

**MITSUBISHI  
ELECTRIC**

*Changes for the Better*

for a greener tomorrow



# Mitsubishi Graphic Operation Terminal GOT2000 Series



**GOOD  
DESIGN  
AWARD  
2014**



Your window to better production control

# GOT2000

Graphic Operation Terminal

**iQ** Platform

The Mitsubishi Electric  
Graphic Operation Terminal GOT2000 series  
continues to impress with solutions  
that fulfill all demands.

The GOT2000 boasts advanced functionality, acts as a seamless gateway to other industrial automation devices, all while increasing productivity and efficiency.

The high quality display is designed to optimize operator control and monitoring of device and line statuses. If you are looking for an intuitive operation terminal, the new tablet-like operability and the higher functionality of operation terminal makes the GOT2000 the ideal choice.

Incorporate the GOT2000 to bring forth flexibility, productivity, and quality on a global scale.

Your window to better production control

# **GOT2000**

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**Graphic Operation Terminal**

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The GOT2000 inherits all the features of our popular GOT1000 series, and introduces a more refined and advanced function set. The powerful and flexible lineup includes GOTs with various features and communication options to tackle any application you may encounter.

## GT27

Advanced model with multi-touch gesture functions

Ethernet
RS-232
RS-422/485
Bus
MELSECNET/H
CC-Link IE
CC-Link

**15** inch



**XGA** GT2715-XTBA  
GT2715-XTBD | Resolution: 1024x768  
Display color: 65536 colors

**12.1** inch



**SVGA** GT2712-STBA  
GT2712-STBD  
GT2712-STWA  
GT2712-STWD | Resolution: 800x600  
Display color: 65536 colors

## GT25

High performance, cost efficient, mid-range model

Ethernet
RS-232
RS-422/485
Bus
MELSECNET/H
CC-Link IE
CC-Link

**12.1** inch **NEW**



**SVGA** GT2512-STBA  
GT2512-STBD | Resolution: 800x600  
Display color: 65536 colors

**10.4** inch



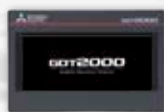
**VGA** GT2510-VTBA  
GT2510-VTBD  
GT2510-VTWA  
GT2510-VTWD | Resolution: 640x480  
Display color: 65536 colors

## GT21

Compact model with basic functions

Ethernet
RS-232
RS-422/485

**3.8** inch **NEW**



GT2103-PMBD  
GT2103-PMBDS | Resolution: 320x128  
Display color: Monochrome  
(black/white) 32 shade grayscale  
Backlight: 5-color LED  
(white/green/pink/orange/red)



Compliant with safety standards including UL Standards, shipping standards (to be obtained soon), and radio laws. For inquiries relating to the status of conforming to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

- Multi-touch Gesture
  - Multi-media\*
  - Video/RGB\*
  - Sound output
  - External I/O
- \* Not supported by 5.7 inch model.

## 10.4 inch



- |             |  |   |
|-------------|--|---|
| <b>SVGA</b> | <b>GT2710-STBA</b><br><b>GT2710-STBD</b>   | Resolution: 800x600<br>Display color:<br>65536 colors |
| <b>VGA</b>  | <b>GT2710-VTBA</b><br><b>GT2710-VTBD</b><br><b>GT2710-VTWA</b><br><b>GT2710-VTWD</b> | Resolution: 640x480<br>Display color:<br>65536 colors |

- Sound output
- External I/O

## 8.4 inch



- |             |  |   |
|-------------|--|---|
| <b>SVGA</b> | <b>GT2708-STBA</b><br><b>GT2708-STBD</b> | Resolution: 800x600<br>Display color:<br>65536 colors |
| <b>VGA</b>  | <b>GT2708-VTBA</b><br><b>GT2708-VTBD</b> | Resolution: 640x480<br>Display color:<br>65536 colors |

## 5.7 inch Coming soon



- |            |                    |   |
|------------|--------------------|---|
| <b>VGA</b> | <b>GT2705-VTBD</b> | Resolution: 640x480<br>Display color:<br>65536 colors |
|------------|--------------------|---|

## 8.4 inch



- |            |  |   |
|------------|--|---|
| <b>VGA</b> | <b>GT2508-VTBA</b><br><b>GT2508-VTBD</b><br><b>GT2508-VTWA</b><br><b>GT2508-VTWD</b> | Resolution: 640x480<br>Display color:<br>65536 colors |
|------------|--|---|

# GT23

- Ethernet
- RS-232
- RS-422/485

## Unchallenged cost performance

## 10.4 inch



- |            |  |  |
|------------|--|--|
| <b>VGA</b> | <b>GT2310-VTBA</b><br><b>GT2310-VTBD</b> | Resolution:<br>640x480<br>Display color:<br>65536 colors |
|------------|--|--|

## 8.4 inch



- |            |  |  |
|------------|--|--|
| <b>VGA</b> | <b>GT2308-VTBA</b><br><b>GT2308-VTBD</b> | Resolution:<br>640x480<br>Display color:<br>65536 colors |
|------------|--|--|

# SoftGOT Turn your personal computer into a GOT!

## GOT2000 compatible HMI software **GT SoftGOT2000** Version1

GT SoftGOT2000 is an HMI software that allows GOT2000 functions to operate on a personal computer or panel computer.

Resolution: 640 to 1920 x 480 to 1200  
Display color: 65536 colors

\* GT SoftGOT2000 Version1 is included with GT Works3.  
A separate license key must be mounted during use.



Line up

Features

Functions

FA Solutions

Specifications

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Support

# GT27

Advanced model with multi-touch gesture functions

- 65K color TFT LCD display available in the following screen sizes: 8.4", 10.4", 12.1" and 15"
- Tablet like gesture functionality and multi-media features create an intuitive user experience
- Communication interfaces such as Ethernet, RS-422/485, USB host/device and SD memory card are standard features
- High capacity data processing ensure smooth screen operation even when multiple tasks, such as logging, script, alarm, or device data transfer, are running



- Display..... 65K color TFT LCD display, 8.4", 10.4", 12.1" and 15"
- Resolution ..... XGA, SVGA, VGA
- Backlight..... White LED
- User memory..... Memory for storage (ROM): 57MB  
Memory for operation (RAM): 128MB
- Standard interface..... Ethernet, RS-232, RS-422/485  
USB host 2ch (High-Speed 480Mbps) (White model has 1ch)  
USB device 1ch (High-Speed 480Mbps)
- Extension interface..... Bus, MELSECNET/H, CC-Link IE, CC-Link

# GT27 Standard model

**Human sensor**  
The unit automatically detects an operator approaching the unit and displays the screen. When no one is around, the backlight turns off to save energy.  
\* 15" and 12.1" only

**USB device**  
Transfer data without opening the cabinet.

**USB host**  
Transfer screen data or read the data to or from the GOT using the USB memory. A USB mouse and keyboard connection is also supported.



**Simple design**  
The stylish and simple design with a linear motif is sleek and complements any machine design.

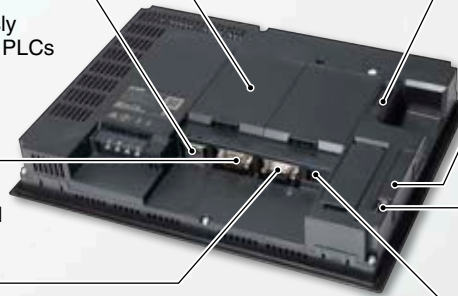
**LED backlight**  
The long life cycle minimizes maintenance and replacement costs.

**Extension interface**  
Communication and option units can be installed.

**Ethernet**  
Use Ethernet to simultaneously connect to up to four types of PLCs from different manufacturers.

**RS-232**  
Connect to various industrial devices, barcode readers and serial printers.

**RS-422/485**  
Easily connect to various industrial devices.



**SD card slot**  
Save large volumes of data, including alarms and logging data.

**Side interface**  
Mount a wireless LAN communication module.

**USB host**  
Save the alarm and logging data by connecting a USB memory stick. A USB mouse and keyboard connection is also supported.

**USB device**  
Connect to a personal computer and transfer data.  
\* The white model only

# GT27 White model

\* Back side is the same as the standard model

**Human sensor**  
The unit automatically detects an operator approaching the unit and displays the screen. When no one is around, the backlight turns off to save energy.  
\* 12.1" only

**Flat body**  
The front flat screen is easy to clean. (USB interface is on the back.)



**Simple design**  
In the same way as the standard model, the stylish and simple design with a linear motif is sleek and complements any machine design.

**White body**  
The white model portrays a clean image.

Line up

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# GT25

High performance, cost efficient, mid-range model

- 65K color TFT LCD display available in the following screen sizes: 8.4", 10.4", and 12.1" **NEW**
- Communication interfaces such as Ethernet, RS-422/485, USB host/device and SD memory card are standard features
- High capacity data processing ensure smooth screen operation even when multiple tasks, such as logging, script, alarm, or device data transfer are running



- Display..... 65K color TFT LCD display, 8.4", 10.4", and 12.1" **NEW**
- Resolution ..... SVGA, VGA
- Backlight..... White LED
- User memory..... Memory for storage (ROM): 32MB  
Memory for operation (RAM): 80MB
- Standard interface..... Ethernet, RS-232, RS-422/485  
USB host 2ch (High-Speed 480Mbps) (White model has 1ch)  
USB device 1ch (High-Speed 480Mbps)
- Extension interface..... Bus, MELSECNET/H, CC-Link IE, CC-Link



# GT25 Standard model

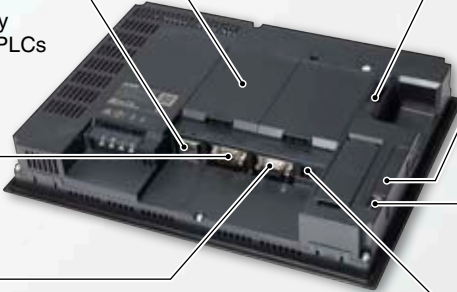


**USB device**  
Transfer data without opening the cabinet.

**USB host**  
Transfer screen data or read the data to or from the GOT using the USB memory. A USB mouse and keyboard connection is also supported.

**Simple design**  
The stylish and simple design with a linear motif is sleek and complements any machine design.

**LED backlight**  
The long life cycle minimizes maintenance and replacement costs.



**Extension interface**  
Communication and option units can be installed.

**Ethernet**  
Use Ethernet to simultaneously connect to up to four types of PLCs from different manufacturers.

**RS-232**  
Connect to various industrial devices, barcode readers and serial printers.

**RS-422/485**  
Easily connect to various industrial devices.

**SD card slot**  
Save large volumes of data, including alarms and logging data.

**Side interface**  
Mount a wireless LAN communication unit.

**USB host**  
Save the alarm and logging data by connecting a USB memory stick. A USB mouse and keyboard connection is also supported.

**USB device**  
Connect to a personal computer and transfer data.  
\* The white model only

# GT25 White model

\* Back side is the same as the standard model



**Simple design**  
In the same way as the standard model, the stylish and simple design with a linear motif is sleek and complements any machine design.

**Flat body**  
The front flat screen is easy to clean. (USB interface is on the back.)

**White body**  
The white model portrays a clean image.

Line up

Features

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# GT23

## Unchallenged cost performance

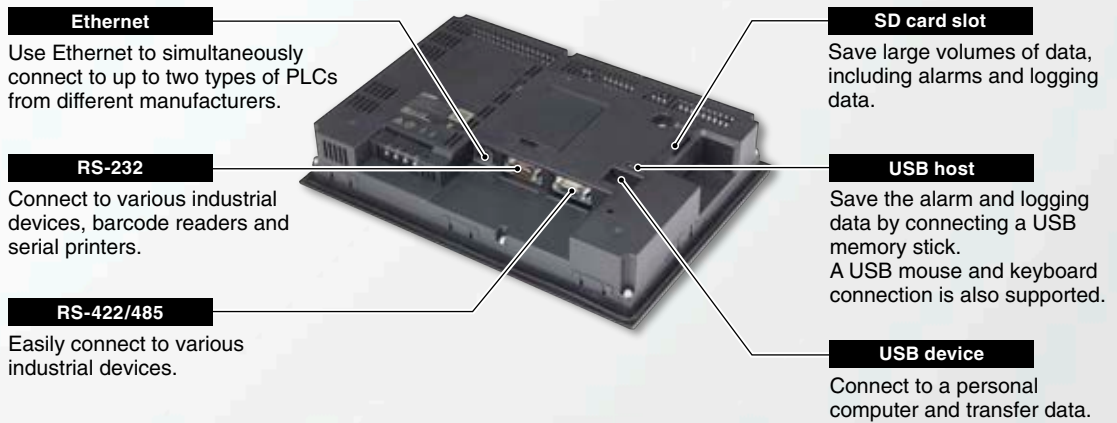
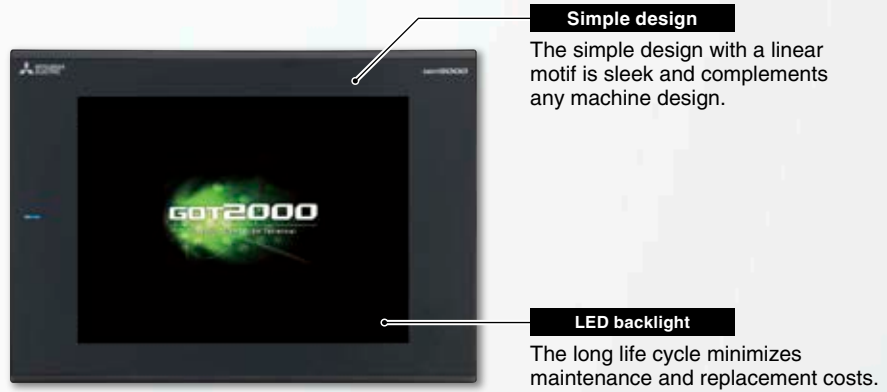
- 65K color TFT LCD display available in the following screen sizes: 8.4" and 10.4"
- Communication interfaces such as Ethernet, RS-422/485, USB host/device and SD memory card are standard features
- Advanced features such as data logging, multi-channel communication and FA transparent function are supported



- Display..... 65K color TFT LCD display, 8.4" and 10.4"
- Resolution ..... VGA
- Backlight..... White LED
- User memory..... Memory for storage (ROM): 9MB  
Memory for operation (RAM): 9MB
- Standard interface..... Ethernet, RS-232, RS-422/485  
USB host 1ch (Full-Speed 12Mbps)  
USB device 1ch (Full-Speed 12Mbps)

# GT23

## Standard model



Line up

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Support

# GT21

NEW

## Small screen, big possibilities

- Monochrome (black/white), 32 shade grayscale TFT LCD display available in the following screen size: 3.8"
- 320x128 dot high-resolution LCD, four times higher resolution than conventional model (GT1020)
- 5-color LED backlight (white, green, pink, orange, red)
- Ethernet interface (GT2103-PMBD only)
- Advanced features such as data logging, multi-channel communication and FA transparent function are supported



Display.....	Monochrome (black/white), 32 shade grayscale TFT LCD display, 3.8"
Resolution .....	320x128 dots
Backlight.....	5-color LED (white, green, pink, orange, red)
User memory.....	Memory for storage (ROM): 3MB
Standard interface.....	GT2103-PMBD : Ethernet, RS-422/485
	GT2103-PMBDS : RS-232, RS-422/485
	All models : USB device 1ch
	(Full-Speed 12Mbps)



## High-definition LCD with changeable color backlight

GT2103 is equipped with an easy to see, compact high-resolution TFT LCD with 32 gray scales. The intuitively understandable 5-color backlight offers choices of backlight color and backlight blink according to machine operation state.

The backlight can also be controlled from the connected PLC (screen color change and backlight ON/OFF/blink).

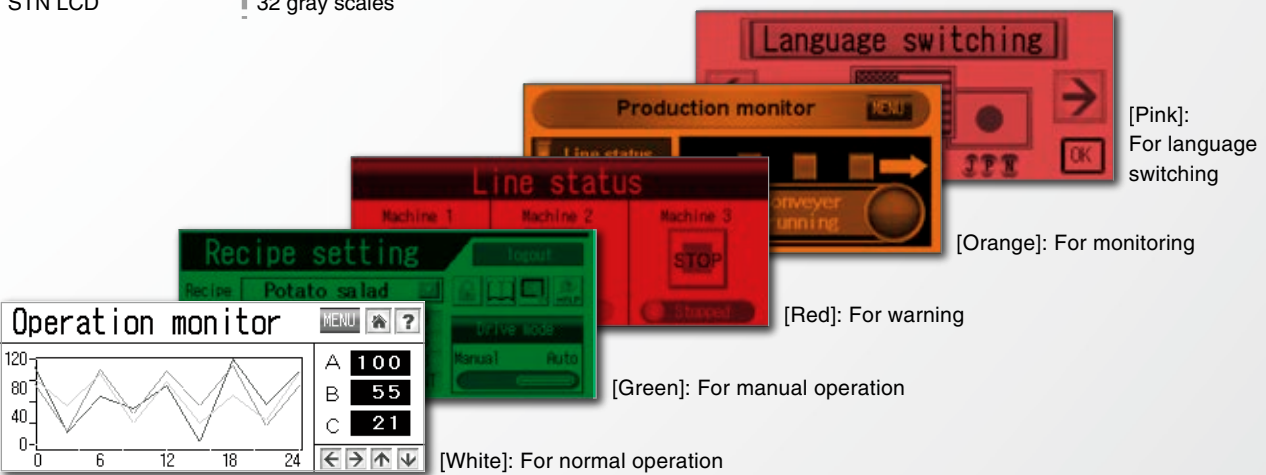


Same compact type, but so much clearer!

**GT1020**  
Monochrome (black/white)  
STN LCD

**GT2103**  
Monochrome  
TFT LCD with 32 gray scales

[Backlight color and screen example]



### Ethernet type

## GT2103-PMBD

#### SD card unit interface

Connect an optional SD card unit and save data including alarms and logging data.

#### USB device

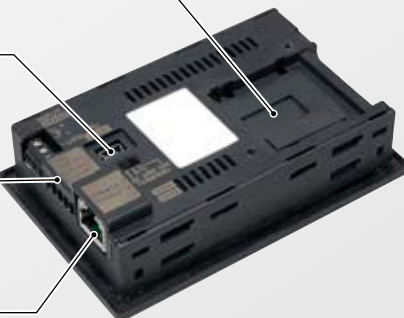
Connect a personal computer and transfer data.

#### RS-422/485

Easily connect to various industrial devices.

#### Ethernet

Use Ethernet to simultaneously connect to up to two types of PLCs from different manufacturers.



### Serial type

## GT2103-PMBDS

#### SD card unit interface

Connect an optional SD card unit and save data including alarms and logging data.

#### USB device

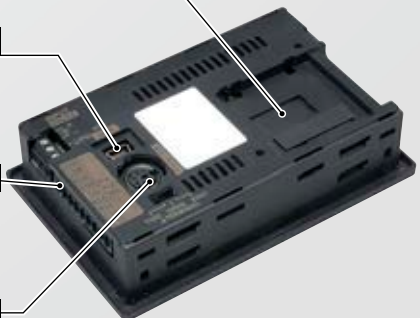
Connect a personal computer and transfer data.

#### RS-422/485

Easily connect to various industrial devices.

#### RS-232

Connect to various industrial devices, barcode readers and serial printers.



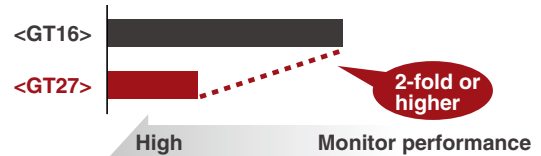
## GOT2000 - Designed to meet your industrial automation needs.

### High-speed processing

Easily operate the screens even during high-load processing, such as logging, script, alarm or device data transfer.

(GT16 → GT27: monitor performance is 2-fold or more higher)

Comparison of GT27/GT16 monitor performance

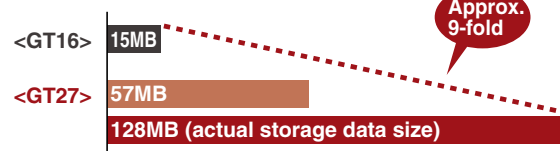


### Increased memory capacity

Design screens without worrying about the data capacity. The product data compression technology allows up to 128MB of actual space to be used without an SD card. (GT27)

\* An SD card may be required depending on the project.

Comparison of GT27/GT16 ROM capacity

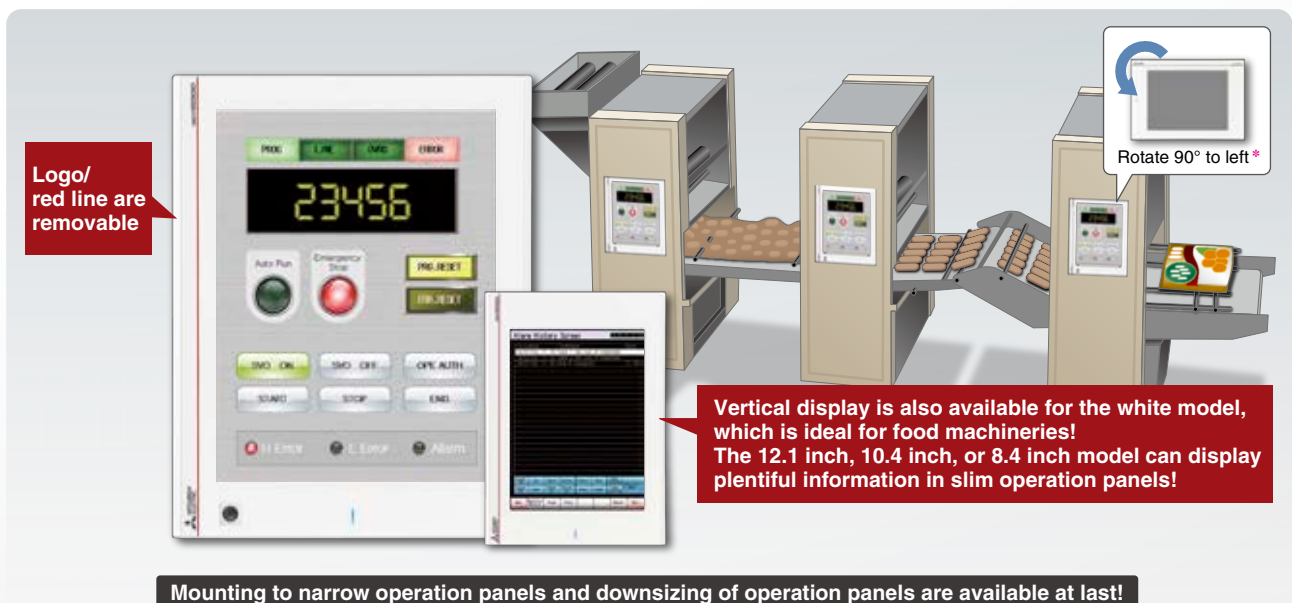


### Enhanced lineup

The new GOT2000 is suitable for applications in any industry.

The GT27, GT25 white model provides an additional color option, and the flush frame without the USB port can be cleaned very easily.

The GOT can be installed vertically for extra flexibility when installed in confined spaces. **NEW**



\* GT21 models should be rotated by 90 degrees to the right.

Use multi-touch gestures to operate your GOT in a more natural way!



Line up

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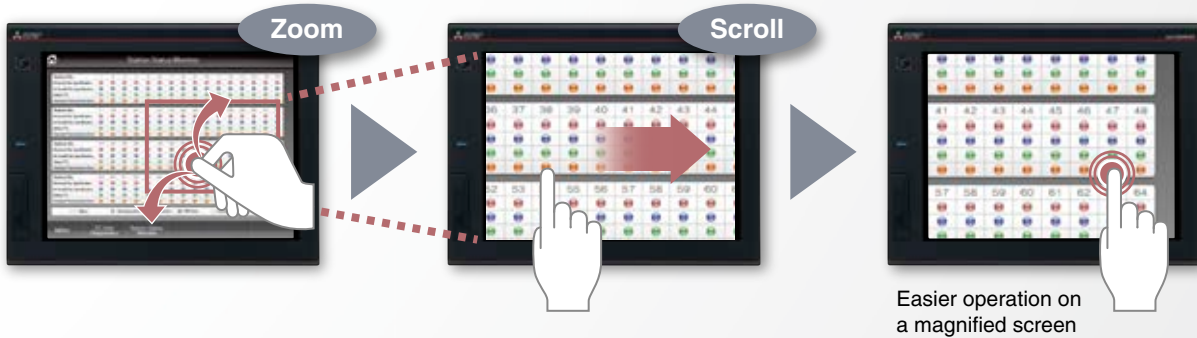
Support

## Screen Gestures

GOT2000 only

Zoom in to easily operate small and hard to reach switches.  
After zooming in, scroll the display to show the area you want to operate.

\* GOT27 only



## Object Gestures

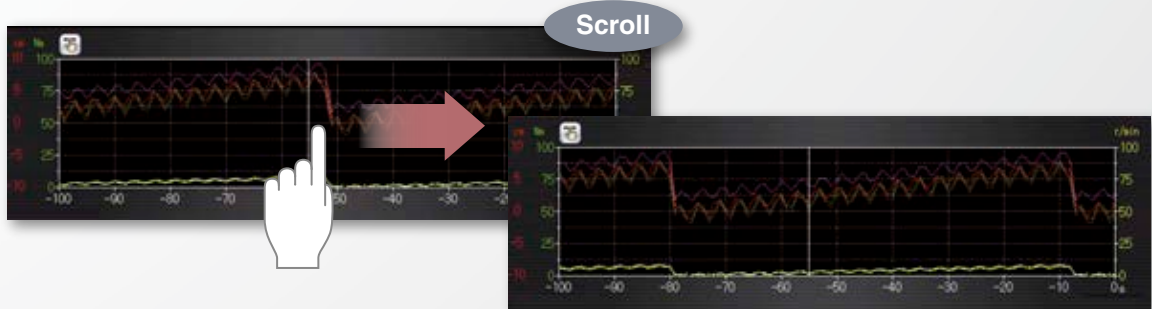
GOT2000 only

Specify an object to be enlarged, scrolled or flicked.

<Target objects>

- Historical data list display
- Alarm display (user)
- Alarm display (system)
- Simple alarm display
- Historical trend graph
- Document display

\* GOT27 only



## 2-point press operation prevents incorrect operations

GOT2000 only

Prevent accidental operations by designating two pressing points for critical operations.

\* GOT27 only

<Before>

2-point pressing switch was prepared separately



<GOT2000>

You only need the GOT!



\* Cautions apply to the arrangement of the 2-point pressing switch.

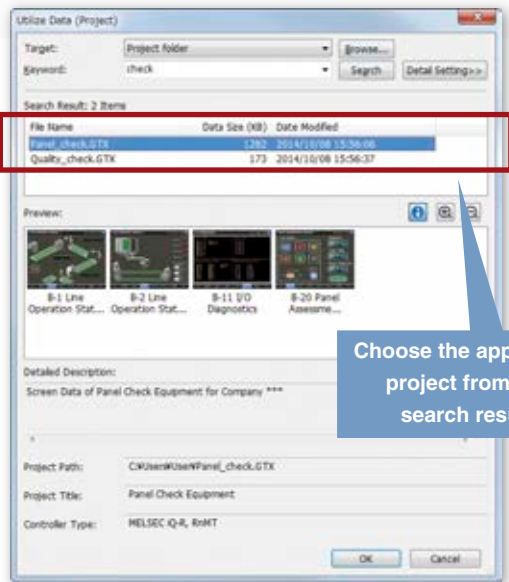
## Professional Designs in Just a Few Clicks

The GOT2000 introduces an efficient approach to reuse previously created screen designs.



### Reuse previous projects

Use keyword search to find and reuse existing projects or sample projects, minimizing engineering time spent on screen design.



### Variety of reusable sample projects [Upgrade](#)

GOT2000 has many sample projects that can be used when designing screens. (English, Japanese, Chinese [Simplified]) Just select a sample and apply it to your screen.

Alarm



Recipe



Device monitor



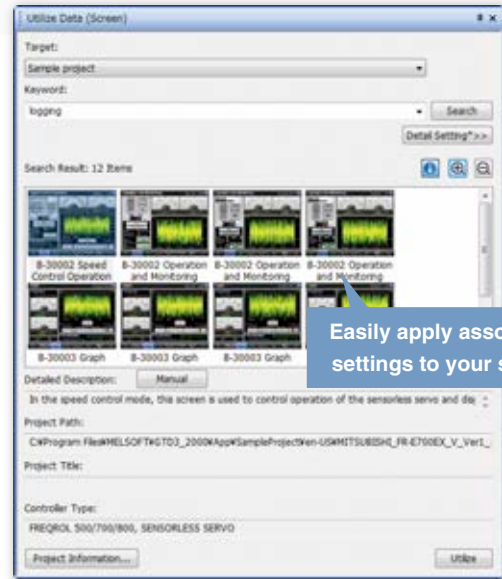
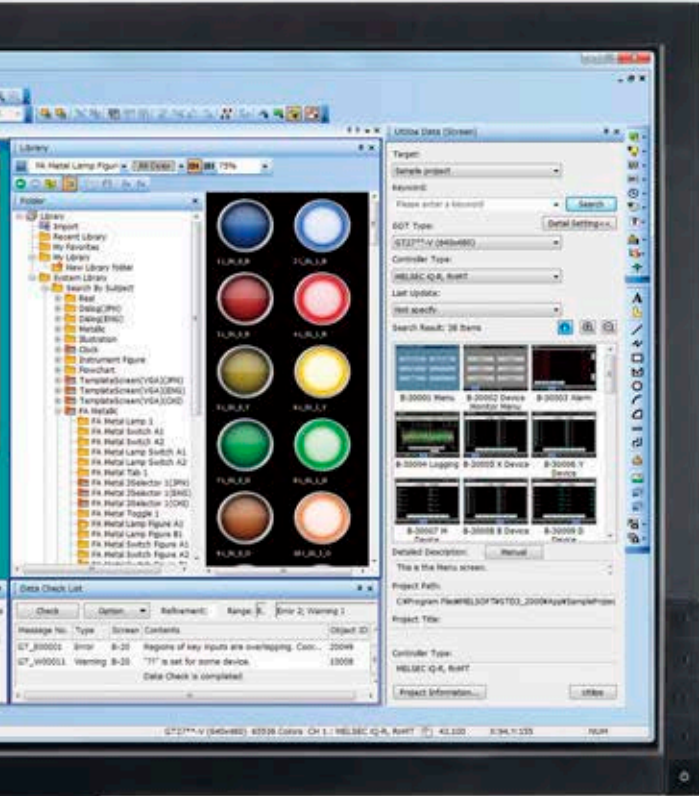


GOT Screen Design Software  
**MELSOFT GT Works3+plus**

GOT2000 only

**Reuse previous screens**

Settings associated with a previous project, such as comment data, logging settings, etc., can be easily applied to a new project.



Easily apply associated settings to your screen.

For details, please refer to the GT Works3 Catalog (L (NA) 08170ENG).



Line up

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Support

Programmable controller



Simple motion **NEW**



Q Motion **NEW**



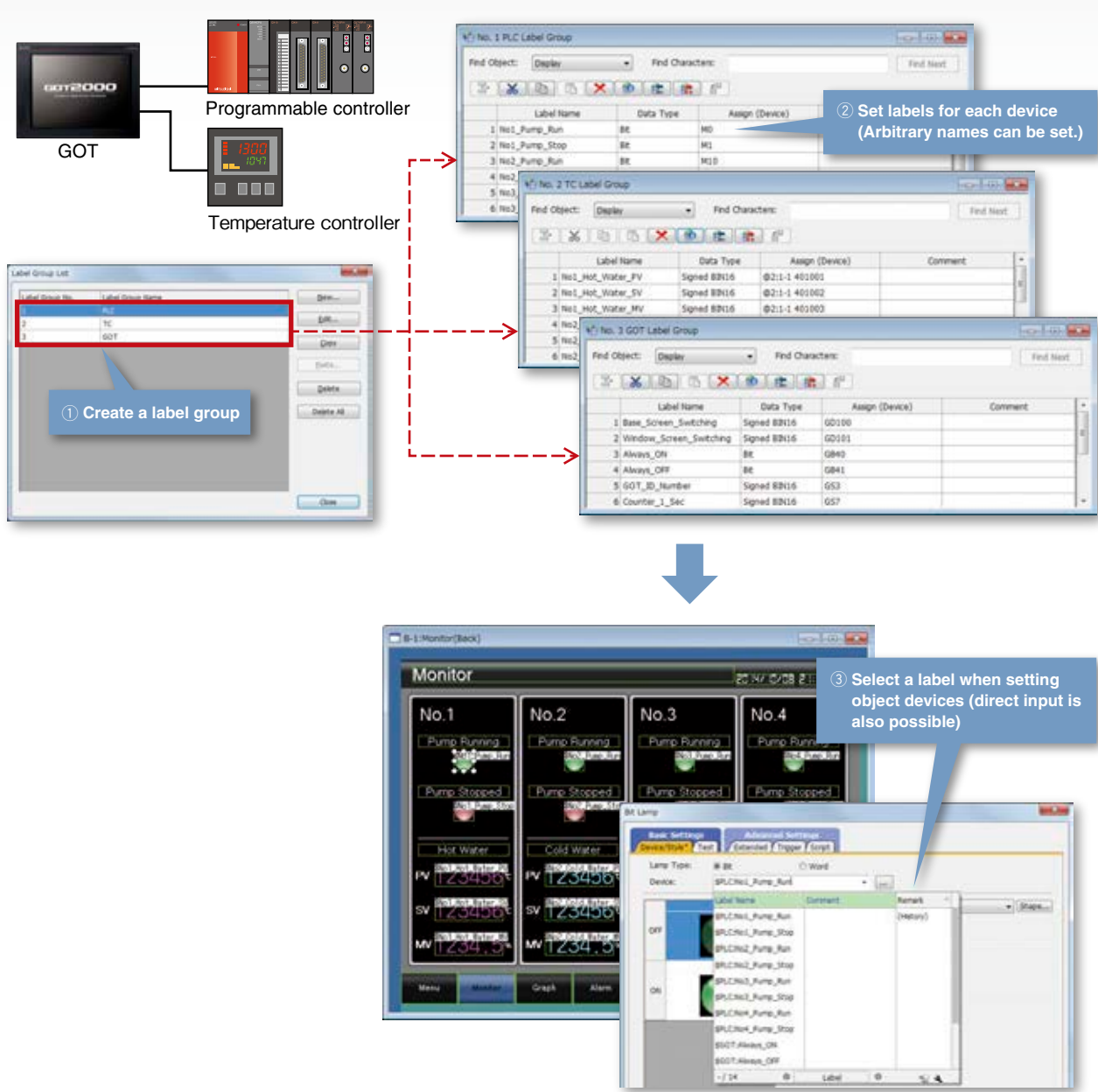
## Labels for easy to understand screen design

A new screen design style without worrying about actual devices

Use the Label function to design screens without worrying about actual devices **NEW**

GOT2000 only

Instead of using devices, use easy-to-understand names (label names) to create screens. Not only Mitsubishi programmable controller devices, but also third party controller devices and GOT internal devices can be assigned to labels. The labels can easily be managed by defining label groups for each controller and screen.



GOT Screen Design Software  
**MELSOFT GT Works3+plus**

Line up

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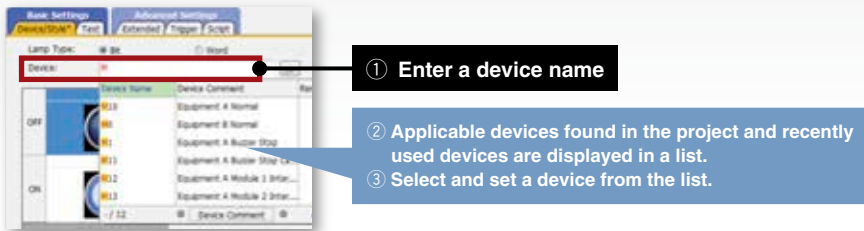
Support

**Quickly set labels/devices with "Input Assist"!** Upgrade



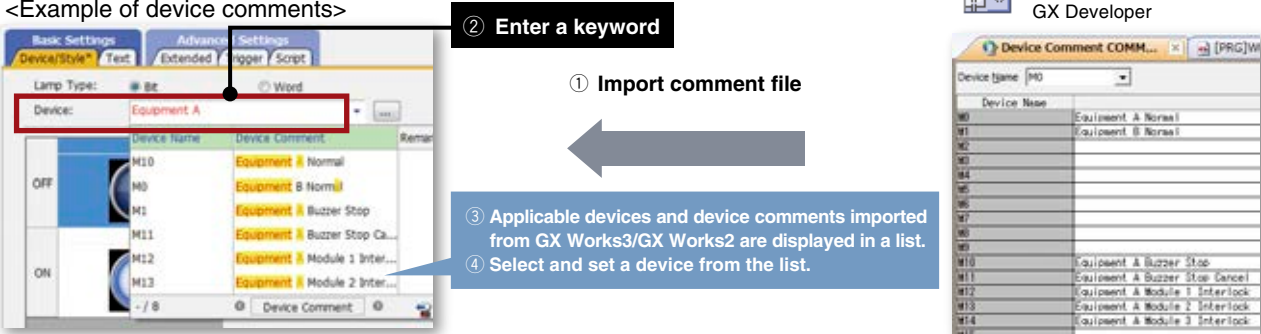
When setting your labels **NEW** /devices, "Input Assist" provides a list of applicable labels **NEW** /devices, complete with label comments **NEW**, device comments, and device definitions.

<Example of devices>



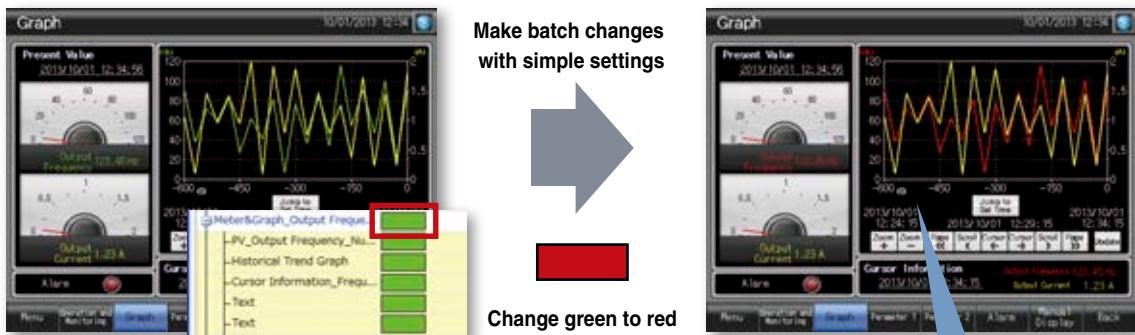
GT Works3 device setting area

<Example of device comments>



**Use templates to greatly reduce your screen creation time!**

Customize each template to the desired look-and-feel, ranging from color options to device selection. Attributes such as devices and colors can be set for each template. You can easily change devices and colors by associating each object with the template's attribute.



**Template attributes (color)**

- Historical trend graph line color
- Character string character color
- Numerical display value color
- ...

● **Items that can be registered in templates**

Figures, objects

● **Attributes that can be registered and changed in templates**

Devices (bits, words), numerical values, text, colors, figures, fonts, font size

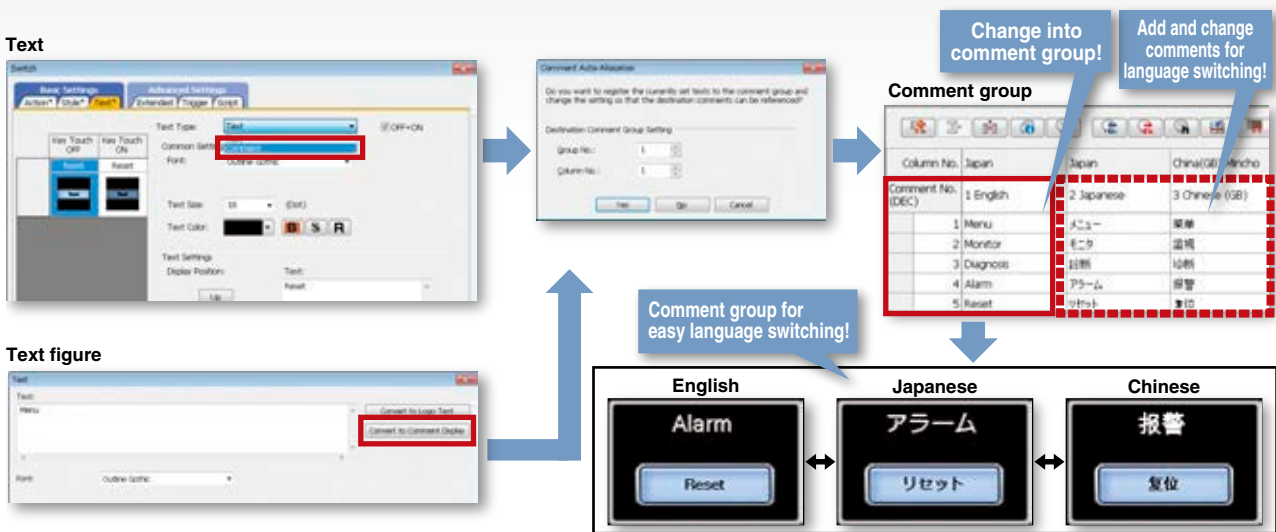
## Maintain screens more efficiently

Quickly and simply correct existing screens using various functions

### Easily create multi-language screens! **NEW**

GOT2000 only

The character strings of switches and lamps can easily be converted from the Text or Text Figures into Comments. This makes it easy to upgrade screens to display multiple languages.



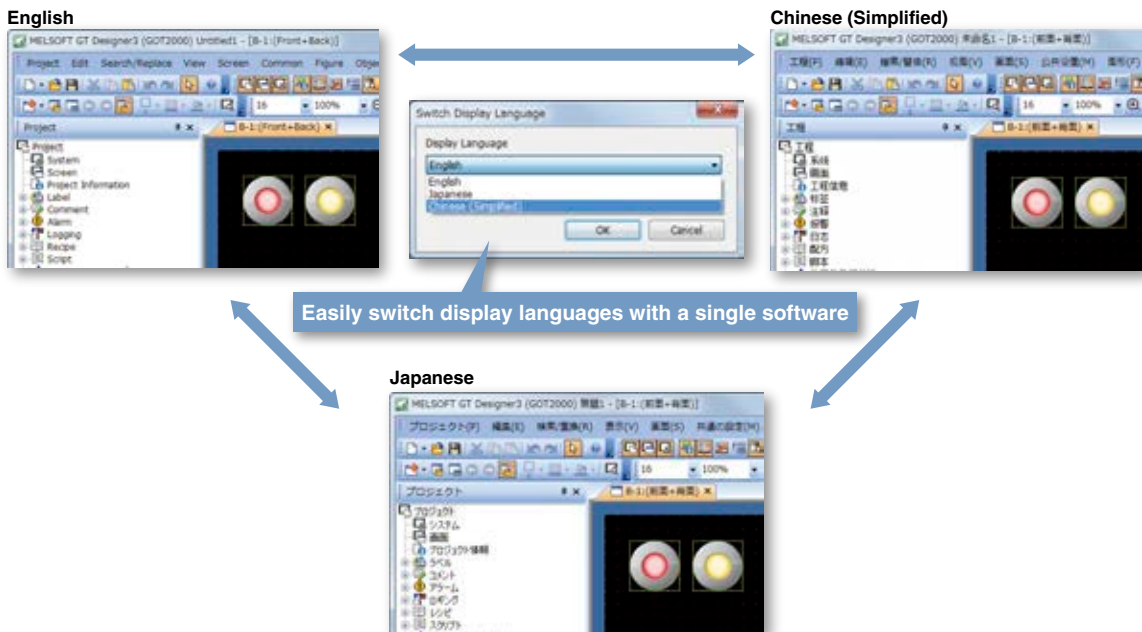
### Useful for maintenance abroad! **NEW**

GOT2000 only

The display language of the GT Works3 menu bar, dialog, and others can be switched.

When maintaining the data abroad, away from where you created the data, the data editing work can be done smoothly by selecting a preferred language by the user.

\* The GOT1000 series does not support multiple languages. It is recommended to purchase GT Works3 of the language to be used.





GOT Screen Design Software  
**MELSOFT GT Works3+plus**

Line up

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Support

**View data difference at a glance with “Data Verification”!** Upgrade

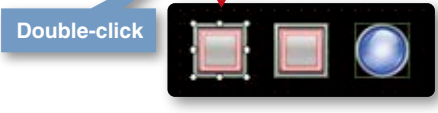
GOT2000 only

Verify the project data and check the results for each screen/object **NEW**. From the Verify Result window, you can jump to the target object or can narrow down results by items such as the screen type. This function enables you to check differences and modify the data quickly even if the project data includes many screens. **NEW**

Verify Project (verifying the project being edited against one in a personal computer) and GOT Verification (verifying the project being edited against one in the GOT) are available

Export of Verify results and refinement by items such as screen type are possible

Source Project	Destination Project	Date of Update	Compare Result
Line_A_control_panel.GTX Version1.122C	Line_B_control_panel.GTX Version1.122C	10/10/2014 13:39	1
Base Screen	Base Screen		
Screen Property	Screen Property		Match
Switch(Object ID: 10000)	Switch(Object ID: 10000)		Match
Switch(Object ID: 10001)	Switch(Object ID: 10001)		Mismatch
Switch(Object ID: 10002)			Source Only
Bit Lamp(Object ID: 10003)	Bit Lamp(Object ID: 10003)		Mismatch
	Switch(Object ID: 10005)		Dest. Only
(Unmatched figure/object stacking order)	(Unmatched figure/object stacking order)		Mismatch
Common	Common		
GOT Type Setting	GOT Type Setting	10/10/2014 13:40	Match
GOT Environmental Setting	GOT Environmental Setting		



The background color of a row varies according to the type of difference.  
 Pink: The item exists in both projects and the data are not matched.  
 Blue: The item exists only in the source project.  
 Green: The item exists only in the destination project.

**Easily upgrade from GOT1000!**

Simply change the GOT Type using the screen design software to upgrade your GOT1000 projects to GOT2000. It will be a drop in replacement because the panel size is exactly the same.

**STEP1** Replace GOT



**STEP2** Change GOT type



**STEP3** Transfer the data

\* The screen data cannot be converted and the GOT type cannot be changed from GOT2000 to GOT1000.

## An Easy and Flexible HMI Solution

### Simplifying startup and debugging

FA Transparent Function & Wireless LAN Connection

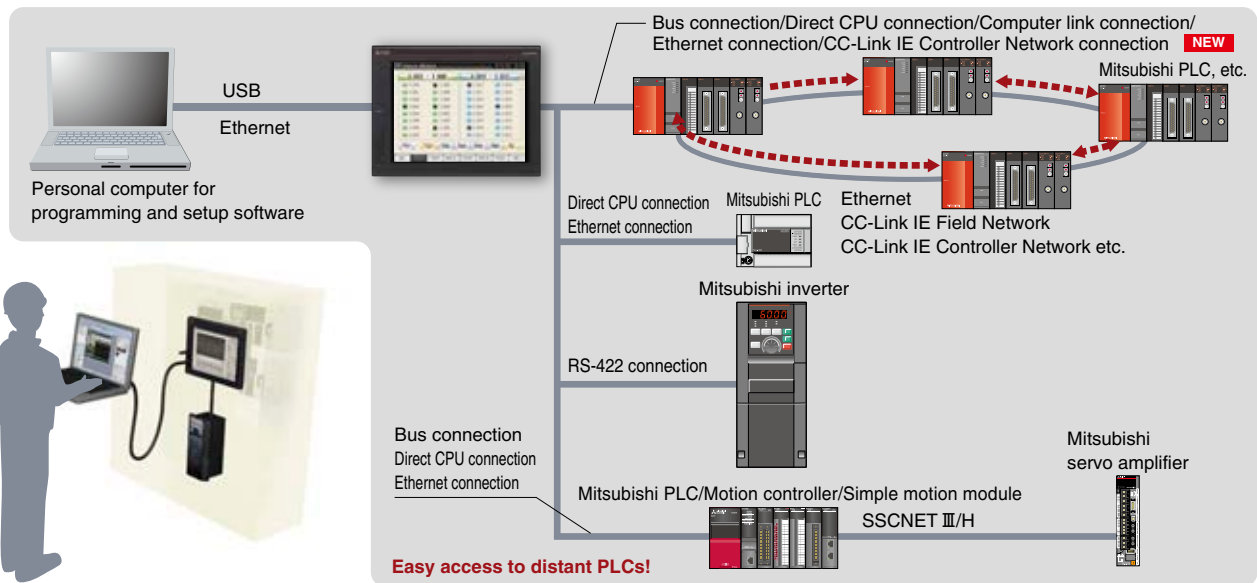
GT27 GT25 GT23 GT21

#### Simplifying the startup process of industrial automation systems

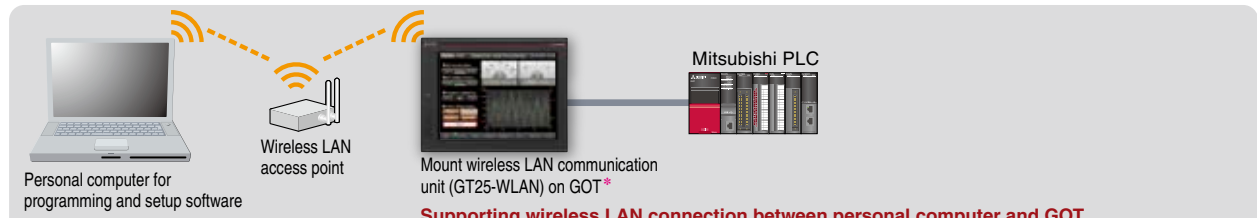
Connected with a personal computer, the GOT acts as a transparent gateway to enable programming, start up, and adjustment of industrial automation systems. Users do not have to bother with opening the cabinet or changing cable connections.

A wireless LAN connection between the personal computer and the GOT is supported. Startup and perform adjustments even without a cable connection. **NEW**

GT27 GT25 GT23 GT21



Easy access to distant PLCs!



Supporting wireless LAN connection between personal computer and GOT

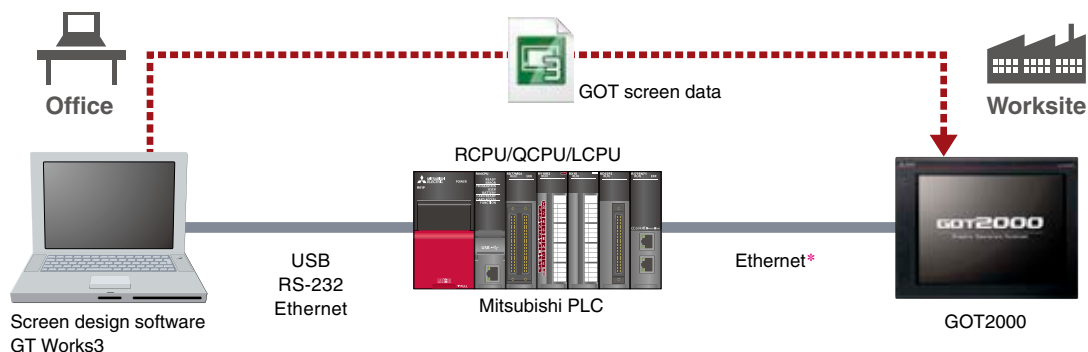
\* Data transfer in wireless LAN communication may not be as stable as that in cable communication. A packet loss may occur depending on the surrounding environment and the installation location. Be sure to perform a confirmation of operation before using this product. The product with hardware version A can be used only in Japan. The product with hardware version B or later can be used in Japan (Japan Radio Law), the United States (FCC), the EU member states, Switzerland, Norway, Iceland, and Liechtenstein (R&TTE).

#### Transferring GOT screen data

GOT screen data can be transferred from a personal computer to the GOT2000 with a programmable controller acting as a gateway.

GT27 GT25 GT23 GT21

There is no need to connect cables directly from personal computers to the GOT. Editing GOT screen data during startup and maintenance is now easier than ever.

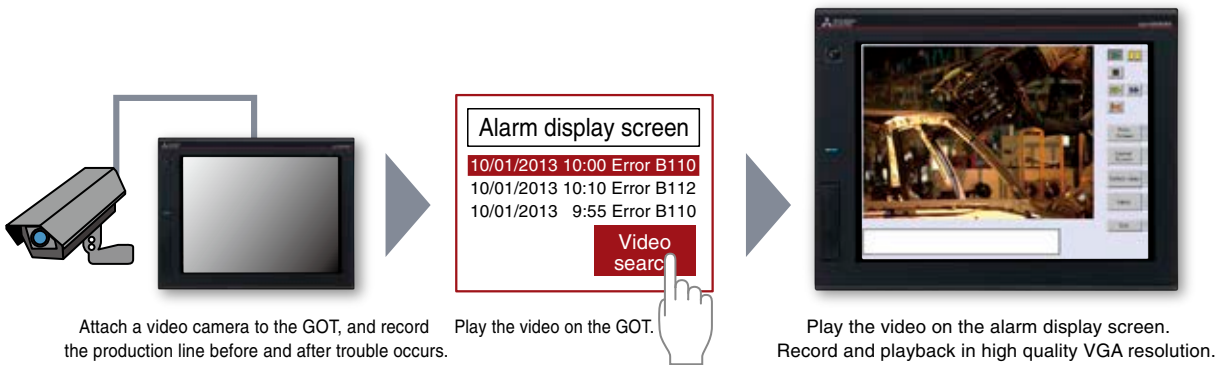


\* This feature does not apply to a GOT connected to a CPU's built-in Ethernet port.

## Record the worksite state Multimedia Function

GT27 GT25 GT23 GT21

Quickly identify cause of errors by reviewing recordings of the production line.



[Recording specifications]

<Before-after event recording> ...A total of 240 seconds of images can be recorded, including 120 seconds before and after a system error occurs. (When event trigger device turns on.)

<Standard mode> ...Two types of recording modes are available. Recording size VGA (640×480), frame rate max. 15fps, or recording size QVGA (320×240), frame rate max. 30fps.

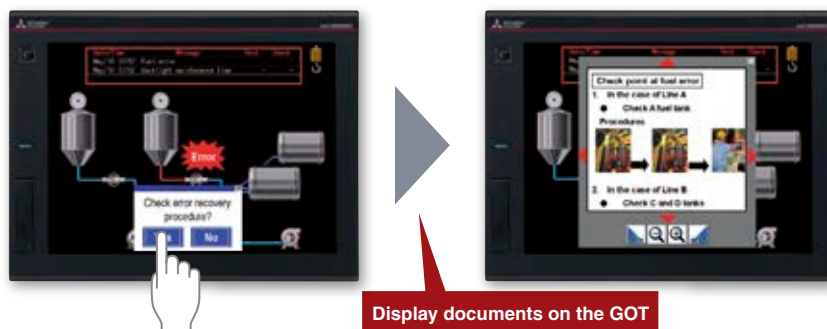
<Longtime mode> ...Approximately two days worth of video image can be recorded. The recording size is QVGA (320×240), frame rate is 15fps.

## Review documents at the production site Document Display

GT27 GT25 GT23 GT21

When errors occur on-site, a check sheet or manual can be displayed on the GOT with instructions on how to restore the system. This can reduce the downtime.

<Supported file format>  
doc, xls, ppt, pdf, jpg, bmp



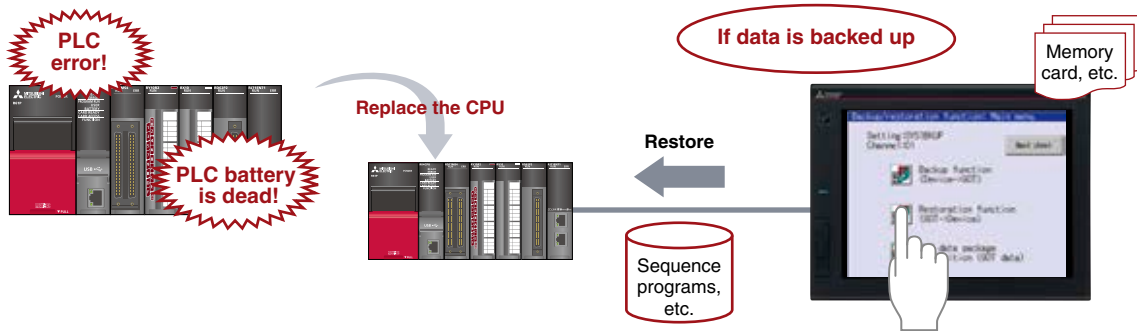
## An Easy and Flexible HMI Solution

### Easily backup and restore programs

Backup/Restore

GT27 GT25 GT23 GT21

Data such as the programs and parameters of the programmable controller CPU, motion controller, robot controller and CNC can be backed up onto the GOT's SD card or USB memory. With a backup of data in the GOT, there's no need to use a personal computer when replacing the industrial devices such as the programmable controller CPU. All replacement and restoration can be completed with just the GOT.



<Objective data> ..... Programs, parameters, device comments, device default value data, file registers, etc.

<Objective models> ..... MELSEC iQ-R Series\* **NEW**  
 MELSEC-Q Series (excluding Q12PRH/Q25PRHCPU), MELSEC-L Series, MELSEC-F Series  
 Motion controller MELSEC iQ-R Series\* **NEW**  
 Motion controller MELSEC-Q Series (SV13/SV22 only)\*, CNC C70\* **NEW**  
 Robot controller (CR750/751-Q, CR750/751-D, CRnQ-700, CRnD-700)\*

\* Not supported by GT21.

<Supported connection types> ..... Bus connection, direct CPU connection, computer link connection, Ethernet connection

#### Back up multiple controllers at the same time

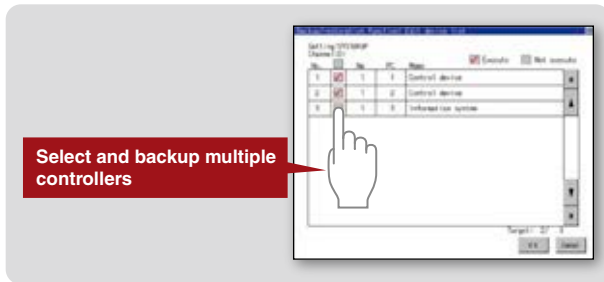
Multiple controllers connected on Ethernet can be backed up at the same time, reducing the time needed to back up each controller separately.

\* Not supported by GT21.

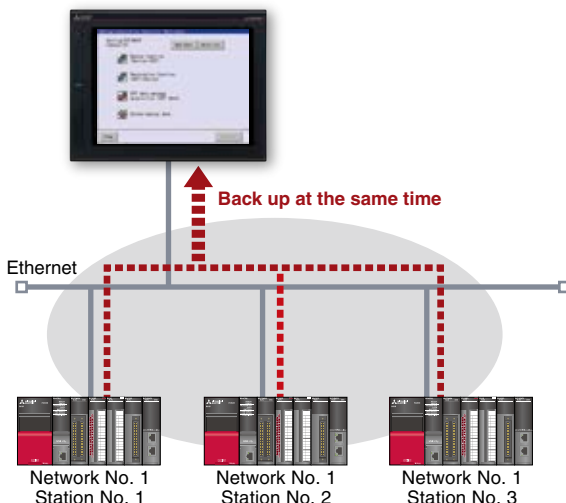
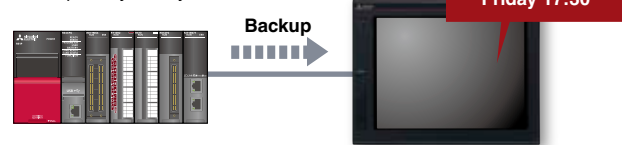
#### Automatic backup

Besides manual backup from touch switches, you can specify a trigger device, a day of the week, and time for automatic backup.

\* Not supported by GT21.



Backup every Friday at 17:30



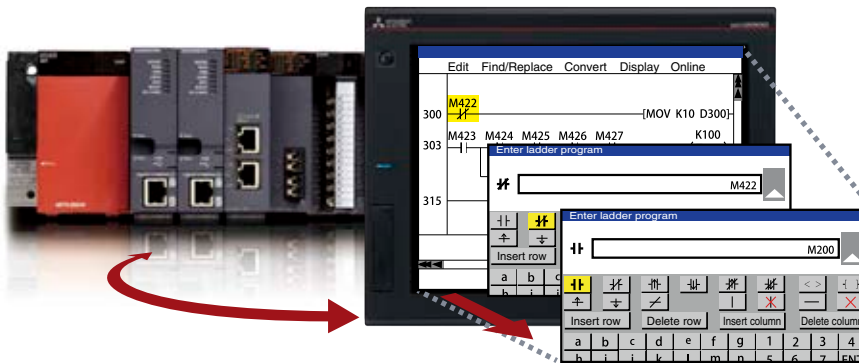


## Monitor and edit ladder programs without a personal computer

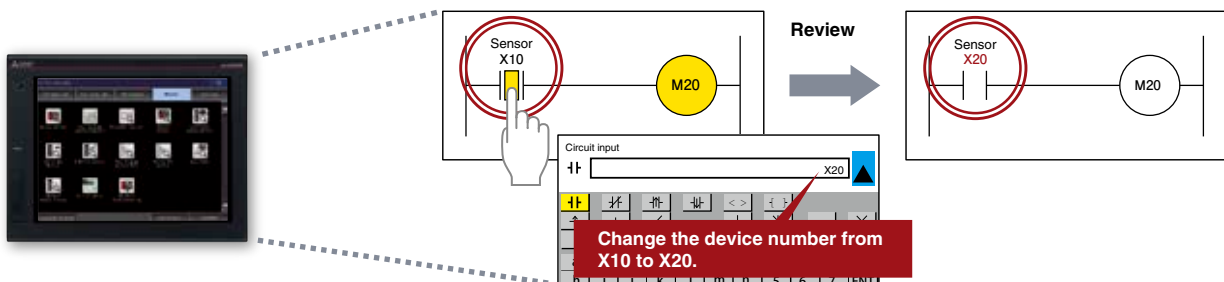
Sequence Program Monitor

GT27 GT25 GT23 GT21

When an error occurs, monitor the ladder program and identify the cause of error. There is no need for a personal computer on the production floor.



Just touch the GOT screen and easily edit the ladder program to make simple changes.



<Target models> ..... MELSEC-Q Series (excluding QnPHCPU/QnPRHCPU), MELSEC-L Series, Motion controller MELSEC-Q Series (programmable controller CPU section)

\* To be supported by MELSEC iQ-R Series soon.



## An Easy and Flexible HMI Solution

Check logging data of a CPU and high speed data logger module without a personal computer

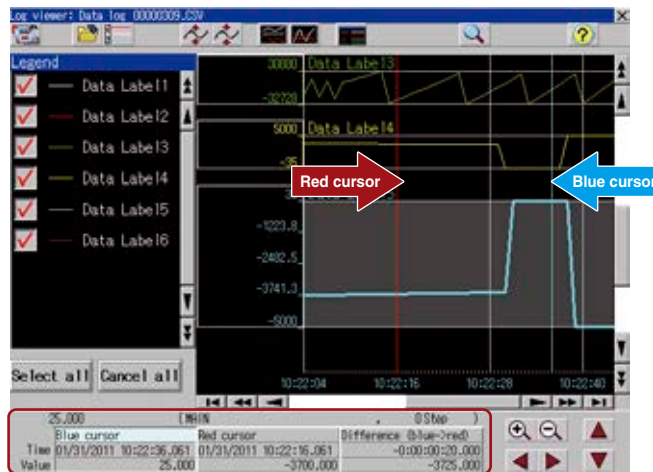
Log Viewer

GT27 GT25 GT23 GT21

Logging data collected by the data logging function of an RCPU **NEW**, QnUDVCPU, LCPU or high speed data logger module can be displayed on the GOT.

By displaying multiple cursors, changes in data can easily be checked. The collected logging data can be searched for by index No.

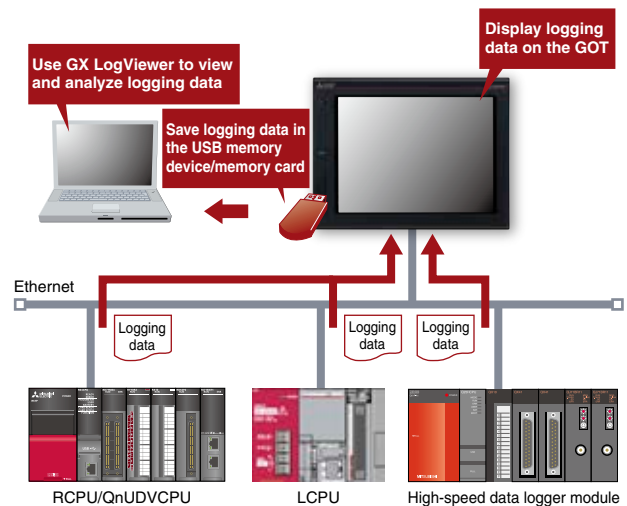
<Data to be displayed> ... Data logging (historical trend display)



You do not need to have a PC onsite. Check logging data from the GOT, and you can take corrective actions quickly.

The logging data can be copied to a USB memory device attached to the USB interface on the front of the GOT. You can retrieve the logging data easily with the GOT without removing the memory card from the CPU or the high speed data logger module.

Connect a personal computer to the front USB interface of the GOT to view the logging data with the GX LogViewer, or to change the logging settings with the CPU Module Logging Configuration Tool or the High Speed Data Logger Module Configuration Tool. (FA transparent function)



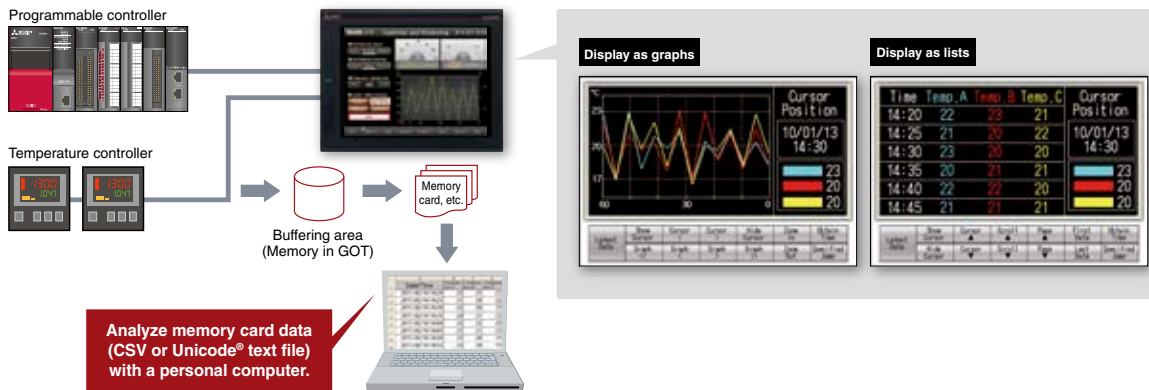
## Easily collect data

Logging & Graphs and Lists

GT27 GT25 GT23 GT21

Use the GOT to collect data from the programmable controller and temperature controllers. The data can be displayed in graphs and lists. It can also be exported to a personal computer for further analysis. The logging data can be saved in the built-in SRAM even if the power fails.

<Supported device formats> ... Bit, BIN, BCD, real numbers, character strings **NEW**



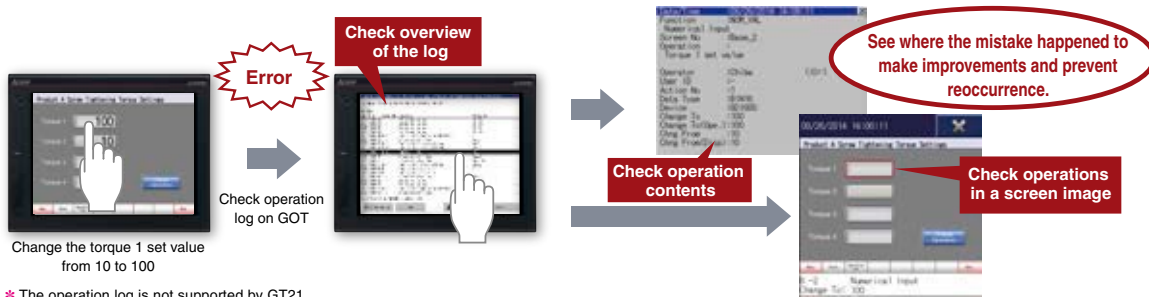
## Easily identify the cause from operation history

Operator Authentication & Operation Log

GT27 GT25 GT23 GT21

The operation and display level (authority) can be set for each operator to strengthen security and prevent operation errors from reoccurring.

The operation log file saved with the operator information can be viewed to identify causes, and help make improvements and prevent recurrence.



\* The operation log is not supported by GT21.

## Perform changeover even without changing the ladder program

Recipe Function

GT27 GT25 GT23 GT21

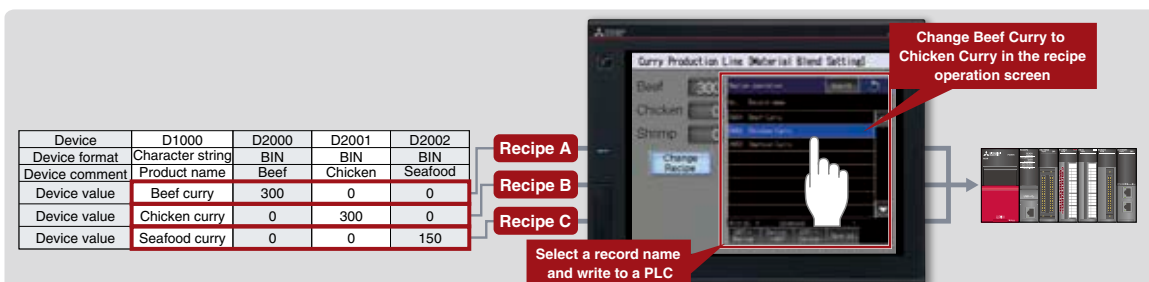
Recipe information (device values) such as material blend and machine conditions are saved in the GOT. This information can be written from the GOT to quickly perform changeover.

Recipes can be changed (changeover) easily by selecting recipe file name and record name on the user-created screen.\* **NEW**

Recipe files can be converted into CSV files or Unicode® text files and easily edited on a personal computer.

<Supported device formats> ... Bit, BIN, BCD, real numbers, character strings

\* Not supported by GT21.



## An Easy and Flexible HMI Solution

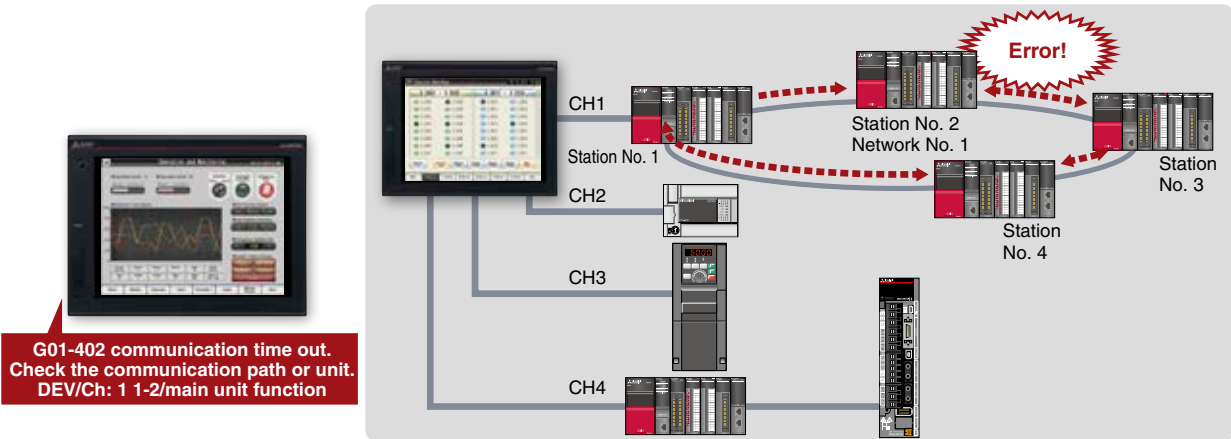
### Identify the cause of alarms

System Alarms

GT27 GT25 GT23 GT21

Information such as the channel No., network No., station No., and CPU No., has been added to the system alarm making it possible to identify the abnormal device just by looking at the current alarm.

The number of the screen and the ID of the object that caused the alarm are also recorded and displayed, so that operators can easily identify what operations caused an alarm.



### Easily search for causes when alarm occurs

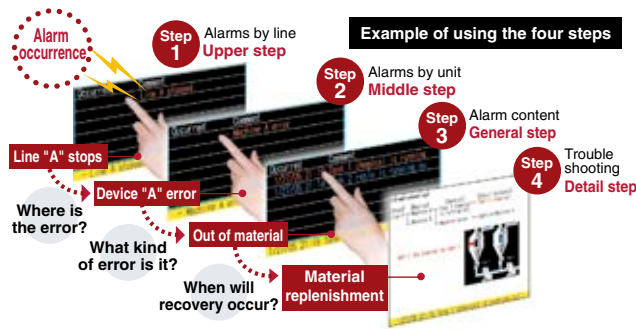
Alarm Function

GT27 GT25 GT23 GT21

Alarms can be divided into groups and displayed by system or levels, or can be displayed all at the same time.

Troubleshooting multiple alarm occurrences may be complicated in a large system, however, breaking down the alarms leads to effective and fast resolution. The alarm log data can be saved in the built-in SRAM even if the power fails.\*

\* Not supported by GT21.



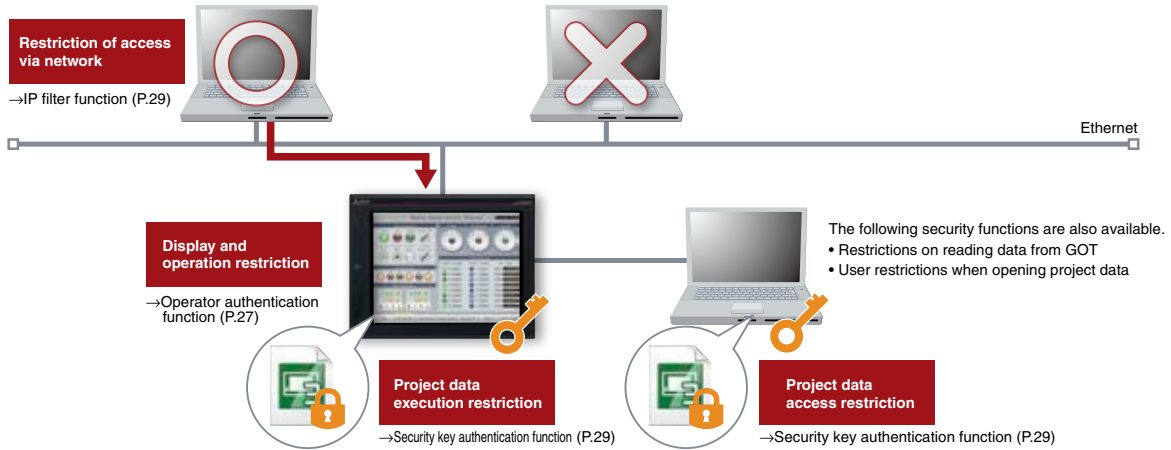
The alarm function works with the logging graph, so that the situation at alarm occurrence or graph error can be seen easily.





**Protect valuable assets** Various security functions

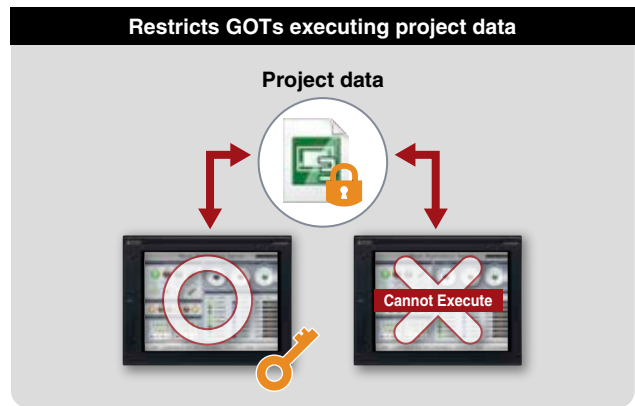
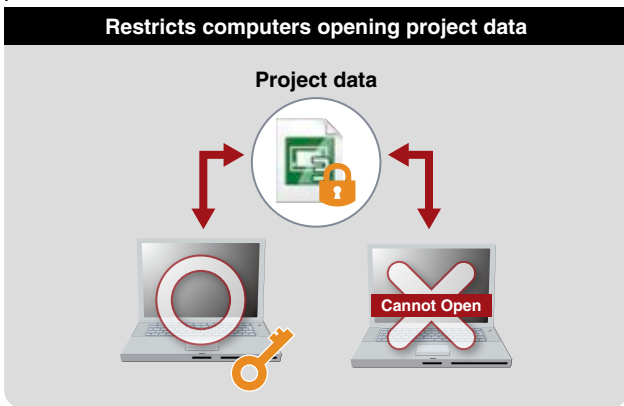
Various security functions protect customers' assets.



**Protect your project data from alteration and duplication!** Security Key Authentication Function

**GT27 GT25 GT23 GT21**

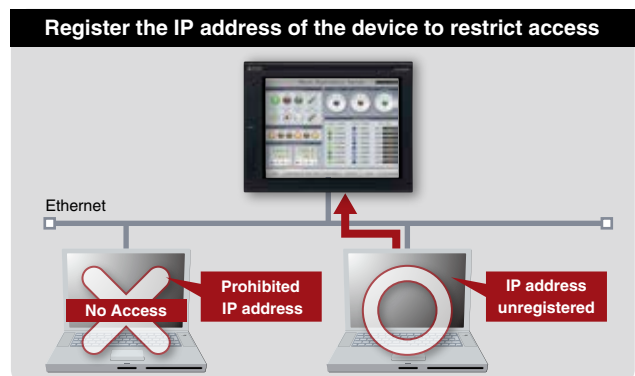
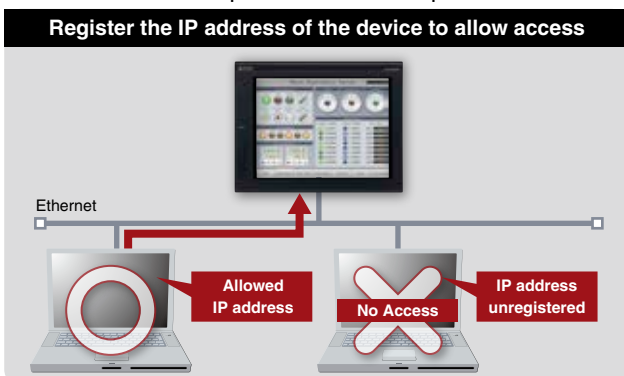
With the security key authentication function, computers without registered security keys can't open project data. As well, because GOTs without registered security keys can't execute project data, your techniques (know-how) are protected from information leaks.



**Reduce risk of unauthorized access through networks!** IP Filter Function

**GT27 GT25 GT23 GT21**

By registering the IP addresses of devices which can access the GOT or which are prohibited to access the GOT, access from devices without permission can be prevented.



## Powerful Remote Access Options

### Operate GOT remotely

GOT Remote Access (VNC Server)

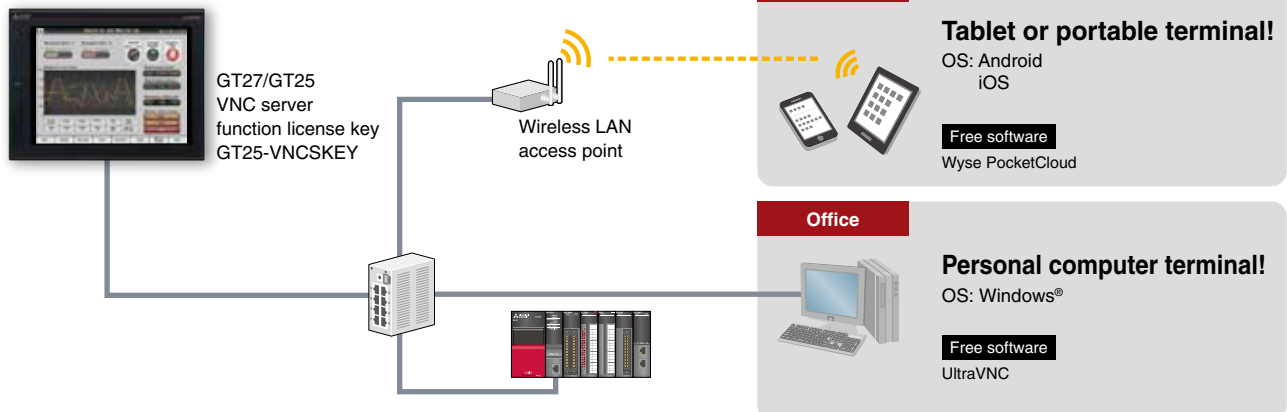
GT27 GT25 GT23 GT21

Remotely view and operate the GOT screen from a personal computer, tablet, or portable terminal that is connected via Ethernet.

Utility functions including the sequence program monitor and the network monitor are also supported.



<System configuration>



\* For the list of applicable VNC client software, please refer to the Technical Bulletin No. GOT-A-0069.

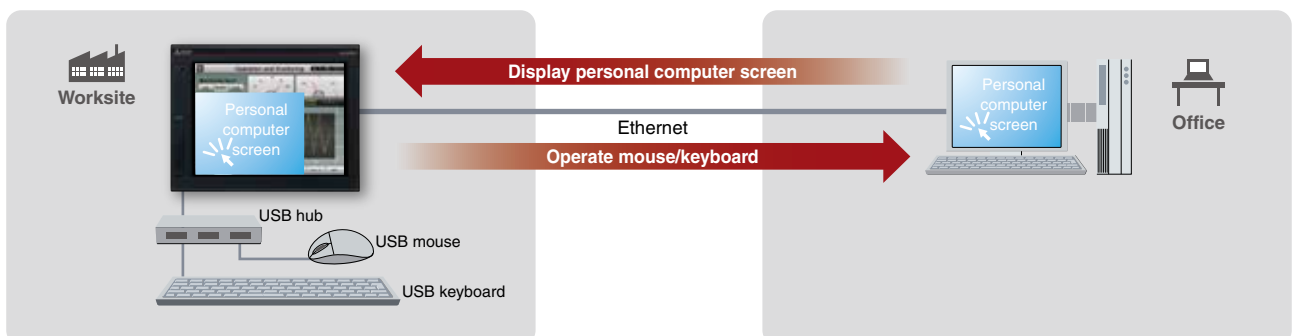
### Use GOT to remotely operate a personal computer

Remote Personal Computer Operation (Ethernet)

GT27 GT25 GT23 GT21

A GOT can remotely operate a personal computer that is connected via Ethernet. Connect a USB mouse and keyboard to the USB interface found in the front or at the back of the GOT. This allows you to open files such as manuals that are stored in the personal computer, view the computer's browser, and use engineering tools.

\* A separate license (GT25-PCRAKEY) is required.

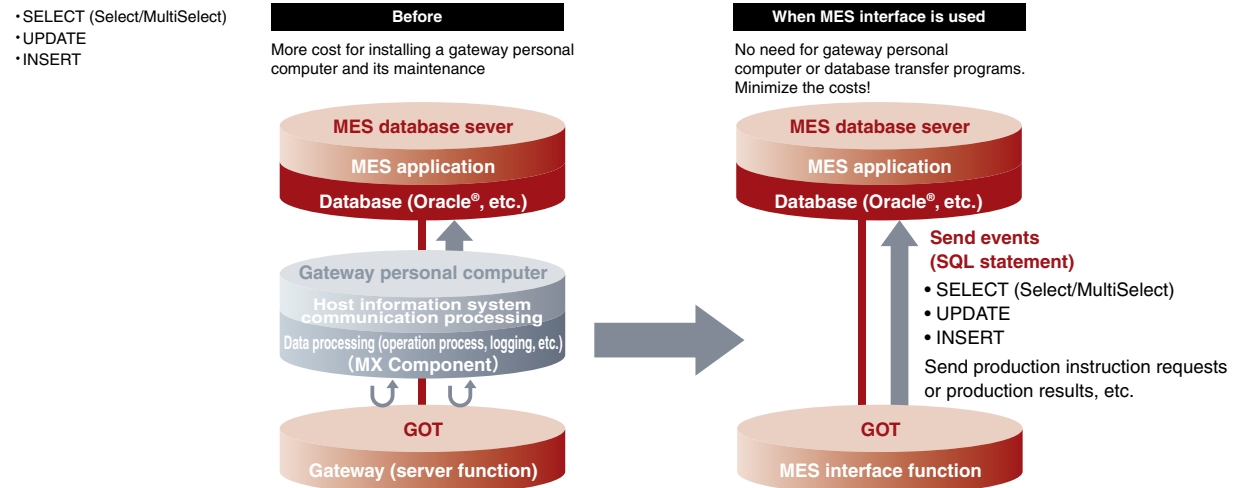


**Communicate with databases** MES Interface Function

**GT27** **GT25** **GT23** **GT21**

The GOT uses SQL statements to directly transmit data from the connected industrial devices to a database server. The communication with the database is configured in GT Works3 without any programming. There is no need for a gateway computer or complex programming to communicate with the MES database server.

\* A separate license (GT25-MESIFKEY) is required.



**MES Interface Functions**

- DB interface function (tag function / trigger buffering function / trigger monitoring function / SQL text transmission function < SELECT (Select/MultiSelect) / UPDATE / INSERT > / arithmetic processing function / program execution function / DB buffering function)
- SNTP time synchronization function • Resource data send function • Diagnostics function
- DB server function (ODBC connection function / connection setting function / log output function)

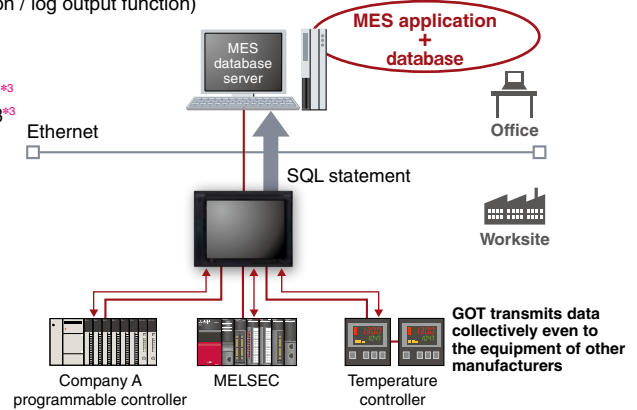
**Usable databases**

- Oracle® 12c<sup>\*1</sup> **NEW** •Oracle® 11g<sup>\*2</sup> •Oracle® 10g/9i/8i<sup>\*3</sup>
  - Microsoft® SQL Server® 2012/2008 R2/2008<sup>\*2</sup> •Microsoft® SQL Server® 2005/2000<sup>\*3</sup>
  - Microsoft® SQL Server® 2000 Desktop Engine (MSDE2000) •Microsoft® Access® 2013<sup>\*3</sup>
  - Microsoft® Access® 2010<sup>\*2</sup> •Microsoft® Access® 2007/2003/2000
- \*1: Compatible only with 64-bit versions.  
\*2: Compatible with 32-bit and 64-bit versions.  
\*3: Compatible only with 32-bit versions.

**<MES (Manufacturing Execution System)>**  
The manufacturing execution system (MES) is a system that controls and manages production processes at a worksite in order to optimize quality, productivity, delivery date, and cost.



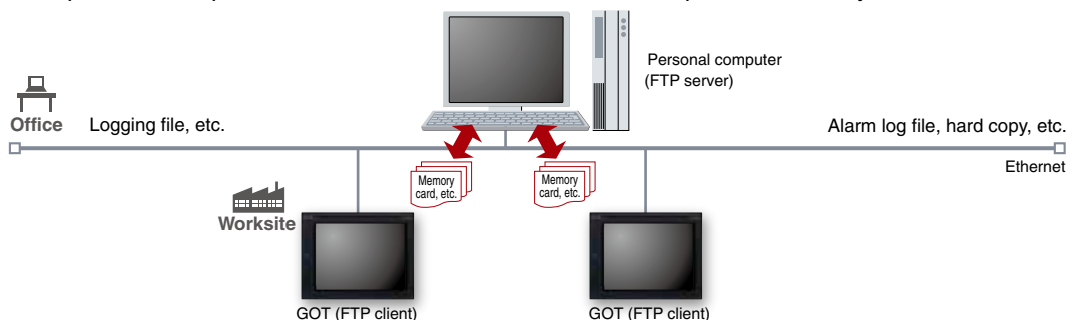
Mitsubishi Electric e-Factory presents the optimum products to connect production information and MES (Manufacturing Execution System) to improve productivity at clients' factories.



**Send and retrieve files between a GOT and personal computer** File Transfer (FTP Client) Function

**GT27** **GT25** **GT23** **GT21**

By using a GOT, files (alarm logs, hard copies, etc.) stored on the GOT's memory card or USB memory can be sent to or received from a personal computer. File names and folder names can be specified indirectly.



## Perfectly Complemented by SoftGOT

Execute GOT functions on your personal computer

SoftGOT

SoftGOT allows GOT functions to be executed on a personal computer. Similar to the GOT2000, a variety of industrial devices can be connected and monitored. The GT SoftGOT2000 Version1 software is included in GT Works3, but requires a separate license key to operate.



USB port license key

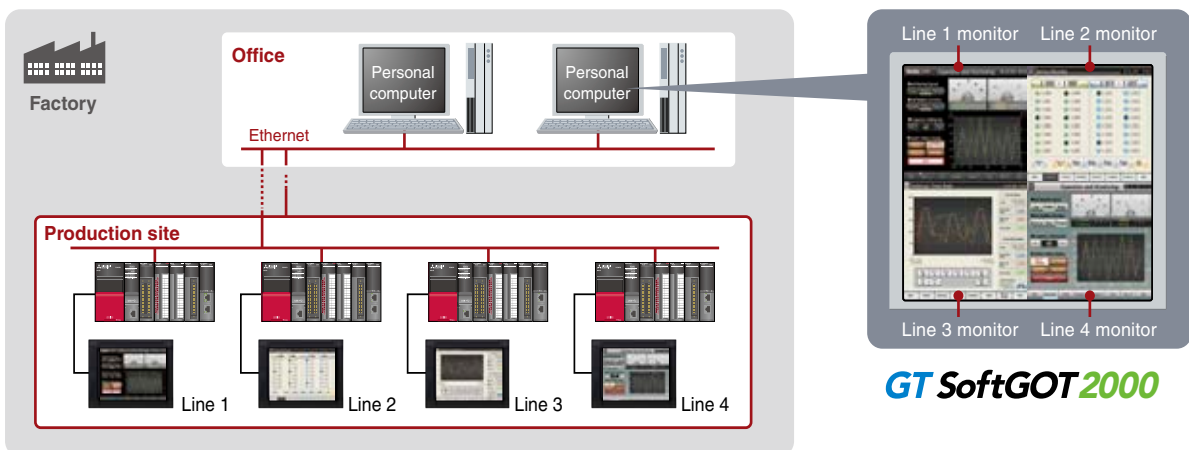
### Monitor the production site from a remote location

#### Reduce downtime

Use GT SoftGOT2000 to monitor the production site from your office. You can collect information quickly when a problem occurs, taking necessary actions immediately.

#### Use GOT project data from the production site

The GOT project file running at your production site can be reused as the GT SoftGOT2000 project file, greatly reducing your design costs.



### Engage with MELSEC process control

Simplify design and maintenance of a process control system by connecting PX Developer's monitor tools with GT SoftGOT2000. This process control monitoring system can be easily used in various process control applications.

#### PX Developer face plates, etc.

Monitor, operate or tune the loop control tags. (The display position can be specified.)

#### GT SoftGOT2000 touch switch / object

Click on touch switches and objects to open the various screens of the PX Developer monitor tool. (The display position can be specified.)

#### Security collaboration

The GT SoftGOT2000 security level is changed accordingly when the PX Developer monitor tool's mode is changed (engineer mode / operator mode / lock mode). Authority can be set for operations requiring security.



#### PX Developer monitor tool bar

Click on buttons to execute various operations such as starting GT SoftGOT2000 or switching base screens.

#### GT SoftGOT2000 base screen

Turn your desktop into a graphic monitoring window with the full-screen and back-screen mode.



GOT2000 compatible HMI software  
**GT SoftGOT2000** Version 1

Line up

Features

Functions

FA Solutions

Specifications

Product list

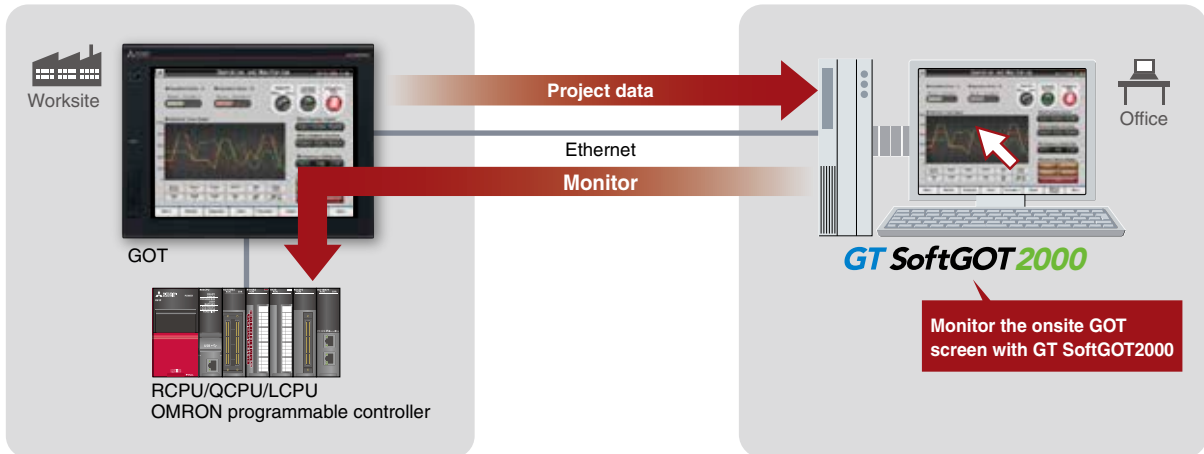
Support

**Remote monitoring with SoftGOT**

SoftGOT-GOT Link Function

GT27 GT25 GT23 GT21

GT SoftGOT2000 allows remote monitoring of devices connected on the worksite. This feature is available by connecting the GT SoftGOT2000 with the GOT via Ethernet and sharing the GOT project data.



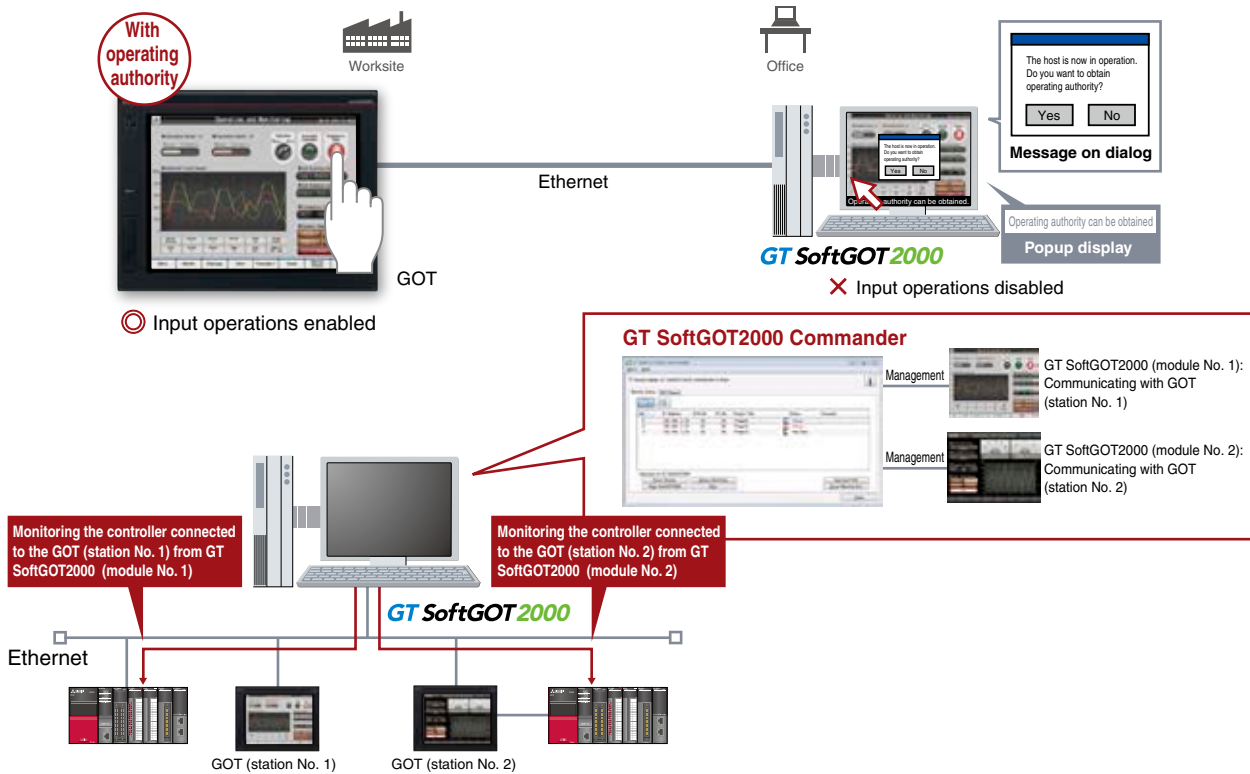
**Control multiple SoftGOT modules**

GT SoftGOT2000 Commander

GT27 GT25 GT23 GT21

**GT SoftGOT2000 Commander**

By using GT SoftGOT2000 Commander, multiple GT SoftGOT2000 modules using the SoftGOT-GOT link function can be efficiently managed, and the SoftGOT-GOT link function can be utilized easily.



## “More Options!”

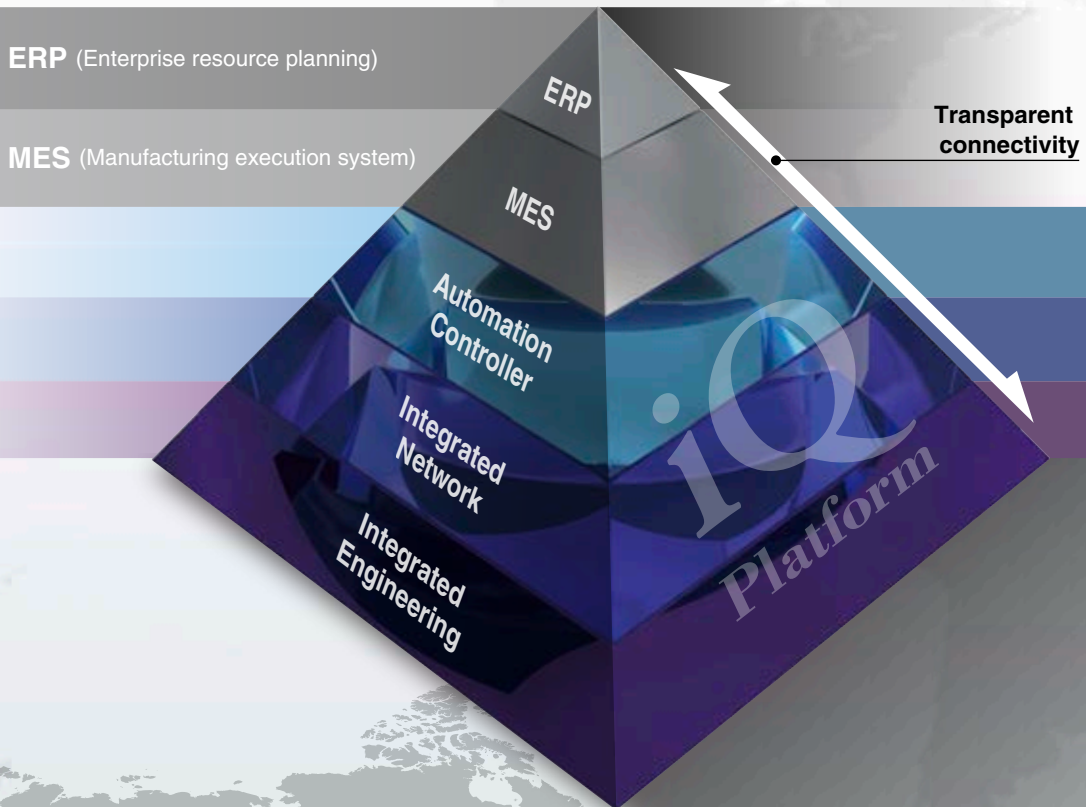
The GOT2000 engages various industrial devices to support maintenance

### iQ Platform for maximum return on investment

Minimize TCO, Seamless integration, Maximize productivity, Transparent communications: these are common items that highlight the benefits of the iQ Platform. Enhanced further with the arrival of the new iQ-R Series Programmable Automation Controller (PAC), reducing costs and improving productivity can be realized even easier.

The iQ Platform minimizes TCO at all phases of the automation life cycle by improving development times, enhancing productivity, reducing maintenance costs, and making information more easily accessible. Seamless integration is the core part of the iQ Platform, having a highly intelligent controller platform that caters to different aspects of control all on the same base rack, and maximizing productivity by taking advantage of the high-speed iQ-R system bus, which further reduces operation cycle times. Transparent communications are achieved by supporting the industry-leading gigabit Ethernet-based open network, CC-Link IE. Seamless data flow is realized no matter what point on the network, ensuring the free flow of production data across the manufacturing site.

Taking these aspects and applying the new iQ-R Series controller into the mix, the iQ Platform raises processing capabilities to the next level for future intelligent manufacturing plants.





+ FA Solutions

personnel and reduce downtime.

Line up

Features

Functions

FA Solutions

Specifications

Product list

Support



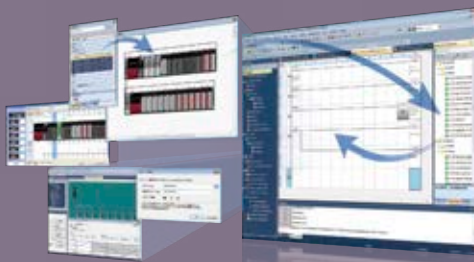
## PAC & HMI

- 1 The new high-speed MELSEC iQ-R Series system bus is 40-times faster realizing improved system performance
- 2 Program standardization through function blocks and module labels
- 3 Powerful and robust security features



## Network

- 1 CC-Link IE, 1Gbps high-speed and large bandwidth communications network (40-times faster link refresh)
- 2 Seamless connectivity within all levels of manufacturing with SLMP



## Engineering

- 1 Automatic generation of network configuration diagram
- 2 Share parameters across multiple engineering software via MELSOFT Navigator
- 3 Changes to system labels shared between PAC and HMI

Mitsubishi Electric  
FA Integrated Controller **iQ** Platform

## “Easier Operations!”

The GOT2000 engages various industrial devices to support maintenance

Programmable Controller  
**MELSEC**  
designed with automation in mind

### Simplify ladder monitoring and editing!

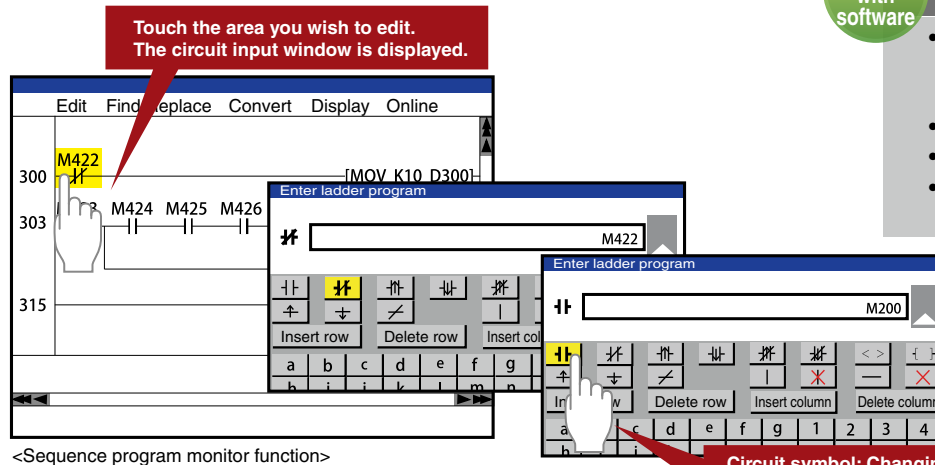


The MELSEC iQ-R Series, MELSEC-Q Series, and MELSEC-L Series sequence programs can be monitored and edited in ladder format using the sequence program monitor function.

In addition, the MELSEC-F Series sequence programs can be monitored in ladder format using the FX ladder monitor function.

Quickly perform maintenance operation on the GOT even if a personal computer is not readily available.

\* The MELSEC iQ-R Series sequence program monitor function is coming soon.



Included with software

Provided sample screen data

- Programmable controller connection samples (RCPU **NEW**, QCPU, FXCPU **NEW**)
- CC-Link network monitors
- Device monitors
- Simple motion connection samples

<Sequence program monitor function>

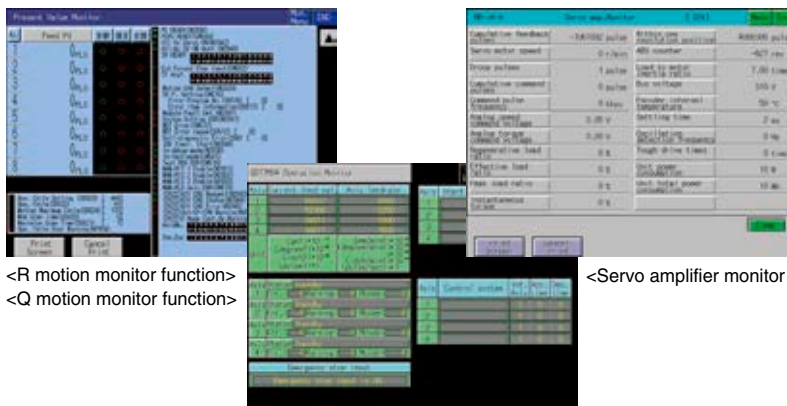
Circuit symbol: Changing from normally closed contact to normally open contact.  
Device: Changing from M422 to M200

### Easily monitor various controllers without creating screens!



General-purpose AC Servo  
SERVO MOTOR AMPLIFIER & MOTOR  
**MELSERVO**

Dedicated screens for motion controllers, positioning modules/simple motion modules, and servo amplifiers are available. Screens do not need to be created for monitoring motion controllers or changing servo parameters, monitoring or changing buffer memory values of positioning modules/simple motion modules, or monitoring or parameter setting of servo amplifiers.



<R motion monitor function>  
<Q motion monitor function>

<Servo amplifier monitor function>

<Intelligent module monitor function>

Included with software

Provided sample screen data

- MR-J4-A connection sample
- MR-J4-A-RJ connection sample
- **Coming soon**
- MR-J3-A connection sample





personnel and reduce downtime.

Line up

Features

Functions

FA Solutions

Specifications

Product list

Support



General-purpose Inverter  
**FREQROL**

**Easily debug your programs without opening the cabinet!**

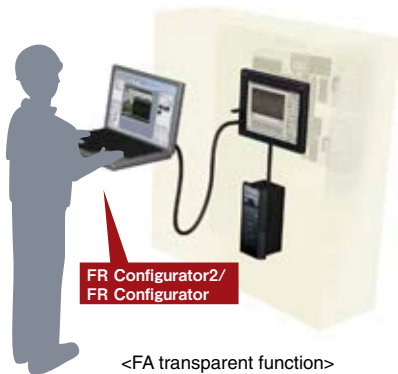
Connected with a personal computer, the GOT acts as a transparent gateway to enable startup and adjustment of equipment using FR Configurator2/FR Configurator. Users do not have to bother with opening the cabinet or changing cable connections.

Sample screen data on which the operation commands and parameters can be set are available.

Included with software

Provided sample screen data

- A800 connection sample
- F800 connection sample
- **NEW**
- D700 connection sample
- E700 connection sample
- F700P connection sample



<Sample screen>

**Simplify speed control, position control, and parameter setting**

Connected with a sensorless servo, the GOT can be used to perform speed control, position control, and parameter setting.

By connecting a personal computer to the front USB interface on the GOT, the GOT acts as a transparent gateway to enable startup and adjustment of equipment using FR Configurator. Users do not have to bother with opening the cabinet or changing cable connections.

Included with software

Provided sample screen data

- **NEW**
- E700EX connection sample



SENSORLESS SERVO



<Sample screen>

## “Easier Operations!”



+ FA Solutions

Easy to use support functions for various industrial devices.



## Easy connections and settings!

Sample screen data is available to read the controller status and control the operation directly from the GOT. The robot can be started and stopped, and the status and alarms can be monitored easily from the GOT.



<Sample screens>



## Quickly recover from trouble! **NEW**

Backup the CNC C70 machining data and parameters onto the GOT's SD card or USB memory using the backup/restore function. Users can perform batch operation to restore the data to the CNC C70.

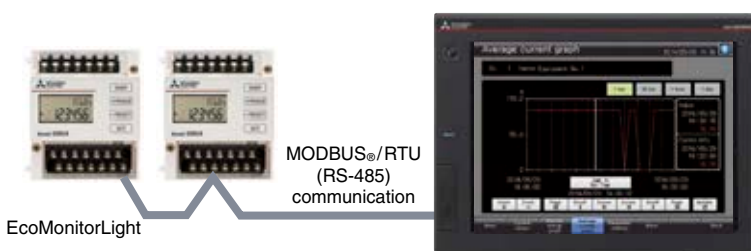


<Backup/Restore function>

**Eco Monitor Light**

## Visualize energy data at worksite!

Easily monitor the energy data (current, power, electric energy, etc.) and change parameters. A single GOT unit manages the information of up to 31 measurement terminals: energy measuring unit EcoMonitorLight EMU4-BD1-MB/EMU4-HD1-MB or electric multi-measuring instrument ME110SSR-MB.



EcoMonitorLight

<Sample screen>

Included with software

Provided sample screen data

- Energy measuring unit/  
Electric multi-measuring instrument connection sample **Coming soon**

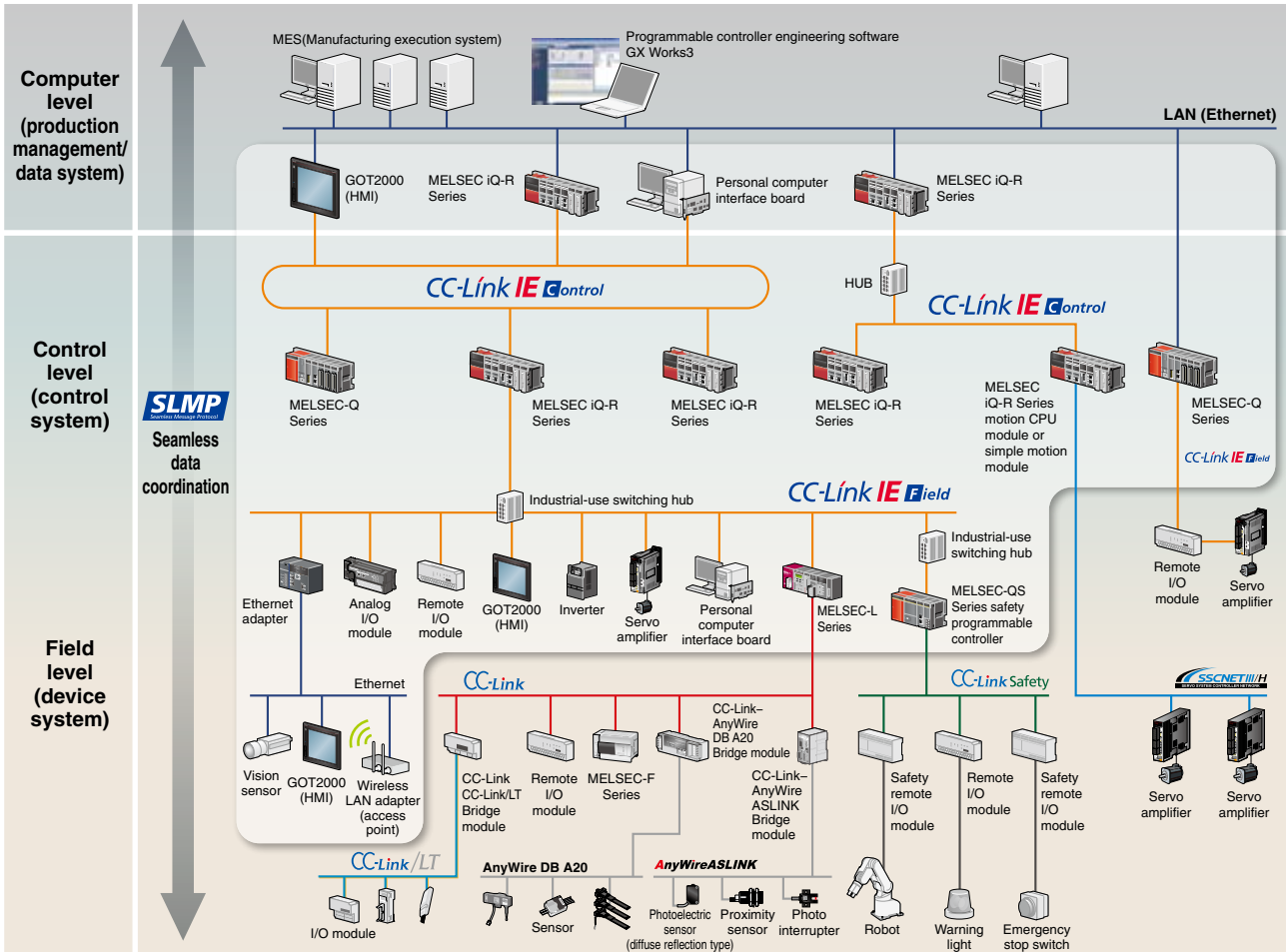
“More Options!”



+ FA Solutions

## CC-Link IE reduces the cost of system construction

The CC-Link IE network family is a high-speed 1 Gbps control level and field level Ethernet topology industrial open network.



### GOTs can be connected to the industrial open network CC-Link IE!

GOTs, programmable controllers, and other controllers can be connected via the CC-Link IE Controller Network or the CC-Link IE Field Network. Dedicated sample screens are available for checking the network status of the CC-Link IE Controller Network and the CC-Link IE Field Network. Communication status can easily be checked with the line monitor, the host information, or the station information without using a personal computer.

#### CC-Link IE Control

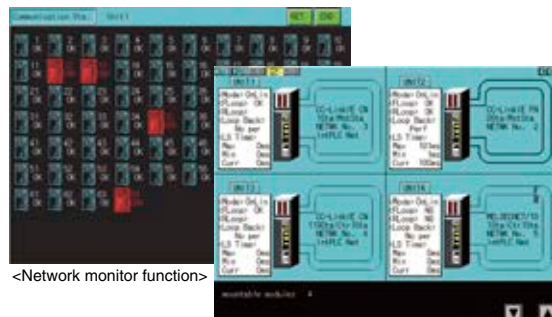
CC-Link IE Control is a high-reliability distributed control network designed to handle very large data communications (128 K word) over a high-speed (1Gbps) dual-loop optical cable topology.

- Communication unit on GOT: GT15-J71GP23-SX (normal station [optical loop])

#### CC-Link IE Field

CC-Link IE Field is a versatile gigabit Ethernet-based network integrating controller, I/O control, and motion control in a flexible topology supporting star, ring, and line configurations.

- Communication unit on GOT: GT15-J71GF13-T2 (intelligent device station)



\* For the details of CLPA (CC-Link Partner Association), please refer to page 76.

Line up

Features

Functions

FA Solutions

Specifications

Product list

Support

## “More Options!”

### iQSS connects all types of sensors.

Sensors used on the manufacturing floor are becoming more advanced and complex.

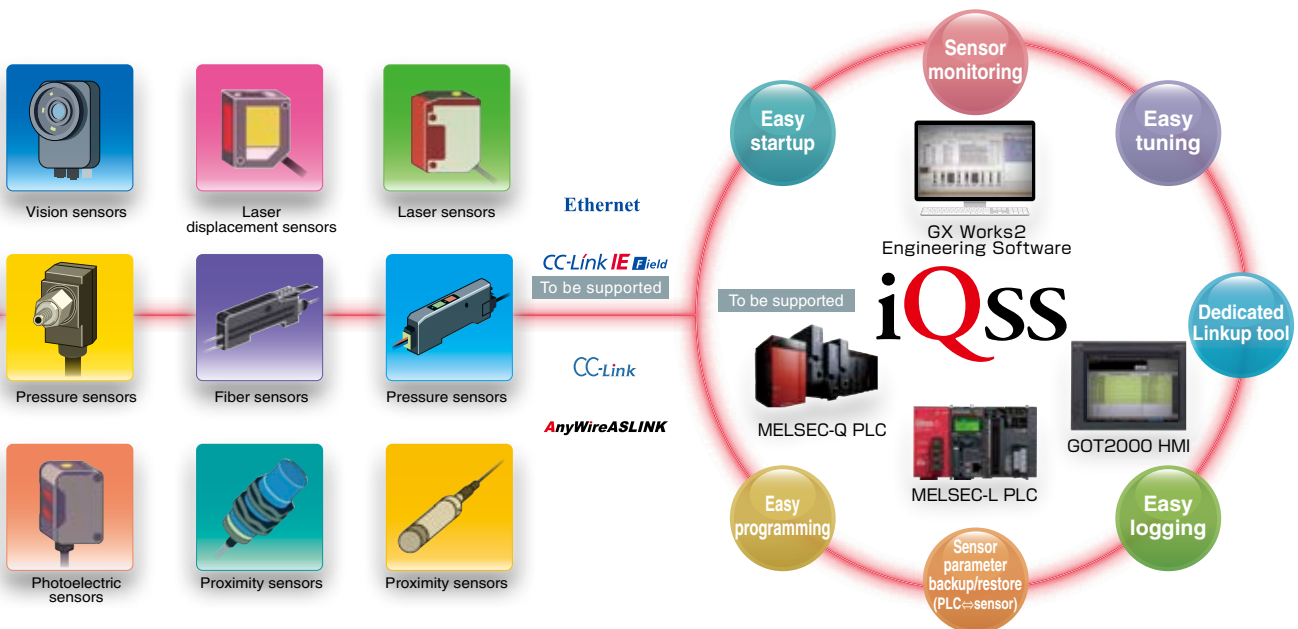
Managing your sensor configuration tools, and maintaining and starting up your equipment can be costly and hugely time consuming.

Through a collaboration with partner manufacturers, Mitsubishi Electric offers an **engineering tool** that enables intuitive configuration and maintenance of sensors.

This tool provides a solution that enhances the interaction between sensors and PLCs, HMIs and engineering softwares, which effectively reduces the customer's TCO\*.

The solution is iQ Sensor Solution (iQSS).

\* TCO: Total Cost of Ownership



**COGNEX Panasonic**

**MEE**

**BALLUFF** To be supported

**OPTEX  
FA**

**Anywire**

**MITSUBISHI  
ELECTRIC**

### Powerful support for sensor startup, operation, and maintenance!



Tools differ for each sensor and it's bothersome to monitor the sensors or backup the parameters...  
With GOT2000, the parameters for the iQSS partner sensors can be easily backed up onto the SD card mounted on the LCPU, and the parameters can be restored in the sensor!



Each sensor status cannot be monitored in a batch, so it takes time to confirm...  
With GOT2000, the iQSS partner sensors can be displayed on one screen, so you can improve the monitoring efficiency!



Multiple parameters cannot be changed in a batch with the parameter configuration tool, so it takes time to complete adjustments...  
With GOT2000, the sensor parameters can be set easily via the network, so you can shorten the work time!

\* For details about iQSS, please refer to the iQ Sensor Solution Catalog (L(NA)16029ENG).

\* For details about sensors, please contact our partner manufacturers.





+ FA Solutions

Line up

Features

Functions

FA Solutions

Specifications

Product list

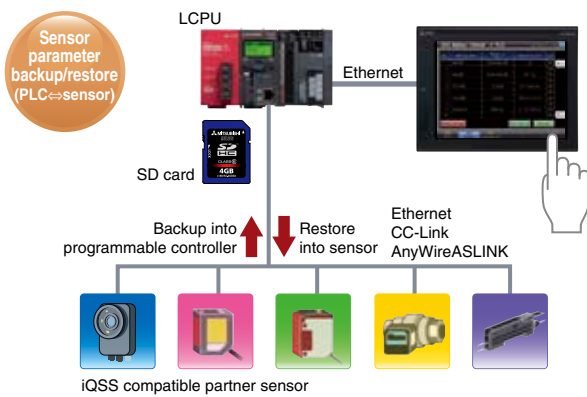
Support

## Sample screens for startup, operation, and maintenance of the iQSS compatible partner sensors!

**Previously** It was a hassle to backup sensor parameters because each manufacturer has a different software

**With GOT2000** Unify the configuration of all settings!

Backup and restore the parameters of any iQSS partner sensor (Ethernet, CC-Link, AnyWireASLINK) to the SD card mounted on the LCPU, reducing work time.



iQSS backup (sensor → programmable controller) screen

**Previously** Sensor status could not be monitored collectively and was time consuming

**With GOT2000** The statuses are displayed on one screen!

iQSS partner sensors (AnyWireASLINK) are displayed on a single screen for comprehensive monitoring



Input signal monitor screen



Sensor detailed information (Parameter setting screen)

### AnyWireASLINK line up

■ ASLINKER



■ ASLINKTERMINAL



■ ASLINKAMP



■ ASLINKSENSOR



# Specifications

## GT27

### General specifications

Item	Specifications					
Operating ambient temperature *1	0 to 55°C *2					
Storage ambient temperature	-20 to 60°C					
Operating ambient humidity	10 to 90% RH, non-condensing					
Storage ambient humidity	10 to 90% RH, non-condensing					
Vibration resistance	Compliant with JIS B 3502 and IEC 61131-2	Under intermittent vibration	Frequency	Acceleration	Half-amplitude	10 times each in X, Y and Z directions
			5 to 8.4Hz	—	3.5mm	
		Under continuous vibration	5 to 8.4Hz	—	1.75mm	
			8.4 to 150Hz	9.8m/s <sup>2</sup>	—	
Shock resistance	Compliant with JIS B 3502, IEC 61131-2 (147 m/s <sup>2</sup> (15G), 3 times each in X, Y and Z directions)					
Operating atmosphere	No oily smoke, corrosive gas or combustible gas, less conductive dust, away from direct sunlight (the same in storage)					
Operating altitude *3	2000m or less					
Installation location	Inside control panel					
Overvoltage category *4	II or less					
Pollution level *5	2 or less					
Cooling method	Self-cooling					
Grounding	Type D grounding (100Ω or less). Connect to panel if unable to ground.					

\*1 The operating ambient temperature includes the temperature inside the enclosure of the control panel to which the GOT is installed.

\*2 The maximum operating ambient temperature should be 5°C lower than that shown in the table on the left when connecting to a multimedia unit (GT27-MMR-Z), MELSECNET/H communication unit (GT15-J71LP23-25 or GT15-J71BR13) or CC-Link communication unit (GT15-J61BT13).

\*3 Do not operate or store the GOT unit in pressurized environments where the pressure exceeds 0m elevation atmospheric pressure, as this could result in abnormal operation. Do not pressurize inside the control panel for air purge cleaning. The pressure could raise the surface sheet, making the touch panel difficult to operate or causing the sheet to come off.

\*4 Assuming that the device is connected at some point between a public power distribution network and local system equipment. Category II applies to devices that are supplied with power from fixed equipment. The surge withstand voltage is 2,500V for devices with ratings up to 300V.

\*5 Index that indicates the level of foreign conductive matter in the operating environment of the device. Pollution level 2 denotes an environment contaminated only by non-conductive matter which may, under certain conditions, become temporarily conductive due to condensation.

Do not use or store the GOT under direct sun light or in an environment with excessively high temperature, dust, humidity or vibration.

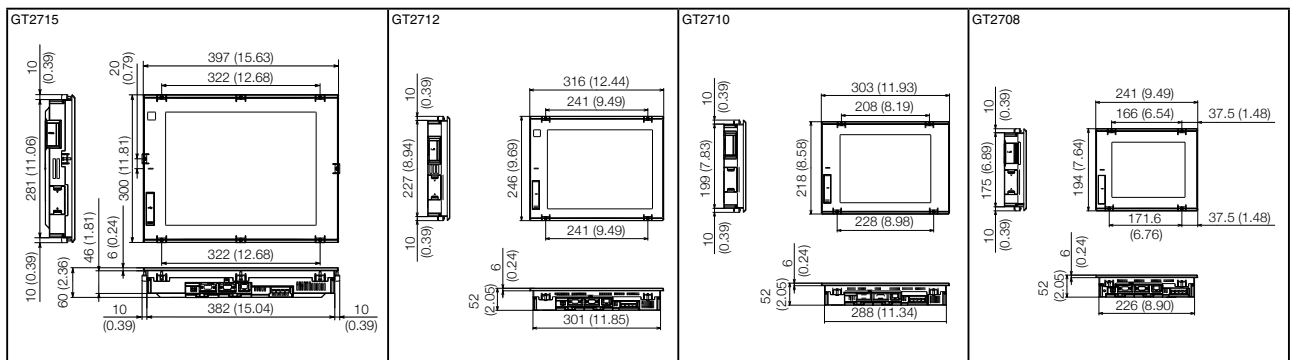
For inquiries relating to the status of conforming to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

### Power supply specifications

Item	Specifications								
	GT2715-XTBA	GT2712-STBA GT2712-STWA	GT2710-STBA GT2710-VTBA GT2710-VTWA	GT2708-STBA GT2708-VTBA	GT2715-XTBD	GT2712-STBD GT2712-STWD	GT2710-STBD GT2710-VTBD GT2710-VTWD	GT2708-STBD GT2708-VTBD	
Power supply voltage	100 to 240VAC (+10%, -15%)				24VDC (+25%, -20%)				
Power supply frequency	50/60Hz ±5%								
Power consumption	Maximum load	51W or less	44W or less	41W or less	41W or less	48W or less	45W or less	42W or less	39W or less
	Stand alone	25W	19W	17W	15W	23W	18W	15W	13W
	Stand alone with backlight off	10W	10W	10W	10W	8W	8W	8W	8W
Inrush current	40A or less (3ms, ambient temperature 25°C, maximum load)	60A or less (2ms, ambient temperature 25°C, maximum load)			5A or less (20ms, ambient temperature 25°C, maximum load)				
Allowable momentary power failure time	Within 20ms (100VAC or more)				Within 10ms				
Noise immunity	Noise voltage 1500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz				Noise voltage 500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz				
Withstand voltage	1500VAC for 1 minute between power supply terminal and ground				350VAC for 1 minute between power supply terminal and ground				
Insulation resistance	10MΩ or higher with an insulation resistance tester (500VDC between power supply terminal and ground)								

### External dimensions

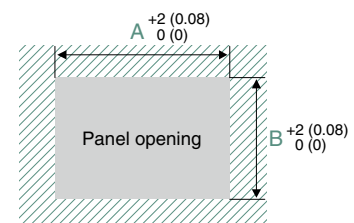
Unit: mm (inch)



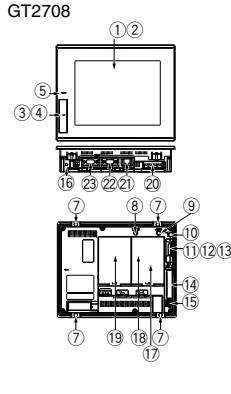
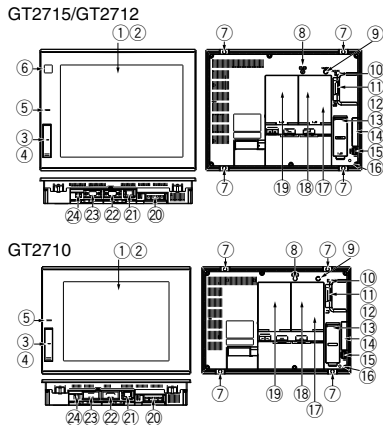
### Panel cutting dimensions

Unit: mm (inch)

Screen size	Model	A	B	Remarks
15"	GT2715	383.5 (15.10)	282.5 (11.12)	Same dimensions as GT1695, GT1595.
12.1"	GT2712	302 (11.89)	228 (8.98)	Same dimensions as GT1685, GT1585, A985GOT.
10.4"	GT2710	289 (11.38)	200 (7.87)	Same dimensions as GT167□, GT157□, A97□GOT.
8.4"	GT2708	227 (8.94)	176 (6.93)	Same dimensions as GT1665, GT1565.



**Components names**



- ① Display screen
- ② Touch panel
- ③ USB interface (host/front face)  
\* Excluding white model
- ④ USB interface (device/front face)  
\* Excluding white model
- ⑤ POWER LED
- ⑥ Human sensor
- ⑦ Unit mounting bracket
- ⑧ Reset switch
- ⑨ S. MODE switch
- ⑩ SD card access LED
- ⑪ SD card interface
- ⑫ SD card cover
- ⑬ Battery
- ⑭ Side interface
- ⑮ USB interface (host/rear face)
- ⑯ Cable clamp mounting hole
- ⑰ Terminating resistor setting switch  
(inside the cover)
- ⑱ Auxiliary extension I/F
- ⑲ Extension interface
- ⑳ Power supply terminal
- ㉑ Ethernet interface
- ㉒ RS-232 interface
- ㉓ RS-422/485 interface
- ㉔ USB interface (device/rear face)  
\* White model only

**Performance specifications**

Item	Specifications							
	GT2715-XTBA GT2715-XTBD	GT2712-STBA GT2712-STBD	GT2712-STWA GT2712-STWD	GT2710-STBA GT2710-STBD	GT2710-VTBA GT2710-VTBD	GT2710-VTWA GT2710-VTWD	GT2708-STBA GT2708-STBD	GT2708-VTBA GT2708-VTBD
Display device	TFT color LCD							
Screen size	15"		12.1"		10.4"		8.4"	
Resolution	XGA: 1024×768 dots		SVGA: 800×600 dots		VGA: 640×480 dots		SVGA: 800×600 dots VGA: 640×480 dots	
Display size	304.1(12.0)(W)× 228.1(8.98)(H) mm(inch)		246(9.685)(W)×184.5(7.264)(H) mm(inch)		211.2(8.315)(W)×158.4(6.236)(H) mm(inch)		170.9(6.728)(W) × 128.2(5.047)(H) mm(inch)	
Number of characters	16-dot standard font: 64 chars. × 48 lines (2-byte) 12-dot standard font: 85 chars. × 64 lines (2-byte)		16-dot standard font: 50 chars. × 37 lines (2-byte) 12-dot standard font: 66 chars. × 50 lines (2-byte)		16-dot standard font: 40 chars. × 30 lines (2-byte) 12-dot standard font: 53 chars. × 40 lines (2-byte)		16-dot standard font: 50 chars. × 37 lines (2-byte) 12-dot standard font: 66 chars. × 50 lines (2-byte)	
Display color	65536 colors							
Intensity adjustment	32-level adjustment							
Backlight	LED (not replaceable)							
Backlight life *4	Approx. 60000 hours (Time for display intensity reaches 50% at ambient temperature of 25°C)							
Type	Analog resistive film							
Key size	Minimum 2 × 2 dots (per key)							
Simultaneous press	Maximum 2 points							
Life	1 million times or more (operating force 0.98N or less)							
Detection distance	1m						-	
Detection temperature	Temperature difference between human body and ambient air: 4°C or higher						-	
User memory capacity	Memory for storage (ROM): 57MB Memory for operation (RAM): 128MB							
Life (No. of writings)	100000 times							
Internal clock accuracy	±90 sec/month (ambient temperature 25°C)							
Battery	GT11-50BAT lithium battery							
Life	Approx. 5 years (ambient temperature 25°C)							
RS-232	1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male)							
RS-422/485	1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (female)							
Ethernet	1ch Data transfer method: 10BASE-T/100BASE-TX Connector shape: RJ-45 (modular jack)							
USB (host)	2ch (front face/rear face)		1ch (rear face)		2ch (front face/rear face)		1ch (rear face)	
USB (device)	Maximum transfer speed: High-Speed 480Mbps Connector shape: USB-A							
	1ch (front face)		1ch (rear face)		1ch (front face)		1ch (rear face)	
SD card	1ch SDHC compliant (maximum 32GB)							
Extension interface	For communication unit/option unit mounting							
Auxiliary extension I/F	For option unit mounting							
Side interface	For communication unit mounting							
Buzzer output	Single tone (tone, tone length adjustable)							
POWER LED	Emission color: 2 colors (blue, orange)							
Protective structure	Front: IP67F *5 In control panel: IP2X							
External dimensions	397(15.63)(W)× 300(11.81)(H)×60(D) mm(inch)		316(12.44)(W)×246(9.69)(H)×52(2.05)(D) mm(inch)		303(11.93)(W)×218(8.58)(H)×52(2.05)(D) mm(inch)		241(9.49)(W)×194(7.64)(H)×52(2.05)(D) mm(inch)	
Panel cutting dimensions	383.5(15.10)(W)× 282.5(11.12)(H) mm(inch)		302(11.89)(W)×228(8.98)(H) mm(inch)		289(11.38)(W)×200(7.87)(H) mm(inch)		227(8.94)(W)×176(6.93)(H) mm(inch)	
Weight (excl. mounting brackets)	4.5kg		2.4kg		2.1kg		1.5kg	
Compatible software package	GT Designer3 Version 1.122C or later							

\*1 On LCD panels, bright dots (permanently lit) and black dots (never lit) generally appear. Because the number of display elements that exist on an LCD panel is large, it is not possible to reduce appearance of the bright and black dots to zero. Individual differences in LCD panels may cause differences in color, uneven brightness and flickering. Note that these are characteristics of LCD panels and it does not mean the products are defective or damaged.

\*2 Flickering may occur due to vibration or shock, or depending on the display colors.

\*3 The life of using a stylus pen is 100,000. Use a stylus pen meeting the following specifications.  
• Material: Polyacetal resin • Pen point radius: 0.8mm or more

\*4 Using the GOT screen saver/backlight OFF functions prevents screen burn-in and extends backlight life.

\*5 Pressing "PUSH" mark firmly and locking the USB environmentally protective cover makes it conform to IP67F. (The USB interface conforms to IP2X when the cover is open.) However, this does not guarantee protection in all users' environments. The unit may not be used in certain environments where it is subjected to splashing oil or chemicals for a long period of time or soaked in oil mist.

# Specifications

## GT25

### General specifications

Item	Specifications					
Operating ambient temperature *1	0 to 55°C *2					
Storage ambient temperature	-20 to 60°C					
Operating ambient humidity	10 to 90% RH, non-condensing					
Storage ambient humidity	10 to 90% RH, non-condensing					
Vibration resistance	Compliant with JIS B 3502 and IEC 61131-2	Under intermittent vibration	Frequency	Acceleration	Half-amplitude	10 times each in X, Y and Z directions
			5 to 8.4Hz	–	3.5mm	
		Under continuous vibration	5 to 8.4Hz	–	1.75mm	–
			8.4 to 150Hz	4.9m/s <sup>2</sup>	–	
Shock resistance	Compliant with JIS B 3502, IEC 61131-2 (147 m/s <sup>2</sup> (15G), 3 times each in X, Y and Z directions)					
Operating atmosphere	No oily smoke, corrosive gas or combustible gas, less conductive dust, away from direct sunlight (the same in storage)					
Operating altitude *3	2000m or less					
Installation location	Inside control panel					
Overvoltage category *4	II or less					
Pollution level *5	2 or less					
Cooling method	Self-cooling					
Grounding	Type D grounding (100Ω or less). Connect to panel if unable to ground.					

\*1 The operating ambient temperature includes the temperature inside the enclosure of the control panel to which the GOT is installed.

\*2 The maximum operating ambient temperature should be 5°C lower than that shown in the table on the left when connecting to a MELSECNET/H communication unit (GT15-J71LP23-25 or GT15-J71BR13) or CC-Link communication unit (GT15-J61BT13).

\*3 Do not operate or store the GOT unit in pressurized environments where the pressure exceeds 0m elevation atmospheric pressure, as this could result in abnormal operation. Do not pressurize inside the control panel for air purge cleaning. The pressure could raise the surface sheet, making the touch panel difficult to operate or causing the sheet to come off.

\*4 Assuming that the device is connected at some point between a public power distribution network and local system equipment. Category II applies to devices that are supplied with power from fixed equipment. The surge withstand voltage is 2,500V for devices with ratings up to 300V.

\*5 Index that indicates the level of foreign conductive matter in the operating environment of the device. Pollution level 2 denotes an environment contaminated only by non-conductive matter which may, under certain conditions, become temporarily conductive due to condensation.

Do not use or store the GOT under direct sun light or in an environment with excessively high temperature, dust, humidity or vibration.

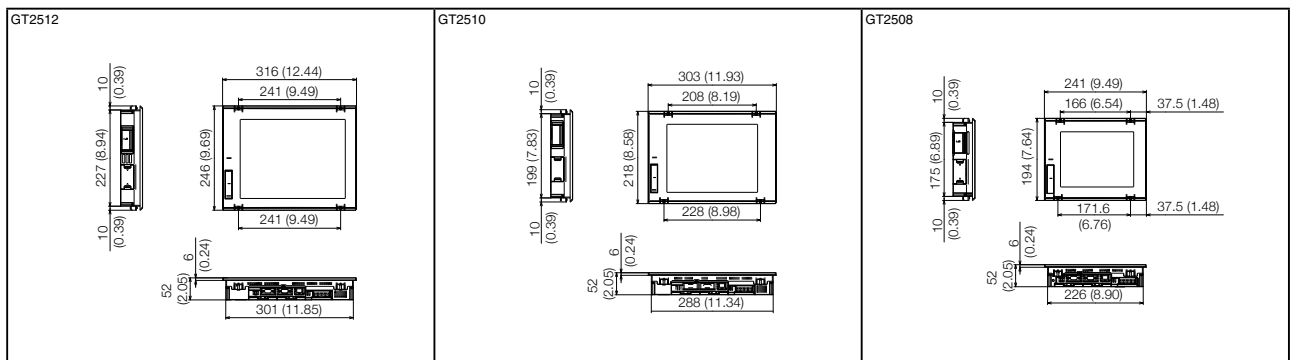
For inquiries relating to the status of conforming to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

### Power supply specifications

Item	Specifications					
	GT2512-STBA	GT2510-VTBA GT2510-VTWA	GT2508-VTBA GT2508-VTWA	GT2512-STBD	GT2510-VTBD GT2510-VTWD	GT2508-VTBD GT2508-VTWD
Power supply voltage	100 to 240VAC (+10%, -15%)			24VDC (+25%, -20%)		
Power supply frequency	50/60Hz ±5%			–		
Power consumption	Maximum load	35W or less	34W or less	31W or less	33W or less	31W or less
	Stand alone	14W	12W	11W	13W	8W
	Stand alone with backlight off	7W	7W	7W	6W	6W
Inrush current	60A or less (2ms, ambient temperature 25°C, maximum load)			5A or less (20ms, ambient temperature 25°C, maximum load)		
Allowable momentary power failure time	Within 20ms (100VAC or more)			Within 10ms		
Noise immunity	Noise voltage 1500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz			Noise voltage 500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz		
Withstand voltage	1500VAC for 1 minute between power supply terminal and ground			350VAC for 1 minute between power supply terminal and ground		
Insulation resistance	10MΩ or higher with an insulation resistance tester (500VDC between power supply terminal and ground)					

### External dimensions

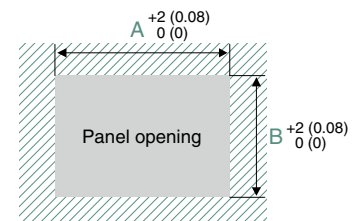
Unit: mm (inch)



### Panel cutting dimensions

Unit: mm (inch)

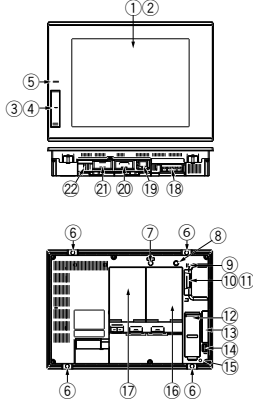
Screen size	Model	A	B	Remarks
12.1"	GT2512	302 (11.89)	228 (8.98)	Same dimensions as GT1685, GT1585, A985GOT.
10.4"	GT2510	289 (11.38)	200 (7.87)	Same dimensions as GT167□, GT157□, A97□GOT.
8.4"	GT2508	227 (8.94)	176 (6.93)	Same dimensions as GT1665, GT1565.



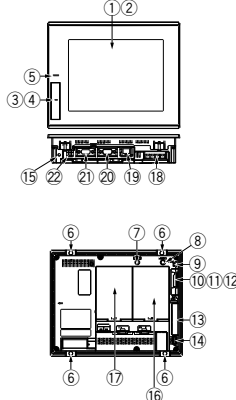


### Components names

GT2512/GT2510



GT2508



- ① Display screen
- ② Touch panel
- ③ USB interface (host/front face)  
\* Excluding white model
- ④ USB interface (device/front face)  
\* Excluding white model
- ⑤ POWER LED
- ⑥ Unit mounting bracket
- ⑦ Reset switch
- ⑧ S. MODE switch
- ⑨ SD card access LED
- ⑩ SD card interface
- ⑪ SD card cover
- ⑫ Battery
- ⑬ Side interface
- ⑭ USB interface (host/rear face)
- ⑮ Cable clamp mounting hole
- ⑯ Terminating resistor setting switch  
(inside the cover)
- ⑰ Extension interface
- ⑱ Power supply terminal
- ⑲ Ethernet interface
- ⑳ RS-232 interface
- ㉑ RS-422/485 interface
- ㉒ USB interface (device/rear face)  
\* White model only

### Performance specifications

Item	Specifications					
	GT2512-STBA GT2512-STBD	GT2510-VTBA GT2510-VTBD	GT2510-VTWA GT2510-VTWD	GT2508-VTBA GT2508-VTBD	GT2508-VTWA GT2508-VTWD	
Display section *1 *2	Display device	TFT color LCD				
	Screen size	12.1"	10.4"		8.4"	
	Resolution	SVGA: 800x600 dots	VGA: 640x480 dots			
	Display size	246(9.685)(W)× 184.5(7.264)(H) mm(inch)	211.2(8.315)(W)×158.4(6.236)(H) mm(inch)		170.9(6.728)(W) × 128.2(5.047)(H) mm(inch)	
	Number of characters	16-dot standard font: 50 chars × 37 lines (2-byte) 12-dot standard font: 66 chars. × 50 lines (2-byte)	16-dot standard font: 40 chars. × 30 lines (2-byte) 12-dot standard font: 53 chars. × 40 lines (2-byte)			
	Display color	65536 colors				
	Intensity adjustment	32-level adjustment				
	Backlight	LED (not replaceable)				
Backlight life *4	Approx. 60000 hours (Time for display intensity reaches 50% at ambient temperature of 25°C)					
Touch panel *3	Type	Analog resistive film				
	Key size	Minimum 2 × 2 dots (per key)				
	Simultaneous press	Simultaneous press prohibited *5 (only 1 point can be pressed)				
Life	1 million times or more (operating force 0.98N or less)					
User memory	User memory capacity	Memory for storage (ROM): 32MB Memory for operation (RAM): 80MB				
	Life (No. of writings)	100000 times				
Internal clock accuracy	±90 sec/month (ambient temperature 25°C)					
Battery	Type	GT11-50BAT lithium battery				
	Life	Approx. 5 years (ambient temperature 25°C)				
Built-in interface	RS-232	1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male)				
	RS-422/485	1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (female)				
	Ethernet	1ch Data transfer method: 10BASE-T/100BASE-TX Connector shape: RJ-45 (modular jack)				
	USB (host)	2ch (front face/rear face)	2ch (front face/rear face)	1ch (rear face)	2ch (front face/rear face)	1ch (rear face)
		Maximum transfer speed: High-Speed 480Mbps Connector shape: USB-A				
	USB (device)	1ch (front face)	1ch (front face)	1ch (rear face)	1ch (front face)	1ch (rear face)
		Maximum transfer speed: High-Speed 480Mbps Connector shape: USB Mini-B				
	SD card	1ch SDHC compliant (maximum 32GB)				
Extension interface	For communication unit/option unit mounting					
Side interface	For communication unit mounting					
Buzzer output	Single tone (tone, tone length adjustable)					
POWER LED	Emission color: 2 colors (blue, orange)					
Protective structure	Front: IP67F *6 In control panel: IP2X					
External dimensions	316(12.44)(W)×246(9.69)(H) ×52(2.05)(D) mm(inch)	303(11.93)(W)×218(8.58)(H)×52(2.05)(D) mm(inch)		241(9.49)(W)×194(7.64)(H)×52(2.05)(D) mm(inch)		
Panel cutting dimensions	302(11.89)(W)×228(8.98)(H) mm(inch)	289(11.38)(W)×200(7.87)(H) mm(inch)		227(8.94)(W)×176(6.93)(H) mm(inch)		
Weight (excl. mounting brackets)	2.4kg	2.1kg		1.5kg		
Compatible software package	GT Designer3 Version 1.122C or later					

\*1 On LCD panels, bright dots (permanently lit) and black dots (never lit) generally appear. Because the number of display elements that exist on an LCD panel is large, it is not possible to reduce appearance of the bright and black dots to zero. Individual differences in LCD panels may cause differences in color, uneven brightness and flickering. Note that these are characteristics of LCD panels and it does not mean the products are defective or damaged.

\*2 Flickering may occur due to vibration or shock, or depending on the display colors.

\*3 The life of using a stylus pen is 100,000. Use a stylus pen meeting the following specifications.  
• Material: Polyacetal resin • Pen point radius: 0.8mm or more

\*4 Using the GOT screen saver/backlight OFF functions prevents screen burn-in and extends backlight life.

\*5 When 2 points on the touch panel are pressed simultaneously, if a switch is located the middle of the 2 points then the switch will be activated. Therefore, avoid pressing 2 points on the touch panel simultaneously.

\*6 Pressing "PUSH" mark firmly and locking the USB environmentally protective cover makes it conform to IP67F. (The USB interface conforms to IP2X when the cover is open.)  
However, this does not guarantee protection in all users' environments. The unit may not be used in certain environments where it is subjected to splashing oil or chemicals for a long period of time or soaked in oil mist.

## GT23

### General specifications

Item	Specifications					
Operating ambient temperature *1	0 to 55°C					
Storage ambient temperature	-20 to 60°C					
Operating ambient humidity	10 to 90% RH, non-condensing *2					
Storage ambient humidity	10 to 90% RH, non-condensing *2					
Vibration resistance	Compliant with JIS B 3502 and IEC 61131-2	Under intermittent vibration	Frequency	Acceleration	Half-amplitude	Sweep count
			5 to 8.4Hz	—	3.5mm	
		Under continuous vibration	8.4 to 150Hz	9.8m/s <sup>2</sup>	—	10 times each in X, Y and Z directions
			5 to 8.4Hz	—	1.75mm	
8.4 to 150Hz	4.9m/s <sup>2</sup>	—	—			
Shock resistance	Compliant with JIS B 3502, IEC 61131-2 (147 m/s <sup>2</sup> (15G), 3 times each in X, Y and Z directions)					
Operating atmosphere	No oily smoke, corrosive gas or combustible gas, less conductive dust, away from direct sunlight (the same in storage)					
Operating altitude *3	2000m or less					
Installation location	Inside control panel					
Overvoltage category *4	II or less					
Pollution level *5	2 or less					
Cooling method	Self-cooling					
Grounding	Type D grounding (100Ω or less). Connect to panel if unable to ground.					

\*1 The operating ambient temperature includes the temperature inside the enclosure of the control panel to which the GOT is installed.

\*2 If ambient temperature exceeds 40°C, absolute humidity should not exceed 90% at 40°C.

\*3 Do not operate or store the GOT unit in pressurized environments where the pressure exceeds 0m elevation atmospheric pressure, as this could result in abnormal operation. Do not pressurize inside the control panel for air purge cleaning. The pressure could raise the surface sheet, making the touch panel difficult to operate or causing the sheet to come off.

\*4 Assuming that the device is connected at some point between a public power distribution network and local system equipment. Category II applies to devices that are supplied with power from fixed equipment. The surge withstand voltage is 2,500V for devices with ratings up to 300V.

\*5 Index that indicates the level of foreign conductive matter in the operating environment of the device. Pollution level 2 denotes an environment contaminated only by non-conductive matter which may, under certain conditions, become temporarily conductive due to condensation.

Do not use or store the GOT under direct sun light or in an environment with excessively high temperature, dust, humidity or vibration.

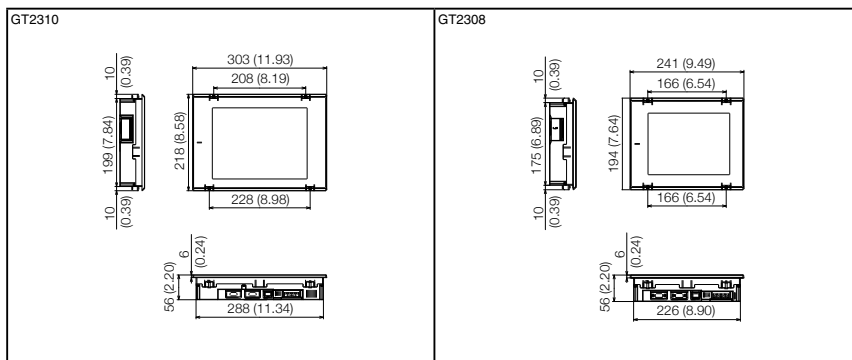
For inquiries relating to the status of conforming to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

### Power supply specifications

Item	Specifications			
	GT2310-VTBA	GT2308-VTBA	GT2310-VTBD	GT2308-VTBD
Power supply voltage	100 to 240VAC (+10%, -15%)		24VDC (+25%, -20%)	
Power supply frequency	50/60Hz ±5%			
Power consumption	Maximum load	18W or less	11W or less	16W or less
	Stand alone	15W	9W	13W
	Stand alone with backlight off	8W	6W	7W
Inrush current	40A or less (4ms, ambient temperature 25°C, maximum load)		40A or less (2ms, ambient temperature 25°C, maximum load)	
Allowable momentary power failure time	Within 20ms (100VAC or more)		Within 10ms	
Noise immunity	Noise voltage 1500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz		Noise voltage 500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz	
Withstand voltage	1500VAC for 1 minute between AC external terminal and ground		350VAC for 1 minute between power supply terminal and ground	
Insulation resistance	10MΩ or higher with an insulation resistance tester (500VDC between power supply terminal and ground)			

### External dimensions

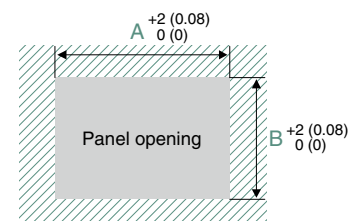
Unit: mm (inch)



### Panel cutting dimensions

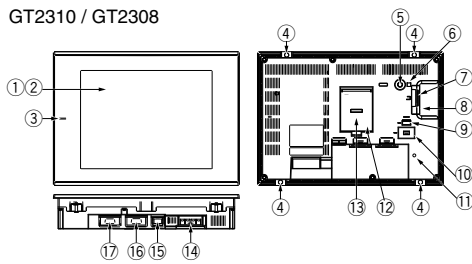
Unit: mm (inch)

Screen size	Model	A	B	Remarks
10.4"	GT2310	289 (11.38)	200 (7.87)	Same dimensions as GT167□, GT157□, A97□GOT.
8.4"	GT2308	227 (8.94)	176 (6.93)	Same dimensions as GT1665, GT1565.



## Components names

GT2310 / GT2308



- ① Display screen
- ② Touch panel
- ③ POWER LED
- ④ Unit mounting bracket
- ⑤ S. MODE switch
- ⑥ SD card access LED
- ⑦ SD card interface
- ⑧ SD card cover
- ⑨ USB interface (host)
- ⑩ USB interface (device)
- ⑪ Cable clamp mounting hole
- ⑫ Terminating resistor setting switch (inside the cover)
- ⑬ Battery
- ⑭ Power supply terminal
- ⑮ Ethernet interface
- ⑯ RS-232 interface
- ⑰ RS-422/485 interface

## Performance specifications

Item	Specifications		
	GT2310-VTBA GT2310-VTBD	GT2308-VTBA GT2308-VTBD	
Display section <sup>*1 *2</sup>	Display device	TFT color LCD	
	Screen size	10.4"	
	Resolution	VGA: 640x480 dots	
	Display size	211.2(8.315)(W)x158.4(6.236)(H) mm(inch)	
	Number of characters	16-dot standard font: 40 chars. x 30 lines (2-byte) 12-dot standard font: 53 chars. x 40 lines (2-byte)	
	Display color	65536 colors	
	Intensity adjustment	16-level adjustment	
	Backlight	LED (not replaceable)	
Backlight life <sup>*4</sup>	Approx. 50000 hours (Time for display intensity reaches 50% at ambient temperature of 25°C)		
Touch panel <sup>*3</sup>	Type	Analog resistive film	
	Key size	Minimum 2 x 2 dots (per key)	
	Simultaneous press	Simultaneous press prohibited <sup>*5</sup> (only 1 point can be pressed)	
	Life	1 million times or more (operating force 0.98N or less)	
User memory	User memory capacity	Memory for storage (ROM): 9MB Memory for operation (RAM): 9MB	
	Life (No. of writings)	100000 times	
Internal clock accuracy	±90 sec/month (ambient temperature 25°C)		
Battery	GT11-50BAT lithium battery		
	Life	Approx. 5 years (ambient temperature 25°C)	
Built-in interface	RS-232	1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male)	
	RS-422/485	1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (female)	
	Ethernet	1ch Data transfer method: 10BASE-T/100BASE-TX Connector shape: RJ-45 (modular jack)	
	USB (host)	1ch	
		Maximum transfer speed: Full-Speed 12Mbps Connector shape: USB-A	
	USB (device)	1ch	
Maximum transfer speed: Full-Speed 12Mbps Connector shape: USB Mini-B			
SD card	1ch SDHC compliant (maximum 32GB)		
Buzzer output	Single tone (tone length adjustable)		
POWER LED	Emission color: 2 colors (blue, orange)		
Protective structure	Front: IP67F <sup>*6</sup> In control panel: IP2X		
External dimensions	303(11.93)(W)x218(8.58)(H)x56(2.20)(D) mm(inch)	241(9.49)(W)x194(7.64)(H)x56(2.20)(D) mm(inch)	
Panel cutting dimensions	289(11.38)(W)x200(7.87)(H) mm(inch)		227(8.94)(W)x176(6.93)(H) mm(inch)
Weight (excl. mounting brackets)	1.9kg		1.5kg
Compatible software package	GT Designer3 Version1.122C or later		

<sup>\*1</sup> On LCD panels, bright dots (permanently lit) and black dots (never lit) generally appear. Because the number of display elements that exist on an LCD panel is large, it is not possible to reduce appearance of the bright and black dots to zero. Individual differences in LCD panels may cause differences in color, uneven brightness and flickering. Note that these are characteristics of LCD panels and it does not mean the products are defective or damaged.

<sup>\*2</sup> Flickering may occur due to vibration or shock, or depending on the display colors.

<sup>\*3</sup> The life of using a stylus pen is 100,000. Use a stylus pen meeting the following specifications.  
• Material: Polyacetal resin • Pen point radius: 0.8mm or more

<sup>\*4</sup> Using the GOT screen saver/backlight OFF functions prevents screen burn-in and extends backlight life.

<sup>\*5</sup> When 2 points on the touch panel are pressed simultaneously, if a switch is located the middle of the 2 points then the switch will be activated. Therefore, avoid pressing 2 points on the touch panel simultaneously.

<sup>\*6</sup> This does not guarantee protection in all users' environments. The unit may not be used in certain environments where it is subjected to splashing oil or chemicals for a long period of time or soaked in oil mist.

# Specifications

## GT21

### General specifications

Item	Specifications					
Operating ambient temperature *1	0 to 55°C (horizontal installation), 0 to 50°C (vertical installation)					
Storage ambient temperature	-20 to 60°C					
Operating ambient humidity	10 to 90% RH, non-condensing *2					
Storage ambient humidity	10 to 90% RH, non-condensing *2					
Vibration resistance	Compliant with JIS B 3502 and IEC 61131-2	Under intermittent vibration	Frequency	Acceleration	Half-amplitude	10 times each in X, Y and Z directions
			5 to 8.4Hz	-	3.5mm	
		Under continuous vibration	5 to 8.4Hz	9.8m/s <sup>2</sup>	-	-
			5 to 8.4Hz	4.9m/s <sup>2</sup>	1.75mm	
Shock resistance	Compliant with JIS B 3502, IEC 61131-2 (147 m/s <sup>2</sup> (15G), 3 times each in X, Y and Z directions)					
Operating atmosphere	No oily smoke, corrosive gas or combustible gas, less conductive dust, away from direct sunlight (the same in storage)					
Operating altitude *3	2000m or less					
Installation location	Inside control panel					
Overvoltage category *4	II or less					
Pollution level *5	2 or less					
Cooling method	Self-cooling					
Grounding	Type D grounding (100Ω or less). Connect to panel if unable to ground.					

\*1 The operating ambient temperature includes the temperature inside the enclosure of the control panel to which the GOT is installed.

\*2 If ambient temperature exceeds 40°C, absolute humidity should not exceed 90% at 40°C.

\*3 Do not operate or store the GOT unit in pressurized environments where the pressure exceeds 0m elevation atmospheric pressure, as this could result in abnormal operation. Do not pressurize inside the control panel for air purge cleaning. The pressure could raise the surface sheet, making the touch panel difficult to operate or causing the sheet to come off.

\*4 Assuming that the device is connected at some point between a public power distribution network and local system equipment, Category II applies to devices that are supplied with power from fixed equipment. The surge withstand voltage is 2,500V for devices with ratings up to 300V.

\*5 Index that indicates the level of foreign conductive matter in the operating environment of the device. Pollution level 2 denotes an environment contaminated only by non-conductive matter which may, under certain conditions, become temporarily conductive due to condensation.

Do not use or store the GOT under direct sun light or in an environment with excessively high temperature, dust, humidity or vibration.

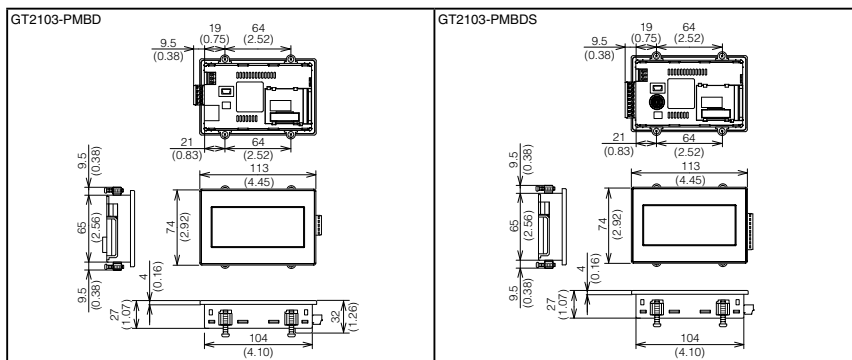
For inquiries relating to the status of conforming to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

### Power supply specifications

Item	Specifications	
	GT2103-PMBD	GT2103-PMBDS
Power supply voltage	24VDC (+10%, -15%)	
Power supply frequency	-	
Power consumption	Maximum load	2.6W or less
	Stand alone with backlight off	2.0W
Inrush current	30A or less (1ms, ambient temperature 25°C, maximum load)	
Allowable momentary power failure time	Within 5ms	
Noise immunity	Noise voltage 1000Vp-p, noise width 1μs by noise simulator with noise frequency 30 to 100Hz	
Withstand voltage	500VAC for 1 minute between power supply terminal and ground	
Insulation resistance	10MΩ or higher with an insulation resistance tester (500VDC between power supply terminal and ground)	

### External dimensions

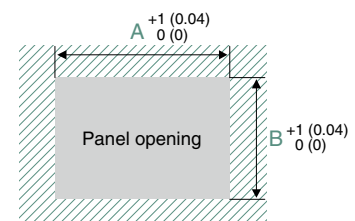
Unit: mm (inch)



### Panel cutting dimensions

Unit: mm (inch)

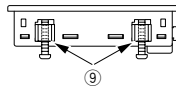
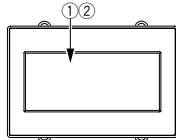
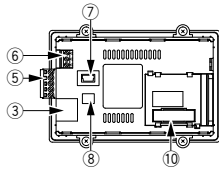
Screen size	Model	A	B	Remarks
3.8"	GT2103	105 (4.14)	66 (2.60)	Same dimensions as GT1020.



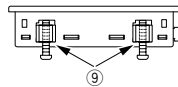
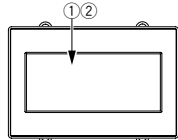
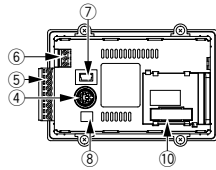


## Components names

GT2103-PMBD



GT2103-PMBDS



- ① Display screen
- ② Touch panel
- ③ Ethernet interface
- ④ RS-232 interface
- ⑤ RS-422/485 interface
- ⑥ Power supply terminal
- ⑦ USB interface (device)
- ⑧ Terminating resistor setting switch
- ⑨ Unit mounting bracket
- ⑩ SD card unit connector (inside the cover)

## Performance specifications

Item	Specifications	
	GT2103-PMBD	GT2103-PMBDS
Display section <sup>*1 *2</sup>	Display device	TFT monochrome LCD
	Screen size	3.8"
	Resolution	320x128 dots
	Display size	89.0(3.51)(W)x35.6(1.41)(H) mm(inch)
	Number of characters	16-dot standard font: 20 chars. x 8 lines (2-byte) 12-dot standard font: 26 chars. x 10 lines (2-byte)
	Display color	Monochrome (black/white) 32 shade grayscale
	Intensity adjustment	32-level adjustment
	Backlight	5-color LED (white/green/pink/orange/red) (not replaceable)
Touch panel <sup>*3</sup>	Backlight life <sup>*4</sup>	Approx. 50000 hours (Time for display intensity reaches 50% at ambient temperature of 25°C)
	Type	Analog resistive film
	Key size	Minimum 2 x 2 dots (per key)
User memory	Simultaneous press	Simultaneous press prohibited <sup>*5</sup> (only 1 point can be pressed)
	Life	1 million times or more (operating force 0.98N or less)
User memory capacity	User memory capacity	Memory for storage (ROM): 3MB
	Life (No. of writings)	100000 times
Built-in interface	RS-232	-
	RS-422/485	1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: connector terminal block 5-pin
	Ethernet	1ch Data transfer method: 10BASE-T/100BASE-TX Connector shape: RJ-45 (modular jack)
	USB (device)	1ch Maximum transfer speed: Full-Speed 12Mbps Connector shape: USB Mini-B
	SD card <sup>*6</sup>	1ch SDHC compliant (maximum 32GB)
Buzzer output	Single tone (tone length adjustable)	
Protective structure	Front: IP67F <sup>*7</sup> In control panel: IP2X	
External dimensions	113(4.45)(W)x74(2.92)(H)x32(1.26)(D) mm(inch)	113(4.45)(W)x74(2.92)(H)x27(1.07)(D) mm(inch) <sup>*8</sup>
Panel cutting dimensions	105(4.14)(W)x66(2.60)(H) mm(inch)	
Weight (excl. mounting brackets)	0.2kg	
Compatible software package	GT Designer3 Version1.122C or later	

<sup>\*1</sup> On LCD panels, bright dots (permanently lit) and black dots (never lit) generally appear. Because the number of display elements that exist on an LCD panel is large, it is not possible to reduce appearance of the bright and black dots to zero. Individual differences in LCD panels may cause differences in color, uneven brightness and flickering. Note that these are characteristics of LCD panels and it does not mean the products are defective or damaged.

<sup>\*2</sup> Flickering may occur due to vibration or shock, or depending on the display colors.

<sup>\*3</sup> The life of using a stylus pen is 100,000. Use a stylus pen meeting the following specifications.  
• Material: Polyacetal resin • Pen point radius: 0.8mm or more

<sup>\*4</sup> Using the GOT screen saver/backlight OFF functions prevents screen burn-in and extends backlight life.

<sup>\*5</sup> When 2 points on the touch panel are pressed simultaneously, if a switch is located the middle of the 2 points then the switch will be activated. Therefore, avoid pressing 2 points on the touch panel simultaneously.

<sup>\*6</sup> A separate SD card unit (GT21-03SDCD) must be mounted.

<sup>\*7</sup> This does not guarantee protection in all users' environments. The unit may not be used in certain environments where it is subjected to splashing oil or chemicals for a long period of time or soaked in oil mist.

<sup>\*8</sup> When an SD card unit (GT21-03SDCD) is mounted, external dimensions are 113(4.45)(W)x74(2.92)(H)x32(1.26)(D) mm(inch).

## MELSOFT GT Works3 Version1 (English Version) operating environment

Item	Description
Personal computer	Personal computer that Windows® runs on.
OS (English, Simplified Chinese, Traditional Chinese, Korean, or German version)	Microsoft® Windows® 8.1 (Enterprise, Pro) (64 bit/32 bit) *1 *2 *4 *5 *6 Microsoft® Windows® 8.1 (64 bit/32 bit) *1 *2 *4 *5 Microsoft® Windows® 8 (Enterprise, Pro) (64 bit/32 bit) *1 *2 *4 *5 *6 Microsoft® Windows® 8 (64 bit/32 bit) *1 *2 *4 *5 Microsoft® Windows® 7 (Ultimate, Enterprise, Professional) (64 bit/32 bit) *1 *2 *3 *4 Microsoft® Windows® 7 (Home Premium) (64 bit/32 bit) *1 *2 *4 Microsoft® Windows® 7 (Starter) (32 bit) *1 *2 Microsoft® Windows Vista® (Ultimate, Enterprise, Business, Home Premium, Home Basic) (32 bit) Service Pack1 or later *1 *2 Microsoft® Windows® XP (Professional, Home Edition) (32 bit) Service Pack3 or later *1 *2
CPU	1GHz or faster recommended
Memory	For Windows® 8.1 (64 bit), Windows® 8 (64 bit), Windows® 7 (64 bit): 2GB or more recommended For Windows® 8.1 (32 bit), Windows® 8 (32 bit), Windows® 7 (32 bit), Windows Vista® (32 bit): 1GB or more recommended For Windows® XP: 512MB or more recommended
Display	Resolution XGA (1024 × 768 dots) or higher
Hard disk space	For installation: 2GB or more recommended For execution: 512MB or more recommended
Display color	High Color (16 bits) or higher
Other hardware	Use the hardware compatible with the above OS. • For installation: mouse, keyboard, DVD-ROM drive • For execution: mouse, keyboard • For printing: printer Use the following hardware when required. • For simulation (only when outputting the buzzer sound): sound card, speaker
Compatible GOT	GOT2000 series, GOT1000 series
Applicable software version	GT Works3 Version1.122C or later

- \*1 For installation, the administrator authority is required.  
For Windows® 8.1, Windows® 8, Windows® 7 and Windows Vista®, the standard user or administrator account is required.  
To interact GT Designer3 with other MELSOFT applications which are used under the administrator authority, use GT Designer3 under the administrator authority.
- \*2 The following functions are not supported.  
• Application start in Windows compatibility mode • Fast user switching • Change your desktop themes (fonts) • Remote desktop  
• DPI setting other than the normal size (For Windows® XP and Windows Vista®)  
• Setting the size of text and illustrations on the screen to any size other than [Small-100%] (For Windows® 8.1, Windows® 8, and Windows® 7)
- \*3 Windows XP Mode is not supported.  
\*4 Windows Touch or Touch is not supported.  
\*5 Modern UI Style is not supported.  
\*6 Hyper-V is not supported.

## GT SoftGOT2000 Version1 (English Version) operating environment

Item	Description
Personal computer	Personal computer that Windows® runs on. PC CPU module manufactured by CONTEC CO., LTD (PPC-852-21G, PPC-852-22F) *8
OS (English, Simplified Chinese, Traditional Chinese, Korean, or German version)	Microsoft® Windows® 8.1 (Enterprise, Pro) (64 bit/32 bit) *1 *2 *4 *5 *6 Microsoft® Windows® 8.1 (64 bit/32 bit) *1 *2 *4 *5 Microsoft® Windows® 8 (Enterprise, Pro) (64 bit/32 bit) *1 *2 *4 *5 *6 Microsoft® Windows® 8 (64 bit/32 bit) *1 *2 *4 *5 Microsoft® Windows® 7 (Ultimate, Enterprise, Professional) (64 bit/32 bit) *1 *2 *3 *4 Microsoft® Windows® 7 (Home Premium) (64 bit/32 bit) *1 *2 *4 Microsoft® Windows® 7 (Starter) (32 bit) *1 *2 Microsoft® Windows Vista® (Ultimate, Enterprise, Business, Home Premium, Home Basic) (32 bit) Service Pack1 or later *1 *2 Microsoft® Windows® XP (Professional, Home Edition) (32 bit) Service Pack3 or later *1 *2 Microsoft® Windows® XP Embedded (32 bit) *1 *2 *7
CPU	1GHz or more recommended
Memory	For Windows® 8.1 (64 bit), Windows® 8 (64 bit), Windows® 7 (64 bit): 2GB or more recommended For Windows® 8.1 (32 bit), Windows® 8 (32 bit), Windows® 7 (32 bit), Windows Vista® (32 bit): 1GB or more recommended For Windows® XP: 512MB or more recommended
Display	Resolution VGA (640 × 480 dots) or higher
Hard disk space *9	For installation: 2GB or more recommended For execution: 512MB or more recommended
Display color	High Color (16 bits) or higher
Hardware	GT27-SGTKEY-U (license key (for USB port))
Other software	The following software is required to create the project data. • GT Designer3 Version1.100E or later *10 The following software is required for interaction with PX Developer. • PX Developer Version1.40S or later • GT Designer3 Version1.105K or later *10 The following software is required to connect with GX Simulator. • GX Simulator Version5.00A or later The following software is required to connect with GX Simulator2. • GX Works2 Version1.12N or later The following software is required to connect with MT Simulator2. • MT Works2 Version 1.70Y or later
Other hardware	Use the hardware compatible with the above OS. • For installation: mouse, keyboard, DVD-ROM drive • For execution: mouse, keyboard • For printing: printer Prepare the following hardware if necessary. • For execution (only when outputting buzzer sound or others): sound function, speaker

- \*1 Administrator authority is required for installing and using GT SoftGOT2000.  
When interacting other applications, use the applications with the administrator authority.
- \*2 The following functions are not supported.  
• Application start in Windows compatibility mode • Fast user switching • Change your desktop themes (fonts) • Remote desktop  
• DPI setting other than the normal size (For Windows® XP and Windows Vista®)  
• Setting the size of text and illustrations on the screen to any size other than [Small-100%] (For Windows® 8.1, Windows® 8, and Windows® 7)
- \*3 Windows XP Mode is not supported.  
\*4 Windows Touch or Touch is not supported.  
\*5 Modern UI Style is not supported.  
\*6 Hyper-V is not supported.  
\*7 For using the PPC-852-22F, GT SoftGOT2000 can be used on the PPC-852-22F with the OS preinstalled only.  
\*8 Refer to the manual of the PC CPU module to be used.  
\*9 When using GT Designer3 or PX Developer besides GT SoftGOT2000, additional free space is required.  
For the available space required when using GT Designer3, please refer to the GT Works3 operating environment.  
For the available space required when using monitor tool functions of PX Developer, please refer to the following manual.  
⇒PX Developer Version □ Operating Manual (Monitor Tool)  
When using a user-created application, free space is required separately.
- \*10 Use GT Designer3 included in GT Works3 that contains GT SoftGOT2000.

For details of functions, supported controllers, and connection types, please refer to the GOT2000 Series Manual or Help.

● : Supported    - : Not supported

## Function list

Category	Function name	Necessary devices <sup>*1</sup>	GT27	GT25	GT23	GT21	GT SoftGOT2000	
Figure/object functions	Figure		●	●	●	●	●	
	Logo text		●	●	●	●	●	
	Touch switch		●	●	●	●	●	
	Lamp		●	●	●	●	●	
	Numerical display, Numerical input		●	●	●	●	●	
	Text display, Text input		●	●	●	●	●	
	Date display, Time display	(Battery)	●	●	●	●	●	
	Comment display		●	●	●	●	●	
	Parts display	(SD card or USB memory)	●	●	●	●	●	
	Parts movement	(SD card or USB memory)	●	●	●	●	●	
	Historical data list display		●	●	●	●	●	
	Simple alarm display		●	●	●	●	●	
	System alarm display		●	●	●	-	●	
	Alarm display (user)	(SD card or USB memory, battery)	●	●	●	-	●	
	Alarm display (system)	(SD card or USB memory, battery)	●	●	●	-	●	
	Level		●	●	●	●	●	
	Panelmeter		●	●	●	●	●	
	Line graph		●	●	●	●	●	
	Trend graph		●	●	●	●	●	
	Bar graph		●	●	●	●	●	
	Statistic bar graph		●	●	●	●	●	
	Statistic pie graph		●	●	●	●	●	
	Scatter graph		●	●	●	●	●	
	Historical trend graph		●	●	●	●	●	
	Screen design Functions performed on background of GOT	Slider		●	●	●	-	●
Document display		SD card	●	●	-	-	●	
Logging		(SD card or USB memory, battery)	●	●	●	●	●	
Recipe		(SD card or USB memory)	●	●	●	●	●	
Device data transfer			●	●	●	●	●	
Trigger action			●	●	●	●	●	
Time action		(SD card or USB memory)	●	●	●	●	●	
Hard copy		File output	SD card or USB memory	●	●	●	●	● <sup>*2</sup>
		Serial printer output		●	●	●	●	● <sup>*2</sup>
		PictBridge printer output	Printer unit	●	●	-	-	● <sup>*2</sup>
Project/screen script			●	●	●	●	●	
Object script			●	●	●	-	●	
Barcode function			●	●	●	●	●	
RFID function			●	●	●	●	●	
Remote personal computer operation function (Ethernet)		License	●	●	-	-	-	
Remote personal computer operation function (serial)		RGB input unit or Video/RGB input unit	●	-	-	-	-	
GOT remote access function (VNC server function)		License	●	●	-	-	-	
Video display function		Video input unit or Video/RGB input unit	●	-	-	-	-	
RGB display function		RGB input unit or Video/RGB input unit	●	-	-	-	-	
Multimedia function		Multimedia unit, CF card	●	-	-	-	-	
External I/O function		External I/O unit	●	●	-	-	-	
Operation panel function		External I/O unit	●	●	-	-	-	
RGB output function		RGB output unit	●	-	-	-	● <sup>*3</sup>	
Report function		Serial printer output		●	●	●	●	● <sup>*3</sup>
		PictBridge printer output	Printer unit	●	●	●	●	● <sup>*3</sup>
Sound output function	Sound output unit	●	●	-	-	●		
Server function, Client function		●	●	●	●	●		
Mail send function		●	●	-	-	●		
FTP server function	(SD card or USB memory)	●	●	●	●	●		
File transfer (FTP client) function	SD card or USB memory	●	●	●	●	●		
MES interface function	License, (SD card)	●	●	-	-	-		
GOT functions	Base screen		●	●	●	●	●	
	Overlap window		●	●	●	●	●	
	Superimpose window		●	●	●	●	●	
	Dialog window		●	●	●	●	●	
	Key window		●	●	●	●	●	
	Language switching		●	●	●	●	●	
	System information		●	●	●	●	●	
	Operator authentication	(SD card or USB memory)	●	●	●	●	●	
	Operation log	SD card or USB memory	●	●	●	-	●	
	Startup logo		●	●	●	●	●	
	Kana-kanji conversion		●	●	-	-	●	
	FA transparent		●	●	-	-	●	
	SoftGOT-GOT link		●	●	-	-	●	
	Backup/Restore	SD card or USB memory	●	●	●	●	●	
	Multi-channel function		4ch (Up to 3 units)	4ch (Up to 3 units)	2ch (No units can be mounted)	2ch (No units can be mounted)	-	
	Station No. switching		●	●	●	●	●	
	Screen gesture function		●	-	-	-	-	
	Object gesture function		●	-	-	-	-	
	Security key authentication function	NEW	●	●	●	●	●	
	IP filter function	NEW	●	●	●	●	●	
	Vertical display <sup>*5</sup>	NEW	(Rotate 90° to left)	(Rotate 90° to left)	(Rotate 90° to left)	(Rotate 90° to right)	-	
	Debug functions	Device monitor		●	●	●	●	●
		Sequence program monitor (Ladder)	SD card or USB memory	●	●	●	●	●
		Sequence program monitor (SFC)	SD card or USB memory	●	●	●	●	●
		Network monitor		●	●	●	●	●
Intelligent module monitor			●	●	●	●	●	
Servo amplifier monitor			●	●	●	●	●	
R motion monitor			●	●	●	●	●	
Q motion monitor			●	●	●	●	●	
Motion SFC monitor		SD card or USB memory	●	●	●	●	●	
CNC monitor		NEW	● <sup>*4</sup>	● <sup>*4</sup>	●	●	●	
CNC data I/O		NEW	● <sup>*4</sup>	● <sup>*4</sup>	●	●	●	
CNC machining program edit		NEW	● <sup>*4</sup>	● <sup>*4</sup>	●	●	●	
Log viewer		(SD card or USB memory)	●	●	●	●	●	
MELSEC-FX list editor			●	●	●	●	●	
FX ladder monitor			●	●	●	●	●	
MELSEC-L troubleshooting		●	●	●	●	●		

\*1 Necessary units when using GT27, GT25, GT23, or GT21 are shown. Parenthesized devices will be required depending on conditions of use.

\*2 Data is output to the printer that is recognized by the personal computer.

\*3 CSV files are saved in the virtual drive of the personal computer so that it is recommended to output the files to printers.

\*4 Only the GOTs with SVGA or higher resolution are supported.

\*5 The following screens are displayed horizontally:

Utility screen, monitor and data management screens that are displayed from the utility screen (sequence program monitor, etc.), video camera images in the multimedia and video display functions

Remote personal computer operation function (Ethernet) cannot be used.

For the details of other GOT operations when placed vertically, please refer to the related manuals or the Help.

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## GOT2000 connectable model list

### ■ Modules usable when connected with Mitsubishi PLCs/motion controllers

#### ● Ethernet connection

CPU series	Ethernet module
MELSEC iQ-R series Motion controller (MELSEC iQ-R series)	RJ71EN71
MELSEC-Q series (Q mode) MELSEC-QS series Motion controller (MELSEC-Q series)	QJ71E71-100 QJ71E71-B5 QJ71E71-B2 QJ71E71
MELSEC-L series	LJ71E71-100*1
MELSEC-F series	FX3U-ENET-L*2 FX3U-ENET-ADP*2

\*1 Use a CPU with the upper five digits of the serial No. later than 14112.

\*2 Options for extension controller may be required depending on the connected CPU.

#### ● Serial communication connection

CPU series	Serial communication module <sup>*1</sup>		
	Model name	CH1	CH2
MELSEC iQ-R series Motion controller (MELSEC iQ-R series)	RJ71C24	RS-232	RS-422/485
	RJ71C24-R2	RS-232	RS-232
	RJ71C24-R4	RS-422/485	RS-422/485
MELSEC-Q series (Q mode) Motion controller (MELSEC-Q series) MELSECNET/H remote I/O station	QJ71C24*2	RS-232	RS-422/485
	QJ71C24-R2*2	RS-232	RS-232
	QJ71C24N	RS-232	RS-422/485
	QJ71C24N-R2	RS-232	RS-232
	QJ71C24N-R4	RS-422/485	RS-422/485
	QJ71CMO*3	Modular connector	RS-232
	QJ71CMON*3	Modular connector	RS-232
MELSEC-L series CC-Link IE Field Network head module	LJ71C24	RS-232	RS-422/485
	LJ71C24-R2	RS-232	RS-232

\*1 Communication cannot be performed with RS-485.

\*2 Either CH1 or CH2 can be used for the function version A.  
Both CH1 and CH2 can be used together for the function version B or later.

\*3 Only CH2 can be connected.

#### ● CC-Link IE Controller Network connection

CPU series	CC-Link IE Controller Network module
MELSEC iQ-R series Motion controller (MELSEC iQ-R series)	RJ71GP21-SX
MELSEC-Q series (Q mode) MELSEC-QS series C Controller module Motion controller (MELSEC-Q series)	QJ71GP21-SX*1 QJ71GP21S-SX*1

\*1 When the CC-Link IE Controller Network is in the extended mode, use a module with the upper five digits of the serial No. 12052 or later.

#### ● CC-Link IE Field Network connection

CPU series	CC-Link IE Field Network module
MELSEC iQ-R series Motion controller (MELSEC iQ-R series)	RJ71GF11-T2 RJ71EN71
MELSEC-Q series (Q mode) C Controller module	QD77GF16 QJ71GF11-T2
MELSEC-QS series	QS0J71GF11-T2
MELSEC-L series	LJ71GF11-T2

#### ● CC-Link (intelligent device station) connection

CPU series	CC-Link module
MELSEC iQ-R series Motion controller (MELSEC iQ-R series)	RJ61BT11
MELSEC-Q series (Q mode) C Controller module Motion controller (MELSEC-Q series)	QJ61BT11 QJ61BT11N
MELSEC-L series	LJ61BT11

#### ● CC-Link (via G4) connection

CPU series	CC-Link module	Peripheral module
MELSEC-Q series (Q mode) C Controller module Motion controller (MELSEC-Q series)	QJ61BT11 QJ61BT11N	AJ65BT-G4-S3 AJ65BT-R2N
MELSEC-L series	LJ61BT11	

For the details of the connection configuration, please refer to the GOT2000 Series Connection Manual.

●MELSECNET/H connection

CPU series	MELSECNET/H module	
	Optical loop	Coaxial bus
MELSEC-Q series (Q mode) <sup>*1</sup> MELSEC-QS series Motion controller (MELSEC-Q series)	QJ71LP21 QJ71LP21-25 QJ71LP21S-25	QJ71BR11 <sup>*1</sup>
C Controller module	QJ71LP21-25 QJ71LP21S-25	

\*1 Use function version B or later of the MELSECNET/H network module and CPU.

●MELSECNET/10 connection

CPU series	MELSECNET/H (NET/10 mode), MELSECNET/10 module	
	Optical loop	Coaxial bus
MELSEC-Q series (Q mode) <sup>*1</sup> MELSEC-QS series Motion controller (MELSEC-Q series)	QJ71LP21 QJ71LP21-25 QJ71LP21S-25	QJ71BR11 <sup>*1</sup>
C Controller module	QJ71LP21-25 QJ71LP21S-25	

\*1 Use function version B or later of the MELSECNET/H network module and CPU.

Inverter

Series		GT27/GT25/GT23/GT21		
		RS-422	RS-232	Multi-drop connection
FREQROL series	FREQROL-A800 <sup>*1</sup>	○	×	×
	FREQROL-F800 <sup>*1</sup>	○	×	×
	FREQROL-A700	○	×	×
	FREQROL-F700P	○	×	×
	FREQROL-F700	○	×	×
	FREQROL-E700	○	×	×
	FREQROL-F700PJ	○	×	×
	FREQROL-D700	○	×	×
	FREQROL-V500/V500L	○	×	×
	FREQROL-A500/A500L	○	×	×
	FREQROL-F500/F500L	○	×	×
	FREQROL-E500	○	×	×
	FREQROL-S500/S500E	○	×	×
	FREQROL-F500J	○	×	×
MELIPM series	MD-CX522-□□K	○	×	×
	MD-CX522-□□K-A0	○	×	×

\*1 GT21 does not support automatic negotiation.

Sensorless servo

Model name		GT27/GT25/GT23/GT21		
		RS-422	RS-232	Multi-drop connection
Drive module	FREQROL-E700EX	○	×	×

Servo amplifier

Series	Model name	GT27/GT25/GT23/GT21		
		RS-422	RS-232	Multi-drop connection
MELSERVO-J4 series	MR-J4-□A	○	○	×
	MR-J4-□A-RJ	○	○	×
MELSERVO-J3 series	MR-J3-□A	○	○	×
	MR-J3-□T	○	○	×
MELSERVO-J2-Super series	MR-J2S-□A	○	○	×
	MR-J2S-□CP	○	○	×
	MR-J2S-□CL	○	○	×
MELSERVO-J2M series	MR-J2M-P8A	○	○	×
	MR-J2M-□DU	○	○	×
MELSERVO-JE series	MR-JE-□A	○	×	×

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For the details of the connection configuration, please refer to the GOT2000 Series Connection Manual.

**Third party PLCs/Motion controllers/Safety controllers**

Manufacturer	Model name	GT27/GT25/GT23/GT21 <sup>*31</sup>							
		Ethernet connection	Direct CPU connection		Serial communication connection		EtherNet/IP connection		
			RS-422	RS-232	RS-422	RS-232			
OMRON Corporation	SYSMAC CJ1	CJ1H CJ1G	CJ1M	○	×	○	○ <sup>*4</sup>	×	
		CJ2H CJ2M		○	×	○	○ <sup>*4</sup>	×	
	SYSMAC CPM	CPM1	CPM1A	×	×	×	×	○	×
		CPM2A		×	×	○	×	○	×
		CPM2C		×	×	×	×	○	×
	SYSMAC CQM1H	CQM1H	CP1L	×	×	○	×	×	
	SYSMAC CP1	CP1E (N type)		×	×	○ <sup>*6</sup>	○ <sup>*6*7</sup>	○ <sup>*6*7</sup>	×
	SYSMAC CQM1	CQM1		×	×	○ <sup>*8</sup>	×	×	×
	SYSMAC CS1	CS1H CS1G	CS1D <sup>*3</sup>	○	×	○	○	○	×
	SYSMAC CVM1/CV <sup>*9</sup>	CVM-CPU11-V□ CVM1-CPU01-V□ CV500-CPU01-V□	CV1000-CPU01-V□ CV2000-CPU01-V□	×		○ <sup>*4</sup>	×	×	×
	SYSMAC C200HS	C200HS		×	×	×	○	○	×
	SYSMAC C200H	C200H		×	×	×	○	○	×
	SYSMAC C1000H	C1000H		×	×	×	○ <sup>*4</sup>		×
	SYSMAC C2000H	C2000H		×	×	×	○ <sup>*4</sup>		×
SYSMAC α	C200HX C200HG	C200HE	×	×	○	○	○	×	
KEYENCE CORPORATION		KV-700 KV-1000 KV-5000	KV-3000 KV-5500	○ <sup>*2</sup>	×	○	○	○	×
	DirectLOGIC 05 series	D0-05AA D0-05AD D0-05AR D0-05DA	D0-05DD D0-05DD-D D0-05DR D0-05DR-D	×	×	○	○	○	×
		DirectLOGIC 06 series	D0-06DD1 D0-06DD2 D0-06DR D0-06DA D0-06AR	D0-06AA D0-06DD1-D D0-06DD2-D D0-06DR-D	×	○	○	○	×
DirectLOGIC 205 series		D2-240 D2-250-1	D2-260	×	×	○	○	○	×
KOSTAC SU series	SU-5E SU-6B	SU-5M SU-6M	×	○	○	○	○	×	
	PZ series	PZ3		×	○	○	×	×	
Sharp Manufacturing Systems Corporation <sup>*2</sup>		JW-21CU JW-31CUH	JW-50CUH	×	×	×	○	×	×
		JW-22CU JW-32CUH JW-33CUH	JW-70CUH JW-100CUH JW-100CU	×		○ <sup>*4</sup>	○	×	×
		Z-512J		×		○ <sup>*4</sup>	×	×	×
	TOYOPUC series	PC2JC-CPU PC2J16P-CPU	PC2J16PR-CPU	×	×	○ <sup>*10</sup>	○	○ <sup>*10</sup>	×
PC2J-CPU PC2JS-CPU		PC2JR-CPU	×	×	×	○	○ <sup>*10</sup>	×	
PC3JG-P-CPU		PC3JG-CPU	×	×	○ <sup>*10</sup>	○	○ <sup>*10</sup>	×	
PC3JD-CPU		PC3JD-C-CPU	×	×	○ <sup>*10</sup>	○	○ <sup>*10</sup>	×	
PC3J-CPU		PC3JL-CPU	×	○	○ <sup>*10</sup>	○	○ <sup>*10</sup>	×	
T2 (PU224) T2E T3		T2N T3H	×	○	×	×	×	×	
TOSHIBA CORPORATION <sup>*2</sup>	PROSEC T series	model 2000 (S2E) model 2000 (S2T) model 2000 (S2) model 3000 (S3)		×	○	×	×	×	×
	TCmini series	TC3-01 TC3-02	TC6-00 TC8-00	×	×	○	×	×	×
	Large-sized H series	H-302 H-1002 H-300 H-2000	H-702 H-2002 H-700 H-4010	×	×	○	○ <sup>*4</sup>	×	
	H-200 to 252 series	H-200 H-252 H-252B	H-250 H-252C	×	×	○	×	×	×
H series board type	HL-40DR HL-64DR H-20DR H-20DT H-28DR	H-28DT H-40DR H-40DT H-64DR H-64DT	×	×	○	×	×	×	
	EH-150 series	EH-CPU104 EH-CPU208 EH-CPU308	EH-CPU316 EH-CPU516 EH-CPU548	×	×	○	×	×	×
Hitachi Ltd. <sup>*2</sup>	S10V	LQP510 LQP520		×	×	×	○	○	×
	S10mini	LQP000 LQP010 LQP011	LQP120 LQP800	×	×	×	○	○	×
	MICREX-F	F55 F120S F140S	F70 F15□S	×	×	×	○	○	×
Panasonic Industrial Devices SUNX Co., Ltd.	FP0R FP0-C16CT FP0-C32CT	FP1-C24C FP1-C40C	×	×	○	×	×	×	
	FP2 FP2SH FP3	FP5 FP10 (S) FP10SH	×	×	○	×	○	×	
	FP-M (C20TC) FP-M (C32TC)	FP-Σ	×	×	○	×	×	×	
	FP-X		×	×	○	○	○	×	
				×	×	○	○	○	×

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### Third party PLCs/Motion controllers/Safety controllers

Manufacturer	Model name		GT27/GT25/GT23/GT21 <sup>*1</sup>					EtherNet/IP connection	
			Ethernet connection	Direct CPU connection		Serial communication connection			
				RS-422	RS-232	RS-422	RS-232		
YASKAWA Electric Corporation <sup>*2</sup>	GL120	GL130	×	×	○	○	×	×	
	GL60S	GL70H	×	×	×	○	○	×	
	GL60H		×	×	×	○	○	×	
	CP-9200SH		○	×	×	×	○	×	
	CP-9300MS		×	×	○	×	×	×	
	MP920		○	×	○	○	○	×	
	MP930		×	×	○	×	×	×	
	MP940		×	○	○	×	×	×	
	PROGIC-8		×	×	○	×	×	×	
	CP-9200 (H)		×	×	○	×	×	×	
	CP-312		○	×	×	×	○	×	
	CP-317		○	×	×	×	○	×	
	MP2200	MP2300S	○	×	×	○	○	×	
	MP2300		○	×	×	○	○	×	
Yokogawa Electric Corporation <sup>*2</sup>	FA500		×	×	×		○ <sup>*4</sup>	×	
	FA-M3	F3SP05	F3SP08	○	×	○	○	○	×
		F3SP10		×	×	×	×	○	×
		F3SP20	F3SP30	×	×	×	○	○	×
		F3FP36		○	×	×	○	○	×
		F3SP21	F3SP38						
		F3SP25	F3SP53	○	×	○	○	○	×
		F3SP28	F3SP58						
	F3SP35	F3SP59							
	FA-M3V	F3SP66	F3SP67	○	×	○	○	○	×
		F3SP22-0S		×	×	○	×	×	×
		F3SP71-4N		○	×	×	×	×	×
	STARDOM	F3SP71-4S		○	×	×	○	○	×
		F3SP76-7S		○	×	×	×	○	×
NFCP100		NFJT100	○ <sup>*14</sup>	×	○	×	×	×	
Allen-Bradley (Rockwell Automation, Inc.) <sup>*2</sup>	SLC500 series <sup>*11</sup>	SLC500-20	SLC5/01	×	×	○	×	×	×
		SLC500-30	SLC5/02						
		SLC500-40	SLC5/03						
			SLC5/04						
	MicroLogix1000 series (digital CPU) <sup>*11</sup> *12*13	1761-L10BWA	1761-L32AAA						
		1761-L10BWB	1761-L32AWA						
		1761-L16AWA	1761-L32BWA	×	×	○	×	×	×
		1761-L16BWA	1761-L32BWB						
		1761-L16BWB	1761-L32BBB						
	MicroLogix1000 series (analog CPU) <sup>*11</sup>	1761-L20AWA-5A	1761-L20BWB-5A	×	×	○	×	×	×
		1761-L20BWA-5A							
	MicroLogix1200 series <sup>*11</sup>	1762-L24BWA	×	×	○	×	×	×	
	MicroLogix1400 series <sup>*11</sup>	1766-L32AWA	×	×	○	×	×	×	
	MicroLogix1500 series <sup>*11</sup>	1764-LSP	×	×	○	×	×	×	
ControlLogix series	1756-L	1756-L1M2	○ <sup>*15</sup>	×	○	×	×	○	
	1756-L1M1	1756-L1M3							
	1756-L55M12	1756-L55M22							
	1756-L55M13	1756-L55M23	○ <sup>*15</sup>	×	○	×	×	○	
	1756-L55M14	1756-L55M24							
	1756-L55M16								
CompactLogix series	1756-L61	1756-L63	○ <sup>*15</sup>	×	○	×	×	○	
	1756-L62								
	1756-L72S		○ <sup>*15</sup>	×	×	×	×	○	
FlexLogix series	1769-L31		×	×	○	×	×	×	
	1769-L32C								
	1769-L35CR								
Series 90-30	1769-L32E		○ <sup>*15</sup>	×	○	×	×	○	
	1769-L35E								
Series 90-70	1794-L33		×	×	○	×	×	○ <sup>*16</sup>	
	1794-L34								
GE Intelligent Platforms, Inc. <sup>*2</sup>	Series 90-30	IC693CPU311		×	×	×	○	○	×
		IC693CPU313							
		IC693CPU323							
	Series 90-70	IC693CPU350	IC693CPU366	×	○	×	○	○	×
		IC693CPU360	IC693CPU367						
		IC693CPU363	IC693CPU374						
		IC697CGR772	IC697CPX772						
		IC697CGR935	IC697CPX782						
	VersaMax Micro	IC697CPM790	IC697CPX928	×	×	×	○	○	×
		IC697CPU731	IC697CPX935						
		IC697CPU780							
		IC697CPU788							
		IC697CPU789							
		IC200UAA003	IC200UDR001	×	○	○	×	×	×
IC200UAR014		IC200UDR002							
IC200UDD104	IC200UDR003	×	×	○	×	×	×		
LS Industrial Systems Co., Ltd. <sup>*2</sup>	K300S	IC200UAA007	IC200UDR005						
		IC200UAL004	IC200UDR006						
		IC200UAL005	IC200UDR010						
		IC200UAL006	IC200UDD064						
		IC200UAR028	IC200UDD164	×	○	○	×	×	×
		IC200UDD110	IC200UDR064						
		IC200UDD120	IC200UDR164						
		IC200UDD212							
		K200S	K4P-15AS	×	×	×	○	○	×
		K120S	K3P-07□S	×	×	×	○	○	×
K80S	K7M-D□□□U	×	×	○	○	○	×		
	K7M-D□□□S (DC)	×	×	○	○	○	×		

For the details of the connection configuration, please refer to the GOT2000 Series Connection Manual.

Manufacturer	Model name	GT27/GT25/GT23/GT21 <sup>*8</sup>							
		Ethernet connection	Direct CPU connection		Serial communication connection		EtherNet/IP connection		
			RS-422	RS-232	RS-422	RS-232			
Mitsubishi Electric India Pvt. Ltd.	Nexgenie 2000 PLC	P2210 P2211	P2213A P2214	×	○	○	×	×	×
	Nexgenie 1000 PLC	NG14RL NG14RN NG16ADL NG16ADN	NG16DL NG16DN	×	○	○	×	×	×
Schneider Electric SA <sup>*2</sup>	Twido	TWD LCAA 10DRF TWD LCAA 16DRF TWD LCAA 24DRF TWD LCAA 40DRF TWD LCAE 40DRF TWD LCDA 10DRF TWD LCDA 16DRF TWD LCDA 24DRF	TWD LMDA 20DRT TWD LMDA 20DTK TWD LMDA 20DUK TWD LMDA 40DTK TWD LMDA 40DUK	○ <sup>*14</sup>	×	×	×	×	×
	Modicon Premium	TSX P57 203M TSX P57 253M TSX P57 303M TSX P57 353M TSX P57 453M		○ <sup>*14</sup>	×	×	×	×	×
	Modicon Quantum	140 CPU 113 02 140 CPU 113 03 140 CPU 311 10 140 CPU 434 12A 140 CPU 434 12U	140 CPU 534 14A 140 CPU 534 14U 140 CPU 651 50 140 CPU 651 60 140 CPU 671 60	○ <sup>*14</sup>	×	×	×	×	×
SICK AG	Flexi Soft series	FX3-CPU00000 FX3-CPU130002	FX3-CPU320002	×	×	○	×	×	×
Siemens AG		SIMATIC S7-200 series		○ <sup>*2&amp;17</sup>	×	○	×	×	×
		SIMATIC S7-300 series		○ <sup>*2</sup>	×	○	×	×	×
		SIMATIC S7-400 series		○ <sup>*2</sup>	×	○	×	×	×
		SIMATIC S7-1200 series		○ <sup>*2&amp;17</sup>	×	×	×	×	×
SMC Corporation <sup>*2</sup>		LECA6	LECP6	×	○ <sup>*18</sup>	×	×	×	

- \*1 Select an appropriate GT21 model depending on the connection type. For the details of applicable GOT models for each connection type, please refer to page 62.
- \*2 GT21 cannot be connected.
- \*3 Connectable only when a single communication unit is used in a single CPU system.
- \*4 Either RS-422 or RS-232 can be selected.
- \*5 Only CJ2M-CPU1□ can be connected.
- \*6 Connection is not available with the E type CP1E.
- \*7 For CP1E (N type) CPU modules with 20 or less I/O points, only the direct CPU connection is available.
- \*8 The CQM1-CPU11 is unable to communicate with GOT since the CQM1-CPU11 has no RS-232 interface.
- \*9 SYSMAC CVM1/CV can be used with a CPU version 1 or later.
- \*10 An RS-232/RS-422 interface converter (TXU-2051) is required.

- \*11 Connection to DH485 network is available via adapter (1770-KF3).
- \*12 DH485 connection can be used with a CPU in the series C or later. (DH485 protocol is not supported by a CPU in the series B or earlier.)
- \*13 One-to-one connection is supported by a CPU in the series D or later. (DF1 half duplex is not supported by a CPU in the series C or earlier.)
- \*14 Only MODBUS<sup>®</sup>/TCP connection is supported. Use a MODBUS/TCP communication driver.
- \*15 EtherNet/IP (PCCS protocol) is supported.
- \*16 Use EtherNet/IP Tag.
- \*17 Only OP communication can be used in Ethernet connection of the S7-200 series and the S7-1200 series.
- \*18 Only MODBUS<sup>®</sup>/RTU connection is supported. Use MODBUS/RTU communication driver.

## Modules usable when connected with third party serial communication connection, Ethernet connection, Ethernet/IP connection modules

Manufacturer		Ethernet	RS-422	RS-232	EtherNet/IP
OMRON Corporation	Host link unit	CJ1W-EIP21 CJ1W-ETN21 CS1D-ETN21D	CP1Q-CIF11 CJ1W-SCU31-V1 CJ1W-SCU41 (-V1) CP1W-CIF11 CP1W-CIF12 CQM1-SCB41 CS1W-SCB41 (-V1) C200H-LK202-V1 C200HW-COM03 C200HW-COM06 C500-LK201-V1	CJ1W-SCU21 (-V1) CJ1W-SCU41 (-V1) CPM1-CIF01 CPM2C-CIF01-V1 CP1W-CIF01 CQM1-CIF02 CQM1-SCB41 CS1W-SCB21 (-V1) CS1W-SCB41 (-V1) CS1W-SCU21 (-V1) C200HW-COM02 C200HW-COM05 C200HW-COM06 C200H-LK201-V1 C500-LK201-V1	-
	Communication unit Communication board Ethernet module				
KEYENCE CORPORATION	Multi-communication unit Ethernet module	KV-LE20V KV-LE21V	KV-L20 KV-L20R KV-L20V	KV-L20 KV-L20R KV-L20V	-
KOYO ELECTRONICS INDUSTRIES CO., LTD.	Data communications module Host link module	-	D0-DCM D2-DCM U-01DM	D0-DCM D2-DCM U-01DM	-
Sharp Manufacturing Systems Corporation	Link unit	-	JW-10CM JW-21CM ZW-10CM	-	-
JTEKT Corporation	Link unit	-	THU-2755 THU-2927 THU-5139	-	-
Hitachi Industrial Equipment Systems Co., Ltd.	Intelligent serial port module	-	COMM-H COMM-2H	COMM-H COMM-2H	-
Hitachi, Ltd.	Communication module	-	LQE165 LQE565	LQE060 LQE160 LQE560	-
FUJI ELECTRIC CO., LTD.	RS-232C interface card	-	-	NV1L-RS2	-
	RS-232C/485 interface capsule	-	FFK120A-C10	FFK120A-C10	-
	General-purpose interface module	-	FFU120B NC1L-RS4	FFU120B NC1L-RS2	-
Panasonic Industrial Devices SUNX Co., Ltd.	Computer communication unit Communication cassette	-	AFPX-COM3	AFP801 AFP802 AFPX-COM1 AFPX-COM2 AFPX-COM4 AFP2462 AFP3462 AFP5462	-

## GOT2000 connectable model list

### ■ Modules usable when connected with third party serial communication connection, Ethernet connection, Ethernet/IP connection modules

Manufacturer		Ethernet	RS-422	RS-232	EtherNet/IP
YASKAWA Electric Corporation	MEMOBUS module Communication module	CP-218IF 218IF 218IF-01 218IF-02*1 218TXB	JAMSC-IF612 JAMSC-120NOM27100 217IF 217IF-01	CP-217IF JAMSC-IF60 JAMSC-IF61 217IF 217IF-01 218IF-01 218IF-02*1	-
Yokogawa Electric Corporation	PC link module Ethernet interface module	F3LE01-5T F3LE11-0T F3LE12-0T	F3LC11-2N LC02-0N	F3LC01-1N F3LC11-1F F3LC11-1N F3LC12-1F LC01-0N LC02-0N	-
Allen-Bradley (Rockwell Automation, Inc.)	EtherNet/IP communication module	1756-ENBT 1756-ENET 1756-EN2TR	-	-	1756-ENBT 1756-ENET*2 1756-EN2TR 1788-ENBT/A
GE Intelligent Platforms, Inc.	Communication module	-	IC693CMM311 IC697CMM711	IC693CMM311 IC697CMM711	-
LS Industrial Systems Co., Ltd.	Cnet I/F unit	-	G7L-CUEC	G7L-CUEB	-
	Cnet I/F module	-	G4L-CUEA G6L-CUEC	G4L-CUEA G6L-CUEB	-
Schneider Electric SA	Ethernet module	TSX ETY 4102 TSX ETY 5102 140 NOE 771 00 140 NOE 771 10 140 NWM 100 00	-	-	-
Siemens AG	Ethernet module	CP 243-1 CP 243-1 IT CP 343-1 CP 343-1 Advanced CP 343-1 Advanced-IT CP 343-1 IT CP 343-1 Lean CP 443-1 CP 443-1 IT CP 443-1 Advanced-IT	-	-	-

\*1 When connecting MP2200, MP2300, or MP2300S using Ethernet connection or RS-232 connection, use a CPU of the software version 2.60 or later.

\*2 Use an EtherNet/IP communication module 1756-ENET of the version B or later.

## Servo amplifier

Manufacturer	Model name	GT27/GT25	
		RS-485	RS-232
Panasonic Corporation	MINAS A4 series	○	○
	MINAS A4F series	○	○
	MINAS A4L series	○	○
	MINAS A5 series	○	○

## Robot controller

Manufacturer	Model name	GT27/GT25				
		RS-422	RS-232			
IAI Corporation X-SEL controller	ROBO CYLINDER RCA series dedicated program controller	ASEL	ASEL	×	○	
	ROBO CYLINDER RCP2 series dedicated program controller	PSEL	PSEL	×	○	
	Single-axis robot/linear servo/ROBO CYLINDER RCS2 program controller	SSEL	SSEL	×	○	
	Single-axis, multi-axis robot controller	X-SEL	XSEL-J	XSEL-K	×	○
			XSEL-KE	XSEL-KET		
			XSEL-KT	XSEL-P		
			XSEL-Q	XSEL-JX		
			XSEL-KTX	XSEL-KX		
	SCARA robot controller	X-SEL	XSEL-PX	XSEL-QX	×	○
			XSEL-KX	XSEL-KX		
XSEL-PX			XSEL-QX			
XSEL-QX			XSEL-QX			
IAI Corporation ROBO CYLINDER	RCA2/RCA series positioner controller	ACON	ACON-C ACON-CG ACON-CY ACON-PL ACON-PO ACON-SE	○	○	
	ERC2 built-in positioner controller	ERC2	ERC2	○	○	
	RCP3/RCP2 series positioner controller	PCON	PCON-C	PCON-CA*1	○	○
			PCON-CF	PCON-CFA*1		
			PCON-CG	PCON-CY		
			PCON-PL	PCON-PO		
			PCON-SE	PCON-SE		
			PCON-C	PCON-CA		
			PCON-CA	PCON-CA		
	RCS2 series positioner controller	SCON	SCON-C SCON-CA	○	○	
TOSHIBA MACHINE CO., LTD.	SCARA robot controller	TS2000	TS2100	×	○	
		TS2100	TS2100	×	○	

\*1 Use PCON-CA or PCON-CFA of V0002 or later.



For the details of the connection configuration, please refer to the GOT2000 Series Connection Manual.

**Temperature controllers/Other control equipment**

Manufacturer	Model name		GT27/GT25/GT23				
			RS-485	RS-422	RS-232	Ethernet	
Azbil Corporation	AHC2001	AHC2001	○ (4-wire type* <sup>11</sup> )	×	○	×	
	AUR	AUR350C      AUR450C	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	
	CMC	CMC10B	○ (4-wire type)	×	○* <sup>2</sup>	×	
	CMF	CMF015 CMF050	○ (2-wire type* <sup>11</sup> ) ○ (2-wire type* <sup>11</sup> /4-wire type)	×	○* <sup>2</sup>	×	
	CML	CML	○ (2-wire type* <sup>11</sup> /4-wire type)	×	○* <sup>2</sup>	×	
	CMS	CMS	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	
	DMC	DMC10 DMC50	○ (2-wire type* <sup>11</sup> ) ○ (2-wire type* <sup>11</sup> /4-wire type)	×	○* <sup>2</sup>	×	
	MPC	MPC	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	
	MQV	MQV	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	
	MVF	MVF	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	
	NX	NX-D15 NX-D25 NX-D35		○ (2-wire type* <sup>11</sup> * <sup>9</sup> )	×	×	○* <sup>10</sup>
			NX-DX1      NX-DY1 NX-DX2      NX-DY2	○ (2-wire type* <sup>11</sup> * <sup>9</sup> )	×	×	○* <sup>10</sup>
			NX-S01      NX-S12 NX-S11      NX-S21	○ (2-wire type* <sup>11</sup> * <sup>9</sup> )	×	×	○* <sup>10</sup>
		SDC	SDC15      SDC35 SDC25      SDC36 SDC26	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×
			SDC45 SDC46	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×
			SDC20      SDC40A SDC21      SDC40B SDC30      SDC40G SDC31	○ (2-wire type* <sup>11</sup> /4-wire type)	×	○* <sup>2</sup>	×
	PBZ	PBC201-VN2	○ (2-wire type* <sup>11</sup> /4-wire type)	×	○* <sup>2</sup>	×	
	RX	RX	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	
	OMRON Corporation	INPANEL NEO	E5ZN	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×
		THERMAC NEO	E5AN      E5CN E5EN      E5GN	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×
Shinko Technos Co., Ltd.	ACS-13A series	ACS-13A □/□/□, C5* <sup>8</sup>	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	
	DCL-33A series	DCL-33A-□/□/□, C5* <sup>8</sup>	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	
	JC series	JCD-33A-□/□/□, C5* <sup>8</sup>	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	
		JCR-33A-□/□/□, C5* <sup>8</sup>					
		JCS-33A-□/□/□, C5* <sup>8</sup>					
	JCM-33A series	JCM-33A-□/□/□, C5* <sup>8</sup>	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	
	FCR-100 series	FCR-13A-□/□, M, C	×	×	○* <sup>4</sup>	×	
		FCR-15A-□/□, M, C					
	FCD-100 series	FCD-13A-□/□, M, C	×	×	○* <sup>4</sup>	×	
		FCD-15A-□/□, M, C					
	FCR-23A series	FCR-23A-□/□, M, C	×	×	○* <sup>4</sup>	×	
	PC-900 series	PC935-□/□, M, C	×	×	○* <sup>4</sup>	×	
		PC935-□/□, M, C5* <sup>8</sup>	○ (2-wire type* <sup>11</sup> )				
		PC955-□/□, M, C	×				
PC955-□/□, M, C5* <sup>8</sup>		○ (2-wire type* <sup>11</sup> )					
PCD-300 series	PCD-33A-□/□, M, C5* <sup>8</sup>	○ (2-wire type* <sup>11</sup> )	×	○* <sup>4</sup>	×		
FIR series	FIR-201-M, C	×	×	○* <sup>4</sup>	×		
JIR-301-M series	JIR-301-□, C5* <sup>8</sup>	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×		
CHINO CORPORATION	AH3000 series	AH3000	○ (2-wire type)	○	○	×	
	AL3000 series	AL3000	○ (2-wire type)	○	○	×	
	DB1000 series	DB1000	○ (2-wire type)	○	○	×	
	DB2000 series	DB2000	○ (2-wire type)	○	○	×	
	DZ1000 series	DZ1000* <sup>7</sup>	○ (2-wire type)	○	○	×	
	DZ2000 series	DZ2000* <sup>7</sup>	○ (2-wire type)	○	○	×	
	GT120 series	GT120	○ (2-wire type)	×	○* <sup>2</sup>	×	
	JU series	JU	○ (2-wire type)	○	×	×	
	KE series	KE3000	○ (2-wire type)	○	×	×	
	KP series	KP1000      KP2000	○ (2-wire type)	○	○	×	
	LE5000 series	LE5000	○ (2-wire type)	○	×	×	
	LT230 series	LT230	○ (2-wire type)	×	○* <sup>2</sup>	×	
	LT300 series	LT350      LT370	○ (2-wire type)	○	○	×	
	LT400 series	LT450      LT470	○ (2-wire type)	○	○	×	
	LT830 series	LT830	○ (2-wire type)	×	○* <sup>2</sup>	×	
	SE3000 series	SE3000	○ (2-wire type)	○	○	×	
FUJI ELECTRIC CO., LTD.	Micro Controller X	PXH      PXH9 PXG      PXG4/5/9 PXR      PXR3/4/5/9	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	
Yokogawa Electric Corporation	GREEN series (UM)	UM330      UM350 UM331      UM351	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	
		UP350      UP550 UP351	○ (2-wire type* <sup>11</sup> /4-wire type)	×	○* <sup>2</sup>	×	
	GREEN series (UP)	UP750	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	
		US1000	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	
	GREEN series (UT)	UT320      UT450 UT321      UT520 UT350      UT550 UT351      UT551 UT420	○ (2-wire type* <sup>11</sup> /4-wire type)	×	○* <sup>2</sup>	×	
		UT750	○ (2-wire type* <sup>11</sup> )	×	○* <sup>2</sup>	×	

Line up

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## GOT2000 connectable model list

### Temperature controllers/Other control equipment

Manufacturer	Model name		GT27/GT25/GT23				
			RS-485	RS-422	RS-232	Ethernet	
Yokogawa Electric Corporation	UT100 series (UP)	UP150	○ (2-wire type <sup>*1</sup> )	×	○ <sup>*2</sup>	×	
	UT100 series (UT)	UT130 UT150	○ (2-wire type <sup>*1</sup> )	×	○ <sup>*2</sup>	×	
	UT2000 series	UT2400 UT2800	○ (4-wire type)	×	○ <sup>*2</sup>	×	
	UTAdvanced series (UM)	UM33A	○ (2-wire type <sup>*1</sup> /4-wire type)	×	○ <sup>*2</sup>	○ <sup>*10</sup>	
	UTAdvanced series (UP)	UP35A UP55A	○ (2-wire type <sup>*1</sup> /4-wire type)	×	○ <sup>*2</sup>	○ <sup>*10</sup>	
	UTAdvanced series (UT)	UT32A UT35A UT52A	UT55A UT75A	○ (2-wire type <sup>*1</sup> /4-wire type) ○ (2-wire type <sup>*1</sup> )	×	○ <sup>*2</sup>	○ <sup>*10</sup>
RKC INSTRUMENT INC.	SR Mini HG	H-PCP-J	○ (2-wire type <sup>*1</sup> )	○	○	×	
		H-PCP-A H-PCP-B <sup>*7</sup>	×	○	○	×	
	SRZ	Z-CT Z-DIO Z-TIO	○ (2-wire type <sup>*1</sup> / <sup>*6</sup> )	○ <sup>*5</sup>	○ <sup>*2</sup>	○ <sup>*10</sup>	
		CB <sup>*7</sup>	CB100 CB400 CB500	○ (2-wire type <sup>*1</sup> )	×	○ <sup>*2</sup>	×
	FB	FB100	○ (2-wire type/4-wire type)	×	○ <sup>*2</sup>	○ <sup>*10</sup>	
		FB400 FB900	○ (2-wire type/4-wire type)	○	○	○ <sup>*10</sup>	
	RB	RB100 RB400 RB500	○ (2-wire type)	×	○ <sup>*2</sup>	×	
		PF	PF900 PF901	○ (2-wire type/4-wire type)	○	○	×
	HA	HA400 HA401	HA900 HA901	○ (2-wire type/4-wire type)	○	○	×
		RMC	RMC500	○ (2-wire type)	×	○ <sup>*2</sup>	×
	MA	MA900 MA901	○ (2-wire type/4-wire type)	○	○	×	
	AG	AG500	○ (2-wire type/4-wire type)	○	×	×	
	THV	THV-A1	○ (2-wire type/4-wire type)	○	×	×	
	SA	SA100 SA200	○ (2-wire type)	×	○ <sup>*2</sup>	×	
	SRX	X-TIO	○ (2-wire type)	×	○ <sup>*2</sup>	×	
	SB1	SB1	○ (2-wire type)	×	○ <sup>*2</sup>	×	
B400	B400	○ (2-wire type)	○	×	×		

\*1 GT27/GT25: Use GT15-RS4-TE or FA-LTBGT2R4CBL□.

The RS-422/485 interface and GT15-RS4-9S cannot be used.

GT23: Use FA-LTBGT2R4CBL□. The RS-422/485 interface cannot be used.

\*2 If the temperature controller/indicating controller has an RS-485 interface, use an RS-232/RS-485 converter for the manufacturer.

\*3 If the temperature controller/indicating controller has an RS-422 interface, use an RS-232/RS-422 converter for the manufacturer.

\*4 Only the indicating controller equipped with RS-232 communication function can be connected.

\*5 Use a communication extension module (Z-COM).

\*6 Use a communication extension module (Z-COM) depending on the system configuration of the temperature controller.

\*7 Select a model that supports the MODBUS<sup>®</sup> communication function.

\*8 Connectable with the products manufactured in October 2007 or later (Indicating controllers with the serial numbers 07Axxxxxx, 07Kxxxxxx, and 07Xxxxxxx or later).

\*9 Only MODBUS<sup>®</sup>/RTU connection is supported. Use MODBUS/RTU communication driver.

\*10 Only MODBUS<sup>®</sup>/TCP connection is supported. Use a MODBUS/TCP communication driver.

\*11 Use a serial communication unit SCU.

### MODBUS<sup>®</sup> device

Communication with MODBUS<sup>®</sup> compatible devices is possible by using the MODBUS/RTU communication driver or the MODBUS/TCP communication driver. (GT21 supports MODBUS<sup>®</sup>/RTU connection only.)

For the MODBUS<sup>®</sup> devices, which have been checked for operation, please refer to the Technical Bulletin "List of Valid Devices Applicable for GOT2000 Series MODBUS<sup>®</sup> Connection" No. GOT-A-0070.

### Computer

By connecting a PC, microcomputer board, PLC, etc. to a GOT, the data can be written to or read from virtual devices of the GOT.

### ■ Applicable GOT models for each connection type

The GOT to be used differs depending on the connection type.

Model	Connection type	Applicable model
GT27/GT25	RS-232	All models (Built-in interfaces of the GOT can be used.)
	RS-422/485	
	Ethernet	
	Other than above	
GT23	RS-232	All models (Built-in interfaces of the GOT can be used.)
	RS-422/485	
	Ethernet	
GT21	RS-232	GT2103-PMBDS
	RS-422/485	GT2103-PMBD GT2103-PMBDS
	Ethernet	GT2103-PMBD
	CC-Link	GT2103-PMBD GT2103-PMBDS

For the details of the connection configuration, please refer to the GOT2000 Series Connection Manual.

## GT SoftGOT2000 Version1 connectable model list

### Mitsubishi PLCs/C Controller modules/Safety controllers/Motion controllers

Series	Model name	Connection type										
		Ethernet connection	Direct CPU connection		Serial communication connection	CC-Link IE Controller Network connection	CC-Link IE Field Network connection	MELSECNET/H connection	MELSECNET/10 connection <sup>⑧</sup>			
			RS-232	USB								
PLC	MELSEC iQ-R series	R04CPU										
		R08CPU										
		R16CPU	○	×	○	○	×	×	×	×		
		R32CPU										
		R120CPU										
	MELSEC-Q series (Q mode)	High-speed type universal model QCPU	Q03UDVCP									
			Q04UDVCP									
			Q06UDVCP	○*23	○*19	○	○	○*2	○*4	○*23	○*23	
			Q13UDVCP									
			Q26UDVCP									
			Universal model QCPU	Q00UCPU					○*2			
		Q01UCPU						○*3				
		Q02UCPU						○*3				
		Q03UDCPU						○*3	○*4	○*23	○*23	
		Q04UDHCPU		○*23	○	○	○	○*3				
		Q06UDHCPU						○*3				
		Q10UDHCPU						○*2				
		Q13UDHCPU										
		Q20UDHCPU										
		Q26UDHCPU										
		Built-in Ethernet type		Q03UDECPU					○*3			
				Q04UDEHCPU								
				Q06UDEHCPU								
				Q10UDEHCPU								
			Q13UDEHCPU	○*23	○*18	○	○	○*2	○*4	○*23	○*23	
			Q20UDEHCPU									
			Q26UDEHCPU									
			Q50UDEHCPU									
			Q100UDEHCPU									
			Basic model QCPU	Q00JCPU								
		Q00CPU*5		○*23	○	×	○	○*5	×	○*23	○*23	
		Q01CPU*5										
		High performance model QCPU		Q02CPU*5			×					
				Q02HCPU*5								
			Q06HCPU*5	○*23	○	○	○	○*7	×	○*23	○*23	
			Q12HCPU*5									
			Q25HCPU*5									
		Process CPU	Q02PHCPU					○*8				
			Q06PHCPU	○*23	○	○	○	○*9	×	○*23	○*23	
			Q12PHCPU									
		Redundant CPU (main base)	Q25PHCPU									
			Q12PRHCPU	○	○	○	×	○*9	×	○*10	○*10	
		Redundant CPU (extension base)	Q25PRHCPU									
			Q12PRHCPU	○	×	×	○	×	×	×	×	
		MELSEC-QS series	Q25PRHCPU									
			QS001CPU	○	×	○*11	×	○*12	○*13	○	○	
		MELSEC-L series	L02SCPU									
			L02SCPU-P	○*14	○*15	○	○	×	○*16	×	×	
			L02CPU									
			L02CPU-P									
	L06CPU											
	L06CPU-P		○*14	○*17	○	○	×	○*16	×	×		
	L26CPU											
	L26CPU-P											
	L26CPU-BT											
	L26CPU-PBT											
	MELSEC-F series	FX0										
		FX0S	×	○	×	×	×	×	×	×		
		FX0N										
		FX1										
		FX1S	×	○	×	×	×	×	×	×		
		FX1N										
		FX1NC										
		FX2										
		FX2C	×	○	×	×	×	×	×	×		
		FX2N										
		FX2NC	×	○	×	×	×	×	×	×		
		FX3G										
		FX3GC	○	○	○	×	×	×	×	×		
		FX3U										
		FX3UC	○	○	×	×	×	×	×	×		
		FX3S										
		FX3GE										
		C Controller module	Q24DHCCPU-V									
	Q24DHCCPU-VG		○	○*18	○	○*19	○*3	○*20	○	○		
	Q24DHCCPU-LS											
	Q12DCCPU-V*20											

Line up

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## GT SoftGOT2000 Version1 connectable model list

### Mitsubishi PLCs/C Controller modules/Safety controllers/Motion controllers

Series	Model name	Connection type								
		Ethernet connection	Direct CPU connection		Serial communication connection	CC-Link IE Controller Network connection	CC-Link IE Field Network connection	MELSECNET/H connection	MELSECNET/10 connection <sup>*)</sup>	
			RS-232	USB						
Safety controller	MELSEC-WS series	WS0-CPU0	×	×	×	×	×	×	×	×
		WS0-CPU1	×	×	×	×	×	×	×	×
		WS0-CPU3	×	×	×	×	×	×	×	×
Motion controller	MELSEC iQ-R series	R16MTCPU	×	×	×	×	×	×	×	×
		R32MTCPU	×	×	×	×	×	×	×	×
	MELSEC-Q series	Q172CPU	×	×	×	×	×	×	×	×
		Q173CPU	×	×	×	×	×	×	×	×
		Q172CPUN	×	×	×	×	×	×	×	×
		Q173CPUN	×	×	×	×	×	×	×	×
		Q172HCPU	×	×	×	×	×	×	×	×
		Q173HCPU	×	×	×	×	×	×	×	×
		Q172DCPU	×	×	×	×	×	×	×	×
		Q173DCPU	×	×	×	×	×	×	×	×
		Q172DCPU-S1	×	×	×	×	×	×	×	×
		Q173DCPU-S1	×	×	×	×	×	×	×	×
		Q172DSCPU	○ <sup>*)23</sup>	○ <sup>*)18</sup>	○	○	○	×	○ <sup>*)23</sup>	○ <sup>*)23</sup>
		Q173DSCPU	○ <sup>*)23</sup>	○	○	○	○	○ <sup>*)4</sup>	○ <sup>*)23</sup>	○ <sup>*)23</sup>
		Q170MCPU <sup>*)21</sup> <sup>*)22</sup>	○ <sup>*)23</sup>	○	○	○	○	○	○ <sup>*)23</sup>	○ <sup>*)23</sup>
		Q170MSCPU <sup>*)22</sup>	○ <sup>*)23</sup>	○	○	○	○	○	○ <sup>*)23</sup>	○ <sup>*)23</sup>
		Q170MSCPU-S1 <sup>*)22</sup>	○ <sup>*)23</sup>	○	○	○	○	○	○ <sup>*)23</sup>	○ <sup>*)23</sup>
MR-MQ100	×	×	×	×	×	×	×	×		
MELSECNET/H remote I/O station	QJ72LP25-25	×	○	×	×	×	×	×	×	
	QJ72LP25G	×	○	×	×	×	×	×	×	
	QJ72BR15	×	○	×	×	×	×	×	×	
CC-Link IE Field Network head module	LJ72GF15-T2	×	×	○	○	×	○	×	×	
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB <sup>*)24</sup>	○	×	×	×	×	×	×	×	

- \*1 Includes the connection where MELSECNET/H is used in the MELSECNET/10 mode. Connection to the remote I/O network is not allowed.
- \*2 Use a CC-Link IE Controller Network module with the upper five digits of the serial No. later than 09042.
- \*3 Use a CPU and a CC-Link IE Controller Network module with the upper five digits of the serial No. later than 09042.
- \*4 Use a CPU with the upper five digits of the serial No. later than 12012.
- \*5 Use a CPU of function version B or later or a CC-Link IE Controller Network module of function version D or later.
- \*6 For the multiple CPU system configuration, use a CPU of function version B or later.
- \*7 Use a CPU with the upper five digits of the serial No. later than 09012 or a CC-Link IE Controller Network module with the upper five digits of the serial No. later than 09011. When the total number of stations in a network is 65 or more, use a CC-Link IE Controller Network module with the upper five digits of the serial No. 09042 or later.
- \*8 Use a CC-Link IE Controller Network module of function version D or later.
- \*9 Use a CPU with the upper five digits of the serial No. later than 10042 or a CC-Link IE Controller Network module of function version D or later.
- \*10 Use a MELSECNET/H interface board driver (SW0DNC-MNETH-B) with the version K or later.
- \*11 Only the host station and the host station settings can be accessed. (Access to other stations or other PLC CPUs are not allowed.)
- \*12 Use a CPU with the upper five digits of the serial No. later than 10032 or a CC-Link IE Controller Network module of function version D or later.

- \*13 Use a CPU with the upper five digits of the serial No. later than 13042.
- \*14 When using a LJ71E71-100, use a CPU with the upper five digits of the serial No. later than 14112.
- \*15 Use a LJ71E71-100 since L02SCPU and L02SCPU-P have no built-in Ethernet port.
- \*16 Use a CPU with the upper five digits of the serial No. later than 13012.
- \*17 The adapter L6ADP-R2 is required.
- \*18 Access via the serial port (RS-232) of QCPU in the multiple CPU system since QnUDEHCPU, Q12DCCPU, Q24DHCCPU-V/VG/LS, Q172DS/173DSCPU, Q173NCCPU, and Q172DRCPU have no serial port.
- \*19 Use the serial port of a serial communication module controlled by another CPU on the multiple CPU system.
- \*20 Use a CPU with the upper five digits of the serial No. later than 12042.
- \*21 When using SV43, use the motion controller CPU on which any of the following main OS software version is installed.  
SW7DC-SV43Q 3.00F or later
- \*22 Only the PLC CPU area (CPU No.1) can be connected. The PERIPHERAL I/F cannot be used.
- \*23 In the Ethernet, MELSECNET/H, or MELSECNET/10 connection, to monitor a QCPU in the multiple CPU system, always use a network module of function version B or later.
- \*24 Devices of other stations can be monitored via NZ2GF-ETB. (Devices of the host station cannot be monitored.)

### Modules usable when connected with Mitsubishi PLCs

#### Ethernet connection

##### PLC Ethernet module

CPU series	Ethernet module
MELSEC iQ-R series	RJ71EN71
MELSEC-Q series (Q mode) MELSEC-QS series Motion controller (MELSEC-Q series) <sup>*)1</sup>	QJ71E71-100 QJ71E71-B5 QJ71E71-B2 QJ71E71
MELSEC-L series	LJ71E71-100 <sup>*)2</sup>
MELSEC-F series	FX3U-ENET-L <sup>*)3</sup> FX3U-ENET-ADP <sup>*)3</sup>

- \*1 For the connection with motion controller CPUs (Q series), only the PLC CPU area (CPU No.1) of the Q170MCPU/Q170MSCPU is available.
- \*2 When using a LJ71E71-100, use a CPU with the upper five digits of the serial No. later than 14112.
- \*3 Options for extension controller may be required depending on the connected CPU.

#### Serial communication connection<sup>\*)1</sup>

##### PLC serial communication module

CPU series	Serial communication module
MELSEC iQ-R series	RJ71C24 RJ71C24-R2
MELSEC-Q series (Q mode) Motion controller (MELSEC-Q series) <sup>*)2</sup>	QJ71C24 QJ71C24-R2 QJ71C24N QJ71C24N-R2
MELSEC-L series CC-Link IE Field Network head module	LJ71C24 LJ71C24-R2

- \*1 Only RS-232 communication can be used.
- \*2 For the connection with motion controller CPUs (Q series), only the PLC CPU area (CPU No.1) of the Q170MCPU/Q170MSCPU is available.

For the details of the connection configuration, please refer to the GOT2000 Series Connection Manual.

## ● CC-Link IE Controller Network connection

### • Network module (PLC side)

CPU series	CC-Link IE Controller Network module
MELSEC-Q series (Q mode) MELSEC-QS series C Controller module Motion controller (MELSEC-Q series)*1	QJ71GP21-SX QJ71GP21S-SX

\*1 For the connection with motion controller CPUs (Q series), only the PLC CPU area (CPU No.1) of the Q170MCP/Q170MSCPU is available.

### • Network interface board (PC side)

PLC type	Network interface board
CC-Link IE Controller Network	Q80BD-J71GP21-SX Q80BD-J71GP21S-SX Q81BD-J71GP21-SX (optical loop) Q81BD-J71GP21S-SX (optical loop, with external power supply function)

## ● CC-Link IE Field Network connection

### • Network module (PLC side)

CPU series	CC-Link IE Field Network module
MELSEC-Q series (Q mode) Motion controller (MELSEC-Q series)*1	QJ71GF11-T2
MELSEC-QS series	QS0J71GF11-T2
MELSEC-L series	LJ71GF11-T2

\*1 For the connection with motion controller CPUs (Q series), only the PLC CPU area (CPU No.1) of the Q170MCP/Q170MSCPU is available.

### • Network interface board (PC side)

PLC type	Network interface board
CC-Link IE Field Network	Q81BD-J71GF11-T2

## ● MELSECNET/H, MELSECNET/10 connection

### • Network module (PLC side)

CPU series	MELSECNET/H, MELSECNET/10 module	
	Optical loop	Coaxial bus
MELSEC-Q series (Q mode)*1 MELSEC-QS series Motion controller (MELSEC-Q series)*2	QJ71LP21 QJ71LP21-25 QJ71LP21S-25	QJ71BR11*1
C Controller module	QJ71LP21-25 QJ71LP21S-25	

\*1 Use function version B or later of the MELSECNET/H network module and CPU.

\*2 For the connection with motion controller CPUs (Q series), only the PLC CPU area (CPU No.1) of the Q170MCP/Q170MSCPU is available.

### • Network interface board (PC side)

PLC type	Network interface board
MELSECNET/H	Q80BD-J71LP21-25 (optical loop) Q80BD-J71LP21S-25 (optical loop, with external power supply function) Q80BD-J71LP21G (optical loop) Q80BD-J71BR11 (coaxial loop) Q81BD-J71LP21-25 (optical loop)

## Mitsubishi robot controller

Controller name	Ethernet connection	Connection type							
		Direct CPU connection		Serial communication connection	CC-Link IE Controller Network connection	CC-Link IE Field Network connection	MELSECNET/H connection	MELSECNET/10 connection <sup>(*)</sup>	
RS-232	USB								
F series	CR750-Q(Q172DRCPU)	○*2	○*3	○	○	○*4	○	○	○
	CR751-Q(Q172DRCPU)	○	×	×	×	×	×	×	×
	CR750-D CR751-D	○	×	×	×	×	×	×	×
SQ series	CRnQ-700 (Q172DRCPU)	○*2	○*3	○	○	○*4	○	○	○
SD series	CRnD-700	○	×	×	×	×	×	×	×

\*1 Only supports the case where MELSECNET/H is used in the MELSECNET/10 mode. Connection to the remote I/O network is not allowed.

\*2 The Display I/F of CRnQ-700, CR750/751-Q cannot be used. Ethernet connections can be established only via the Ethernet module (QJ71E71) or the built-in Ethernet port in the multiple CPU system (QnUDE).

\*3 Access via the serial port (RS-232) of QCPU in the multiple CPU system since CRnQ-700 and CR750/751-Q have no serial port.

\*4 Use a CC-Link IE Controller Network module with the upper five digits of the serial No. later than 09042.



## GT SoftGOT2000 Version1 connectable model list

### Mitsubishi CNC

Series	Model	Ethernet connection	Direct CPU connection		Serial communication connection	CC-Link IE Controller Network connection	CC-Link IE Field Network connection	MELSECNET/H connection	MELSECNET/10 connection <sup>*3</sup>
			RS-232	USB					
CNC C70	Q173NCCPU	○	○ <sup>*2</sup>	○	○	○ <sup>*3</sup>	○	○	○

\*1 Only supports the case where MELSECNET/H is used in the MELSECNET/10 mode. Connection to the remote I/O network is not allowed.

\*2 Access via the serial port (RS-232) of QCPU in the multiple CPU system since CNC C70 has no serial port.

\*3 Use a CC-Link IE Controller Network module with the upper five digits of the serial No. later than 09042.

### Third party PLCs/Motion controllers

Manufacturer	Model name	Connection type					
		Ethernet connection	Direct CPU connection (RS-232)	Serial communication connection (RS-232)			
OMRON Corporation	SYSMAC CJ1	CJ1H CJ1G	CJ1M	○	○	×	
	SYSMAC CJ2	CJ2H	CJ2M	○	○ <sup>*1</sup>	×	
	SYSMAC CPM	CPM2A		×	○	×	
	SYSMAC CQM1H	CQM1H		×	○	×	
	SYSMAC CP1	CP1E (N type)		×	○	×	
	SYSMAC CQM1	CQM1		×	○ <sup>*2</sup>	×	
	SYSMAC CS1	CS1H CS1G	CS1D <sup>*3</sup>		○	○	×
	SYSMAC CVM1/CV <sup>*4</sup>	CVM1-CPU11-V□ CVM1-CPU01-V□ CV500-CPU01-V□	CV1000-CPU01-V□ CV2000-CPU01-V□		×	○	×
	SYSMAC α	C200HX C200HG	C200HE		×	○	×
KEYENCE CORPORATION		KV-700 KV-1000	KV-3000	○	×	×	
		KV-5000	KV-5500	○	×	×	
		GL120 GL60S GL60H	GL130 GL70H	×	○	×	
YASKAWA Electric Corporation		CP-9200SH		○	×	○	
		CP-9300MS		×	○	×	
		MP920		○	○	○	
		MP930		×	○	×	
		MP940		×	○	×	
		PROGIC-8		×	○	×	
		CP-9200(H)		×	○	×	
		CP-312		○	×	○	
		CP-317		○	×	○	
		MP2200 MP2300	MP2300S		○	×	○
	Yokogawa Electric Corporation	FA-M3	F3SP05 F3SP08 F3FP36 F3SP21 F3SP25 F3SP28 F3SP35	F3SP38 F3SP53 F3SP58 F3SP59 F3SP66 F3SP67	○	×	×
		FA-M3V	F3SP71-4N F3SP71-4S F3SP76-7S		○	×	×
	Siemens AG		SIMATIC S7-200 series <sup>*5</sup> SIMATIC S7-300 series SIMATIC S7-400 series <sup>*5</sup> SIMATIC S7-1200 series <sup>*5</sup>		○	×	×

\*1 Only C.J2M-CPU11□ can be connected.

\*2 Connection to the CQM1-CPU11 is not allowed since the CQM1-CPU11 has no RS-232 interface.

\*3 Connection is supported only when a single communication unit is used in a single CPU system configuration.

\*4 SYSMAC CVM1/CV can be used with a CPU version 1 or later.

\*5 Only OP communication can be used in Ethernet connection of the S7-200 series and the S7-1200 series.

### Modules usable when connected with third party serial communication connection or Ethernet connection modules

Manufacturer	Ethernet	RS-232		
			Manufacturer	Model name
OMRON Corporation	Ethernet module	CS1W-ETN21 CS1D-ETN21D	CJ1W-ETN21	-
KEYENCE CORPORATION	Ethernet module	KV-LE20V	KV-LE21V	-
YASKAWA Electric Corporation	MEMOBUS module Communication module	218IF 218IF-01 218IF-02 <sup>*1</sup> 218TXB	JAMSC-IF60 JAMSC-IF61 CP-217IF 217IF	217IF-01 218IF-01 218IF-02 <sup>*1</sup>
Yokogawa Electric Corporation	Ethernet interface module	F3LE01-5T F3LE11-0T F3LE12-0T		-
Siemens AG	Ethernet module	CP343-1 IT CP343-1 CP343-1 Lean	CP343-1 Advanced CP443-1 IT CP443-1	-

\*1 To connect MP2200, MP2300, or MP2300S using Ethernet connection or RS-232 connection, use a CPU of software version 2.60 or later.

### MODBUS® device

Communication with MODBUS® compatible devices is possible.

For the MODBUS® devices, which have been checked for operation, please refer to the Technical Bulletin "List of Valid Devices Applicable for GOT2000 Series MODBUS® Connection" No. GOT-A-0070.

For the details of the connection configuration, please refer to the GOT2000 Series Connection Manual.

## Compatibility with Conventional Products

### Compatibility with GOT1000 series

- The following shows the overview of replacing from the GOT1000 series. For the details, please refer to the following Technical Bulletins.
- Technical Bulletin "Precautions when Replacing GOT1000 Series with GOT2000 Series" No.GOT-A-0061 (GT16, GT15)

### Panel cutting dimensions

The panel cutting dimensions are the same if the GOT1000 series and the GOT2000 series have the same screen size. Changing mounting holes is not required.

GOT1000 series		GOT2000 series
15"	GT1695, GT1595*	Same dimensions as GT2715.
12.1"	GT1685, GT1585	Same dimensions as GT2712, GT2512.
10.4"	GT167□, GT157□	Same dimensions as GT2710, GT2510.
8.4"	GT1665, GT156□	Same dimensions as GT2708, GT2508.
3.7"	GT1020	Same dimensions as GT2103. (Although the screen size differs, panel cutting dimensions are the same.)

\* Discontinued product.

### Communication units, option units

Communication units and option units for the GT16, GT15, or GT10 can be used with the GOT2000 series as-is except for the following devices.

GOT1000 series		GOT2000 series	Remarks	
Communication unit	RS-422 conversion unit	GT15-RS2T4-9P GT15-RS2T4-25P	Use the built-in RS-422/485 interface or GT15-RS4-9S (serial communication unit)	
	MELSECNET/10 communication unit	GT15-75J71LP23-Z*	GT15-J71LP23-25 (MELSECNET/H connection unit)	
		GT15-75J71BR13-Z*	GT15-J71BR13 (MELSECNET/H connection unit)	Use MELSECNET/H connection unit in MELSECNET/10 mode.
	CC-Link communication unit (CC-Link (ID) Ver.1)	GT15-75J61BT13-Z*	GT15-J61BT13 (CC-Link communication unit)	
Connection conversion adapter	GT10-9PT5S	-	The adapter is not required on GT2103 because Europe terminal blocks are used.	
Ethernet communication unit	GT15-J71E71-100	Use the built-in Ethernet interface		
Option unit	Multimedia unit	GT16M-MMR	GT27-MMR-Z (multimedia unit)	A CF card is used with the unit.
	Video input unit	GT16M-V4	GT27-V4-Z (video input unit)	
		GT15V-75V4		
	RGB input unit	GT16M-R2	GT27-R2-Z (RGB input unit)	
		GT15V-75R1		
	Video/RGB input unit	GT16M-V4R1	GT27-V4R1-Z (video/RGB input unit)	
		GT15V-75V4R1		
	RGB output unit	GT16M-ROUT	GT27-ROUT-Z (RGB output unit)	
GT15V-75ROUT				
CF card unit	GT15-CFCD	-	A CF card cannot be used with the GOT2000 series. Use an SD card with the built-in SD card slot.	
CF card extension unit	GT15-CFEX-C08SET	-		

\* Discontinued product.

### Cables

#### <GT16, GT15>

- For the details of using the bus connection cables, RS-232 cables, RS-422 cables, or other cables for GT16 or GT15 with GT27 or GT25, please refer to the Technical Bulletin No. GOT-A-0061.

#### <GT10>

- The cables being used with GT1020 can be used as-is with GT2103 (serial type).

### Project data

The project data of the GOT1000 series can be used as-is by converting the GOT Type using GT Designer3 Version 1.100E or later\*.

\* The supported version differs depending on the GOT2000 models.

### Compatibility with GOT900 series

For the details, please refer to the following Technical Bulletins.

- Technical Bulletin "Precautions when Replacing GOT-A900 Series with GOT2000 Series" No.GOT-A-0062

### Compatibility with GOT800, A77GOT, or A64GOT series

For the details, please refer to the following Technical Bulletins.

- Technical Bulletin "Precautions when Replacing A800, A77GOT, A64GOT Series with GOT2000 Series" No.GOT-A-0063

For the Technical Bulletins, please contact your local sales office.

# Product list

## GOT model name

**GT27 15 - X T B A** □

Code	Screen size	Code	Resolution	Code	Display section	Code	Panel color	Code	Power supply type	Code	Communication interface
15	15"	X	XGA	T	TFT color	B	Black	A	100 to 240VAC	None *1	Ethernet, RS-422/485
12	12.1"	S	SVGA	M	TFT monochrome	W	White	D	24VDC	S *1	RS-232, RS-422/485
10	10.4"	V	VGA								
08	8.4"	P	320x128 dots								
05	5.7"										
03	3.8"										

\*1 GT21 only

<b>GT27</b>	Advanced model with multi-touch gesture functions
<b>GT25</b>	High performance, cost efficient, mid-range model
<b>GT23</b>	Unchallenged cost performance
<b>GT21</b>	Compact models with basic functions

## GOTs

Category	Model name	Screen size	Display section	Display color	Panel color	Power supply	Remarks			
GT27	GT2715-XTBA	15" XGA	TFT color	65536 colors	Black	100 to 240VAC	Multimedia & Video/RGB compliant Multi-touch compliant			
	GT2715-XTBD					24VDC				
	GT2712	GT2712-STBA			12.1" SVGA	Black		100 to 240VAC	-	
		GT2712-STBD						24VDC		
		GT2712-STWA				White		100 to 240VAC		
		GT2712-STWD						24VDC		
	GT2710	GT2710-STBA			10.4" SVGA	Black		100 to 240VAC		-
		GT2710-STBD						24VDC		
		GT2710-VTBA			10.4" VGA	White		100 to 240VAC		
		GT2710-VTBD						24VDC		
		GT2710-VTWA				100 to 240VAC				
	GT2710-VTWD	24VDC								
GT2708	GT2708-STBA	8.4" SVGA	TFT color	65536 colors	Black	100 to 240VAC	-			
	GT2708-STBD					24VDC				
	GT2708-VTBA	8.4" VGA			White	100 to 240VAC				
	GT2708-VTBD					24VDC				
GT2705	GT2705-VTBD	5.7" VGA	Black	24VDC	Multi-touch compliant					
GT25	GT2512-STBA	12.1" SVGA	TFT color	65536 colors	Black	100 to 240VAC		-		
	GT2512-STBD					24VDC				
	GT2510	GT2510-VTBA			10.4" VGA	Black			100 to 240VAC	-
		GT2510-VTBD							24VDC	
		GT2510-VTWA				White			100 to 240VAC	
		GT2510-VTWD							24VDC	
	GT2508	GT2508-VTBA			8.4" VGA	Black			100 to 240VAC	
		GT2508-VTBD					24VDC			
		GT2508-VTWA				White	100 to 240VAC			
		GT2508-VTWD					24VDC			
GT23	GT2310-VTBA	10.4" VGA	TFT color	65536 colors	Black	100 to 240VAC	-			
	GT2310-VTBD					24VDC				
	GT2308-VTBA	8.4" VGA			Black	100 to 240VAC				
	GT2308-VTBD					24VDC				
GT21	GT2103-PMBD	3.8" [320x128 dots]	TFT monochrome	Monochrome (black/white) 32 shade grayscale 5-color LED (white/green/pink/orange/red)	Black	24VDC	Ethernet, RS-422/485			
	GT2103-PMBDS					24VDC	RS-232, RS-422/485			

\*For inquiries relating to the status of conforming to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

## Communication units

Product name	Model name	Specifications	Applicable model			
			GT27	GT25	GT23	GT21
Serial communication unit	GT15-RS2-9P	RS-232 serial communication unit (D-sub 9-pin male)	●	●	-	-
	GT15-RS4-9S	RS-422/485 serial communication unit (D-sub 9-pin female) *1 *2	●	●	-	-
	GT15-RS4-TE	RS-422/485 serial communication unit (terminal block) *1 Usable only when connecting to temperature controllers/indicating controllers via RS-485 or in GOT multi-drop connection	●	●	-	-
Q bus connection unit	GT15-QBUS	Q bus connection (1ch) unit standard model	●	●	-	-
	GT15-QBUS2	Q bus connection (2ch) unit standard model	●	●	-	-
	GT15-75QBUSL	Q bus connection (1ch) unit slim model *3	●	●	-	-
	GT15-75QBUS2L	Q bus connection (2ch) unit slim model *3	●	●	-	-
MELSECNET/H communication unit	GT15-J71LP23-25	Normal station unit (optical loop)	●	●	-	-
	GT15-J71BR13	Normal station unit (coaxial bus)	●	●	-	-
CC-Link IE Controller Network communication unit	GT15-J71GP23-SX	Normal station unit (optical loop)	●	●	-	-
CC-Link IE Field Network communication unit	GT15-J71GF13-T2	Intelligent device station unit	●	●	-	-
CC-Link communication unit	GT15-J61BT13	Intelligent device station unit CC-Link Ver. 2 compliant	●	●	-	-
Wireless LAN communication unit	GT25-WLAN <b>NEW</b>	IEEE802.11b/g/n compliant, built-in antenna, station (wireless LAN adapter), connection to personal computer Compliance with: Japan Radio Law *4, FCC *5, R&TTE *5	●	●	-	-
Serial multi-drop connection unit	GT01-RS4-M	For GOT multi-drop connection	●	●	●	●

\*1 The unit may not be able to be used depending on the connection destination. Please refer to the GOT2000 Series Connection Manual.

\*2 The unit cannot be used when connecting to temperature controllers/indicating controllers via RS-485 (2-wire type).

\*3 The unit cannot be used stacked on other units.

\*4 The product with hardware version A complies with the regulation. The product with hardware version A can be used only in Japan.

\*5 The product with hardware version B complies with the regulation. The product with hardware version B or later can be used in Japan, the United States, the EU member states, Switzerland, Norway, Iceland, and Liechtenstein.

## Option units

Product name	Model name	Specifications	Applicable model			
			GT27	GT25	GT23	GT21
Printer unit	GT15-PRN	USB slave (PictBridge) for printer connection, 1ch Cable for connection between printer unit and printer (3m) included	●	●	-	-
Multimedia unit	GT27-MMR-Z	For video input (NTSC/PAL) 1ch, Record video images/play video files	● *1	-	-	-
Video input unit	GT27-V4-Z	For video input (NTSC/PAL) 4ch	● *1	-	-	-
RGB input unit	GT27-R2-Z	For analog RGB input 2ch	● *1	-	-	-
Video/RGB input unit	GT27-V4R1-Z	For video input (NTSC/PAL) 4ch / analog RGB 1ch input	● *1	-	-	-
RGB output unit	GT27-ROUT-Z	For analog RGB output 1ch	● *1	-	-	-
Sound output unit	GT15-SOUT	For sound output (ø3.5 stereo pin jack)	●	●	-	-
External I/O unit	GT15-DIOR	For external I/O devices and operation panel connection (negative common input / source type output)	●	●	-	-
	GT15-DIO	For external I/O devices and operation panel connection (positive common input / sink type output)	●	●	-	-
SD card unit	GT21-03SDCD <b>NEW</b>	For SD card mounting	-	-	-	●

\*1 Not supported by the 5.7-inch model.

## Software

Product name	Model name	Contents	
HMI/GOT Screen Design Software MELSOFT GT Works3	SW1DND-GTWK3-E	English Version	Standard license product
	SW1DND-GTWK3-EA		Volume license product *1
	SW1DND-GTWK3-EAZ		Additional license product *1 *6
FA Integrated Engineering Software MELSOFT iQ Works *2 *3	SW2DND-IQWK-E <b>NEW</b>	English Version	Standard license product
License key for GT SoftGOT2000 *4	GT27-SGTKEY-U	USB port licence key	
Remote Personal Computer Operation Function (Ethernet) License *5	GT25-PCRAKEY	1 license	
VNC Server Function License *5	GT25-VNCSKEY	1 license (License for GOT remote access function)	
MES I/F Function License *5	GT25-MESIFKEY	1 license	

\*1 The desired number of licenses (2 or more) can be purchased. For details, please contact your local sales office.

\*2 Volume license product and additional license product are also available. For more details, please refer to the MELSOFT iQ Works catalog (L(NA)08232ENG).

\*3 The product includes the following software.

- System Management Software [MELSOFT Navigator]
- Programmable Controller Engineering Software [MELSOFT GX Works2]
- Motion Controller Engineering Software [MELSOFT MT Works2]
- Screen Design Software for Graphic Operation Terminal [MELSOFT GT Works3]
- Robot Engineering Software [MELSOFT RT ToolBox2 mini]
- Inverter Setup Software [FR Configurator2]

\*4 To use GT SoftGOT2000, a license key for GT SoftGOT2000 is necessary for each personal computer.

\*5 1 license is required for 1 GOT unit.

\*6 This product does not include the DVD-ROM. Only the license certificate with the product ID No. is issued.

## Options

Product name	Model name	Specifications	Applicable model				
			GT27	GT25	GT23	GT21	
Protective sheet *1	GT27-15PSGC	For 15"	●	-	-	-	
	GT25-12PSGC	For 12.1"	●	●	-	-	
	GT25-10PSGC	For 10.4"	●	●	-	-	
	GT25-08PSGC	For 8.4"	●	●	-	-	
	GT25-05PSGC	For 5.7"	●	-	-	-	
	GT27-15PSCC	For 15"	●	-	-	-	
	GT25-12PSCC	For 12.1"	●	●	-	-	
	GT25-10PSCC	For 10.4"	●	●	-	-	
	GT25-08PSCC	For 8.4"	●	●	-	-	
	GT25-05PSCC	For 5.7"	●	-	-	-	
	GT21-03PSGC-UC	For 3.8"	Surface treatment: anti-glare Sheet color: transparent USB environmental protection cover area: closed *2 Number of sheets included in a set: 5	-	-	-	●
	GT25-12PSCC-UC	For 12.1"	●	●	-	-	
	GT25-10PSCC-UC	For 10.4"	●	●	●	-	
	GT25-08PSCC-UC	For 8.4"	●	●	●	-	
GT25-05PSCC-UC	For 5.7"	●	-	-	-		
GT21-03PSCC-UC	For 3.8"	Surface treatment: anti-glare Sheet color: transparent USB environmental protection cover area: closed *2 Number of sheets included in a set: 5	-	-	-	●	
USB environmental protection cover	GT25-UCCOV	For 15"/12.1"/10.4"/8.7"	●	●	-	-	
	GT25-05UCCOV	For 5.7"	●	-	-	-	
Protective cover for oil *3	GT20-15PCO	For 15"	●	-	-	-	
	GT20-12PCO	For 12.1"	●	●	-	-	
	GT20-10PCO	For 10.4"	●	●	●	-	
	GT20-08PCO	For 8.4"	●	●	●	-	
	GT25-05PCO	For 5.7"	●	-	-	-	
	GT10-20PCO	For 3.8"	-	-	-	●	
Stand	GT15-90STAND	For 15"	●	-	-	-	
	GT15-80STAND	For 12.1"	●	●	-	-	
	GT15-70STAND	For 10.4"/8.4"	●	●	●	-	
	GT15-50STAND	For 5.7"	●	-	-	-	
Memory card	SD card	L1MEM-2GBSD	2GB SD memory card for GOT	●	●	●	●
		L1MEM-4GBSD	4GB SDHC memory card for GOT	●	●	●	●
	CF card	GT05-MEM-128MC	128MB CF card for GT27-MMR-Z	●	-	-	-
		GT05-MEM-256MC	256MB CF card for GT27-MMR-Z	●	-	-	-
		GT05-MEM-512MC	512MB CF card for GT27-MMR-Z	●	-	-	-
		GT05-MEM-1GC	1GB CF card for GT27-MMR-Z	●	-	-	-
		GT05-MEM-2GC	2GB CF card for GT27-MMR-Z	●	-	-	-
		GT05-MEM-4GC	4GB CF card for GT27-MMR-Z	●	-	-	-
		GT05-MEM-8GC	8GB CF card for GT27-MMR-Z	●	-	-	-
		GT05-MEM-16GC	16GB CF card for GT27-MMR-Z	●	-	-	-
Memory card adapter	GT05-MEM-ADPC	CF card →memory card (TYPE II) conversion adapter for GT27-MMR-Z	●	-	-	-	
Attachment	GT15-70ATT-98	For 10.4"	For conversion from GT168□, GT158□, A985GOT *4	●	●	●	-
	GT15-70ATT-87		For conversion from A870GOT-SWS/TWS, A8GT-70GOT-TB/TW/SB/SW	●	●	●	-
	GT15-60ATT-97		For conversion from GT167□, GT157□, A97□GOT	●	●	●	-
	GT15-60ATT-96		For conversion from A960GOT	●	●	●	-
	GT15-60ATT-87	For 8.4"	For conversion from A870GOT-EWS, A8GT-70GOT-EB/EW, A77GOT-EL, A77GOT-EL-S5/S3	●	●	●	-
	GT15-60ATT-77		For conversion from A77GOT-CL, A77GOT-CL-S5/S3, A77GOT-L, A77GOT-L-S5/S3	●	●	●	-
	GT15-50ATT-95W	For 5.7"	For conversion from A956WGOT, F940WGOT	●	-	-	-
	GT15-50ATT-85		For conversion from A85□GOT	●	-	-	-
Battery	GT11-50BAT	Battery for backup of SRAM data, clock data, and system status log data	● (For replacement)	● (For replacement)	● (Option)	-	

\*1 The white model does not have the front USB interface. It is recommended to use the products that the USB environmental protection cover area is closed.

\*2 When using the product with the USB environmental protection cover area closed, the front USB interface cannot be used.

\*3 Check if the protective cover for oil can be used in the actual environment before use. When using the cover, the front USB interface and human sensor cannot be used.

\*4 Including the GP250□ and GP260□ manufactured by Digital Electronics Corporation.



**Cables**

Product name		Model name	Cable length	Recommended product <sup>※</sup>	Specifications	Applicable model							
						GT27	GT25	GT23	GT21				
QCPU bus connection cable	QCPU connection cable GOT-to-GOT connection cable	GT15-QC06B	0.6m	○	Between QCPU and GOT Between GOT and GOT	●	●	-	-				
		GT15-QC12B	1.2m										
		GT15-QC30B	3m										
		GT15-QC50B	5m										
		GT15-QC100B	10m										
	QCPU connection cable GOT-to-GOT connection cable (for long distance connection)	GT15-QC150BS	15m	○	Between QCPU and GOT (for long-distance connection) A9GT-QCNC required Between GOT and GOT (for long-distance connection)	●	●	-	-				
		GT15-QC200BS	20m										
		GT15-QC250BS	25m										
		GT15-QC300BS	30m										
		GT15-QC350BS	35m										
Bus extension connector box		A9GT-QCNCB	-	-	Attach to PLC main base when using QCPU and GOT long-distance connection	●	●	-	-				
Ferrite core set for Q bus cable		GT15-QFC	-	-	Attach to GOT-A900 bus connection cable when replacing existing GOT-A900 with GOT2000 (two-pack)	●	●	-	-				
RS-485 terminal block conversion unit		FA-LTBGT2R4CBL05	0.5m	○	RS-485 terminal block conversion unit With cable for connection between RS-422/485 (connector) of GOT2000 and RS-485 terminal block conversion unit	●	●	-	-				
		FA-LTBGT2R4CBL10	1m										
		FA-LTBGT2R4CBL20	2m			●	●	-	-				
RS-422 conversion cable		FA-CNV2402CBL	0.2m	○	Between QCPU/L02SCPU(-P) and RS-422 cable (GT01-C□R4-25P, GT10-C□R4-25P, GT21-C□R4-25P5) Between L6ADP-R2 and RS-422 cable (GT01-C□R4-25P, GT10-C□R4-25P, GT21-C□R4-25P5) [MINI-DIN6 pin and D-sub 25-pin]	●	●	●	●				
		FA-CNV2405CBL	0.5m										
RS-422 cable	QnA/ACPU direct connection cable Computer link connection cable CC-Link(G4) connection cable	GT01-C30R4-25P	3m	-	Between QnA/ACPU/motion controller CPU (A series)/FXCPU and GOT Between RS-422 conversion cable (FA-CNV□CBL) and GOT Between serial communication module and GOT Between peripheral connection module (AJ65BT-G4-S3) and GOT [Between D-sub 25-pin and D-sub 9-pin]	●	●	●	● <sup>※3</sup>				
		GT01-C100R4-25P	10m										
		GT01-C200R4-25P	20m										
		GT01-C300R4-25P	30m										
		GT10-C30R4-25P	3m										
		GT10-C100R4-25P	10m										
		GT10-C200R4-25P	20m										
		GT10-C300R4-25P	30m										
		GT21-C30R4-25P5	3m										
		GT21-C100R4-25P5	10m										
	Computer link connection cable	GT09-C30R4-6C	3m	○	Between serial communication module and GOT Between computer link module and GOT [Between loose wire and D-sub 9-pin]	●	●	●	● <sup>※3</sup>				
		GT09-C100R4-6C	10m										
		GT09-C200R4-6C	20m										
		GT09-C300R4-6C	30m										
		GT01-C10R4-8P	1m			-	Between FXCPU and GOT Between FXCPU communication expansion board and GOT [Between MINI-DIN 8-pin and D-sub 9-pin]	●	●	●	● <sup>※3</sup>		
		GT01-C30R4-8P	3m										
		GT01-C100R4-8P	10m										
		GT01-C200R4-8P	20m										
		GT01-C300R4-8P	30m										
		GT10-C10R4-8P	1m										
	GT10-C30R4-8P	3m											
	GT10-C100R4-8P	10m											
	GT10-C200R4-8P	20m											
	GT10-C300R4-8P	30m											
	FXCPU direct connection cable FXCPU communication expansion board connection cable	GT21-C10R4-8P5	1m	-	Between FXCPU and GOT Between FXCPU communication expansion board and GOT [Between MINI-DIN 8-pin and loose wire (connector terminal block 9-pin)]	-	-	-	● <sup>※3</sup>				
		GT21-C30R4-8P5	3m										
		GT21-C100R4-8P5	10m										
		GT21-C200R4-8P5	20m										
		GT21-C300R4-8P5	30m										
		GT10-C10R4-8P	1m			-	Between FXCPU and GOT Between FXCPU communication expansion board and GOT [Between MINI-DIN 8-pin and loose wire (connector terminal block 9-pin)] * Cannot be used for FX1NC, FX2NC, FX3UC-D/DSS, or FX3G.	-	-	-	● <sup>※3</sup>		
		GT10-C10R4-8PC	1m										
		GT10-C30R4-8PC	3m										
		GT10-C100R4-8PC	10m										
		GT10-C200R4-8PC	20m										
	GT10-C300R4-8PC	30m											
	RS-422 connector conversion cable		GT10-C02H-9SC	0.2m	-			Between PLC and GOT [Convert D-sub 9-pin to loose wire (connector terminal block 9-pin)]	-	-	-	● <sup>※3</sup>	
	RS-232 cable	Q/LCPU direct connection cable	GT01-C30R2-6P	3m	-			Between Q/LCPU and GOT Between L6ADP-R2 and GOT/personal computer (GT SoftGOT2000) [Between MINI-DIN 6-pin and D-sub 9-pin]	●	●	●	● <sup>※3</sup>	
			FXCPU communication expansion board connection cable FXCPU communication special adapter connection cable	GT01-C30R2-9S	3m			-	Between FXCPU communication expansion board and GOT/personal computer (GT SoftGOT2000) Between FXCPU communication special adapter and GOT/personal computer (GT SoftGOT2000) [Between D-sub 9-pin and D-sub 9-pin]	●	●	●	● <sup>※3</sup>
			FXCPU communication special adapter connection cable	GT01-C30R2-25P	3m			-	Between FXCPU communication special adapter and GOT/personal computer (GT SoftGOT2000) [Between D-sub 25-pin connector and D-sub 9-pin]	●	●	●	● <sup>※3</sup>
		Computer link connection cable CC-Link(G4) connection cable	GT09-C30R2-9P	3m	○	Between serial communication module and GOT Between computer link module and GOT Between peripheral connection module (AJ65BT-R2N) and GOT [Between D-sub 9-pin and D-sub 9-pin]	●	●	●	● <sup>※3</sup>			
GT09-C30R2-25P			3m	○	Between serial communication module and GOT Between computer link module and GOT [Between D-sub 25-pin and D-sub 9-pin]	●	●	●	● <sup>※3</sup>				
Computer link connection cable		GT10-C02H-6PT9P	0.2m	-	Between PLC and GOT Between multiple connection GOT and GOT Between barcode reader, RFID, serial printer and GOT [Convert D-sub 9-pin to MINI-DIN 6-pin]	-	-	-	● <sup>※3</sup>				
Data transfer cable		GT01-C30R2-6P	3m	-	Between GOT and personal computer * Can be used for the FA transparent function only. Cannot be used for the screen/OS data transfer. [Between MINI-DIN 6-pin and D-sub 9-pin]	-	-	-	● <sup>※3</sup>				
External I/O unit connection conversion cable		GT15-C03HTB	0.3m	○	Between external I/O unit (GT15-DIO) and GOT-A900 external I/O interface unit connection cable (A8GT-C05TK, A8GT-C30TB, user-fabricated cable)	●	●	-	-				
Analog RGB cable		GT15-C50VG	5m	○	Between external monitor, personal computer and vision sensor and GOT	●	-	-	-				
USB cable	Data transfer cable Printer connection cable	GT09-C30USB-5P	3m	○	Between personal computer (screen design software) and GOT Between personal computer (GT SoftGOT2000) and QnU/L/FXCPU Between PictBridge-compatible printer and printer unit (GT15-PRN) [Between USB-A and USB Mini-B]	●	●	●	● <sup>※6</sup>				
		Panel-mounted USB Port Extension	GT10-C10EXUSB-5S	1m	-	For extending a USB port of GOT into the control panel.	-	-	-	●			

※1 FA-LTBGT2R4CBL□, FA-CNV240□CBL are developed by Mitsubishi Electric Engineering Company Limited and sold through your local sales office.  
The other products listed are developed by Mitsubishi Electric Systems & Service Co., LTD. and sold through your local sales office.  
※2 This cable can be used for GT2103-PMBD only.  
※3 This cable can be used for GT2103-PMBDS only.  
※4 This cable can be used if connected with the RS-422 connector conversion cable GT10-C02H-9SC.  
※5 This cable can be used if connected with the RS-232 connector conversion cable GT10-C02H-6PT9P.  
※6 This cable cannot be used for printer connection.

## Cables for non-Mitsubishi FA products

RS-232 and RS-422 cables are available from every manufacturer. For more details, please see the GOT2000 Series Connection Manual.

## Manuals

Manual name	Manual number
GOT2000 Series User's Manual (Hardware)	SH-081194ENG
GOT2000 Series User's Manual (Utility)	SH-081195ENG
GOT2000 Series User's Manual (Monitor)	SH-081196ENG
GOT2000 Series Connection Manual (Mitsubishi Products) for GT Works3 Version1	SH-081197ENG
GT Designer3 (GOT2000) Screen Design Manual	SH-081220ENG



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**Tailored solutions to meet your HMI and  
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## CASE STUDY 1

Have you ever needed an HMI to do more than provide pretty panel meters? The GOT1000 does more than just visualization, it provides solutions for both the everyday, and not so everyday problem.

## CASE STUDY 2

Solutions for your FA Device: Innovative solutions for improving uptime, work efficiency and productivity using the GOT1000 and your FA equipment.

GOT Solutions

FA Solutions

Robots



Motion Controllers and Servos Amplifiers



CNCs



Automation Platforms and Programmable Controllers



Inverters



Vision Systems



# The GOT1000 delivers the competitive advantage:

The speed of your business and the speed of your machine hinges on many forces outside of your control.

The GOT1000 brings them back under control with speed, performance and industry leading functions that are tailored for visualization - real life solutions for your real time process.

Whether your focus is centered on uptime, productivity or serviceability there is a GOT solution that fits your machine, factory and enterprise level requirements.



GOTs evolve the face of control.

GRAPHIC OPERATION TERMINAL  
**GOT1000**

# FA Solutions

Obstacles are often encountered when using many different types of FA devices. The following problems can be resolved by linking with GOT1000.

## Enhancing sequence control.



General-purpose PLC  
**LINK1 MELSEC x GOT1000**

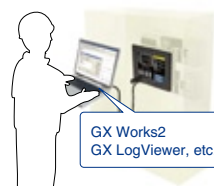
## Powerful functionality that is useful during startup and the tuning process!

Can the program be debugged without opening the cabinet?

### FA transparent function

For details, see P.39

Connected with a personal computer, the GOT acts as a transparent gateway to enable programming, start up, and adjustment of equipment using GX Works2 or GX LogViewer. Users do not have to bother with opening the cabinet or changing cable connections. (On the GT10 series, the FA transparent function can be used via the interface on the rear side.)

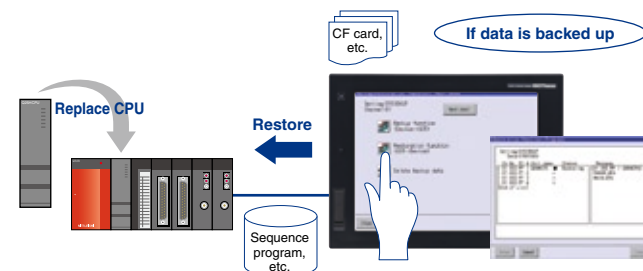


Can the PLC programs be recovered after failure?

### Backup/restoration function

For details, see P.42

Sequence programs and parameters can be backed up to the CF card or USB memory in the GOT. Users can then perform batch operation to restore the data to the PLC.



Can the PLC status or errors be checked quickly?

### System monitor function

For details, see P.46

PLC devices can be monitored and changed.

### Intelligent module monitor function

For details, see P.46

Buffer memory values and I/O information can be monitored and changed.

### Network monitor function

For details, see P.46

Enable monitoring of network line conditions on a dedicated screen.

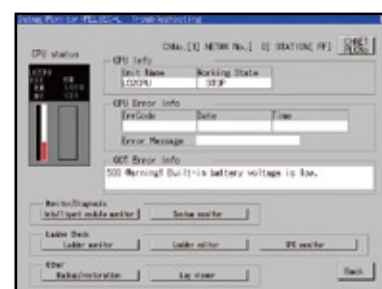
### Network module status display

Enable monitoring of LED status, error status, among others of network modules on a GOT.

### MELSEC-L troubleshooting function

For details, see P.46

A dedicated maintenance screen for the L series is included. The CPU status and error information can be easily confirmed without a personal computer. If a problem occurs, you can jump to a function screen such as the ladder monitor to quickly take corrective actions.



Ideal for PLCs in the field and on the plant floor!

Can PLC programs be monitored with the GOT?

### Ladder monitor function and ladder editor function

For details, see P.44 P.45

Sequence programs can be monitored in a circuit diagram (ladder format).

### SFC monitor function

For details, see P.44

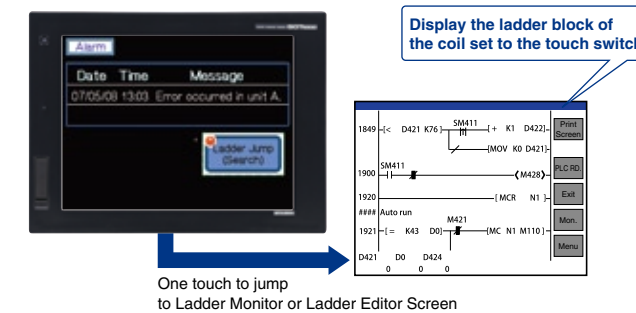
The Q series (Q mode) SFC programs (MELSAP3, MELSAP-L) can be monitored in a SFC diagram format.

Can the root cause be easily identified?

### One-touch ladder jump function

For details, see P.44

By setting a program name and coil number of the PLC to a touch switch, the relevant ladder circuit block can be displayed directly. Troubles can be handled smoothly from the alarm screen.

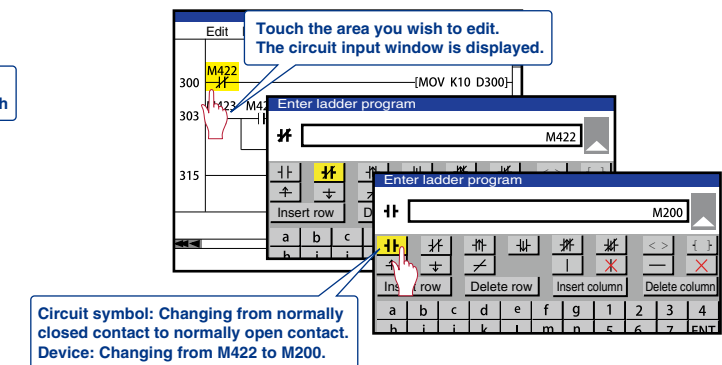


Can simple changes to ladder programs be made without a personal computer?

### Ladder editor function

For details, see P.45

Sequence programs of the Q series (Q mode) and the L series can be edited in a circuit diagram (ladder format).



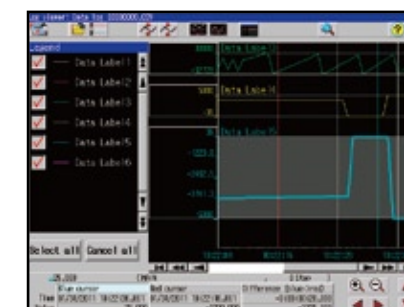
Using the MELSEC-L series or high-speed data logger module!

Can collected logging data be checked at the worksite?

### Log viewer function

For details, see P.40

Logging data collected using the L series or high-speed data logger module can be displayed on the GOT.



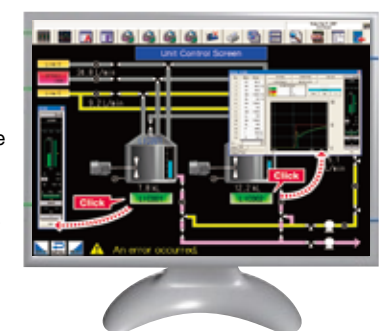
Monitoring batch control!

Can Process and Batch monitoring be simplified?

### Building a process control system using GOT1000

For details, see P.26 P.51

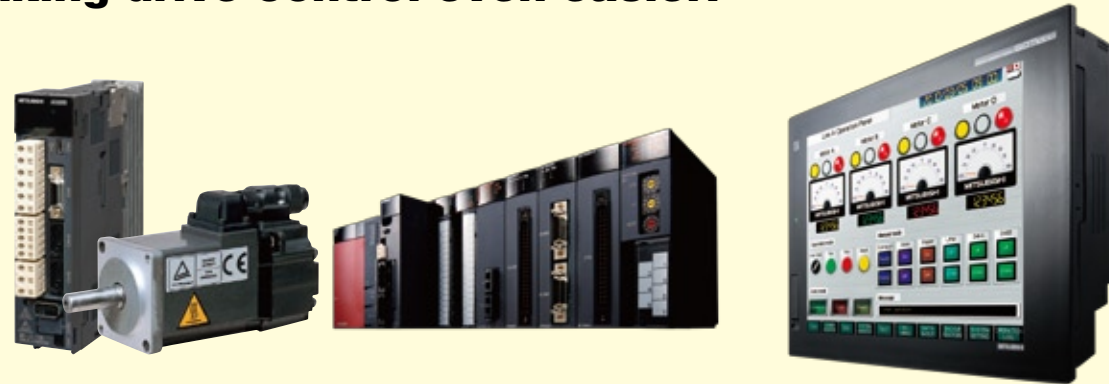
PX Developer creates GOT process control screens automatically. The automatically generated data can be used for both the GOT (worksite) and GT SoftGOT1000 (monitor room), and therefore monitor screens can be created efficiently.





# FA Solutions

**Making drive control even easier.**



General-purpose AC Servo  
**LINK2 MELSERVO X GOT1000**

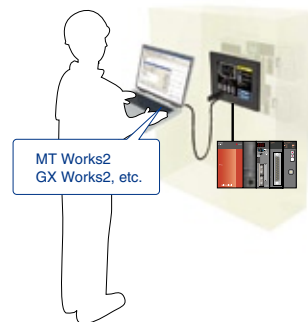
**Powerful functionality that is useful during startup and the tuning process!**

**Can the program be debugged without opening the cabinet?**

**FA transparent function**

For details, see **P.39**

Connected with a personal computer, the GOT acts as a transparent gateway to enable programming, startup, and adjustment of equipment using MT Works2, GX Works2, GX Configurator-QP or MR Configurator2. Users do not have to bother with opening the cabinet or changing cable connections.



MT Works2  
GX Works2, etc.

**Can devices in the motion controller be validated?**

**System monitor function**

For details, see **P.46**

Motion controller devices can be monitored and changed.

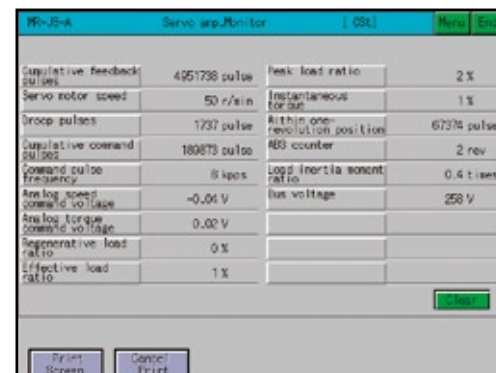
**For direct connection of servo amplifiers to GOTs!**

**Can errors or the status of servo amplifiers be validated?**

**Servo amplifier monitor function**

For details, see **P.47**

In a system which outputs pulse train, the GOT can be connected to a servo amplifier in a serial connection to perform the following operations: monitoring, alarm display, diagnosis, parameter setting, and test operations.



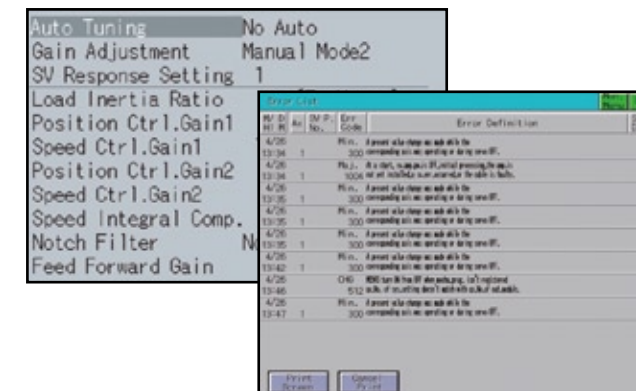
**Ideal for motion controllers in the field and on the plant floor!**

**Can the motion controller's servo parameters be changed easily?**

**Q series motion monitor function**

For details, see **P.47**

The GOT enables easy monitoring of motion controllers (Q series), changing of servo parameters, and display of errors on the screen.

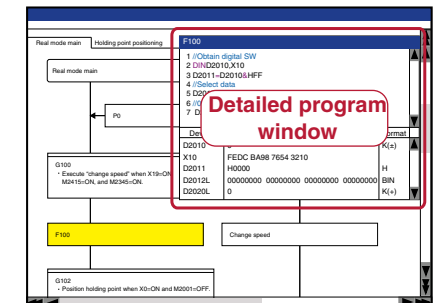


**Can motion SFC programs be checked on the GOT?**

**Motion SFC monitor function**

For details, see **P.45**

Motion controller (Q series) SFC programs can be monitored in SFC diagram format. Viewing the batch program monitor or the active step list enables you to see the complete status at a glance.



**Can motion profiles be recovered after controller failures?**

**Backup/restoration function**

For details, see **P.42**

Motion controller (Q series) programs and parameters can be backed up onto a CF card or USB memory in the GOT. Users can perform batch operation to restore the data to the motion controller.

**Embedded functionality for positioning modules!**

**Can positioning status and errors be validated?**

**Intelligent module monitor function**

For details, see **P.46**

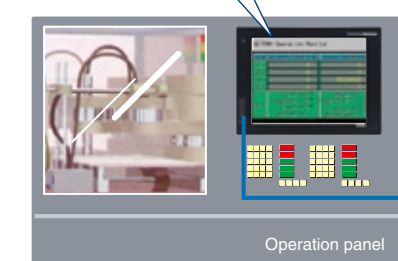
Buffer memory values of modules such as the QD75MH and I/O information can be monitored and changed.



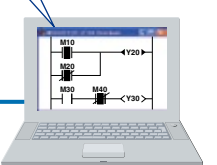
**Other convenient uses!**

When used in combination with the FA transparent function, the positioning module can be efficiently debugged. If an error occurs in the positioning module, the details of the error can be confirmed using just the GOT.

Monitor the status, parameters, input/output information, and other data for each axis of the positioning module (intelligent module monitor function)



Monitor positioning sequence programs (FA transparent function)



# FA Solutions

## Simplifying inverter control.



General-purpose Inverter  
**LINK3 FREQROL X GOT1000**

## Ideal for inverter startups and operation!

Can connections to the inverter be simplified?

### Directly connect inverters

Up to 31 inverters can be connected to a single GOT over a total distance of 500m.  
FREQROL-F700P/F700PJ inverters can automatically configure the communication parameters for GOT connection, making connections easy.

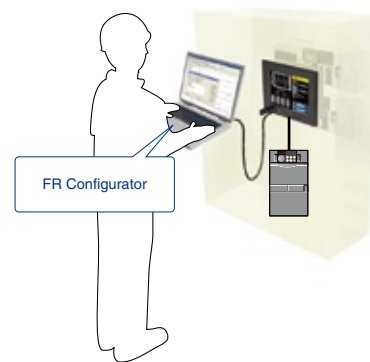


Can the program be debugged without opening the cabinet?

### FA transparent function

For details, see P.39

Connected with a personal computer, the GOT acts as a transparent gateway to enable startup and adjustment of equipment using FR Configurator. Users do not have to bother with opening the cabinet or changing cable connections.



## Ideal for inverter operation!

Can the inverter status be monitored on the GOT?

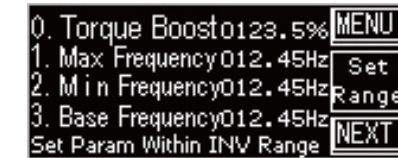
Example of GT16 operation screen



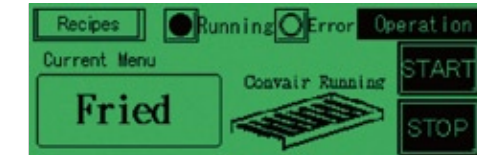
### Easy-to-understand display

Operation commands and parameters can be set from a GOT. On the GT1020/GT1030, three different backlight colors can be switched between screens, making it easy for operators to read and operate the screens.

Example of GT1020 parameter screen



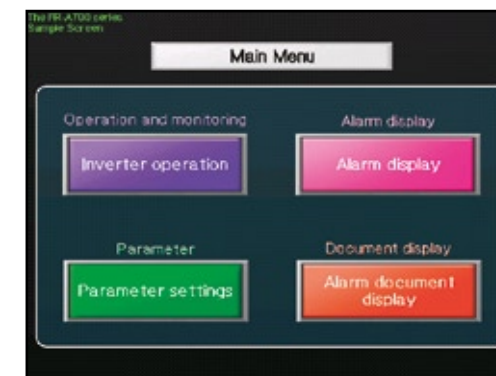
Example of GT1030 operation screen



Can inverter parameters be changed easily?

### Ready-to-use sample screens

Sample screen data for specifying parameters is available.



Parameter settings			
0 Torque boost	0123.5%	01 Acceleration/deceleration time	012.45s
1 Maximum frequency	012.45Hz	21 Stop prevention operation level	012.45%
2 Minimum frequency	012.45Hz	32 Stop prevention operation level	012.45%
3 Base frequency	012.45Hz	43 Stop prevention operation level	012.45%
4 Max speed setting (high speed)	012.45Hz	54 Stop prevention operation level	012.45%
5 Max speed setting (middle speed)	012.45Hz	65 Stop prevention operation level	012.45%
6 Max speed setting (low speed)	012.45Hz	76 Stop prevention operation level	012.45%
7 Acceleration time	012.45s	87 Stop prevention operation level	012.45%
8 Deceleration time	012.45s	98 Stop prevention operation level	012.45%
9 Electronic thermal O/L relay	012.45A	09 Stop prevention operation level	012.45%
10A Acceleration operation frequency	012.45Hz	10 Stop prevention operation level	012.45%
11 DC A/C conversion operation time	012.45s	11 Stop prevention operation level	012.45%
12 DC A/C conversion operation voltage	012.45V	12 Stop prevention operation level	012.45%
13 Starting frequency	012.45Hz	13 Stop prevention operation level	012.45%
14 1st stop prevention operation level	012.45%	14 Stop prevention operation level	012.45%
15 2nd stop prevention operation level	012.45%	15 Stop prevention operation level	012.45%
16 3rd stop prevention operation level	012.45%	16 Stop prevention operation level	012.45%
17 4th stop prevention operation level	012.45%	17 Stop prevention operation level	012.45%
18 5th stop prevention operation level	012.45%	18 Stop prevention operation level	012.45%
19 6th stop prevention operation level	012.45%	19 Stop prevention operation level	012.45%
20 7th stop prevention operation level	012.45%	20 Stop prevention operation level	012.45%
21 8th stop prevention operation level	012.45%	21 Stop prevention operation level	012.45%
22 9th stop prevention operation level	012.45%	22 Stop prevention operation level	012.45%
23 10th stop prevention operation level	012.45%	23 Stop prevention operation level	012.45%
24 Max speed setting (speed 4)	012.45Hz	24 Stop prevention operation level	012.45%
25 Max speed setting (speed 5)	012.45Hz	25 Stop prevention operation level	012.45%
26 Max speed setting (speed 6)	012.45Hz	26 Stop prevention operation level	012.45%
27 Max speed setting (speed 7)	012.45Hz	27 Stop prevention operation level	012.45%
28 Max speed setting (speed 8)	012.45Hz	28 Stop prevention operation level	012.45%
29 Max speed setting (speed 9)	012.45Hz	29 Stop prevention operation level	012.45%
30 Max speed setting (speed 10)	012.45Hz	30 Stop prevention operation level	012.45%
31 Torque boost	0123.5%	31 Stop prevention operation level	012.45%

Alarm display	
<b>Alarm information</b>	<b>Batch monitor display</b>
Latest alarm: EOC2	Set frequency (RAM): 012.34Hz
Second previous alarm: EOC2	Output frequency: 012.34Hz
Third previous alarm: EOC2	Output current: 0.12A
Fourth previous alarm: EOC2	Output voltage: 012.3V
Fifth previous alarm: EOC2	Running speed: 0123.4% (min)
Sixth previous alarm: EOC2	Regenerative brake duty: 012.4%
Seventh previous alarm: EOC2	Electronic thermal relay: 012.4%
Eighth previous alarm: EOC2	Motor excitation current: 01.3A
Ninth previous alarm: EOC2	Motor load factor: 0123.5%
Tenth previous alarm: EOC2	Motor output: 012.45kW
	Cumulative energization: 01234 h



# FA Solutions

## Faster robot control!



Industrial Robot  
**LINK4 MELFA X GOT1000**

## Powerful functions for robotic systems!

Can the teaching box and the personal computer used for setup be consolidated into a single unit?

Consolidate and centralize robot monitoring and control functions on production floor using the GOT

Even if a teaching box is not available, the GOT can be used to operate the robot and easily check the current position data and error details. Consolidating panel operations into the GOT improves operation and maintenance work efficiency.

Immediately check the robot status!

- Operation and maintenance on the GOT
- Robot operation screen
- Robot current position monitor screen
- Load rate/current value display screen
- Maintenance forecast screen

Consolidated panel operations

Robot internal information (data)  
Error information/Variable information/Program information  
Robot information (current speed/attainment rate, etc.)  
Maintenance information (battery/grease remaining time, etc.)  
Servo motor (load rate/current value, etc.)



Robot controller Teaching box Robot programming & engineering software

## Ideal for robot programming!

Can the robot program be easily accessed?



Ready-to-use sample screens

Sample screen data is available for robot operation, current position monitoring, and other purposes. There is no need to create robot programs from scratch.



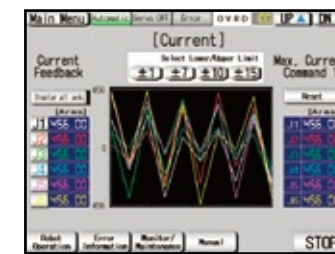
Robot operation panel screen



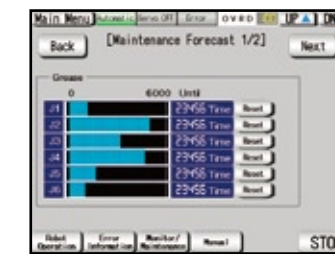
Robot jog/hand operation screen



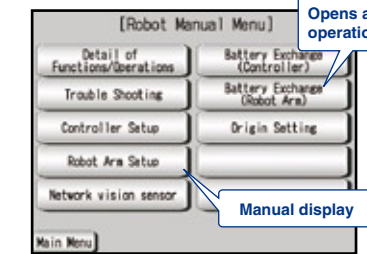
Robot current position monitor screen



Robot load rate/current value monitor screen



Robot maintenance forecast screen



Robot manual menu screen

Opens a video of operation examples

Manual display

Can the program be debugged without opening the cabinet?



FA transparent function

For details, see P.39

Connected with a personal computer, the GOT acts as a transparent gateway to enable start up and adjustment of equipment using RT ToolBox2. Users do not have to bother with opening the cabinet or changing cable connections.



RT ToolBox2

Can devices in the robot controller be validated?



System monitor function

For details, see P.46

Embedded monitoring utilities are available enabling users to view and change device values.

## In the event of trouble!

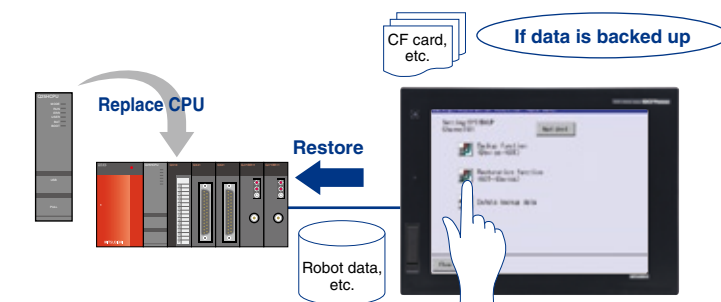
Can robot profiles be recovered after controller failures?



Backup/restoration function

For details, see P.42

Robot controller data can be backed up to the CF card or USB memory in the GOT. Users can perform batch operation to restore the data to the robot controller.



# FA Solutions

## Simplifying numerical control.



**Numerical Control Unit**  
**LINK5 C70 Series** MITSUBISHI CNC  
**GRAPHIC OPERATION TERMINAL**  
**X GOT1000**

## Powerful function for CNC startup, machining and changeover!

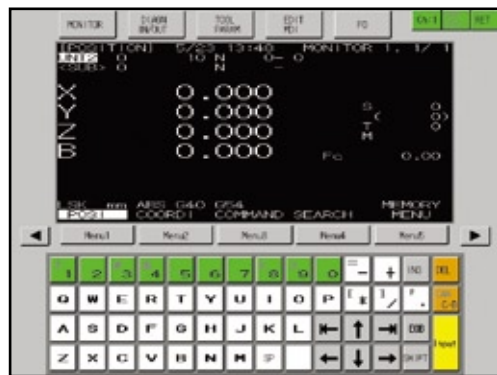
Can CNC parameters be changed easily?



### CNC monitor function

For details, see P.47

The CNC C70 and MELDAS C6/C64 can be monitored and the parameters can be changed.



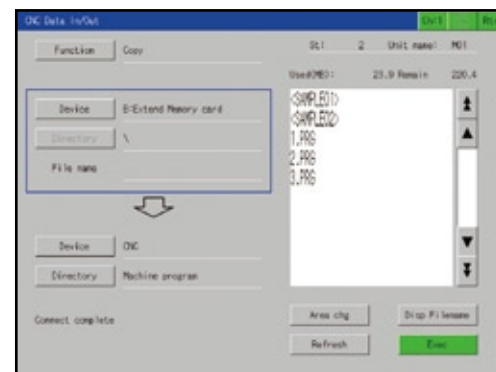
Can errors or the status of the CNC be validated quickly?



### CNC data I/O function

For details, see P.47

Data, such as machining programs and parameters, can be copied from a GOT CF card or USB memory to the CNC C70 and vice versa. Data can be deleted as well.



Can CNC devices be easily validated?



### System monitor function

For details, see P.46

Embedded monitoring utilities are available enabling users to view and change CNC C70 and MELDAS C6/64 device values.

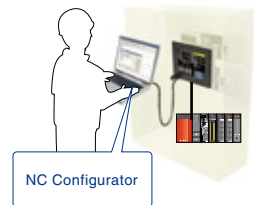
Can the program be debugged without opening the panel?



### FA transparent function

For details, see P.39

Connected with a personal computer, the GOT acts as a transparent gateway to enable start up and adjustment of equipment using NC Configurator, etc. Users do not have to bother with opening the cabinet or changing cable connections.



## Ideal for CNC programming!

Can CNC programs be validated directly from the GOT?



### Ladder monitor function

For details, see P.44

CNC C70 and MELDAS C6/C64 sequence programs can be monitored in a circuit diagram (ladder format).

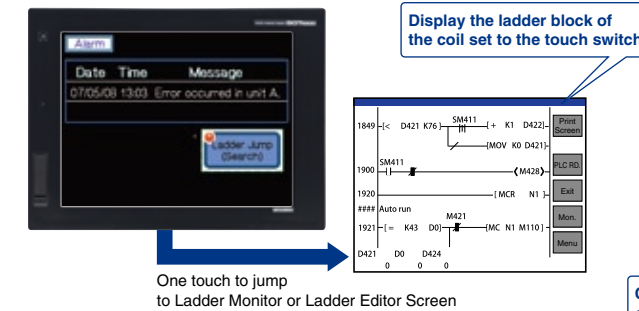
Can the root cause be easily identified?



### One-touch ladder jump function

For details, see P.44

By setting a program name and coil number of the CNC C70 to a touch switch, the relevant ladder circuit block can be displayed directly. Problems can be handled smoothly from the alarm screen.



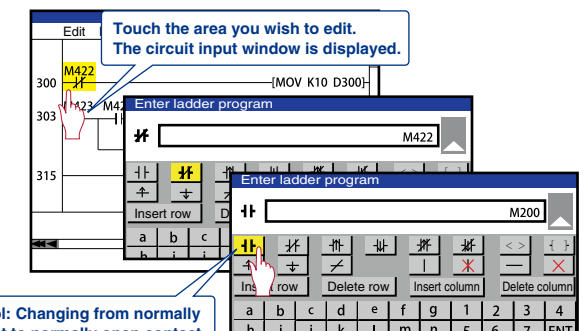
Can programs be changed easily without a personal computer?



### Ladder editor function

For details, see P.45

Sequence programs of the CNC C70 can be edited in a circuit diagram (ladder format).



## In the event of trouble!

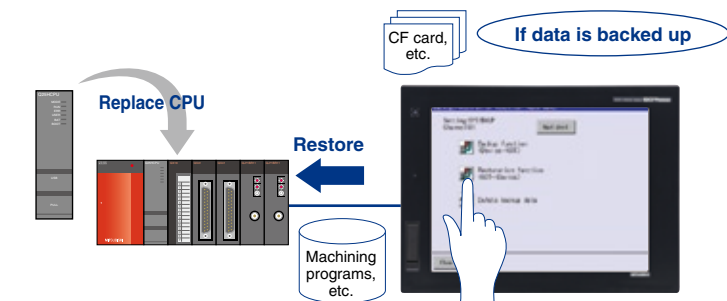
Can the CNC programs be recovered after failure?



### Backup/restoration function

For details, see P.42

CNC C70 data such as machining programs and parameters can be backed up to the CF card or USB memory in the GOT. Users can perform batch operation to restore the data to the CNC C70.





# FA Solutions

## Improving vision integration.



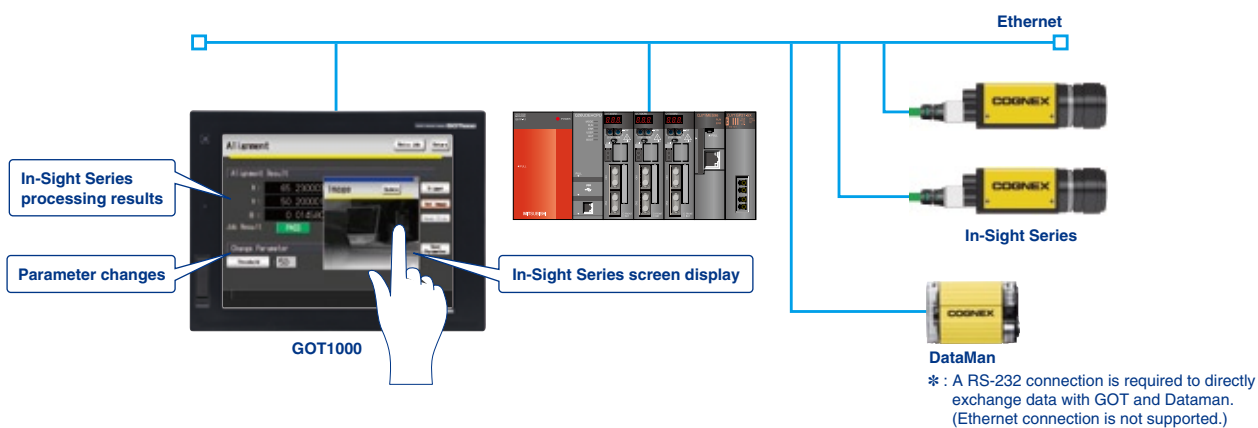
## Powerful functions for vision systems!

Can automation and vision systems be consolidated into a single platform?



### Displaying the In-Sight Series processing results on the GOT

By connecting a GOT to the In-Sight Series and PLC over Ethernet, the In-Sight Series processing results can be displayed and parameters can be changed on the GOT. The GT16 model has a built-in Ethernet port, allowing the system to be built easily.



Can other COGNEX products be connected?



### Connect to various COGNEX products

The In-Sight vision system and DataMan barcode reader can be connected to the GOT.

## Ideal for configuration!

Can vision parameters be changed from the GOT?



### Ready-to-use sample screens

Sample screen data is available for checking the results of positioning, inspection, and reading characters.

#### [Alignment screen]

The workpiece position and posture detected with In-Sight Series as well as the success or failure state of the detection are displayed. The workpiece detection threshold can be changed from this screen.



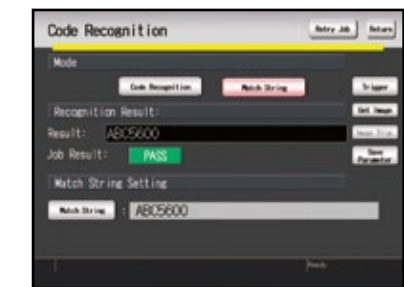
#### [Inspection screen]

The results of workpiece inspections carried out with the In-Sight Series are displayed. The workpiece detection threshold can be changed.



#### [Code recognition screen]

The results of reading ID codes with the In-Sight Series are displayed. The reading mode (read/verify or change character string during verification) can be selected.



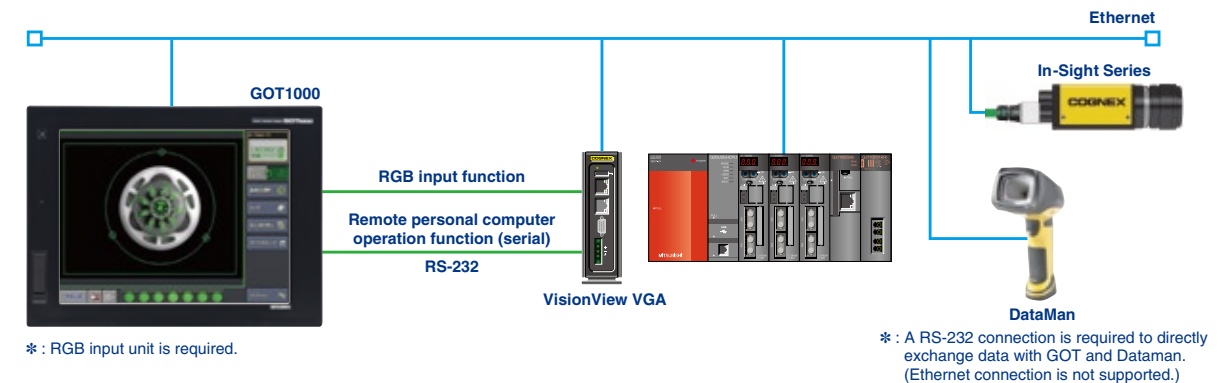
## Ideal for monitoring operations!

Can vision applications be handled easily at the worksite?



### Displaying In-Sight Series vision applications on the GOT

Connect the COGNEX VisionView VGA with the GOT to display the In-Sight Series Vision Application screen. While monitoring connected devices such as PLCs, it is possible to switch to the Vision Application screen when necessary to display live images, specify parameters with touch operations, and perform other operations.






## The GOT1000 series offers five classes of terminals to fit any system or budget requirement.

**High performance models with multimedia and a host of features and functions including embedded communications**

# GT16


GOT1000 GRAPHIC OPERATION TERMINAL

**15" type**




**XGA TFT** (High-brightness, wide viewing angle)  
GT1695M-XTBA AC type GT1695M-XTBD DC type  
Resolution: 1024 x 768 Display colors: 65,536 colors  
Multimedia, video/RGB model

**12.1" type**




**SVGA TFT** (High-brightness, wide viewing angle)  
GT1685M-STBA AC type GT1685M-STBD DC type  
Resolution: 800 x 600 Display colors: 65,536 colors  
Multimedia, video/RGB model

**10.4" type**




**SVGA TFT** (High-brightness, wide viewing angle)  
GT1675M-STBA AC type GT1675M-STBD DC type  
Resolution: 800 x 600 Display colors: 65,536 colors  
Multimedia, video/RGB model

**8.4" type**




**SVGA TFT** (High-brightness, wide viewing angle)  
GT1665M-STBA AC type GT1665M-STBD DC type  
Resolution: 800 x 600 Display colors: 65,536 colors  
Multimedia, video/RGB model

**5.7" type**



**VGA TFT** (High-brightness, wide viewing angle)  
GT1662-VNBA AC type GT1662-VNBD DC type  
Resolution: 640 x 480 Display colors: 16 colors

**6.5" type Handy**




**VGA Handy GOT/TFT** (High-brightness, wide viewing angle)  
GT1665HS-VTBD DC type  
Resolution: 640 x 480 Display colors: 65,536 colors

**Performance models ideal for a wide range of applications in a network or standalone environment**

# GT15


GOT1000 GRAPHIC OPERATION TERMINAL

**15" type**




**XGA TFT** (High-brightness, wide viewing angle)  
GT1595-XTBA AC type GT1595-XTBD DC type  
Resolution: 1024 x 768 Display colors: 65,536 colors  
Video/RGB model

**12.1" type**




**SVGA TFT** (High-brightness, wide viewing angle)  
GT1585V-STBA AC type GT1585V-STBD DC type  
Resolution: 800 x 600 Display colors: 65,536 colors  
Video/RGB model

**10.4" type**




**SVGA TFT** (High-brightness, wide viewing angle)  
GT1575V-STBA AC type GT1575V-STBD DC type  
Resolution: 800 x 600 Display colors: 65,536 colors  
Video/RGB model

**8.4" type**




**VGA TFT** (High-brightness, wide viewing angle)  
GT1565-VTBA AC type GT1565-VTBD DC type  
Resolution: 640 x 480 Display colors: 65,536 colors

**5.7" type**



**VGA STN**  
GT1555-QSBD DC type  
Resolution: 320 x 240 Display colors: 4,096 colors

**5.7" type Handy**




**QVGA STN**  
GT1550-QLBD DC type  
Resolution: 320 x 240 Display colors: 16 gray scales

**Large basic models with integrated features and communications**

# GT12


GOT1000 GRAPHIC OPERATION TERMINAL

**10.4" type**



**VGA TFT**  
GT1275-VNBA AC type GT1275-VNBD DC type  
Resolution: 640 x 480 Display colors: 256 colors

**8.4" type**




**VGA TFT**  
GT1265-VNBA AC type GT1265-VNBD DC type  
Resolution: 640 x 480 Display colors: 256 colors

**Small models with a host of advanced functions**

# GT11


GOT1000 GRAPHIC OPERATION TERMINAL

**5.7" type**



**QVGA STN**  
GT1155-QSBD DC type  
Resolution: 320 x 240 Display colors: 256 colors

**5.7" type Handy**




**QVGA Handy GOT/STN**  
GT1155HS-QSBD DC type  
Resolution: 320 x 240 Display colors: 256 colors

**Compact models with basic functions**

# GT10


GOT1000 GRAPHIC OPERATION TERMINAL

**5.7" type**




**QVGA STN**  
GT1055-QSBD 24VDC type  
Resolution: 320 x 240 Display colors: 256 colors

**4.7" type**




**QVGA STN**  
GT1045-QSBD 24VDC type  
Resolution: 320 x 240 Display colors: 256 colors

**4.5" type**



**QVGA STN**  
GT1040-QBBD 24VDC type  
Resolution: 320 x 240 Display colors: Monochrome (blue/white) 16 gray scales

**3.7" type**



**STN**  
GT1020-LBD [Black] 24VDC type RS-422 connection  
GT1020-LBD2 [Black] 24VDC type RS-232 connection  
GT1020-LBL [Black] 5VDC type RS-422 connection  
GT1020-LBL2 [Black] 5VDC type RS-232 connection  
GT1020-LWD [White] 24VDC type RS-422 connection  
GT1020-LWD2 [White] 24VDC type RS-232 connection  
GT1020-LWL [White] 5VDC type RS-422 connection  
GT1020-LWL2 [White] 5VDC type RS-232 connection  
Resolution: 160 x 64 Display colors: Monochrome (black/white) (Tricolor LED (green/orange/red))

\*: For details about the functions of GT10 models, see "GT10 (pages 48, 49)".

\*: The GT16□□-VNBD□, GT1655-VTBD, GT1665HS-VTBD, GT12□□-VNBD□ and GT1030 high contrast products (GT1030-H□□□□) are not supported by the screen design software GT Works2/GT Designer 2.

The lineup that fits in with any production line. Find your GOT with the right functions, size, and features.

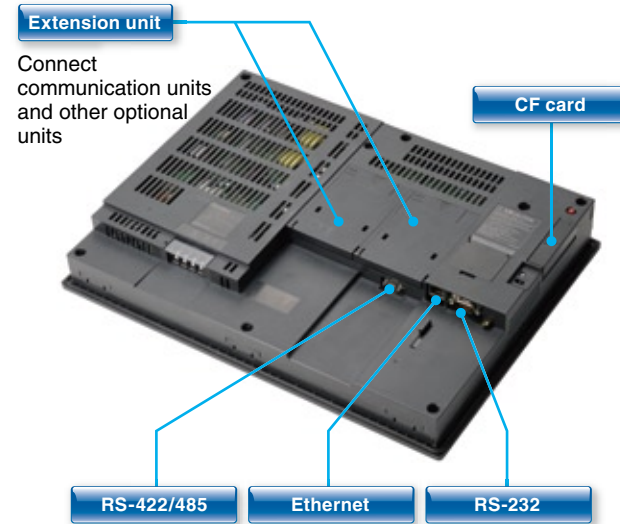
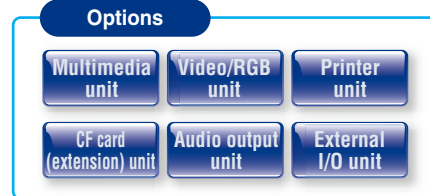
## GT16

High performance models with multimedia and a host of features and functions including embedded communications

\* See page 24 for GT16 Handy.

- User memory capacity: 15MB (GT16□□-VN□□ : 11MB)
- USB host and USB device ports are included.
- Ethernet, RS-422/485, and RS-232 interfaces are supported as standard interfaces.
- A multimedia unit and a video/RGB unit are supported.\*
- Featuring an analog touch panel

\* : Excluding GT16□□-VN□□, GT1655

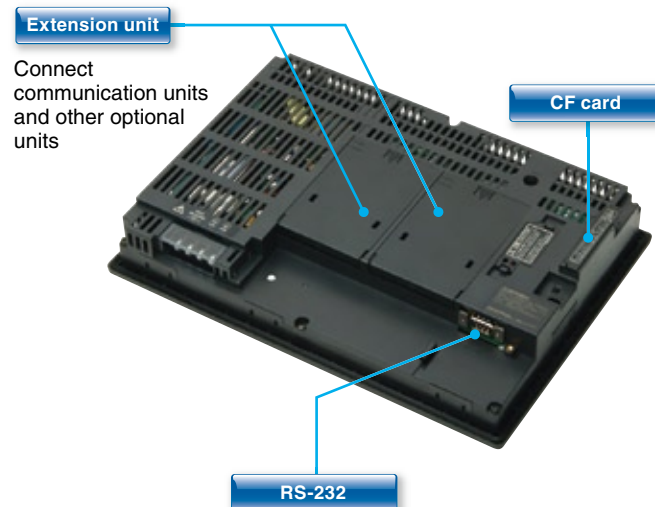
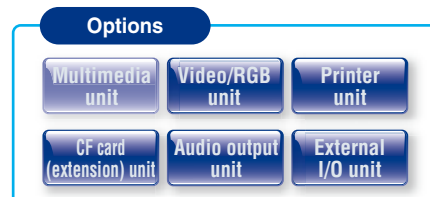


## GT15

Performance models ideal for a wide range of applications in a network or standalone environment

- User memory capacity: 9MB (GT15□□-VN□□: 5MB)
- USB device port is included.
- The RS-232 interface is supported as a standard interface.
- A video/RGB unit is supported.\*

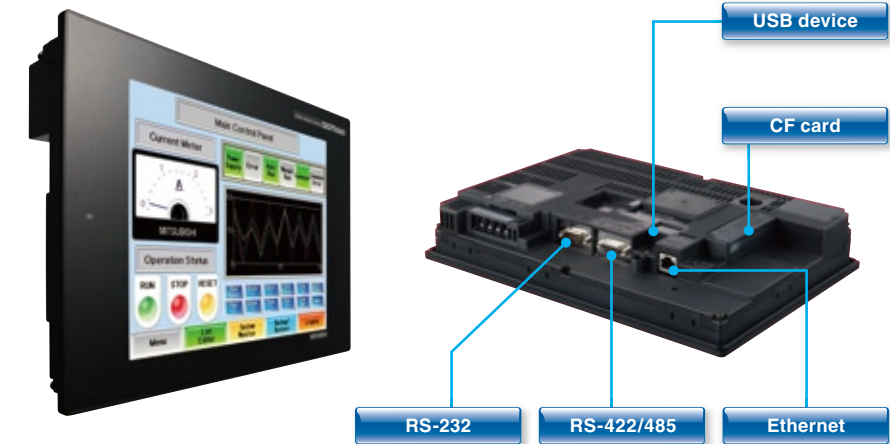
\* : GT1585V/GT1575V only



## GT12

Large basic models with integrated features and communication interfaces

- User memory capacity: 6MB
- USB device port is included.
- Ethernet, RS-422/485, and RS-232 interfaces are supported as standard interfaces.
- Featuring an analog touch panel



## GT11

Small models with a host of advanced functions

- User memory capacity: 3MB
- USB device port is included.
- The RS-232 interface is supported as a standard interface.
- Choose between two standard interface models for network connection: the RS-422/485 interface model or the bus interface model.

\* See page 25 for GT11 Handy.



## GT10

Compact models with basic functions

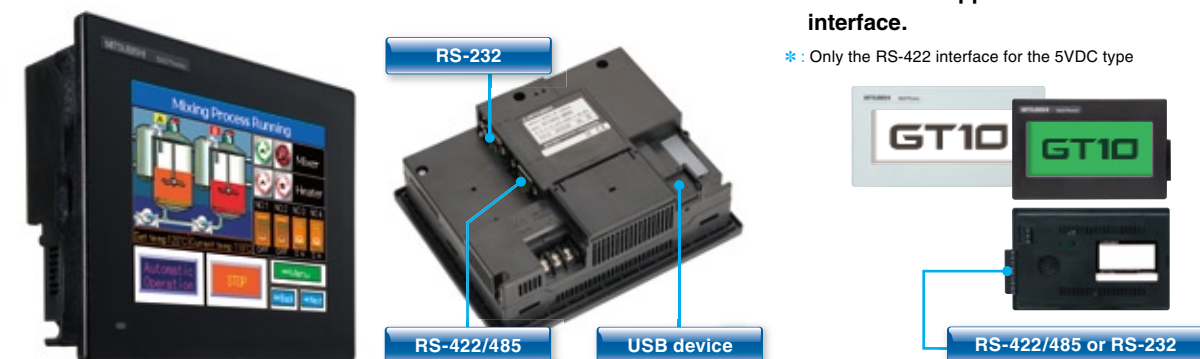
### GT1050/GT1040

- User memory capacity: 3MB
- USB device port is included.
- RS-422/485 and RS-232 interfaces are supported as standard interfaces.

### GT1030/GT1020

- User memory capacity: 1.5MB (GT1030)/ 512KB (GT1020)
- Three-color LED backlight indicates the equipment status at a glance.
- The RS-422/485\* interface or the RS-232 interface is supported as a standard interface.

\* : Only the RS-422 interface for the 5VDC type





## Rich functionality and high performance in the palm of your hand

# GT16 Handy GOT

65,536 vivid colors on a big VGA screen

The light body includes the latest GT16 functions

Extremely easy handling and operation in one hand

Standard Ethernet interface enables long-distance communication

- User memory capacity: 15MB
- USB host and USB device ports are included.
- Ethernet, RS-422/485, and RS-232 interfaces are supported as standard interfaces.
- The latest GT16 functions are available, including various types of monitoring and ladder editing functions.

**6.5"** High resolution handy GOT  
**GT1665HS-VTBD**



## Ergonomic design allows you to change the angle of the handle.

Various types of switches are available

- Operation switches with LEDs (6)
- Emergency stop switch
- Selector switch with key
- Three-position deadman switch



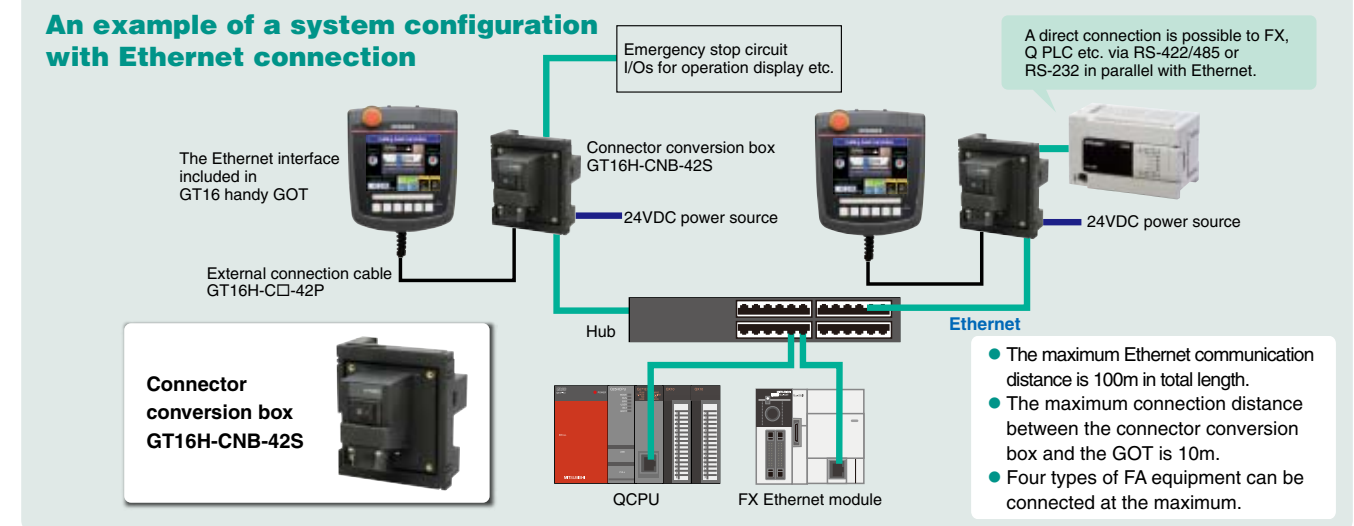
Various types of external connection interfaces are available as standard interfaces

- USB host and USB device
- CF card interface
- RS-422/485 and RS-232 interfaces (switchable)
- Ethernet interface

Options

- Emergency stop switch guard cover
- External connection cable

### An example of a system configuration with Ethernet connection

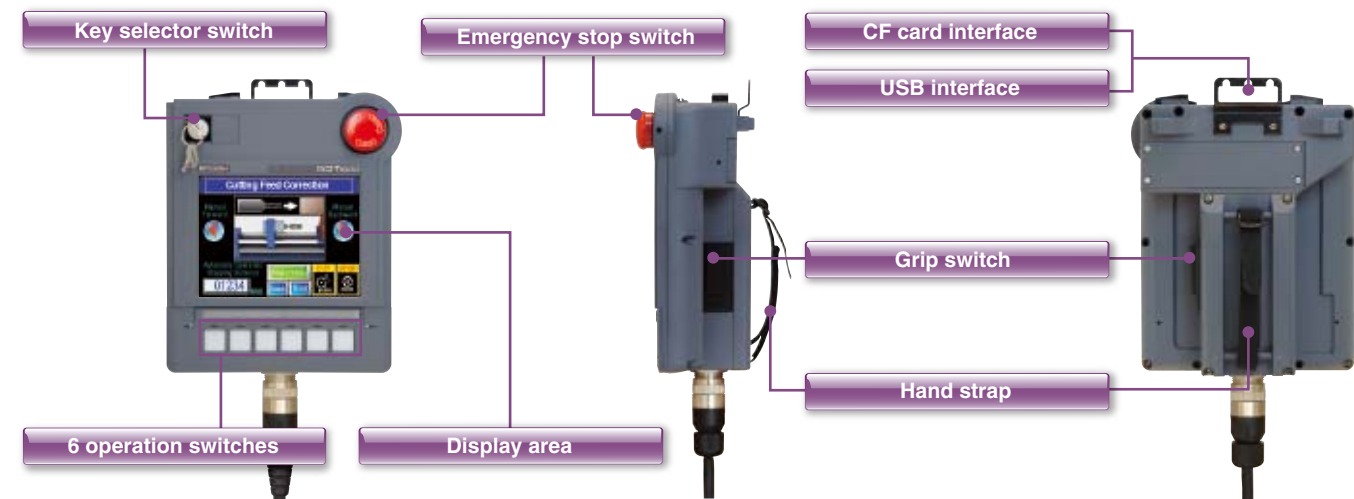
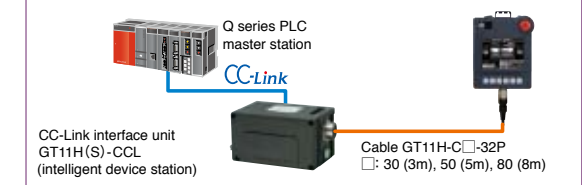


# GT11 Handy GOT

Portable 5.7" operation terminal

GT1155HS-QSBD  
GT1150HS-QLBD

GT11 Handy can be connected to the CC-Link network.



## Use a personal computer or panel computer as a GOT.

HMI software for the GOT1000 series

# MELSOFT **GT SoftGOT1000** Version3

### GT SoftGOT1000

GT SoftGOT1000 is the HMI software that provides GOT functions on personal computers and panel computers.

This software connects with various types of equipment such as Mitsubishi PLCs and let you see screens just like the GOT1000 series.

You can also reuse GOT's project data without modification.

Along with all the advantages of a GOT, you can also enjoy the convenience and flexibility of personal computers and panel computers.



GT SoftGOT1000 Version3 is software included with the GT Works3 suite. A separate license key is required for use.

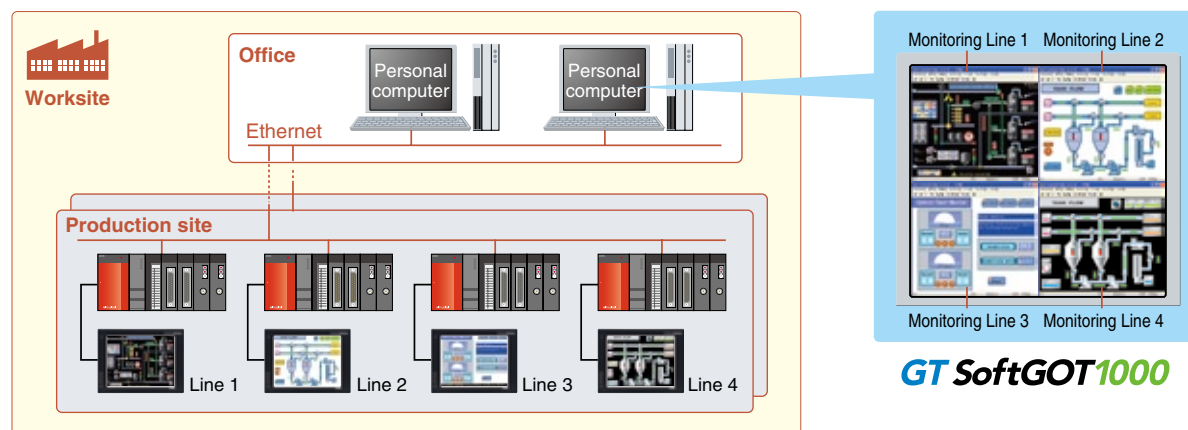
### Monitor the production site from a remote location

#### Reduce downtime

Use GT SoftGOT1000 to monitor the production site from your office. You can collect information quickly when a problem occurs, taking necessary actions immediately.

#### Use GOT project data from the production site

You can reuse project data of the GOT at your production site as the project data of GT SoftGOT1000 to reduce the design cost.



### Connect with MELSEC process control for process control applications

You can connect GT SoftGOT1000 to the monitor tools of the Engineering Environment PX Developer for design and maintenance work for process control. In this way, a process control monitoring system can easily be constructed.

#### PX Developer window screens and other tools

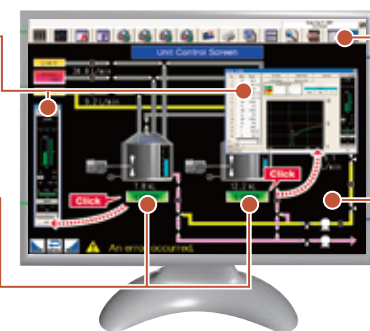
Tools for monitoring, operating, and tuning loop control tags. (The display position can be specified.)

#### GT SoftGOT1000 touch switch/object

Clicking on touch switches and objects displays various screens of PX Developer monitoring tools. (The display position can be specified.)

#### Security collaboration **NEW**

The GT SoftGOT1000 security level is changed accordingly when the PX Developer monitor tool's mode is changed (engineer mode/operate mode/lock mode). Authority can be set for operations requiring security.



#### PX Developer monitoring tool bar

Clicking on buttons executes various operations such as starting up GT SoftGOT1000 and switching base screens.

#### GT SoftGOT1000 base screen

Make your desktop into a graphic monitoring window by displaying the GT SoftGOT1000 base screen in full-screen mode and sending the window to the back of the screen.

### Link with other applications to construct a high-performance system

You can use a user-created application to read and write information to and from internal devices of GT SoftGOT1000. By linking data with user applications such as a data logger, you can construct a high-performance system package. You can also use a touch switch on the GT SoftGOT1000 monitor to launch another application.

#### <Development environment of user applications>

- Microsoft® Visual C++®/Visual C#® **NEW** /Visual Basic® included with Microsoft® Visual Studio 6.0/.NET (2002) **NEW** /.NET 2003/2005 **NEW** /2008 **NEW**
- Embarcadero® C++Builder® XE **NEW**

### Connect to various devices

The GT SoftGOT1000 can be connected to the Mitsubishi PLC, other PLC brands, MODBUS®/TCP slave devices. **NEW**

\*: See "List of connectable models" (page 69), for more details on supported models of other manufactures.

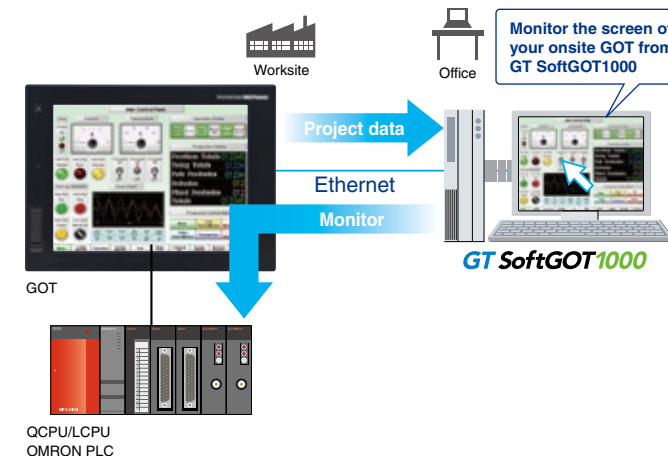
Connect to RFID or barcode reader and input numerical values or ASCII characters. **NEW**

### The SoftGOT-GOT link function enhances the linkage to your onsite GOT **NEW**

#### Monitor the screen of your onsite GOT from GT SoftGOT1000

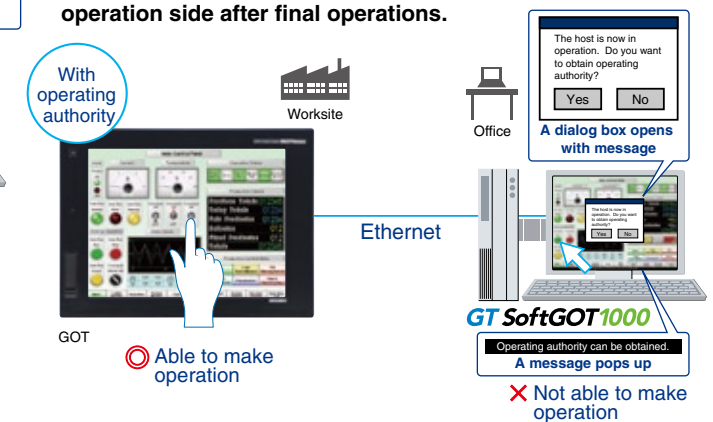
Connect GT SoftGOT1000 with GOT by an Ethernet connection. Use the GOT's project data with GT SoftGOT1000 to monitor connected equipment.\*

\*: Only CH1 can be monitored when GOT is connected via multi-channels. GOT and QCPU/LCPU can be connected by a bus connection, direct CPU connection, computer link connection, or Ethernet connection. GOT and OMRON PLC can be connected via Ethernet connection.



#### Prevent simultaneous operations from GT SoftGOT1000 and GOT

Operation of an input object (e.g. touch switch, numerical input) is allowed by either GT SoftGOT1000 or the GOT, whichever has operating authority. If one terminal does not have operating authority, the status of the operating authority can be displayed in a pop-up window. Whether it is possible to acquire operating authority from the other terminal can be notified with a dialog. It is also possible to specify the time to ensure the operating authority on the operation side after final operations.

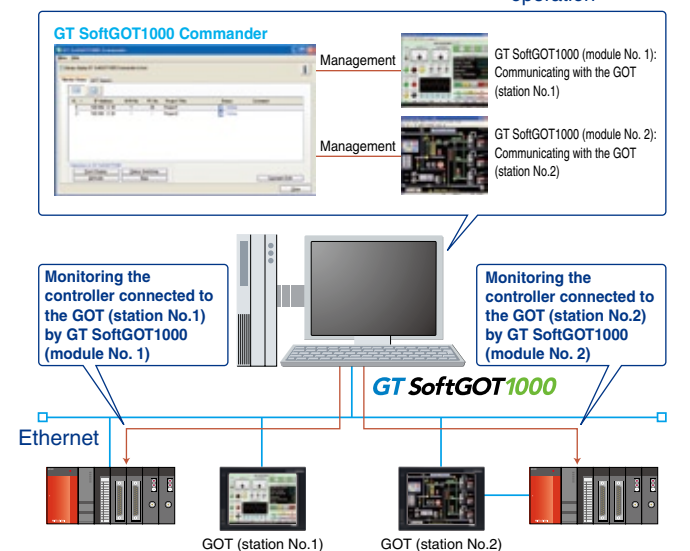


#### GT SoftGOT1000 Commander

By using the GT SoftGOT1000 Commander, multiple GT SoftGOT1000 modules using the SoftGOT-GOT link function can be efficiently managed, and the SoftGOT-GOT link function can be utilized easily.

#### <Actions possible with GT SoftGOT1000 Commander>

- Search for GOT on the Ethernet network and start with GT SoftGOT1000 (GT16 only)
- Start/stop GT SoftGOT1000
- Check and switch GT SoftGOT1000 monitor status (online/offline)
- Designate GT SoftGOT1000 module No. displayed on top screen



See "List of connectable models" (page 69), "Function list" (page 70), and "Notes for use (Operating environment)" (page 85).



**More intuitive. No more wasted time. The screen design software optimized for usability.**

GOT1000 Screen Design Software

# MELSOFT *GT Works3*

**Enhanced "easy-to-use" functions for efficient screen design!**

### Work tree

View the whole project, create a new screen, and add and delete screens with ease.

### Property sheet

A selected object or graphic's settings are displayed as a tree view. Set colors, devices, etc., on the property sheet without opening a dialog box. When selecting multiple objects or graphics, change color, character size, etc., all at the same time.

### Temporary area

Reduce workspace clutter by moving objects off of the display area.

### MELSOFT iQ Works improves design efficiency

Batch parameter check and system labels of MELSOFT Navigator are supported.

### Related tools

GT Works3 comes with various tools such as the Data Transfer Tool and GT Converter2.

### Simulator

Preview operation without connecting to a GOT.

### Communication with the GOT

Communication settings and drivers are automatically selected and downloaded to the GOT with the project data.

### Tool bar

Vividly colored icons make distinguishing active functions from inactive ones easy.

### Library

Parts are easy to select. High resolution graphics and parts are easy create and incorporate into projects.

### Dialog box

User-friendly dialog boxes and object settings.

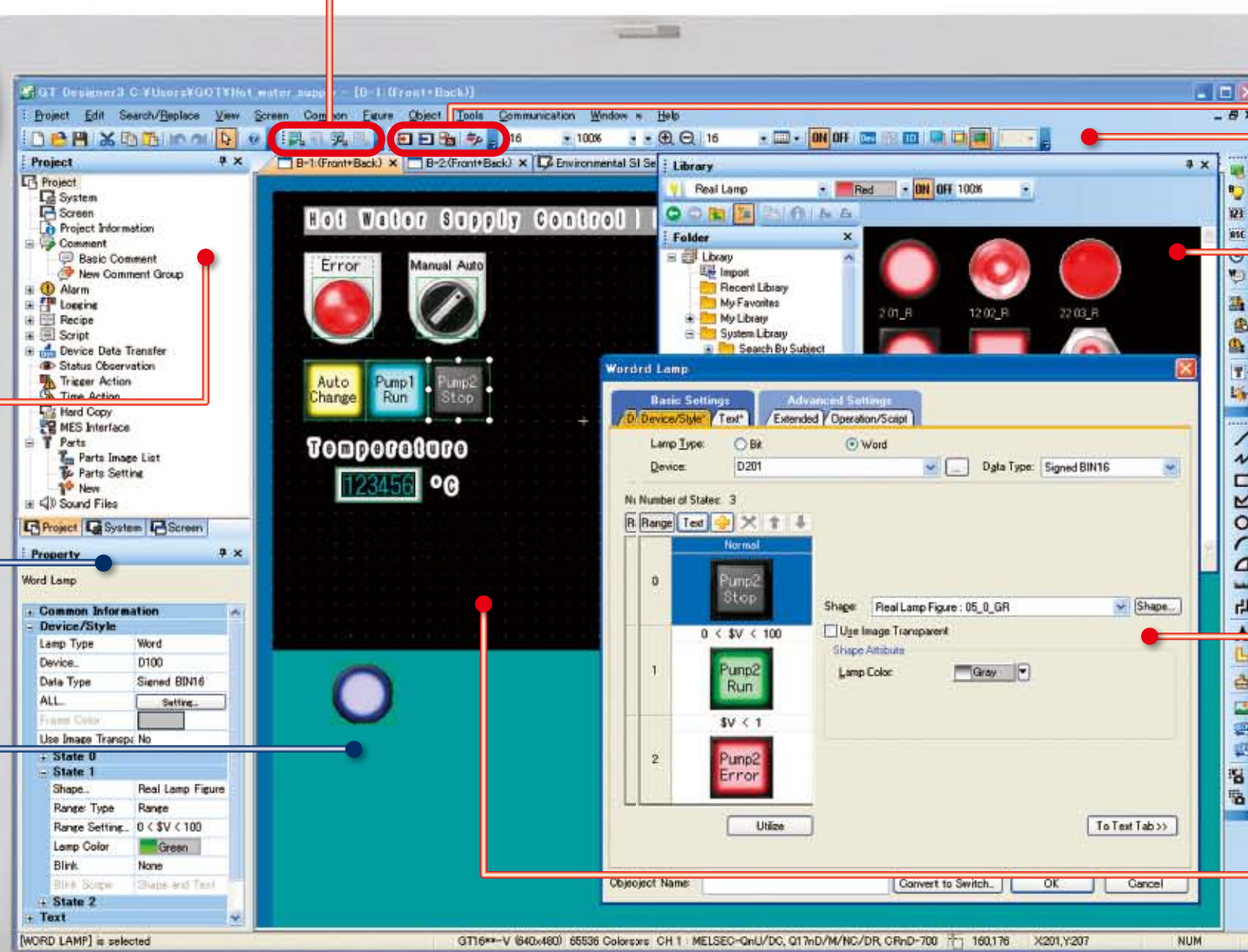
### Editor <screen design area>

Many convenient and efficient development functions are included!

**New functions improve your screen design efficiency than ever before!**

- "Templates" reduce time for screen design
- "Screen Preview" enables simple simulation
- "Device Name Display" helps you check setting contents quickly

**The Help function** is available for quick reference!





## The GOT1000 series provides a variety of functions to satisfy user requirements

Usability depends on who the users are and where they carry out their tasks.

Designers want to use the most advanced HMI technology, while maintenance engineers want the most dependable HMI for their facilities.

To satisfy all of our customers, we are constantly developing more and more functions for the GOT1000 series.

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MELSEC Process Control P51

Specifications P52

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List of Connectable Models P65

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For designers

There are many different applications to be solved. How do we stay flexible?

- Multimedia function P32
- Video/RGB function P32
- Document display function P33
- Multi-channel function P33
- SoftGOT-GOT link function P34
- USB mouse/keyboard connection P34
- Remote personal computer operation function (Ethernet) P34
- Remote personal computer operation function (Serial) P34
- File transfer function (FTP client) P34
- Gateway function P35
- MES interface function P35
- Comment groups P36
- Multilingual support P36
- Advanced recipe function P37
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- Various types of window screens P37

For initial startup & operations

Efficiency requires both fast data transfer as well as user-friendly functions.

- Drawing, computing, communication; a trio of high-speed response functions P38
- Backlight brightness adjustment P38
- Color-coded front face LED P38
- Maintenance time notification function P38
- Equipped with front USB interface P39
- FA transparent function P39

For maintenance personnel

To restore a system as quickly as possible, response capabilities for "just in case" situations are the key to selecting a HMI display.

- Logging function/historical trend graph/historical data list display P40
- Log viewer function P40
- Operator authentication function P41
- Operation log function P41
- Backup/restoration function P42
- Advanced alarm P43
- Ladder monitor function P44
- SFC monitor function P44
- Ladder editor function P45
- Motion SFC monitor function P45
- System monitor function P46
- Network monitor function P46
- Intelligent module monitor function P46
- MELSEC-L troubleshooting function P46
- Q series motion monitor function P47
- Servo amplifier monitor function P47
- CNC monitor function/CNC data I/O function P47
- List editor for A/List editor for FX P47



The functions bearing these marks are available on the GT16, GT15, or GT12 model. All other functions are supported by GT16, GT15, GT12, and GT11 models.

\*: For details about the functions of GT10 models, see "GT10 (pages 48, 49)".

# Freedom to utilize advanced display functions to enhance the GOT

For designers

Smooth, high-quality motion images help efficiently investigate the cause of a problem

GRAPHIC OPERATION TERMINAL GOT 1000

## GT 16 Multimedia function

### Recording audio and video, displaying input images

Clear view before and after the trouble occurrence  
<Recording pre/post event motion images>

- Capable of recording motion images for 120 seconds before and after an error occurrence (when the event trigger device turned on), up to 240 seconds in total.



### High resolution recorded image (standard mode)

- Smooth, high resolution video can be recorded.
- Video size and frame rate
  - Maximum 15 fps in VGA (640 × 480)
  - Maximum 30 fps in QVGA (320 × 240)

### Playing back motion image files

Check the motion image before and after the occurrence of a problem, and diagnose the cause immediately.

- The motion image recorded on site is saved in the CF card of the GOT's multimedia unit and can be played back immediately after being recorded.
- The motion image files saved in the CF card can be sent to your personal computer over the Ethernet interface of the GOT's multimedia unit. You can then view the motion image on your personal computer.
- Fast forward and slow motion playback functions are also available.

### Use as a video guidebook for work tasks

- The GOT plays back motion image files that are created by your personal computer. Since the GOT is compatible with standard formats, commercially available software can be used to create motion image files.

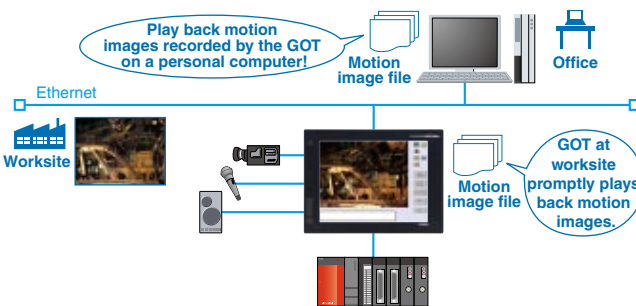
- <Applicable software programs> • Quick Time 7 Pro  
<Compatible file formats> • 3GP and MP4

### For additional recording time (extended mode)

- Over two days of video can be recorded.
- Video size QVGA (320 × 240); frame rate 15 fps

### Displaying input images

- In addition to the dedicated screen, images input from a video camera can be displayed on a user-created screen. Normally, input images are displayed on the user-created screen, and the dedicated multi-media screen is opened only when an error occurs or when playing back recorded images for confirmation. **NEW**



### The dedicated multimedia screen is available for recording and playback. Reduce your screen design time!

- \* : Not supported by GT16□□-VN□□, GT1655, GT16 Handy.
- \* : The multimedia data link tool and multimedia data link FTP services are necessary to transmit motion image files to a personal computer.
- \* : Only one of the following devices can be used at one time: multimedia unit, video input unit, RGB input unit, video/RGB input unit or RGB input unit.

The multimedia data link tool and multimedia data link FTP service are multimedia-dedicated software programs included with GT Works3.

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

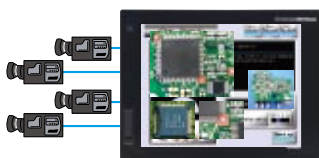
### High-quality images with 65,536 colors provide precise detail

GRAPHIC OPERATION TERMINAL GOT 1000

## GT 16 GT 15 Video/RGB function

Enhanced compatibility with cameras and inspection devices <Video input>

- Input images from up to four video cameras and inspection devices are simultaneously and cleanly displayed in four windows in 65,536 colors. Images can be saved in JPEG format.



### Displays PC images on the GOT <RGB input>

- Images on a personal computer display screen appear on the GOT simultaneously with the GOT's screen. RGB input of up to 2 channels is available when using the GT16M-R2.
- The display size can be changed, and the clip display is available. **NEW**

### Display the GOT screen on a display <RGB output>

- Connect to a commercial display so that the GOT screen can be displayed larger.

- \* : Not supported by GT16□□-VN□□, GT1655, GT16 Handy.
- \* : Only one of the following devices can be used on the GT16 at one time; video input unit, RGB input unit, video/RGB input unit, RGB output unit, or multimedia unit.
- \* : Only the GT1585V and GT1575V for the GT15 series. Only one of the following devices can be used at one time; video input unit, RGB input unit, video/RGB input unit, or RGB output unit.

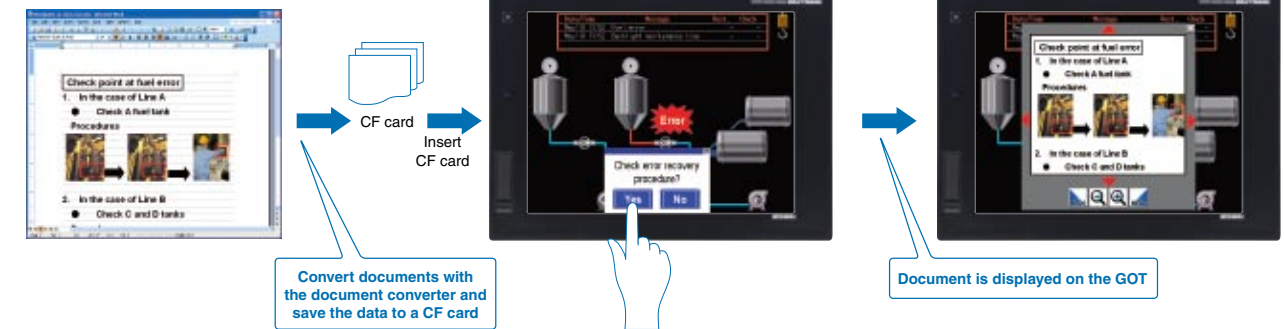
An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

### Display various documents on the GOT at the worksite

GRAPHIC OPERATION TERMINAL GOT 1000

## GT 16 GT 15 Document display function

- When a system error occurs, referring to recovery methods in check lists and/or manuals on the GOT can reduce downtime.



### Display of documents and manuals on the GOT can reduce downtime.

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

### Central storage of FA device information on a single GOT terminal

GRAPHIC OPERATION TERMINAL GOT 1000

## GT 16 GT 15 GT 12 Multi-channel function

- Up to four FA device (PLC, servo, inverter, temperature controller, etc.) channels can be monitored with one GOT unit. (GT12 monitors up to two channels.)
- Easy device transfer between connected devices. Use GT Works3 to specify triggers for source and destination devices for device transfer. (Device data transfer function)

The GOT1000 Series connects with PLCs, microcomputers, and other various devices. More models from more manufactures will be supported in the future.

- Sample screen data for connecting to temperature controllers, servo amplifiers, or inverters is available to make it easy to create your own screen data.
- The QnA compatible 3E frame is now supported with the microcomputer connection (Ethernet).

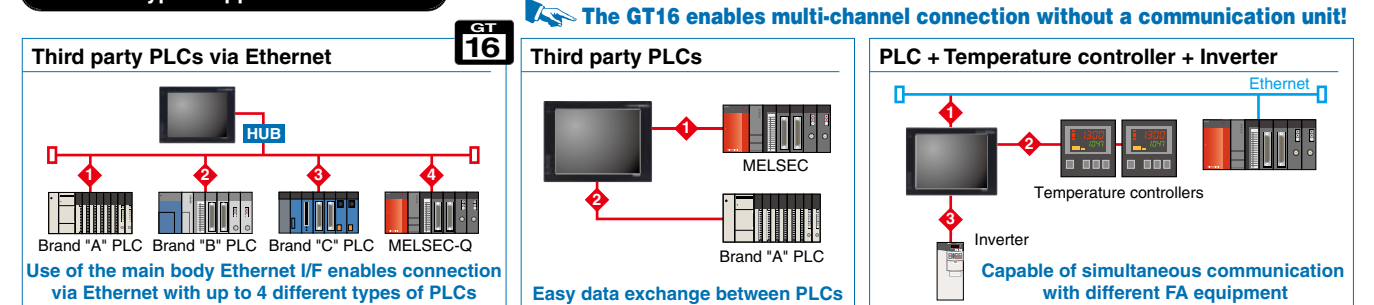
See "List of connectable models" (page 65), for more details on supported models of other manufactures.

### For various types of peripherals.

- General-purpose MODBUS® devices • External devices (operation panels, switches, lamps, etc.)
- Two-dimensional code readers, barcode readers • RFID readers, IC card readers • Speakers • Video cameras
- Displays (RGB output) • PCs (RGB input) • Serial printers • PictBridge printers • Vision sensors\*

\* : For details, see CASE STUDY 2 FA Solutions (page 18).

### Typical applications



Use of the main body Ethernet I/F enables connection via Ethernet with up to 4 different types of PLCs

- \* : For the Ethernet connection with GT1695 and GT1685 of function version A, if connected to equipment compatible with 10BASE-T, use a switching hub for its operation in a network environment where both 10Mbps and 100Mbps systems are operable.
- \* : The number of channels and functions, which can be used with the multi-channel function vary depending on the connection configuration. For more details, see "Notes for use" (page 81).

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

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For Designers

For Initial Startup & Operations

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GT10

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Specifications, External Dimensions

List of Connectable Models, etc.



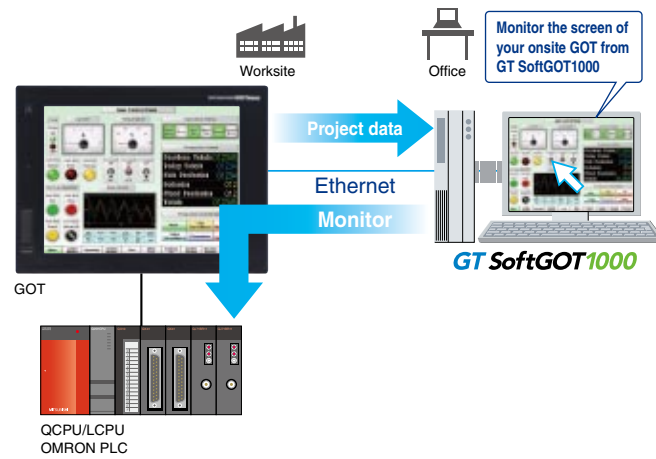
## Monitor the screen of the onsite GOT from your PC screen

### GT 16 GT 15 SoftGOT-GOT link function **NEW**

- Connect GT SoftGOT1000 with the GOT with an Ethernet connection. Use the GOT's project data with GT SoftGOT1000 to monitor connected equipment.\*
- Operation of an input object (e.g. touch switch, numerical input) is allowed by either the GT SoftGOT1000 or GOT, depending on which has operating authority.
- By using the GT SoftGOT1000 Commander, multiple GT SoftGOT1000 modules using the SoftGOT-GOT link function can be efficiently managed, and the SoftGOT-GOT link function can be utilized easily.

\* : Only CH1 can be monitored when GOT is connected via multi-channels. GOT and QCPU/LCPU can be connected by a bus connection, direct CPU connection, computer link connection, or Ethernet connection. GOT and OMRON PLC can be connected via Ethernet connection.

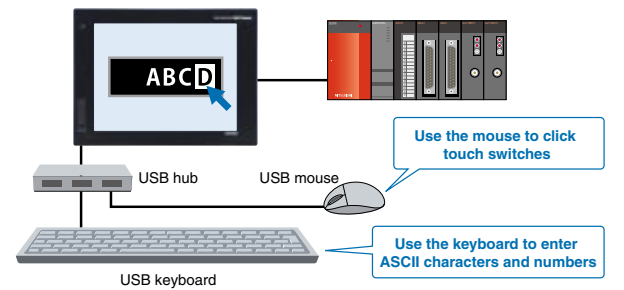
See "GT SoftGOT1000" (page 27), for more details.



## Connect your mouse/keyboard to the front USB interface

### GT 16 USB mouse/keyboard connection **NEW**

- In a user-created screen, you can use your mouse to click touch switches and your keyboard to enter ASCII characters and numbers.



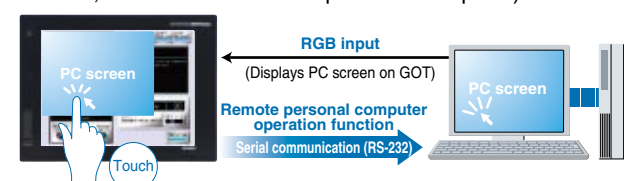
\* : Not supported by GT16 Handy

This is convenient when you need to operate small switches or enter many characters.

## Operate a personal computer from the GOT touch screen

### GT 16 GT 15 Remote personal computer operation function (Serial) **NEW**

- When using RGB input, operate a personal computer screen displayed on the GOT by touch operation (e.g. store information such as touched coordinates in GOT internal devices, transmit the data to a personal computer).



Compatible Windows OS  
Windows® XP Professional SP2/SP3, Windows® XP Home Edition SP2/SP3, Windows® 2000 Professional SP4

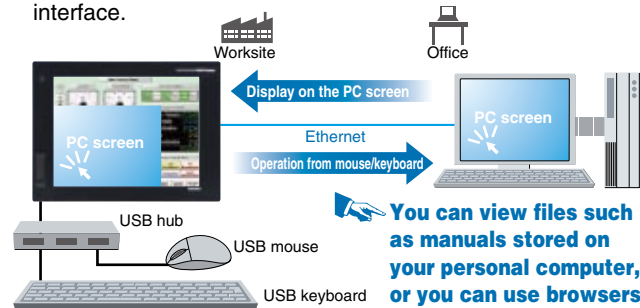
\* : Not supported by GT16□□-VN□□, GT1655, GT16 Handy  
\* : Supported only on the GT1585V and GT1575V models in the GT15 series.

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

## Operate a remote PC from an onsite GOT

### GT 16 Remote personal computer operation function (Ethernet) **NEW**

- A personal computer at a remote location can be operated from an onsite GOT when they are connected via Ethernet.
- A USB mouse/keyboard can be connected to the front USB interface.

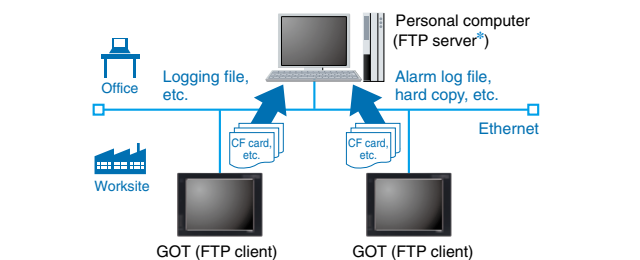


\* : Not supported by GT16□□-VN□□, GT16 Handy  
\* : The license key (GT16-PCRAKEY) is necessary.

## Send files from GOT to personal computer

### GT 16 GT 15 File transfer function (FTP client) **NEW**

- With a few simple settings, files (alarm log files, hard copies, etc.) of resource data stored in the GOT's CF card and USB memory\* can be sent from the GOT to a personal computer.



\* : USB memory is supported only with GT16.  
\* : The Microsoft IIS (Internet Information Service) FTP server is supported.

Convenient for using GOT resource data on a personal computer.

## Be alerted about worksite errors and collect device data from the office

### GT 16 GT 15 GT 12 Gateway function \*1

\*1 : GT12 supports only the FTP server function.

The gateway function remotely monitors the worksite and supports remote maintenance from the office.

#### 1 Collect data on a personal computer (server function)

- A GOT (server) can be monitored from the host personal computer (MX Component) to perform indirect reading/writing of connected devices being monitored by the GOT.
- Even when third party devices are connected, MX Component can read and write the devices through the GOT using the server function.

\* : The collected data can be displayed and analyzed by Excel without using any programs other than MX Sheet. Programming with Visual C++ and Visual Basic enables applications to be flexibly designed and built. See the MELSOFT catalog (L (NA) 08008) for more details.

#### 2 Monitor other GOTs from a GOT (client function)

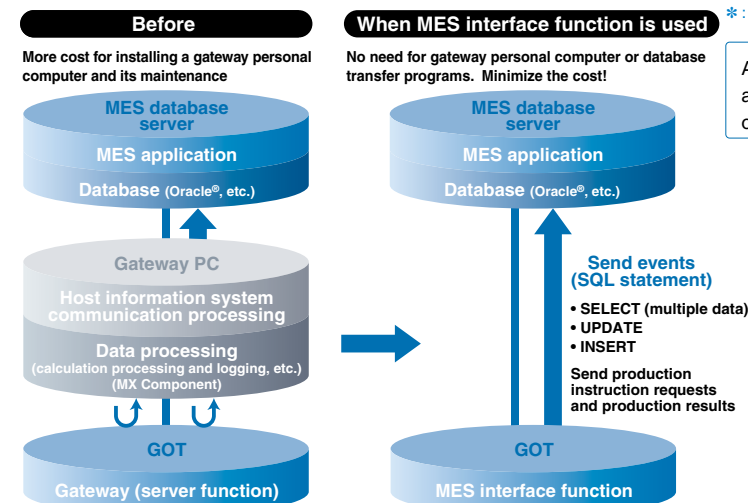
- A GOT (client) indirectly reads/writes device values of equipment monitored by another GOT (server).
- The client function can also be used to indirectly read/write device values of PLC CPUs other than the one to which the GOT (client) is connected.

## Database linkage support enhances productivity at your worksite

### GT 16 GT 15 MES interface function

The GOT transmits data from connected FA devices to the server personal computer database via SQL statements.

- For communication with the database, just specify the necessary data in GT Works3 without programming. There is no need to use a gateway personal computer and complicated programs to communicate with the MES database server.

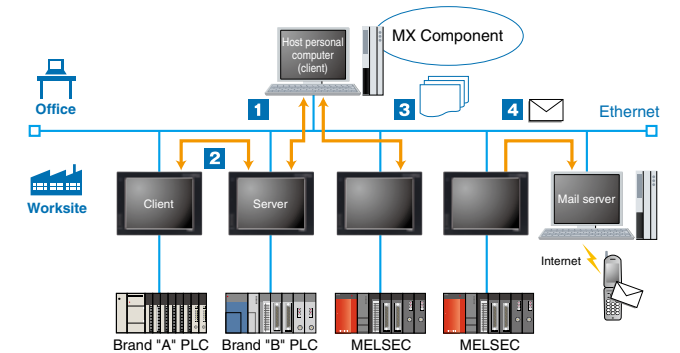


## 3 Direct check/edit of data in the CF card (FTP server function)

- Files in the CF card within the GOT (e.g. alarms, recipes, and hard copies) can be directly read and written from a personal computer.

## 4 Mail send function

- The alarm history display function can transmit alarm occurrences and recovery information by e-mail to personal computers and mobile phones.



An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

## MES interface function

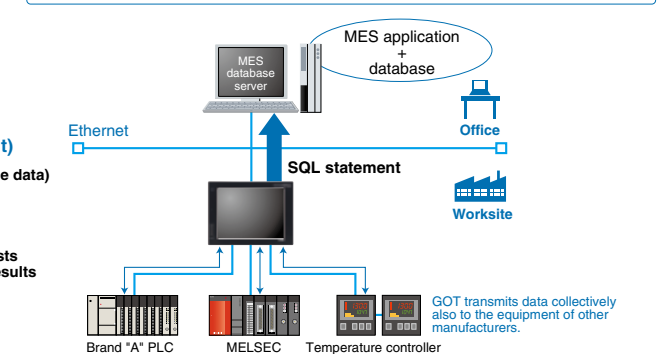
- DB link function (tag function / trigger buffering function / trigger monitor function / SQL statement transmission function <SELECT / SELECT multiple data / UPDATE / INSERT> / calculation processing function / program execution function / DB buffering function)
- SNTP time synchronization function
- Resource data transmission function
- DB server function (ODBC connection function / connection setting function / log output function)

## Usable databases

- Oracle® 8i/9i/10g/11g
- Microsoft® Access 2000/2003/2007
- Microsoft® SQL Server 2000/2005/2008
- Microsoft® SQL Server 2000 Desktop Engine (MSDE2000)
- Wonderware® Historian 9.0

\* : Compatible only with 32-bit versions.

<MES (Manufacturing Execution System)>  
A manufacturing execution system (MES) is a system which controls and manages production processes at a worksite in order to optimize quality, productivity, delivery date, and cost.



\* : Not supported by the GT16 Handy.

Mitsubishi Electric e-Factory presents the appropriate products to connect production information and MES (manufacturing execution system) to improve productivity of clients' plants.

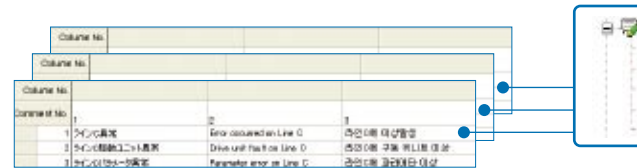
An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

## Efficient input of extensive comment data

GRAPHIC OPERATION TERMINAL GOT 1000

### Comment groups

- CSV/Unicode text format files can be imported. Multiple files can also be imported to individual comment groups, allowing the task of inputting comments to be distributed among several workers, greatly reducing the required input time.



- Automatically adjusts character size and inserts line feeds according to the object size.

- <Supported objects>
- Touch switches or lamps where "comment group" is selected for labels
  - Comment displays where "comment group" is used



## Easy creation of multilingual screens

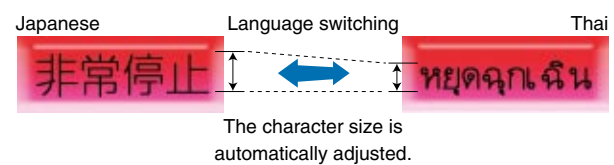
GRAPHIC OPERATION TERMINAL GOT 1000

### Multilingual support

- By using comment groups, different language comments can be created for each comment group column to switch the display language.
  - Comment group comments can be created freely for applications, as well as for different languages.
  - You can specify the column number of the comment group to change the language of the startup message on the GOT.
- \* : Refer to "Comment groups (page 36)" for the details of comment groups.
- The system alarm and utility screen display languages can be changed in conjunction with the language selection function.

### Convenient for language switching

When stroke fonts are used with switching languages for touch switches, lamps or comment displays, the character size is automatically adjusted by the size of the object. There is no need to adjust the size of the object when creating a multi-language screen.



\* : Stroke fonts and Thai characters on GT16 and GT15 only.

## Management of project data line by line is no longer required.

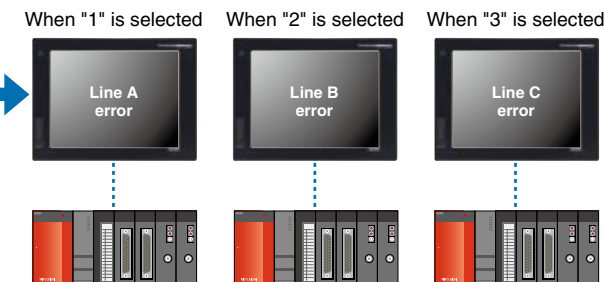
Example of comment group use

- 1 Line-specific comment groups are created.



- 2 Import

- 3 Displayed comment group can be switched by a device.

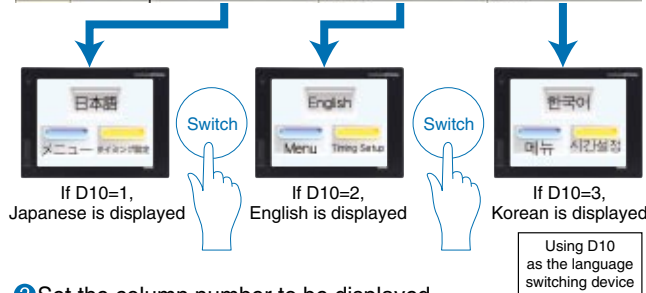


## Users can quickly change the language display.

Example of switching between Japanese, English, and Korean screens

- 1 Use comment groups to create Japanese, English and Korean comments in their respective columns.

Column No.			
Comment No.	1	2	3
	1 メニュー	Menu	메뉴
	2 タイミング設定	Timing Setup	타이밍 설정



- 2 Set the column number to be displayed in the language switching device.
- 3 The displayed comment (language) changes.

Available for touch switches, lamps, comment displays, the historical data list display **NEW**, the alarm history function, the user alarm function **NEW**, and the advanced alarm function.

## Easily create complex recipe data

GRAPHIC OPERATION TERMINAL GOT 1000

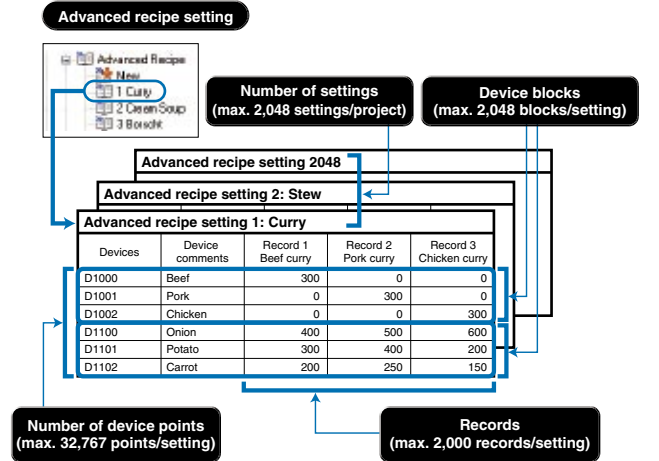
### Advanced recipe function

This function allows material combination data and processing conditions data (device values) to be held in the GOT, with only required data being written to and read from the PLC.

An extensive number of settings and flexible recipe data can be created

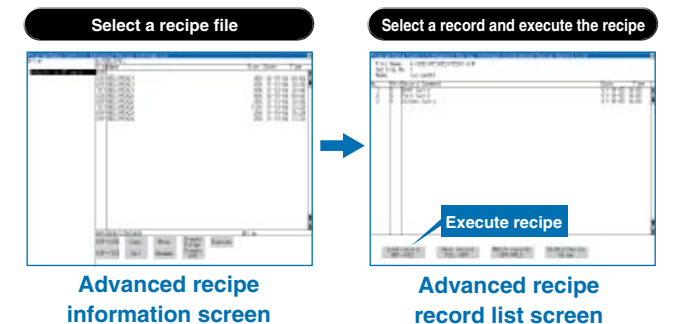
- Up to 2,048 blocks can be used, each block is comprised of sequential word devices, an arbitrary word device (1 point), and a bit device (1 point).
- Because devices also permit bit and word combinations and arbitrary device settings, there is no need to centralize the sequential devices used, thereby reducing the total number of device points used.
- Advanced recipe files can be converted into CSV or Unicode format text files, and can be edited on a personal computer. \*

\* : The advanced recipe file has a binary format. It must therefore be converted to either a CSV file or a Unicode text file by using GT Works3, the GOT utility, or an external control trigger device. After being converted, only the device values can be edited. When more than 251 records are included in an exported Advanced Recipe file (CSV or Unicode text format), use a text editor or Microsoft Excel 2007 or later to open the file.



### Easy handling of recipe data using the GOT

- Recipes can be handled easily with the GOT's utility function without having to create a recipe operation screen.
- CSV/Unicode text files can be converted into binary format files on the GOT. Even without GT Works3, you can edit data on a personal computer and use it on the GOT. **NEW**



## For better work efficiency and enhanced customization functions

GRAPHIC OPERATION TERMINAL GOT 1000

### Script function

#### Project script/screen script

- Control statements, file operation functions, string operation functions, etc. can be specified to a project or to individual screens.

#### Object script (For GT16 and GT15 only)

- Drawing functions and display control functions can be specified per object. Object functions can be expanded, for example, to change colors and display positions and to freely draw graphics.

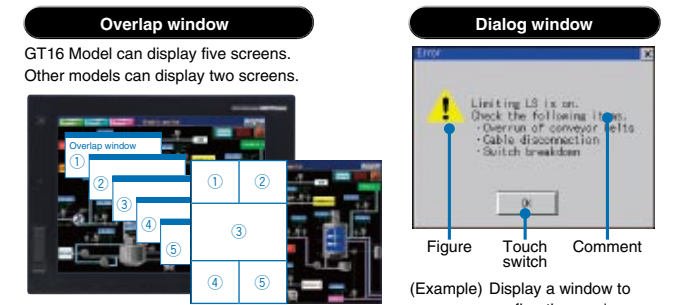
Controlling the GOT display with scripts can reduce load on the controller and enhance maintenance performance. The editor includes input support that makes it easy for you to write scripts.

## Extreme freedom in designing that enables you to create more effective screens

GRAPHIC OPERATION TERMINAL GOT 1000

### Various types of window screens

- Use overlap windows and dialog windows to create various types of screens.



(Example) Hide the title bars to view the screens as divided windows (GT16)

#### Key window

There is no need to create keypads for numerical input and key windows for ASCII input. When entering ASCII characters, you can switch windows to display character selection windows.



# Standard functions to provide users with straightforward operation

For initial startup & operations

## Dramatically improved GOT overall response

GRAPHIC OPERATION TERMINAL GOT 1000

### Drawing, computing, communication—a trio of high-speed response functions

The GOT1000 series offers faster response in drawing, computing and communication, reducing monitoring and operation load.

#### High-speed drawing

- Sharp and quick drawing of complex, layered component screens, and detailed photographic data in 65,536 colors.
- The GT16 further speeds up drawing operations.

#### High-speed computing

- Ultra-high performance processing power to satisfy the most complex and demanding of applications.

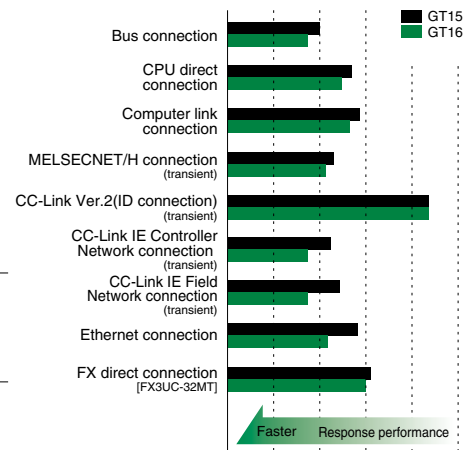
#### High-speed communication

- High-speed communication is possible for connections with both Mitsubishi and third party PLCs.

For connectable PLC models, see "List of connectable models" (page 65).

### GT16/GT15 response performance comparison

[Using MELSEC Q series] As of March 2011



The monitor screen includes about 250 points of word devices.

## Adjust brightness according to surroundings

GRAPHIC OPERATION TERMINAL GOT 1000

### Backlight brightness adjustment

- Consider the conditions in the operation environment (daytime/nighttime etc.) and user comfort. You can adjust the brightness of the backlight while viewing the user screen.
- By using the script function or the status monitor function, you can automatically adjust the brightness according to conditions.



The touch switches for brightness adjustment are registered in the system library.

## Easy-to recognize backlight state

GRAPHIC OPERATION TERMINAL GOT 1000

### Color-coded front face LED

- The color of the LED on the front of the GOT unit indicates whether the backlight is OFF or has expired.

#### [Power LED: Color-coded message]

<b>Green ON</b>	When normal power is being applied	<b>Orange/green blinking</b>	When backlight life has expired
<b>Orange ON</b>	When in screen-save mode	<b>OFF</b>	When power is not being supplied

## For planned commodity maintenance

GRAPHIC OPERATION TERMINAL GOT 1000

### Maintenance time notification function

- The cumulative backlight ON time is automatically monitored, and the operator is notified when maintenance is required. This facilitates scheduled maintenance and prevents system malfunctions.

<Subject to be monitored> Backlight, display area, touch keys, and built-in flash memory

**Warning! Backlight needs replacement soon.**

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).



# To minimize production time, the GOT provides the user with worksite-required functions

For initial startup & operations

## Easy data transmission without opening the cabinet

GRAPHIC OPERATION TERMINAL GOT 1000

### Equipped with front USB interface\*1

\*1 : Back face layout for GT12.

#### USB device (Mini-B)

- Connect the USB device (Mini-B) port to a personal computer. You do not need to open the panel to transfer operating systems and project data or to use the FA transparent function.



\* : To connect the GOT to a personal computer, use the dedicated USB cable. For more details, see "Product list" (page 74).



With USB environmental protection cover installed (standard feature) IP67I \*

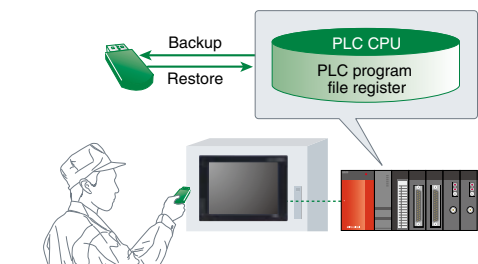
\* : This does not guarantee protection in all users' environments.

#### USB host (Type A) (for GT16 only)

- Operating systems, project data, and resource data can be stored in a USB memory device.
- A USB mouse/keyboard can also be used by connecting to the USB host interface.



#### <Example of the use of a USB memory>



## Sequence program and parameters can easily be modified at the worksite

GRAPHIC OPERATION TERMINAL GOT 1000

### FA transparent function

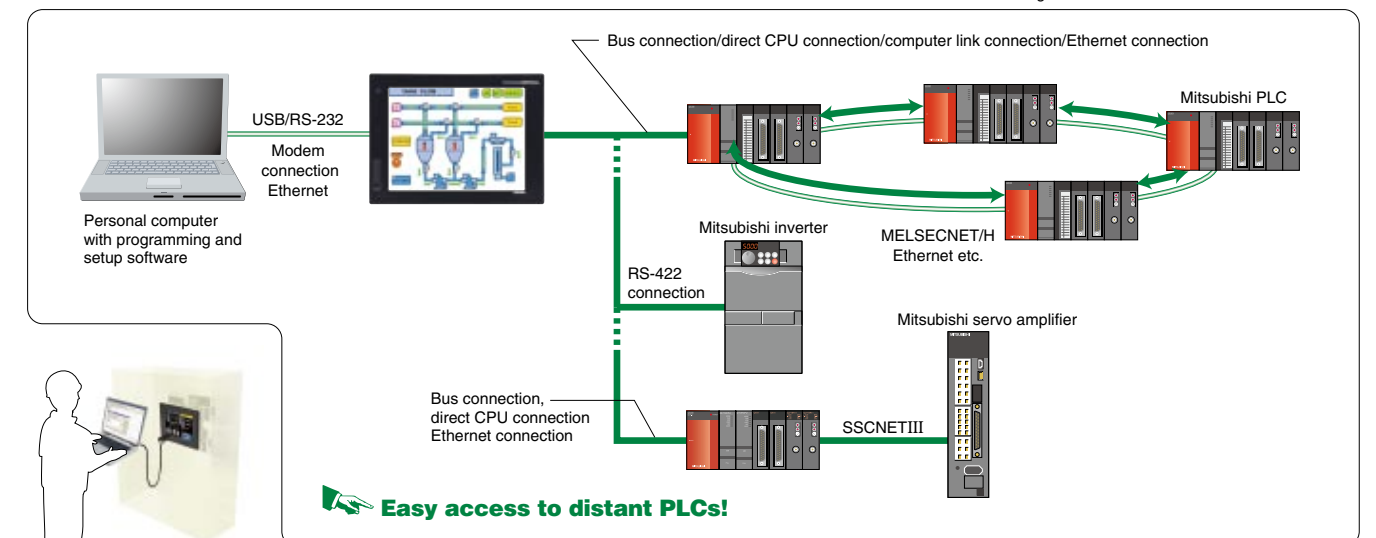
- Connected with a personal computer, the GOT acts as a transparent gateway to enable programming, start up, and adjustment of FA equipment.
- Users do not have to bother with opening the cabinet or changing cable connections. (When using the USB interface)
- The FA transparent function can be used when a GOT and a personal computer are connected via USB, RS-232 or even using an Ethernet connection. (Supported only by GX Works2, MX Component/MX Sheet)

#### Supported software\*

- MELSOFT Navigator
- GX Works2
- GX Developer
- GX Configurator-AD/DA/SC/CT/TI/TC/AS/FL/PT/QP
- PX Developer
- FX Configurator-FP
- FX3U-ENET-L Configuration Tool
- MT Works2
- MT Developer
- MR Configurator
- MR Configurator2
- FR Configurator
- RT ToolBox2
- NC Configurator
- MX Component/MX Sheet
- GX LogViewer
- LCPU Logging Configuration Tool

\* : The version of the software depends on the system configuration. For more details, see the GOT1000 Series Connection Manual (Mitsubishi Products) for GT Works3.

\* : For the software access range when using the FA transparent function, refer to the manual of the software being used.



Easy access to distant PLCs!

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List of Connectable Models, etc.



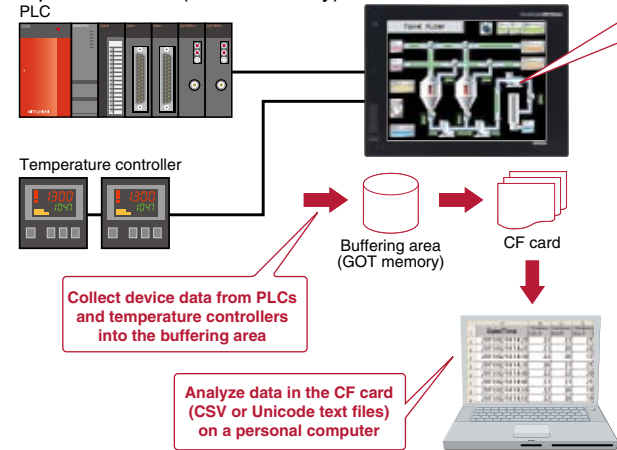
# The GOT provides complete traceability for safe and secure operation

For maintenance personnel

## Smooth operation from the collection of various data to storage of time-series data

### Logging function/historical trend graph/historical data list display

- Collecting data from temperature controllers and other units with the GOT can reduce the load on the PLC.
- Logging data is saved in the built-in SRAM even during a power failure. (For GT16 only)



### Display with graphs Historical trend graph

- After collecting data with the logging function, you can display the data in a time series.
- Scroll the view or specify the time so that you can check necessary data easily.

### Display with values Historical data list display

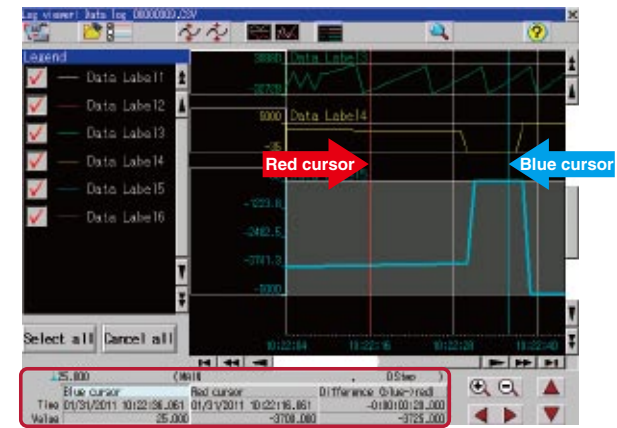
- Data collected with the logging function is displayed in list format.
- The historical trend graph for a specific time can be displayed by designating the time.

## Display logging data of a LCPU and high speed data logger module on the GOT

### Log viewer function

#### Display logging data without a PC

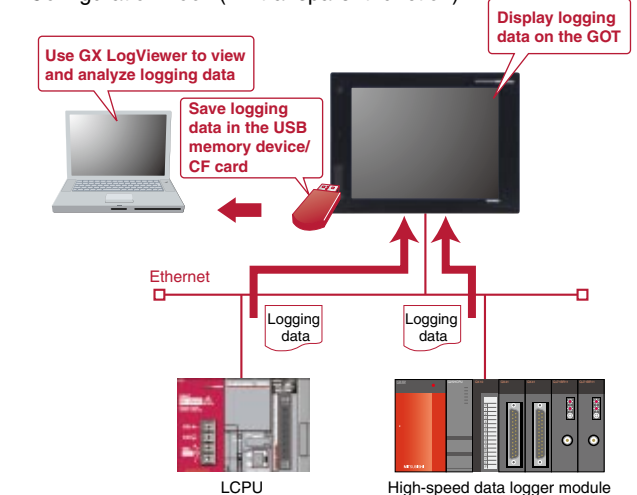
- Logging data collected by a LCPU or high speed data logger module can be displayed on the GOT.
- <Data to be displayed> Data logging (historical display)
- By displaying two cursors (multi-cursor), changes in data can easily be checked.
- The collected logging data can be searched for by time or index No. and displayed.



You do not need to have a PC onsite. Check logging data from the GOT, and you can take corrective actions quickly.

#### Logging data can be collected without opening the cabinet

- In a USB memory device attached to the USB interface on the front of the GOT, you can save logging data of the LCPU and high speed data logger module. In this way, you can collect the logging data easily with the GOT without removing the CF card/SD card from the LCPU or high speed data logger module.
- Connect a personal computer to the front USB interface of the GOT to view the LCPU logging data with the GX LogViewer, or to change the logging settings with the LCPU Logging Configuration Tool. (FA transparent function)



## Enhanced security system using password control

### Operator authentication function

Option ① Enter the operator name and password to log into the system.

Option ② Use the ID card or ID tag to log in to the system.\*

Login OK

The screen appears, enabling operation!

Operator information can be registered and edited by the GOT operator management information conversion tool or from the main unit of the GOT.

CF card etc.

The screen display and touch switches can be specified depending on the level of the logged-in operator.

JonSmith is now logged-in

JonSmith is not authorized to change the set value of "Torque 3".

The GOT operator management information conversion tool is included with GT Works3.

\* : Combined with the operation log function, who, what, when, and how the operator operated can be recorded. See "Operation log function."

#### Setting the level (authority) of operation and display for each operator can strengthen security and prevent operation errors.

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

## Very helpful for identification and analysis of causes of incorrect operation

### Operation log function

- Operations performed by operators on the GOT can be recorded with respect to time, making it possible to check when, what, and how the operation was performed.
- List operations by type and easily search for specific device and GOT operation state changes.
- <Specifiable operations> Touch switch operation, numerical value input operation, security level change, screen change, etc.
- Recorded log data is saved in the CF card and is available for checking on the GOT main unit or on a personal computer (CSV or Unicode text files).
- \* : Use of this function together with the operator authentication function enables recording of "who" has operated. See "Operator authentication function".

Record the operation log

A problem occurs

Check log on GOT

Check log outline

Check log details

More detail

Example ) At 16:43:10 on November 14, 2008, Jon Smith changed the Numerical Input data entry to change the D100 value from 10 to 100 in "Torque 1 Set Value" on the BASE\_2 screen.

#### Refer to the operation log file, and investigate the problem source.

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

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## Back up important sequence programs for assurance in case of an emergency

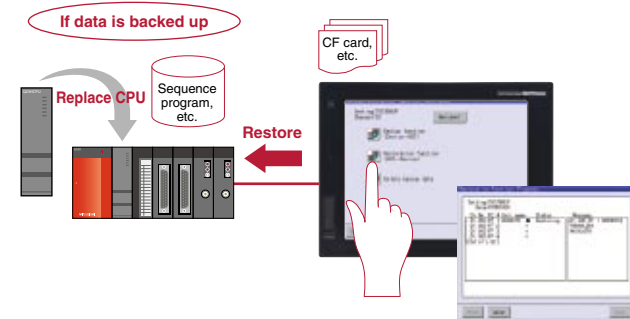
### GT 16 GT 15 GT 12 Backup/restoration function

#### With backup and restore, fear troubles no more

- The sequence program and parameter data of the PLC CPU and motion controller, etc. can be backed up to the CF card in the GOT.
- Users can perform batch operation to restore the data to the PLC CPU or motion controller.

#### Example of use ①

Make a data backup in case of a PLC or CPU failure or a dead battery to quickly replace the faulty device and restore the system using the backup data in such a case.

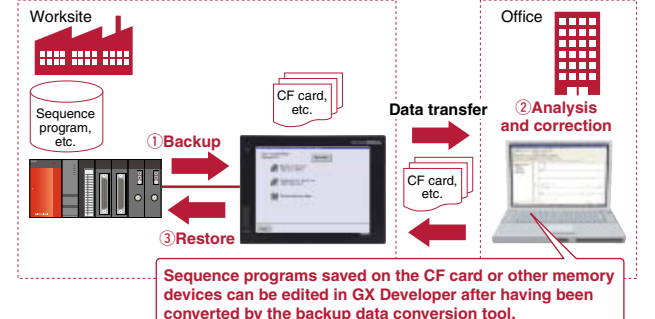


- <Objective data> Programs, parameters, device comments, device initial value data, file registers, etc.
- <Objective model> MELSEC Q-Series (excluding Q12PRH/Q25PRHCPU), L-Series, FX-Series, Q-Series motion controllers (SV13/SV22 only), CNC C70, Robot controller (CRnD-700, CRnQ-700)
- <Usable connection type> Bus connection, CPU direct connection, computer link connection, Ethernet connection

The backup data conversion tool is included with GT Works3.

#### Example of use ②

When a problem occurs, or when the PLC CPU program is updated, the sequence program data can be transferred, analyzed, and corrected without requiring an experienced engineer, increasing time and cost efficiency.



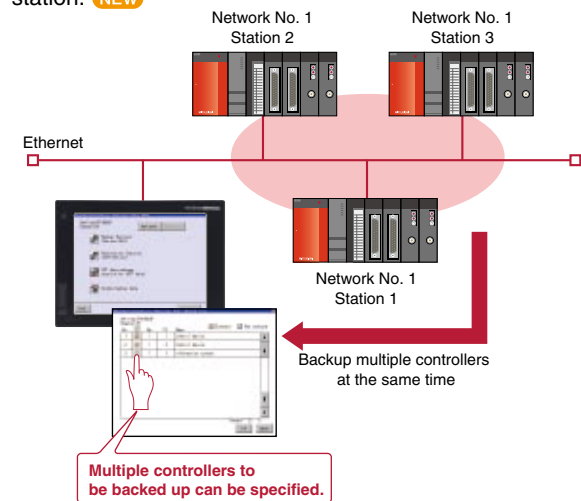
Sequence programs saved on the CF card or other memory devices can be edited in GX Developer after having been converted by the backup data conversion tool.

## PLC CPU programs can be easily changed without a personal computer at the worksite or any previous GX Developer knowledge.

\* : When replacing the PLC CPU, the restoration function may not be available depending on the system configuration and connection type.

## Backup multiple controllers at the same time

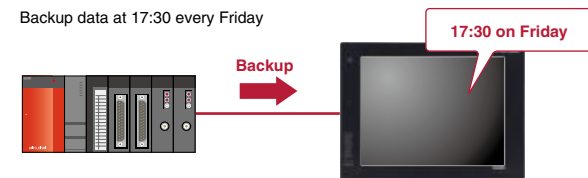
- Multiple controllers can be backed up at the same time over Ethernet. Target controllers for backup can be specified per station. **NEW**



Multiple controllers to be backed up can be specified.

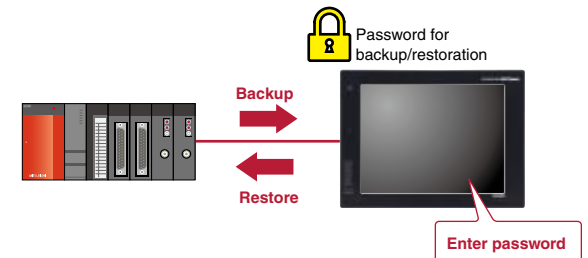
## Automatic backup is available

- Besides automatic backup from touch switches, you can specify a trigger device, a day of the week, and time for automatic backup.



## Password for increased security

- Define a password to perform password authentication when executing backup/restoration.



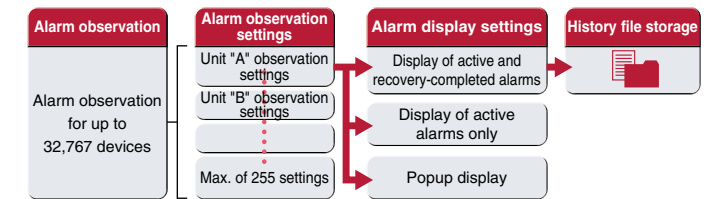
An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

## Clear communication minimizes machine downtime even during an alarm

### GT 16 GT 15 GT 12 Advanced alarm

#### A wider monitoring range protects even large-scale systems

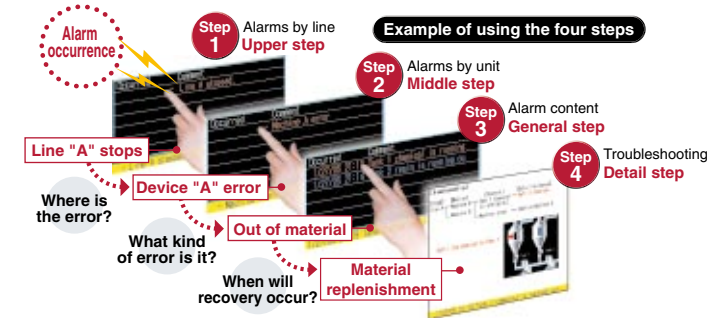
- Alarm observation is possible for up to 32,767 devices with a maximum of 255 alarm observation setting groups.
- Batch display of large amounts of alarm information in large-scale systems, and unit-specific classification for easy management.
- Alarm log data can be saved in the built-in SRAM even during a power failure. **NEW** (For GT16 only)



#### Rapid detection and corrective action for a wide array of alarms

##### Four-step alarm notification

- Alarm occurrence conditions can be divided into 4 steps and conveyed to the operator in an easy-to-understand, step-by-step format.
- The four-step display makes it easy to take in and sort out alarm conditions (information such as where, what, and how). This enables efficient troubleshooting when multiple problems occur.



#### Example of using the four steps

#### Group-specific & level-specific displays

- Alarms can be classified by group and level, with only specified alarms being displayed.

Alarm	Group	Level
M0	Transport G	Mid-level
M1	Transport G	Mid-level
M2	Transport G	Mid-level
M3	Transport G	Mid-level
M4	Transport G	Major
M5	Process G	Major
M6	Process G	Minor
M7	Process G	Minor
M8	Process G	Minor
M9	Process G	Minor

Group: Transport G alarm display, Transport G major alarm display, Minor alarm display

Level: Minor alarm display

Combination of level & group

#### Easy searching with time designation **NEW**

- Specify a time and easily check the required data.
- When used with the historical trend graph, by specifying the time at which an error appears to have occurred on the graph, the state of alarm occurrence at that time can easily be viewed.

#### Easy-to-understand display

- The use of colors and popups produce easily recognizable alarm displays.



#### Improved system alarms

- The PLC/GOT/Network monitoring subject can be specified in advance, with only those specified alarms being displayed.

#### Support in identifying alarm causes (utility function)

- Alarm occurrence conditions can be displayed in a time-series graph form.
- Alarm occurrence counts can be displayed in bar-graph form.





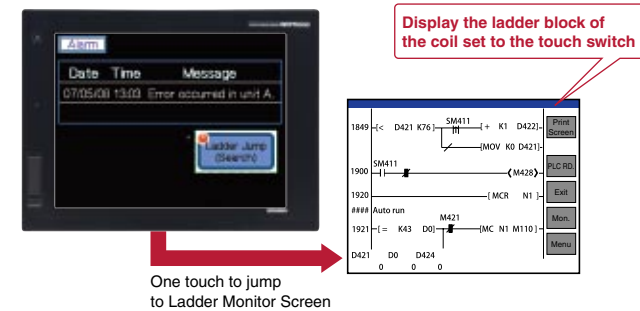
## The GOT Ladder Monitor Function is greatly improved with the One-Touch Ladder Jump function

### GT 16 GT 15 Ladder monitor function

MELSEC Q/QS/L/QnA/A/FX series PLCs, CNC C70, MELDAS C6/C64 sequence programs can be monitored in a circuit diagram (ladder format).

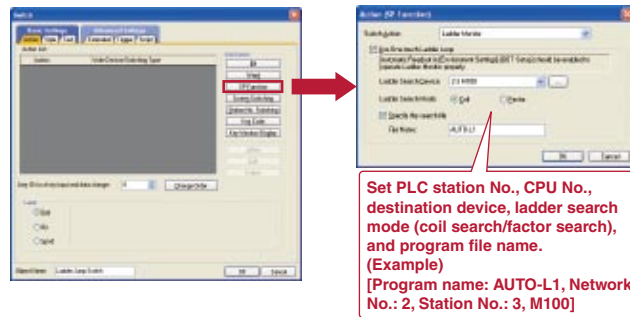
### Defect search with the One-Touch Ladder Jump function (Q/L/QnA series, CNC C70)

- By setting a program name and coil number of the PLC to a touch switch, the relevant ladder circuit block can be displayed directly.



- \* : Supported by XGA/SVGA/VGA models.
- \* : QS series models can only monitor the ladder program of a Q/L/QnA. It cannot alter device values, for instance.
- \* : FX3GCPU is not supported.

- Select [SP Function]-[Ladder Monitor] from the touch switch property dialog.

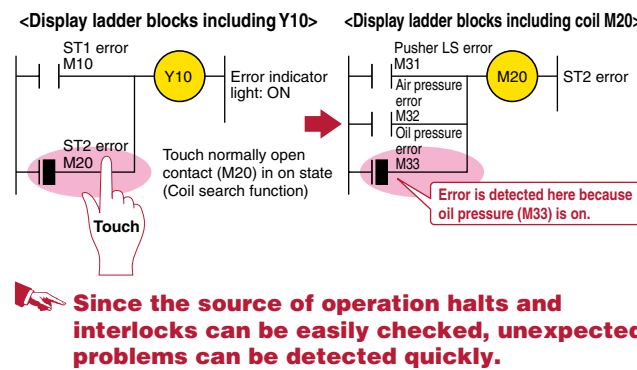


## Wide monitoring range and useful functions make maintenance work more efficient!

- Not only connected PLCs, but also PLCs of other stations, multiple CPUs, multiple programs in the CPU, and local devices can be monitored.
- The programs and comments of multiple connected controllers can be saved in a CF card, so the ladder data can be switched and displayed without reading the data from the PLC. (Q/L/QnA series) **NEW**
- Device values and timer (T) / counter (C) set values can be changed.
- Used together with the alarm history, a back-tracking ladder search can be performed to find the contact which triggered the alarm. <Defect search>
- Simply touching the Ladder Monitor screen can execute a coil search and contact point search. (Q/L/QnA series) <Touch search>
- The number of ladder program lines displayed on a XGA model has increased thus it is more user-friendly than ever. **NEW**

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

### Example of touch search (when error indicator light [Y10] is on)



## Simple and easy! Use the GOT to correct ladder programs, no need for a PC!

### GT 16 GT 15 Ladder editor function

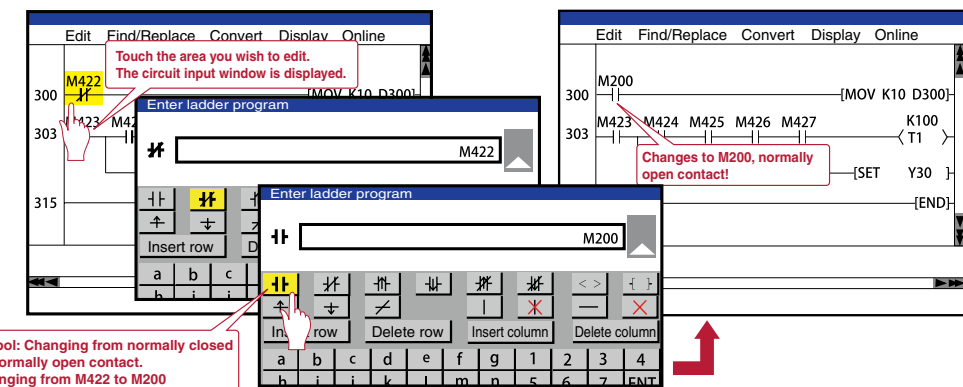
Sequence programs of Mitsubishi PLC Q Series (Q Mode) and CNC C70 can be edited in the ladder format.

### Ladder programs can easily be edited on the GOT at the worksite

- Just touch the portion (e.g. contact points, vertical lines) you want to edit in the ladder program. You can enter, change, or delete circuit symbols and devices. You can also insert or delete vertical lines and horizontal lines as well as columns and rows.

- \* : Supported by XGA/SVGA/VGA models excluding 5.7" types.
- \* : QnPHCPU/QnPRHCPU are not supported.

- Search and replace of devices makes it easy to locate the point to be edited. You can also make two or more modifications in one operation.
- Statements and notes can be edited.
- The details edited last can be restored (undone).



### Writing into PLC while it is in operation

- Edited programs can be written from GOT to a PLC even if it is in operation. You do not need to stop equipment in operation to correct ladder programs.
- Remotely change the PLC's mode to "STOP" or "RUN" from the GOT.

### Grasping CPU status with PLC diagnosis

- The CPU operation status and current errors can be monitored. **NEW**

An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

### Long access range and convenient functions for efficient maintenance!

- Besides a directly connected PLC, you can edit multiple programs on another station's PLC, multi CPU, or CPU in the same network.
- You can view current values, perform a search, and conduct a device test.
- The one-touch ladder jump function is available. This is helpful to identify problem causes.

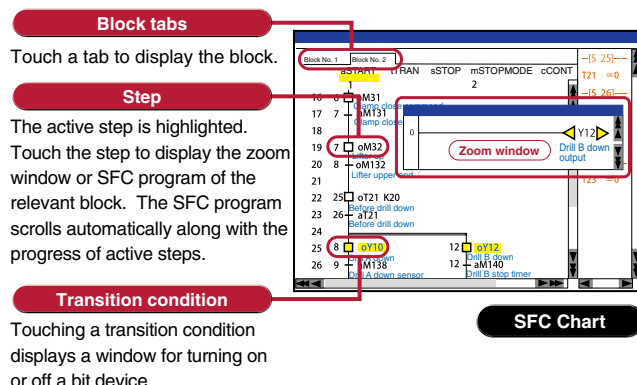
## Monitor SFC programs on the GOT to make troubleshooting even easier

### GT 16 GT 15 SFC monitor function

MELSEC Q/L series PLC SFC programs (MELSAP3, MELSAP-L) can be monitored in a graphical format.

- Viewing the block list or active step list enables you to see the complete status at a glance.
- Touch an SFC chart or a zoom window to specify a device. Then, the Ladder Monitor function displays other sequence programs that use the specified device.
- A device test can easily be conducted from a SFC chart or block list.
- Save programs and comments in the CF card of the GOT. They can be retrieved at a moment's notice.

- \* : Supported by XGA/SVGA/VGA models.



An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

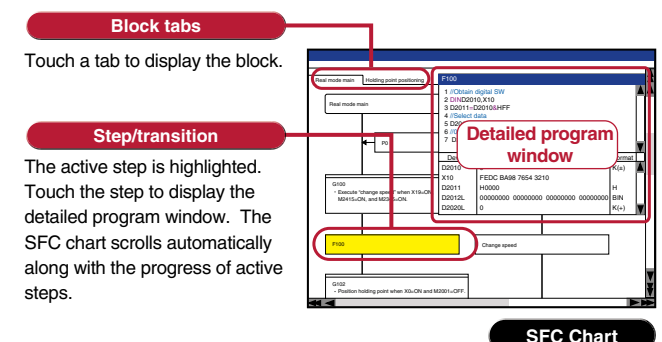
## Use the GOT to monitor a motion SFC program

### GT 16 GT 15 Motion SFC monitor function **NEW**

Motion SFC programs of the Mitsubishi Motion Controller (Q Series) can be monitored.

- Viewing the batch program monitor or the active step list enables you to see the complete status at a glance.
- The detailed program window allows you to monitor programs and current values of operation control steps and transitions.
- Save programs in the CF card of the GOT. They can be retrieved at a moment's notice.

- \* : Supported by XGA/SVGA/VGA models.



An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

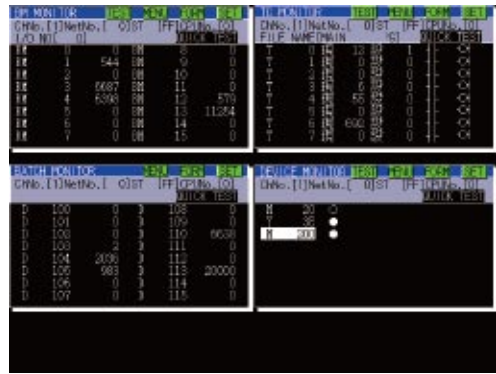
INDEX  
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Specifications, External Dimensions  
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## Monitor and change Mitsubishi FA devices

GRAPHIC OPERATION TERMINAL GOT 1000

### System monitor function

- The devices of PLCs, motion controllers, CNCs and robot controllers can be monitored and changed.
- \* : Only monitoring, but not changing device values and other operations, is available with the QSCPU.
- The current values and setting values of timers (T) and counters (C) can be changed.
- The buffer memory (BM) of an intelligent function module can be monitored and changed.

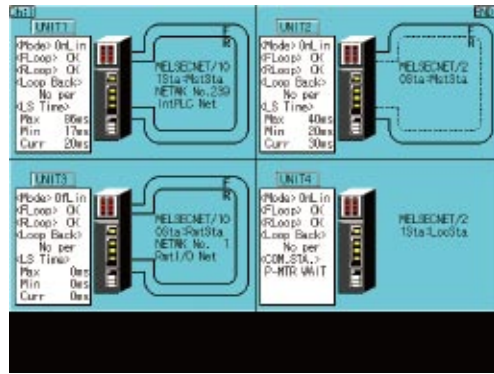


## At-a-glance monitoring of network status

GRAPHIC OPERATION TERMINAL GOT 1000

### Network monitor function

- Enable monitoring of network line conditions of the CC-Link IE Controller Network, CC-Link IE Field Network, MELSECNET/H, MELSECNET/10, and MELSECNET II on a dedicated screen.
- Communication line and information from the host and other stations can be monitored to check the communication status.

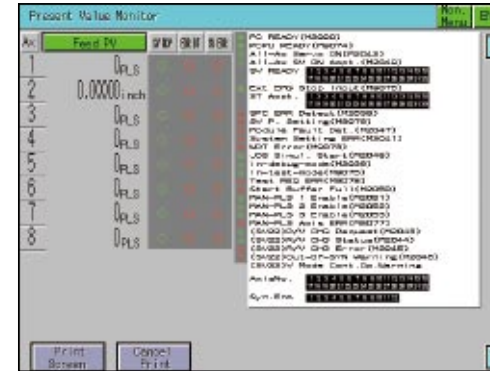


## Easy adjustment of Q series motion controller

GRAPHIC OPERATION TERMINAL GOT 1000

### Q series motion monitor function

- Up to 3 Q-type motion controllers can be used on a single base, with monitoring and parameter settings possible.
  - Access to other stations is also possible.
- <Objective models>
- Q172D/Q173DCPU (-S1) • Q170MCP
  - Q172H/Q173HCPU • Q172(N)/Q173(N)CPU
- \* : Supported only if the Q series motion controller CPU has the SV13/SV22 OS version.  
Moreover, available functions of the Q series motion monitor vary according to the CPU type or the servo amplifier model.



## Easy startup and adjustment of a servo amplifier

GRAPHIC OPERATION TERMINAL GOT 1000

### Servo amplifier monitor function

- In a system which outputs pulse strings, the GOT can be connected to a servo amplifier in a serial connection to perform the following operations: set up, monitoring, alarm display, diagnosis, parameter setting, and test operations.
- \* : Available monitoring functions vary according to the servo amplifier type.

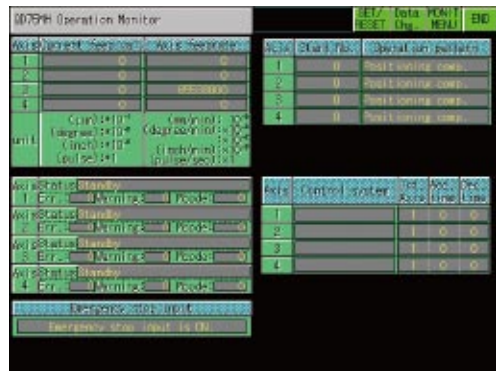


## Easy-to-understand display of buffer memory values and I/O information

GRAPHIC OPERATION TERMINAL GOT 1000

### Intelligent module monitor function

- Buffer memory values of intelligent function modules (e.g. QD75MH) and the ON/OFF status of I/O units can be monitored and changed.
- When a QCPU (Q mode), a QSCPU or a LCPU is in use, CPU operating status and existing errors can be monitored by PLC diagnosis.
- QD65PD2 and LD77MH16 are now supported. **NEW**
- \* : Supported by XGA/SVGA/VGA models.



## Easy maintenance of MELSEC-L Series

GRAPHIC OPERATION TERMINAL GOT 1000

### MELSEC-L troubleshooting function

- The maintenance screen dedicated to LCPU is installed. Without designing new screens and even without using a personal computer, you can check CPU status/error information easily.
- Just touch the dedicated screen. You can jump to a function screen such as the intelligent unit monitor to quickly take corrective actions on site.



## Save space and cost when no dedicated display device is required

GRAPHIC OPERATION TERMINAL GOT 1000

### CNC monitor function/CNC data I/O function

- **CNC monitor function**
  - Connecting to a CNC (C70, C6/C64) enables functions such as position display and alarm diagnosis, and allows tool offset parameters to be set.
- **CNC data I/O function**
  - This function can be used to copy and delete CNC C70 work programs, parameters, etc.



\* : Supported by XGA/SVGA models.

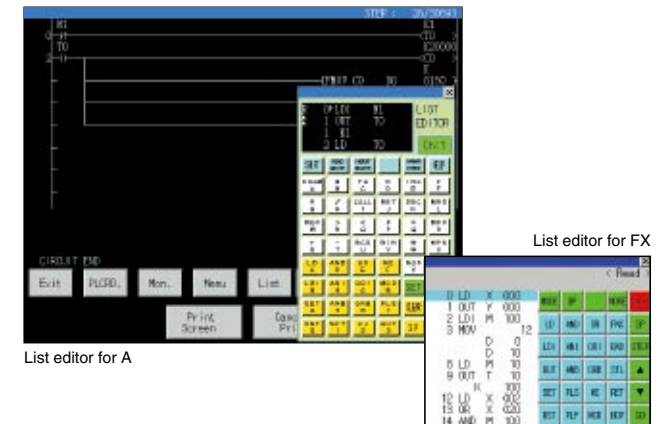
An optional device may be necessary. For details, see "Selection of optional units and devices" (page 81).

## Convenient method for minor program changes onsite

GRAPHIC OPERATION TERMINAL GOT 1000

### List editor for A/List editor for FX

- MELSEC-A series, FX series PLC sequence programs can be edited in list format (instruction word).
- Permits minor program changes onsite, even without a peripheral device.
- Used together with the ladder monitor function, the GT16 and GT15 can edit sequence programs while viewing the ladder data.





# Powerful features even down to the most basic

# GOT

# GT10

## Various screen sizes

The GT10 now offers line up of models with 5.7" and 4.7" screens, enabling more flexible screen layouts. The 4.5" and 3.7" wide screen models are also available with a white frame.

**GT1050/GT1055**

**5.7 inch**

- QVGA 320 × 240 dots
- Matrix touch panel
- Minimum touch key size: 16 × 16 dots
- Maximum number of touch keys: 50/Screen

**GT1040/GT1045**

**4.7 inch**

- QVGA 320 × 240 dots
- Matrix touch panel
- Minimum touch key size: 16 × 16 dots
- Maximum number of touch keys: 50/Screen

**Black frame**

**GT1030**

**4.5 inch**

- 288 × 96 dots
- Matrix touch panel
- Minimum touch key size: 16 × 16 dots
- Maximum number of touch keys: 50/Screen

**NEW High contrast product released!**

**White frame**

**GT1030**

**4.5 inch**

- 288 × 96 dots
- Matrix touch panel
- Minimum touch key size: 16 × 16 dots
- Maximum number of touch keys: 50/Screen

**Black frame**

**GT1020**

**3.7 inch**

- 160 × 64 dots
- Analog touch panel
- Minimum touch key size: 2 × 2 dots
- Maximum number of touch keys: 50/Screen

**White frame**

**GT1020**

**3.7 inch**

- 160 × 64 dots
- Analog touch panel
- Minimum touch key size: 2 × 2 dots
- Maximum number of touch keys: 50/Screen

## Similar dimensions to the F900 Series allows for simple replacement without panel design changes\*1

\*1 : When the F940GOT is replaced with the GT1050/GT1055 or when the F930GOT is replaced with the GT1030

**GT1050/GT1055**

The GT1050, GT1055, and F940GOT are of the same size, 5.7", with the same LCD, QVGA 320 × 240 dots. They are highly compatible.

**F940GOT ▶ GT1050/GT1055**

● QVGA 320 × 240 dots in each model

**GT1030**

The GT1030 has the same panel mounting dimensions as the F930GOT yet with improved resolution\*2.

**F930GOT ▶ GT1030**

\*2 : 1.44 times compared with the F930GOT

## FA transparent function

When a GOT and a personal computer are connected, the FA devices can be programmed, started and adjusted via GOT.

**GT1050/GT1055**  
**GT1040/GT1045**  
**GT1030** **GT1020**

**GX Works2 GX Developer**

Connect a PC with PLC via GOT.

**FA transparent**

Direct connection with FX/Q/L/QnACPU Q/L/QnACPU serial communication unit connection etc.

## GOT multi-drop connection

By using the serial multi-drop connection unit, the GT01-RS4-M, up to 16 GOT1000 units can be connected. The total distance can be up to 500m.

Mitsubishi PLC MELSEC Series FX, A, QnA or Q

\* : See relevant manuals for connectable hardware and software versions.  
\* : GOT multi-drop connection is also available for GT16, GT15, and GT11.

## Connection to Mitsubishi inverters and AC servos

Direct connection to Mitsubishi inverters and AC servo amplifiers with RS-485 makes it easy to adjust parameter settings etc.

Monitoring Parameter adjustment

Monitoring Operation commands

Can connect up to 32 axes of Mitsubishi general-purpose AC servos with a total extension of 500m.

Can connect up to 10 Mitsubishi general-purpose inverters with a total extension of 500m.

\* : See relevant manuals for connectable hardware and software versions.

## Common software functions

GT10 includes convenient functions of more advanced models in a compact package.

- Preinstalled OS to enable immediate use
- Choose your font
- A variety of alarm functions and window functions
- The recipe function and multi-action switch for reducing sequence program load
- Displaying custom startup screens
- Display in a variety of languages and comment switching function
- Screen save function

### Functionality

Common	<ul style="list-style-type: none"> <li>○ Screen (base: max. 1,024 screens, window: max. 512 windows)</li> <li>○ Fonts (standard (6 × 8 dots: Gothic, 16 dots: Gothic [except GT1020]/high quality/TrueType/Windows)</li> <li>○ Screen switching function, screen call-up function, language switching function, password, system information, setting connected devices, and startup logo</li> </ul>
Drawing and graphics	<ul style="list-style-type: none"> <li>○ Straight lines, continuous lines, rectangular, polygons, chamfered quadrangles, circles, ellipses, arcs, elliptic arcs, circular sectors, and elliptic sectors</li> <li>○ Division indication ○Painting ○Images (BMP/DXF)</li> </ul>
Objects	<ul style="list-style-type: none"> <li>○ Comment registration (basic comments and comment groups)</li> <li>○ Parts registration ○Data computing function ○Offset function</li> <li>○ Security function ○Lamp indications ○Touch switches</li> <li>○ Numeric indications and input ○ASCII indications and input</li> <li>○ Clock function (GT1050, GT1055, GT1040, GT1045, GT1030: Integrated clock, GT1020: Read from the PLC clock)</li> <li>○ Comment displays ○Alarm list and alarm history</li> <li>○ Parts display ○Panel meters</li> <li>○ Trend graphs, kinked line graphs, bar graphs, statistic crossbar graphs, statistic circular graphs</li> <li>○ Status monitor function ○Recipe function (4,000 points) ○Time action function</li> </ul>

\* : See the manual for details.

## Supporting the GT Works3 simulator function

Created screens can be easily debugged without an actual machine.

**Easily debug with a PC**

Using the GX Works2 simulator, the sequence program can also be debugged simultaneously.

\* : Supported with GT Works3 Ver. 1.22Y or later.

## Data transfer for improved user-friendliness and flexibility

Optional memory board and memory loader provide a convenient way to download project data and operating system data to terminals without a PC. Furthermore when downloading to multiple units speed and efficiency is increased.

**Data transfer memory board GT10-50FMB**

**GT1050/GT1055**  
**GT1040/GT1045**

Install a memory board storing the newest data

Data can be read or written as shown in the utility window below.

Data is written at startup when two points are pressed on the screen.

**Basic OS, communication driver, and project data**

Read/Write

**Memory loader GT10-LDR**

**GT1030** **GT1020**

- Has a compact design (70 × 110 mm), where the GOT transfer cable can be stored inside the body.
- Can write the standard monitor OS, communication driver, and project data.
- Can read the project data and resource data.
- Offers simple switch type operation, where the write-protect switch prevents erroneous reading.
- Does not require a power supply as power is supplied from the GOT or personal computer.

At the desk: Standard monitor OS, communication driver project data, resource data\*1

At the worksite: Standard monitor OS, communication driver project data, resource data\*2

Read/Write

Read/Write

PC (GT Works3)

USB cable (1m) packed together

RS-232 transfer cable (0.2m) incorporated

GT1020/GT1030

\*1 : Only the standard monitor OS and communication driver can be written and only resource data can be read.  
\*2 : Only resource data can be read.

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# Real-time multi CPU access with the iQ Platform

## iQ Platform

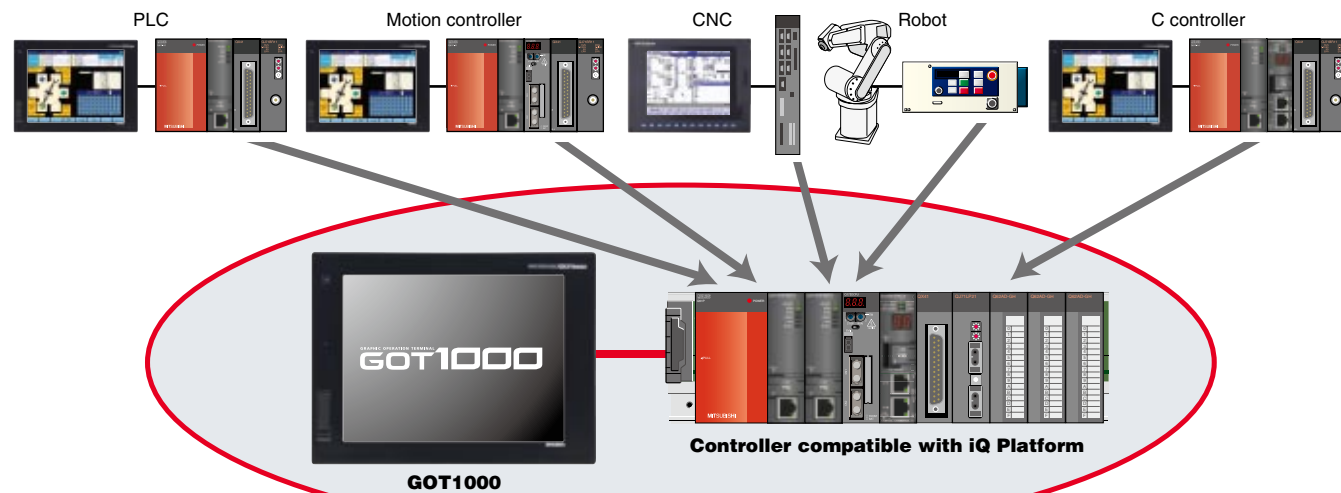
Mitsubishi FA Integrated Platform optimizes front line of production

"iQ Platform," the next generation integrated platform

- integrated Q
- improved Quality
- intelligent & Quick
- innovation & Quest

With high speed control and convenience fully assured, controllers compatible with the iQ Platform and the GOT1000 are the keys to higher productivity at lower costs.

PLCs, motion controllers, CNCs, robot controllers, and C controllers are integrated into one as a controller compatible with the iQ Platform. The GOT1000 can integrate different types of monitor units that were previously connected to each controller.



### ① Reducing engineering cost

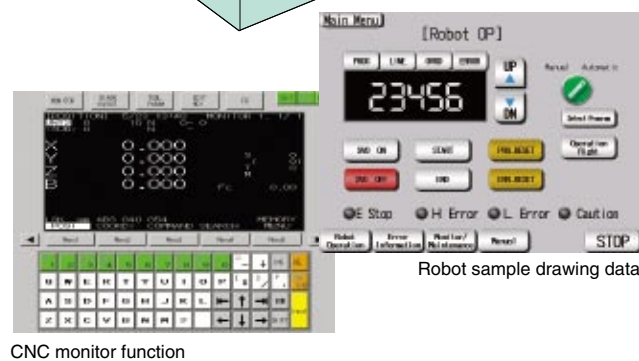
The screen design software "GT Works3" enables creation of monitor screens for each controller.

### ② Reducing spare parts cost

A single GOT1000 can integrate several types of monitor units connected to each controller, greatly reducing equipment cost.

### ③ Powerful support for maintenance

The GOT1000 has a variety of useful maintenance functions such as the "Q motion monitor function" and "CNC monitor function," very capable of and reliable for troubleshooting. (GT16 and GT15 only)



\*: Connectable models and usable functions vary depending on the GOT main unit. For more details, see "List of connectable models" (page 65), "Function list" (page 70) and "Notes for use" (page 81).

# Create an easy-to-operate process control system.

## GOT1000 flexibly interacts with process control. MELSEC process control

MELSEC will change process control. From dedicated systems to PLCs.

"MELSEC process control" is used in a wide range of applications from device process control to plant process control. The GOT1000 can be used as the monitoring interface. When using Mitsubishi FA devices, the outstanding interaction allows a high-performance process control monitor system to be created easily.

### Four benefits that MELSEC process control and GOT1000 (GT16/GT15) can offer.

#### ① PX Developer creates GOT process control monitor screens automatically

Based on the information such as tags defined by PX Developer, process control monitor screens for the GOT can be created automatically, greatly reducing the time required for screen design. GT Works3 can then customize the automatically created screens. By using the GT Works3 simulator function and GX Simulator, the operation of programs and screen data can be confirmed on a personal computer even without an actual machine. **NEW**

\*: For details on the compatible software version and functions, see the PX Developer Operating Manual.

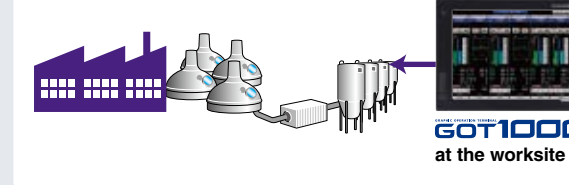
#### [Screen examples that can be created automatically]



#### ② Utilizing GOT1000 & GT SoftGOT1000 data

Only by using GT Works3 and PX Developer, a process control monitor system can be developed for both the worksite (GOT1000) and the remote monitoring location (GT SoftGOT1000). Screen data can be shared to monitor screens efficiently.

##### Worksite



- Excellent anti-environment performance (IP67f) for operation in various types of worksites.
- The VESA mount adapter is available.

##### Monitoring location GT SoftGOT1000 in the monitoring location

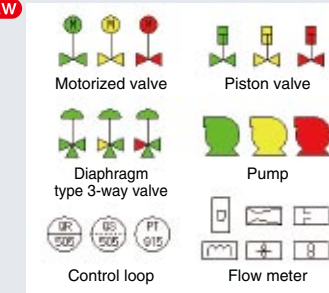


- Touch switches on the GT SoftGOT1000 can call up screens such as face plates and the alarm list of the PX Developer monitor tool.
- Since GOT1000 screen data can be used for GT SoftGOT1000 without modification, no screens need to be created just for the monitoring location.

\*: For more details, see "GT SoftGOT1000" (page 26)

#### ③ Process control parts library **NEW**

Library of process control parts has been added. This allows a process control graphic screen to be created easily.



#### ④ Various GOT1000 functions are available for process and duplex CPU

The various GOT1000 functions usable with process and duplex CPUs support the maintenance work of the process control system.

- Operation log function
- Operator authentication function
- Backup/restoration function, etc.



# Specifications

## GT16

### General specifications

Item	Specification	
Operating ambient temperature*1	0°C to 50°C*5 Other than display: 0°C to 55°C*5	
Storage ambient temperature	-20°C to 60°C	
Operating ambient humidity	10 to 90%RH, no condensation	
Storage ambient humidity	10 to 90%RH, no condensation	
Vibration resistance	Conforming to JIS B 3502 and IEC 61131-2	
	Under intermittent vibration	Frequency: 5 to 8.4Hz Acceleration: 9.8m/s <sup>2</sup> Half amplitude: 3.5mm
	Under continuous vibration	Frequency: 5 to 8.4Hz Acceleration: 4.9m/s <sup>2</sup> Half amplitude: 1.75mm
	Sweep count	10 times each in X, Y and Z directions
	Sweep count	-
Impact resistance	Conforming to JIS B 3502 and IEC 61131-2 (147m/s <sup>2</sup> , 3 times each in X, Y and Z directions)	
Operating atmosphere	No oily smoke, corrosive gas or combustible gas, less conductive dust, away from direct sunlight (the same in storage)	
Operating altitude*2	2000m or less	
Installation location	In control panel*6	
Overvoltage category*3	II or lower	
Contamination level*4	2 or less	
Cooling method	Self-cooling	
Grounding	Type D grounding (100Ω or less). Connect to panel if unable to ground.	

- \*1: The maximum operating ambient temperature should be 5°C lower than that shown in the table on the left when connecting to a multimedia unit (GT16M-MMR), MELSECNET/H communication unit (GT15-J71LP23-25 or GT15-J71BR13) or CC-Link communication unit (GT15-J61BT13).
- \*2: Do not operate or store the GOT unit in pressurized environments where the pressure exceeds 0m elevation atmospheric pressure, as this could result in abnormal operation.
- Do not pressurize inside the control panel for air purge cleaning. The pressure could raise the surface sheet, making the touch panel difficult to operate or causing the sheet to come off.
- \*3: Assuming that the device is connected at some point between a public power distribution network and local system equipment.
- \*4: Category II applies to devices that are supplied with power from fixed equipment. The surge withstand voltage is 2,500V for devices with ratings up to 300V.
- \*5: Index that indicates the level of foreign conductive matter in the operating environment of the device. Contamination level 2 denotes an environment contaminated only by non-conductive matter which may, under certain conditions, become temporarily conductive due to condensation.
- \*6: Excluding GT1665HS
- Do not use or store the GOT under direct sun light or in an environment with excessively high temperature, dust, humidity or vibration.
- For inquiries relating to products which conform to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

### Performance specifications

Item	Specification						
	GT1695M-XTBA GT1695M-XTBD	GT1685M-STBA GT1685M-STBD	GT1675M-STBA GT1675M-STBD	GT1675M-VTBA GT1675M-VTBD	GT1675-VNBA GT1675-VNBD	GT1672-VNBA GT1672-VNBD	GT1665M-STBA GT1665M-STBD
Display*1	Type	TFT color LCD (high-brightness, wide viewing angle)			TFT color LCD		TFT color LCD (high-brightness, wide viewing angle)
	Screen size	15"	12.1"	10.4"		8.4"	
	Resolution	XGA: 1024 x 768 [dots]	SVGA: 800 x 600 [dots]	SVGA: 800 x 600 [dots]		VGA: 640 x 480 [dots]	
	Display size	304.1(W) x 228.1(H)[mm]	246(W) x 184.5(H)[mm]	211(W) x 158(H)[mm]		171(W) x 128(H)[mm]	
	No. of displayed characters	16-dot standard font: 64 chars. x 48 lines (2-byte) 12-dot standard font: 85 chars. x 64 lines (2-byte)	16-dot standard font: 50 chars. x 37 lines (2-byte) 12-dot standard font: 66 chars. x 50 lines (2-byte)	16-dot standard font: 40 chars. x 30 lines (2-byte) 12-dot standard font: 53 chars. x 40 lines (2-byte)		16-dot standard font: 50 chars. x 37 lines (2-byte) 12-dot standard font: 66 chars. x 50 lines (2-byte)	
	Display colors	65,536 colors			4,096 colors	16 colors	65,536 colors
	View angle*2	Right/left: 75°, Up: 50°, Down: 60°	Right/left: 80°, Up: 60°, Down: 80°	Right/left/up/down	Right/left: 70°, Up/down: 65° (Function version D or later) Right/left/up/down: 88° (Function version C or earlier)	Right/left: 45°, Up: 30°, Down: 20°	Right/left: 80°, Up: 80°, Down: 60°
	Intensity	450 [cd/m <sup>2</sup> ]	470 [cd/m <sup>2</sup> ]	400 [cd/m <sup>2</sup> ]	450 [cd/m <sup>2</sup> ]	200 [cd/m <sup>2</sup> ]	400 [cd/m <sup>2</sup> ]
	Intensity adjustment	8-step adjustment			4-step adjustment	8-step adjustment	
	Life	Approx. 52,000 hours (operating ambient temperature: 25°C)		Approx. 43,000 hours (operating ambient temperature: 25°C)		Approx. 43,000 hours (operating ambient temperature: 25°C)	
Backlight	Cold-cathode fluorescent tube (replaceable), with backlight OFF detection function. Backlight off time and screen save time can be set.						
	Approx. 50,000 hours or more (Time for display intensity reaches 50% at operating ambient temperature of 25°C)						
Touch panel*10	Type	Analog resistive type					-
	Key size	Min. 2 x 2 [dots] (per key)					-
	No. of simultaneous touch points	Simultaneous touch prohibited*4 (1 point only)					-
Human sensor	Life*11	1,000,000 times or more (operating force 0.98N or less)					-
	Detection distance	1 [m]					-
	Detection range	Right/left/up/down: 70°					-
	Detection delay time	0 to 4 [sec]					-
Memory*5	C drive	15MB built-in flash memory (for saving project data and OS)		11MB built-in flash memory (for saving project data and OS)		15MB built-in flash memory (for saving project data and OS)	
	Life (No. of writings)	100,000 times					-
Internal clock accuracy	3.47 to 8.38 secs/day (operating ambient temperature: 25°C)*12						
	GT15-BAT type lithium battery						
Battery	Backed up data	Clock data, maintenance time notification data, system log data and SRAM user area (500KB)					-
	Life	Approx. 5 years (operating ambient temperature: 25°C)					-
Built-in interface	RS-232*7	RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male) Application: Communication with connected devices, connection to personal computer (project data read/write, OS installation, FA transparent function)					9600/4800bps Connector shape: Square, 42-pin (male) Application: Communication with connected devices
	RS-422/485	RS-422/485, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: 14-pin (female) Application: Communication with connected devices					115200/57600/38400/19200/9600/4800bps Connector shape: 14-pin (female) Application: Communication with connected devices
	Ethernet	Data transfer system: 100BASE-TX, 10BASE-T, 1ch Connector shape: RJ-45 (modular jack) Application: Communication with connected devices, gateway function, connection to personal computer (project data read/write, OS installation, FA transparent function)					Data transfer system: 100BASE-TX, 10BASE-T, 1ch Connector shape: RJ-45 (modular jack) Application: Communication with connected devices, gateway function, connection to personal computer (project data read/write, OS installation, FA transparent function)
	USB	USB (full-speed 12Mbps), host 1ch Connector shape: TYPE-A Application: USB mouse/keyboard connection, USB memory data transfer and storage FAT16 format: max. 2GB, FAT32 format: max. 32GB*13					USB (full-speed 12Mbps), host 1ch Connector shape: TYPE-A Application: USB mouse/keyboard connection, USB memory data transfer and storage FAT16 format: max. 2GB, FAT32 format: max. 32GB*13
	CF card	Compact flash slot, 1ch Connector shape: TYPE I Application: Data transfer, data storage, GOT startup FAT16 format: max. 2GB, FAT32 format: max. 32GB*13					Compact flash slot, 1ch Connector shape: TYPE I Application: Data transfer, data storage, GOT startup FAT16 format: max. 2GB, FAT32 format: max. 32GB*13
Buzzer output	Protective construction	Front: IP67*9 In panel: IP2X					IP65*9 (when external connection cable is connected)
	External dimensions	397(W) x 296(H) x 61(D)[mm]	316(W) x 242(H) x 52(D)[mm]	303(W) x 214(H) x 49(D)[mm]		241(W) x 190(H) x 52(D)[mm]	
Panel cut dimensions	383.5(W) x 282.5(H)[mm]		302(W) x 228(H)[mm]		289(W) x 200(H)[mm]		
	Weight (excl. mounting brackets)		2.7[kg]		2.1[kg]		
Applicable software packages	GT Works3 Version1.31H or later			GT Works3 Version1.31H or later (not supported by GT Works2/GT Designer 2)		GT Works3 Version1.31H or later	

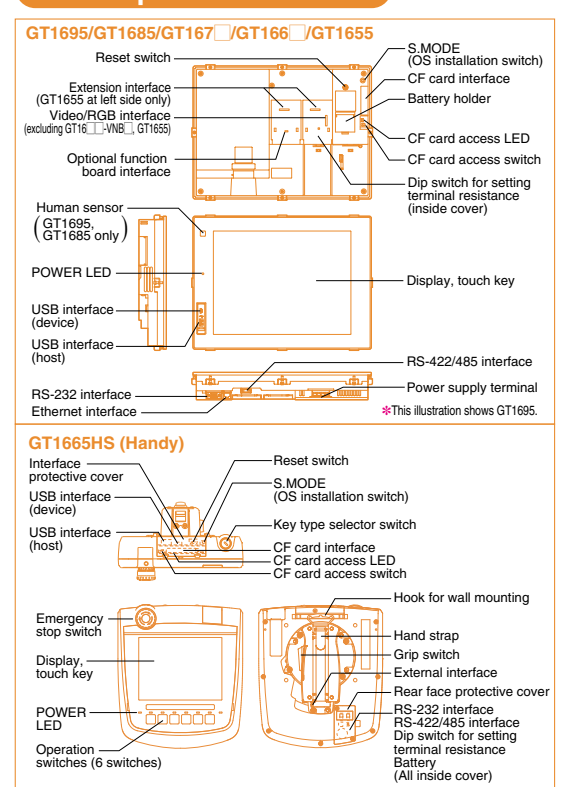
### Power supply specifications

Item	Specification							
	GT1695M-XTBA	GT1685M-STBA	GT1675M-STBA GT1675-VNBA GT1672-VNBA GT1665M-STBA GT1665M-VTBA GT1662-VNBA	GT1695M-XTBD	GT1685M-STBD	GT1675M-VTBA GT1675-VNBD GT1672-VNBD GT1665M-VTBD GT1662-VNBD	GT1655-VTBD	GT1665HS-VTBD
Input power supply voltage	100 to 240VAC (+10%, -15%)			24VDC (+25%, -20%)			24VDC (+10%, -15%)	
Input frequency	50/60Hz ±5%			-				
Input maximum apparent power	150VA (at max. load)	110VA (at max. load)	100VA (at max. load)	-				
Power consumption	64W or less	46W or less	39W or less	60W or less	40W or less	38W or less	16W or less	11.6W or less
	38W or less	32W or less	30W or less	30W or less	26W or less	27W or less	14W or less	8.2W or less
Inrush current	28A or less (4ms, at max. load)			12A or less (75ms, at max. load)	12A or less (55ms, at max. load)		67A or less (1ms, at max. load)	30A or less (2ms, at max. load)
Permissible instantaneous failure time	Within 20ms (100VAC or more)			Within 10ms			Within 5ms	
Noise resistance	Noise voltage 1500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz			Noise voltage 500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz				
Withstand voltage	1500VAC for 1 minute between power supply terminal and ground			500VDC for 1 minute between power supply terminal and ground				
Insulation resistance	10MΩ or higher with an insulation resistance tester (500VDC between power supply terminal and ground)			-				
Applicable wire size	0.75 to 2 [mm <sup>2</sup> ]			-				
Clamp terminal	Clamp terminals for M3 screw RAV1.25-3, V2-S3.3, V2-N3A, FV2-N3A							
Tightening torque (terminal block's terminal screws)	0.5 to 0.8 [N·m]							

### Performance specifications

Item	Specification			
	GT1665M-VTBA GT1665M-VTBD	GT1662-VNBA GT1662-VNBD	GT1655-VTBD	GT1665HS-VTBD
Display*1	Type	TFT color LCD (high-brightness, wide viewing angle)	TFT color LCD	TFT color LCD (high-brightness, wide viewing angle)
	Screen size	8.4"	5.7"	6.5"
	Resolution	VGA: 640 x 480 [dots]		
	Display size	171(W) x 128(H)[mm]	115(W) x 86(H)[mm]	132.5(W) x 99.4(H)[mm]
	No. of displayed characters	16-dot standard font: 40 chars. x 30 lines (2-byte) 12-dot standard font: 53 chars. x 40 lines (2-byte)		
	Display colors	65,536 colors	16 colors	65,536 colors
	View angle*2	Right/left: 80°, Up: 80°, Down: 60°	Right/left: 45°, Up/Down: 20°	Up/down/right/left: 80°
	Intensity	600 [cd/m <sup>2</sup> ]	200 [cd/m <sup>2</sup> ]	350 [cd/m <sup>2</sup> ]
	Intensity adjustment	8-step adjustment	4-step adjustment	8-step adjustment
	Life	Approx. 43,000 hours (operating ambient temperature: 25°C)	Approx. 52,000 hours (operating ambient temperature: 25°C)	Approx. 50,000 hours (operating ambient temperature: 25°C)
Approx. 41,000 hours (operating ambient temperature: 25°C)		Approx. 40,000 hours or more	Approx. 70,000 hours or more	
Backlight	Cold-cathode fluorescent tube (replaceable), with backlight OFF detection function. Backlight off time and screen save time can be set.			
	Approx. 50,000 hours or more (Time for display intensity reaches 50% at operating ambient temperature of 25°C)			
Touch panel*10	Type	Analog resistive type		
	Key size	Min. 2 x 2 [dots] (per key)		
	No. of simultaneous touch points	Simultaneous touch prohibited*4 (1 point only)		
Human sensor	Life*11	1,000,000 times or more (operating force 0.98N or less)		
	Detection distance	-		
	Detection range	-		
	Detection delay time	-		
Memory*5	C drive	15MB built-in flash memory (for saving project data and OS)	11MB built-in flash memory (for saving project data and OS)	15MB built-in flash memory (for saving project data and OS)
	Life (No. of writings)	100,000 times		
Internal clock accuracy	3.47 to 8.38 secs/day (operating ambient temperature: 25°C)*12			
	GT15-BAT type lithium battery			
Battery	Backed up data	Clock data, maintenance time notification data, system log data and SRAM user area (500KB)		
	Life	Approx. 5 years (operating ambient temperature: 25°C)		
Built-in interface	RS-232*7	RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male) Application: Communication with connected devices, connection to personal computer (project data read/write, OS installation, FA transparent function)		
	RS-422/485	RS-422/485, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: 14-pin (female) Application: Communication with connected devices		
	Ethernet	Data transfer system: 100BASE-TX, 10BASE-T, 1ch Connector shape: RJ-45 (modular jack) Application: Communication with connected devices, gateway function, connection to personal computer (project data read/write, OS installation, FA transparent function)		
	USB	USB (full-speed 12Mbps), host 1ch Connector shape: TYPE-A Application: USB mouse/keyboard connection, USB memory data transfer and storage FAT16 format: max. 2GB, FAT32 format: max. 32GB*13		
	CF card	Compact flash slot, 1ch Connector shape: TYPE I Application: Data transfer, data storage, GOT startup FAT16 format: max. 2GB, FAT32 format: max. 32GB*13		
Buzzer output	Protective construction	Front: IP67*9 In panel: IP2X		
	External dimensions	241(W) x 190(H) x 52(D)[mm]	267(W) x 135(H) x 60(D)[mm]	201(W) x 230(H) x 97(D)[mm]
Panel cut dimensions	227(W) x 176(H)[mm]		153(W) x 121(H)[mm]	
	Weight (excl. mounting brackets)		1.0[kg]	
Applicable software packages	GT Works3 Version1.31H or later		GT Works3 Version1.31H or later (not supported by GT Works2/GT Designer 2)	

### Component names



- \*1: On LCD screens, bright dots (permanently lit) and black dots (not to be lit) generally appear. Because the large number of display elements exist on an LCD screen, it is not possible to reduce appearance of the bright and black dots to zero. Note that the existence of bright and black dots is a standard characteristic of LCD screens, and it does not mean that the products are defective or damaged.
- \*2: LCD panels have characteristics of tone reversal. Note that even within the indicated viewing angles, the screen display may not be clear enough depending on the display color.
- \*3: Using the GOT screen save/backlight OFF functions prevents screen burn-in and extends backlight life.
- \*4: An analog resistive touch display is used. When 2 points on the screen are touched simultaneously, if a switch is located the middle of the 2 points then the switch will be activated. Therefore, avoid touching 2 points on the screen simultaneously.
- \*5: The memory is ROM and permits overwriting of new data without having to delete the existing data.
- \*6: With the USB environmentally protective cover is on, pressing firmly the portion marked "△" makes it conform to IP67. (The USB interface conforms to IP2X when a USB cable or a USB memory is connected.) However, this does not guarantee protection in all users' environments. The unit may not be used in an environment where it is exposed to splashing oil or chemicals for a long time or it is soaked with oil mist.
- \*7: Where more than one extension unit, barcode reader, and RFID controller are used, the sum of their current consumptions should be within the current level which the GOT can supply. For the current levels which the extension units, barcode reader, and RFID controller consume and the current level which the GOT can supply, see "Notes for use" (page 81).
- \*8: The function version A of GT1695/GT1685 is not compatible with 10BASE-T.
- \*9: The degree of protection is not guaranteed under all users' environmental conditions. If the interface protective cover or the rear face protective cover is removed, the specification does not apply. If necessary, use a stylus pen meeting the following specifications. (Excluding GT1665HS)
- \*10: Material: Polyacetal resin • Pen point radius: 0.8mm or more
- \*11: When using a stylus pen, it will be 100,000 times or more (operating force 0.98N max.). Since the touch panel is a consumable product structurally, it may not be used even fewer than above, depending on the usage method and environment.
- \*12: If the operating ambient temperature is other than 25°C, operation errors may increase.
- \*13: USB memory and CF cards that can store more than 2GB are available for the GT16 with the following versions of OSs installed.
- Boot OS version: 05.09.00AF or later
  - Standard monitor OS version: 05.09.00 or later
- With OSs earlier than the above versions, the GOT cannot correctly recognize the USB memory and the CF card that store more than 2GB. If the above versions of OSs are not installed, install the OSs on the GOT by using GT Designer3 with version 1.17T or later. GT Designer2 version 1.0 is not compatible with USB memory and CF cards that can store more than 2GB.

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# Specifications

## GT15

### General specifications

Item	Specification				
Operating ambient temperature*1	0°C to 50°C				
Storage ambient temperature	0°C to 55°C				
Operating ambient humidity*2	-20°C to 60°C				
Storage ambient humidity*2	10 to 90%RH, no condensation				
Vibration resistance*3	Conforming to JIS B 3502 and IEC 61131-2				
	Under intermittent vibration	5 to 8.4Hz	3.5mm	10 times each in X, Y and Z directions	
	Under continuous vibration	8.4 to 150Hz	9.8m/s <sup>2</sup>	—	—
		5 to 8.4Hz	—	1.75mm	—
		8.4 to 150Hz	4.9m/s <sup>2</sup>	—	—
Impact resistance	Conforming to JIS B 3502 and IEC 61131-2 (147m/s <sup>2</sup> , 3 times each in X, Y and Z directions)				
Operating atmosphere	No oily smoke, corrosive gas or combustible gas, less conductive dust, away from direct sunlight (the same in storage)				
Operating altitude*4	2000m or less				
Installation location	In control panel				
Overvoltage category*5	II or lower				
Contamination level*6	2 or less				
Cooling method	Self-cooling				
Grounding	Type D grounding (100Ω or less). Connect to panel if unable to ground.				

- \*1: The maximum operating ambient temperature should be 5°C lower than that shown in the table on the left when connecting to a MELSECNET/H communication unit (GT15-J71LP23-25 or GT15-J71BR13) or CC-Link communication unit (GT15-J61BT13).
- \*2: Water bulb temperature for STN display type must be 39°C or lower. Refer to the Communication Unit User's Manual for vibration resistance specifications when using the MELSECNET/H communication unit (GT15-J71LP23-25 or GT15-J71BR13-Z) or CC-Link communication unit (GT15-J61BT13-Z). (The specifications of communication units are different from those of the GOT main unit.)
- \*3: Do not operate or store the GOT unit in pressurized environments where the pressure exceeds 1m elevation atmospheric pressure, as this could result in abnormal operation. Do not pressurize inside the control panel for air purge cleaning. The pressure could raise the surface sheet, making the touch panel difficult to operate or causing the sheet to come off.
- \*4: Assuming that the device is connected at some point between a public power distribution network and local system equipment. Category II applies to devices that are supplied with power from fixed equipment. The surge withstand voltage is 2,500V for devices with ratings up to 300V. Index that indicates the level of foreign conductive matter in the operating environment of the device. Contamination level 2 denotes an environment contaminated only by non-conductive matter which may, under certain conditions, become temporarily conductive due to condensation.
- \*5: Do not use or store the GOT under direct sun light or in an environment with excessively high temperature, dust, humidity or vibration.
- \*6: For inquiries relating to products which conform to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

Do not use or store the GOT under direct sun light or in an environment with excessively high temperature, dust, humidity or vibration.

For inquiries relating to products which conform to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

### Performance specifications

Item	Specification								
	GT1595-XTBA GT1595-XTBD	GT1585V-STBA GT1585V-STBD	GT1575V-STBA GT1575V-STBD	GT1575-VTBA GT1575-VTBD	GT1575-VNBA GT1575-VNBD	GT1572-VNBA GT1572-VNBD	GT1565-VTBA GT1565-VTBD	GT1562-VNBA GT1562-VNBD	
Display	Type	TFT color LCD (high-brightness, wide viewing angle)			TFT color LCD		TFT color LCD (high-brightness, wide viewing angle)	TFT color LCD	
	Screen size	15"	12.1"	10.4"		8.4"			
	Resolution	XGA: 1024 × 768 [dots]	SVGA: 800 × 600 [dots]	VGA: 640 × 480 [dots]		VGA: 640 × 480 [dots]			
	Display size	304.1(W) × 228.1(H) [mm]	246(W) × 184.5(H) [mm]	211(W) × 158(H) [mm]		171(W) × 128(H) [mm]			
	No. of displayed characters	16-dot standard font: 64 chars. × 48 lines (2-byte) 12-dot standard font: 85 chars. × 64 lines (2-byte)	16-dot standard font: 50 chars. × 37 lines (2-byte) 12-dot standard font: 66 chars. × 50 lines (2-byte)	16-dot standard font: 40 chars. × 30 lines (2-byte) 12-dot standard font: 53 chars. × 40 lines (2-byte)		16-dot standard font: 40 chars. × 30 lines (2-byte) 12-dot standard font: 53 chars. × 40 lines (2-byte)			
	Display colors	65,536 colors		256 colors	16 colors	65,536 colors	16 colors		
	View angle*3	Right/left: 75°, Up: 50°, Down: 60°	GT1585V: Right/left: 60°, Up: 40°, Down: 50° GT1585: Right/left: 65°, Up: 45°, Down: 55°	Right/left/up/down: 85°	Right/left: 45°, Up: 30°, Down: 20°	Right/left: 65°, Up: 20°, Down: 60°	Right/left: 45°, Up: 20°, Down: 40°	Right/left: 45°, Up: 20°, Down: 20°	
	Contrast adjustment	—							16-step adjustment
	Intensity	450 [cd/m <sup>2</sup> ]	GT1585V: 350 [cd/m <sup>2</sup> ] GT1585: 400 [cd/m <sup>2</sup> ]	400 [cd/m <sup>2</sup> ]	380 [cd/m <sup>2</sup> ]	200 [cd/m <sup>2</sup> ]	380 [cd/m <sup>2</sup> ]	150 [cd/m <sup>2</sup> ]	
	Intensity adjustment	8-step adjustment			4-step adjustment	8-step adjustment	4-step adjustment		
Life	Approx. 52,000 hours (operating ambient temperature: 25°C)		Approx. 50,000 hours (operating ambient temperature: 25°C)		Approx. 41,000 hours (operating ambient temperature: 25°C)				
	Cold-cathode fluorescent tube (replaceable), with backlight OFF detection function. Backlight off time and screen save time can be set.								
Backlight	Approx. 50,000 hours or more								
	Approx. 40,000 hours or more (Time for display intensity reaches 50% at operating ambient temperature of 25°C)								
Touch panel	Type	Analog resistive type		Matrix resistive type					
	No. of touch keys	—	1900 keys/screen (38 lines × 50 columns)	1200 keys/screen (30 lines × 40 columns)					
	Key size	Min. 2 × 2 [dots] (per key)	Min. 16 × 16 [dots] (per key) (16 × 8 only on lowermost line)	Min. 16 × 16 [dots] (per key)					
	No. of simultaneous touch points	Simultaneous touch prohibited*5 (1 point only)	Max. 2 points						
Human sensor	Life	1,000,000 times or more (operating force 0.98N or less)*10							
	Detection distance	1 [m]		—					
	Detection range	Right/left/up/down: 70°		—					
	Detection delay time	0 to 4 [sec]		—					
Memory	Detection temperature	Temperature difference to be 4°C or more between human body and ambient air							
	C drive	9MB built-in flash memory (for saving project data and OS)		5MB built-in flash memory (for saving project data and OS)		9MB built-in flash memory (for saving project data and OS)	5MB built-in flash memory (for saving project data and OS)		
Battery	Life (No. of writings)	100,000 times							
	Backed up data	GT15-BAT type lithium battery (optional) Clock data and maintenance time notification data							
Built-in interface	Life	Approx. 5 years (operating ambient temperature: 25°C)							
	RS-232*8	RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male) Application: Communication with connected devices, connection to personal computer (project data read/write, OS installation, FA transparent function)							
	USB	USB (full-speed 12Mbps), device 1ch Connector shape: Mini-B Application: Connection to personal computer (project data read/write, OS installation, FA transparent function)							
	CF card	Compact flash slot, 1ch Connector shape: TYPE I Application: Data transfer, data storage, GOT startup FAT16 format: max. 2GB, FAT32 format: not usable							
Buzzer output	Optional function board	1ch for optional function board installation							
	Extension unit*9	2ch for communication unit/optional unit installation							
Protective construction	Front: IP67*7 In panel: IP2X	Single tone (tone length adjustable)							
	External dimensions (without USB port cover)	397(W) × 296(H) × 61(D) [mm]	316(W) × 242(H) × 52(D) [mm]	303(W) × 214(H) × 49(D) [mm]		241(W) × 190(H) × 52(D) [mm]			
Panel cut dimensions	383.5(W) × 282.5(H) [mm]	302(W) × 228(H) [mm]	289(W) × 200(H) [mm]		227(W) × 176(H) [mm]				
Weight (excl. mounting brackets)	5.0 [kg]	2.8 [kg]	GT1575V: 2.3 [kg] GT1575: 2.4 [kg]	2.4 [kg]	2.3 [kg]	1.9 [kg]			
Applicable software package	GT Works3 Version1.31H or later								

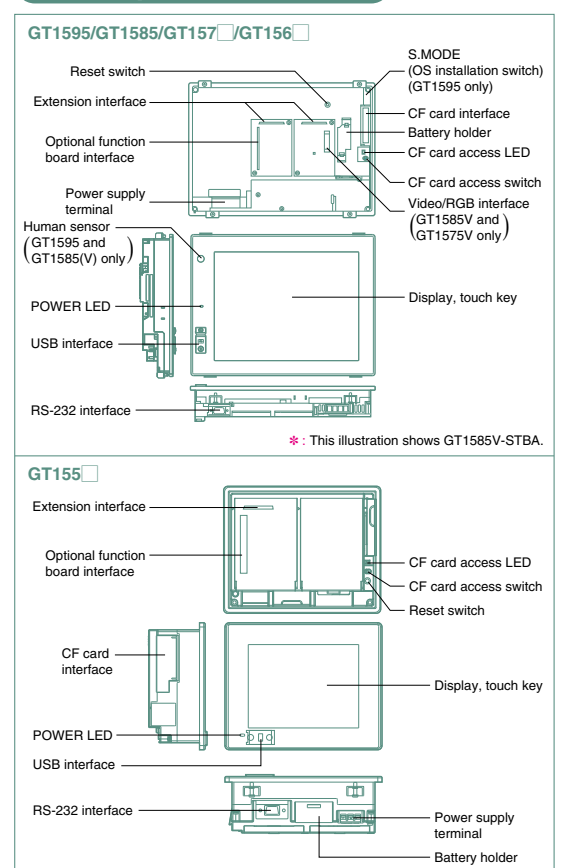
### Power supply specifications

Item	Specification										
	GT1595-XTBA	GT1585V-STBA GT1585V-STBD	GT1575V-STBA GT1575V-STBD GT1575-VNBA GT1572-VNBA GT1565-VTBA GT1562-VNBA	GT1595-XTBD	GT1585V-STBD GT1585V-STBD	GT1575V-STBD GT1575-VTBD GT1575-VNBD GT1572-VNBD GT1565-VTBD GT1562-VNBD	GT1555-VTBD	GT1555-VTBD	GT1555-QTBD	GT1555-QSBD	GT1550-QLBD
Input power supply voltage	100 to 240VAC (+10%, -15%)					24VDC (+25%, -20%)					
Input frequency	50/60Hz ±5%					—					
Input maximum apparent power	110VA (at max. load)					—					
Power consumption	56W or less	41W or less	39W or less	57W or less (2380mA/24VDC)	43W or less (1790mA/24VDC)	41W or less (1710mA/24VDC)	19W or less (790mA/24VDC)	18W or less (750mA/24VDC)	17W or less (710mA/24VDC)	15W or less (620mA/24VDC)	
	With backlight off	30W or less	28W or less	28W or less	32W or less (1330mA/24VDC)	30W or less (1250mA/24VDC)	30W or less (1250mA/24VDC)	14W or less (580mA/24VDC)	13W or less (540mA/24VDC)	—	
Inrush current	50A or less (4ms, at max. load)	45A or less (4ms, at max. load)	40A or less (4ms, at max. load)	100A or less (4ms, at max. load)	115A or less (1ms, at max. load)	115A or less (1ms, at max. load)	67A or less (1ms, at max. load)	60A or less (1ms, at max. load)	60A or less (1ms, at max. load)	60A or less (1ms, at max. load)	
Permissible instantaneous failure time	Within 20ms (100VAC or more)					Within 10ms					
Noise resistance	Noise voltage 1500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz					Noise voltage 500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz					
Withstand voltage	1500VAC for 1 minute between power supply terminal and ground					500VDC for 1 minute between power supply terminal and ground					
Insulation resistance	10MΩ or higher with an insulation resistance tester (500VDC between power supply terminal and ground)										
Applicable wire size	0.75 to 2 [mm <sup>2</sup> ]										
Clamp terminal	Clamp terminals for M3 screw RAV1.25-3, V2-S3.3, V2-N3A, FV2-N3A										
Tightening torque (terminal block's terminal screws)	0.5 to 0.8 [N·m]										

### Performance specifications

Item	Specification				
	GT1555-VTBD	GT1555-VTBD	GT1555-QSBD	GT1550-QLBD	
Display	Type	TFT color LCD (high-brightness, wide viewing angle)	STN color LCD	STN monochrome (black/white) LCD	
	Screen size	5.7"			
	Resolution	VGA: 640 × 480 [dots]	QVGA: 320 × 240 [dots]		
	Display size	115(W) × 66(H) [mm]			
	No. of displayed characters	16-dot standard font: 40 chars. × 30 lines (2-byte) 12-dot standard font: 53 chars. × 40 lines (2-byte)	16-dot standard font: 20 chars. × 15 lines (2-byte) 12-dot standard font: 26 chars. × 20 lines (2-byte)		
	Display colors	65,536 colors	4,096 colors	Monochrome 16 gray scale	
	View angle*3	Right/left: 80°, Up: 80°, Down: 70°	Right/left: 70°, Up: 70°, Down: 50°	Right/left: 55°, Up: 65°, Down: 70°	Right/left: 45°, Up: 20°, Down: 40°
	Contrast adjustment	—			16-step adjustment
	Intensity	350 [cd/m <sup>2</sup> ]	400 [cd/m <sup>2</sup> ]	380 [cd/m <sup>2</sup> ]	220 [cd/m <sup>2</sup> ]
	Intensity adjustment	8-step adjustment			
Life	Approx. 50,000 hours (operating ambient temperature: 25°C)				
Backlight	Cold-cathode fluorescent tube (not replaceable), with backlight OFF detection function. Backlight off time and screen save time can be set.				
	Life*4	Approx. 75,000 hours or more (Time for display intensity reaches 50% at operating ambient temperature of 25°C)			Approx. 58,000 hours or more
Touch panel	Type	Matrix resistive type			
	No. of touch keys	1200 keys/screen (30 lines × 40 columns)	300 keys/screen (15 lines × 20 columns)		
	Key size	Min. 16 × 16 [dots] (per key)			
	No. of simultaneous touch points	Max. 2 points			
Human sensor	Life	1,000,000 times or more (operating force 0.98N or less)			
	Detection distance	—			
	Detection range	—			
	Detection delay time	—			
Memory	Detection temperature	—			
	C drive	9MB built-in flash memory (for saving project data and OS)			
Battery	Life (No. of writings)	100,000 times			
	Backed up data	GT15-BAT type lithium battery (optional) Clock data and maintenance time notification data			
Built-in interface	Life	Approx. 5 years (operating ambient temperature: 25°C)			
	RS-232*8	RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male) Application: Communication with connected devices, connection to personal computer (project data read/write, OS installation, FA transparent function)			
	USB	USB (full-speed 12Mbps), device 1ch Connector shape: Mini-B Application: Connection to personal computer (project data read/write, OS installation, FA transparent function)			
	CF card	Compact flash slot, 1ch Connector shape: TYPE I Application: Data transfer, data storage, GOT startup FAT16 format: max. 2GB, FAT32 format: not usable			
Buzzer output	Optional function board	1ch for optional function board installation			
	Extension unit*9	1ch for communication unit/optional unit installation			
Protective construction	Front: IP67*7 In panel: IP2X	Single tone (tone length adjustable)			
	External dimensions (without USB port cover)	167(W) × 135(H) × 60(D) [mm]			
Panel cut dimensions	153(W) × 121(H) [mm]				
Weight (excl. mounting brackets)	1.1 [kg]				
Applicable software package	GT Works3 Version1.31H or later				

### Component names



- \*1: On LCD screens, bright dots (permanently lit) and black dots (not to be lit) generally appear. Because the large number of display elements exist on an LCD screen, it is not possible to reduce appearance of the bright and black dots to zero. Note that the existence of bright and black dots is a standard characteristic of LCD screens, and it does not mean that the products are defective or damaged.
- \*2: Flickering may occur depending on the display colors.
- \*3: LC panels have characteristics of tone reversal. Note that even within the indicated view angles, the screen display may not be clear enough depending on the display color.
- \*4: Using the GOT screen save/backlight OFF functions prevents screen burn-in and extends the backlight life.
- \*5: An analog resistive touch display is used. When 2 points on the screen are touched simultaneously, if a switch is located the middle of the 2 points then the switch will be activated. Therefore, avoid touching 2 points on the screen simultaneously.
- \*6: The memory is ROM that permits overwriting of new data without having to delete the existing data.
- \*7: IP67 is supported when the USB environmentally protective cover is on. (The USB interface conforms to IP2X when a USB cable is connected.) However, this does not guarantee protection in all users' environments. The unit may not be used in an environment where it is exposed to splashing oil or chemicals for a long time or it is soaked with oil mist.
- \*8: Where more than one extension unit, barcode reader, and RFID controller are used, the sum of their current consumptions should be within the current level which the GOT can supply. For the currents which the extension units, barcode reader, and RFID controller consume and the current level which the GOT can supply, see "Notes for use" (page 81).
- \*9: If necessary, use a stylus pen meeting the following specifications.
  - Material: Polyacetal resin
  - Pen point radius: 0.8mm or more
- \*10: When using a stylus pen with GT1595-VTBD, it will be 100,000 times or more (operating force 0.98N max.). Since the touch panel is a consumable product structurally, it may not be used even fewer than above, depending on the usage method and environment.

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# Specifications

## GT12

### General specifications

Item	Specification	
Operating ambient temperature	Display: 0°C to 50°C Other than display: 0°C to 55°C	
Storage ambient temperature	-20°C to 60°C	
Operating ambient humidity	10 to 90%RH, no condensation	
Storage ambient humidity	10 to 90%RH, no condensation	
Vibration resistance	Conforming to JIS B 3502 and IEC 61131-2	
	Under intermittent vibration	Frequency: 5 to 8.4Hz, Acceleration: 9.8m/s <sup>2</sup> , Half amplitude: 3.5mm, Sweep count: 10 times each in X, Y and Z directions
	Under continuous vibration	Frequency: 5 to 8.4Hz, Acceleration: 9.8m/s <sup>2</sup> , Half amplitude: 1.75mm, Sweep count: -
	Under intermittent vibration	Frequency: 8.4 to 150Hz, Acceleration: 9.8m/s <sup>2</sup> , Half amplitude: 3.5mm, Sweep count: 10 times each in X, Y and Z directions
	Under continuous vibration	Frequency: 8.4 to 150Hz, Acceleration: 4.9m/s <sup>2</sup> , Half amplitude: 1.75mm, Sweep count: -
Impact resistance	Conforming to JIS B 3502 and IEC 61131-2 (147m/s <sup>2</sup> , 3 times each in X, Y and Z directions)	
Operating atmosphere	No oily smoke, corrosive gas or combustible gas, less conductive dust, away from direct sunlight (the same in storage)	
Operating altitude <sup>*1</sup>	2,000m or lower	
Installation location	In control panel	
Overvoltage category <sup>*2</sup>	II or lower	
Contamination level <sup>*3</sup>	2 or less	
Cooling method	Self-cooling	
Grounding	Type D grounding (100Ω or less). Connect to panel if unable to ground.	

- \*1: Do not operate or store the GOT unit in pressurized environments where the pressure exceeds 0 m elevation atmospheric pressure, as this could result in abnormal operation. Do not pressurize inside the control panel for air purge cleaning. The pressure could raise the surface sheet, making the touch panel difficult to operate or causing the sheet to come off.
- \*2: Assuming that the device is connected at some point between a public power distribution network and local system equipment. Category II applies to devices that are supplied with power from fixed equipment. The surge withstand voltage is 2,500V for devices with ratings up to 300V.
- \*3: Index that indicates the level of foreign conductive matter in the operating environment of the device. Contamination level 2 denotes an environment contaminated only by non-conductive matter which may, under certain conditions, become temporarily conductive due to condensation.

Do not use or store the GOT under direct sun light or in an environment with excessively high temperature, dust, humidity or vibration.

For inquiries relating to products which conform to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

### Performance specifications

Item	Specification	
	GT1275-VNBA GT1275-VNBD	GT1265-VNBA GT1265-VNBD
Display <sup>*1</sup>	Type	TFT color LCD
	Screen size	10.4"
	Resolution	VGA: 640 × 480 [dots]
	Display size	211.2(W) × 158.4(H) [mm]
	No. of displayed characters	16-dot standard font: 40 chars. × 30 lines (2-byte) 12-dot standard font: 53 chars. × 40 lines (2-byte)
	Display colors	256 colors
	View angle <sup>*2</sup>	Right/left: 45°, Up/down: 20°
	Intensity	200 [cd/m <sup>2</sup> ]
	Intensity adjustment	4-step adjustment
	Life	Approx. 52,000 hours (operating ambient temperature: 25°C)
Backlight	Cold-cathode fluorescent tube (replaceable), 1CCFL light	
	Life <sup>*3</sup>	50,000 hours or more (at standard lamp current = 6.0 [mA]) (Time for display intensity reaches 50% at operating ambient temperature of 25°C)
Touch panel <sup>*7</sup>	Type	Analog resistive type
	Key size	Min. 2 × 2 [dots] (per key)
	No. of simultaneous touch points	Simultaneous touch prohibited <sup>*4</sup> (1 point only)
	Life <sup>*8</sup>	1,000,000 times or more (operating force 0.98N or less)
Human sensor	Detection distance	-
	Detection range	-
	Detection delay time	-
	Detection temperature	-
Memory <sup>*5</sup>	C drive	6MB built-in flash memory (for saving project data and OS)
	Life (No. of writings)	100,000 times
Battery	Backed up data	GT11-50BAT type lithium battery (optional) Clock data, alarm history, and recipe data
	Life	Approx. 5 years (operating ambient temperature: 25°C)
Built-in interface	RS-232 <sup>*6</sup>	RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (male) Application: Communication with connected devices, connection to personal computer (project data read/write, OS installation, FA transparent function)
	RS-422/485	RS-422/485, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (female) Application: Communication with connected devices
	Ethernet	Data transfer system: 100BASE-TX, 1ch Connector shape: RJ-45 (modular jack) Application: Communication with connected devices, connection to personal computer (project data read/write, OS installation, FA transparent)
	USB	USB (Full Speed 12 Mbps), device 1ch Connector shape: Mini-B Application: Connection to personal computer (project data read/write, OS installation, FA transparent function)
	CF card	Compact flash slot, 1ch Connector shape: TYPE I Application: Data transfer, data storage, GOT startup FAT16 format: max. 2GB, FAT32 format: not usable
	Optional function board	-
	Extension unit <sup>*6</sup>	-
Buzzer output	Single tone (tone length adjustable)	
Protective construction	IP67	
External dimensions	303(W) × 214(H) × 53(D)	241(W) × 190(H) × 58(D)
	Panel cut dimensions	289(W) × 200(H) [mm]
Weight (excl. mounting brackets)	2.3 [kg]	1.7 [kg]
Applicable software package	GT Works3 Version1.31H or later	

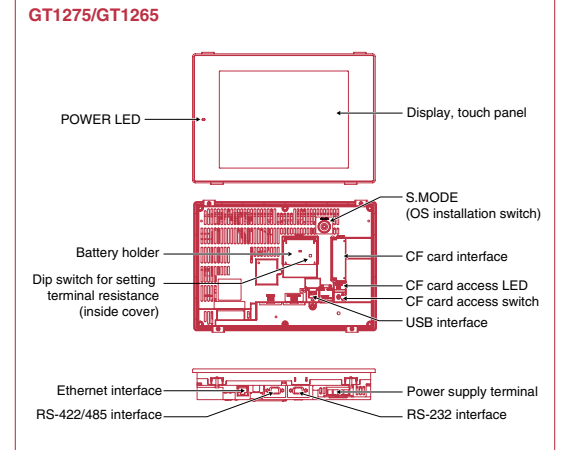
- \*1: On LCD screens, bright dots (permanently lit) and black dots (not to be lit) generally appear. Because the large number of display elements exist on an LCD screen, it is not possible to reduce appearance of the bright and black dots to zero. Note that the existence of bright and black dots is a standard characteristic of LCD screens, and it does not mean that the products are defective or damaged.
- \*2: LCD panels have characteristics of tone reversal. Note that even within the indicated view angles, the screen display may not be clear enough depending on the display color.
- \*3: Using the GOT screen save/backlight OFF functions prevents screen burn-in and extends the backlight life.
- \*4: An analog resistive touch display is used. When 2 points on the screen are touched simultaneously, if a switch is located the middle of the 2 points then the switch will be activated. Therefore, avoid touching 2 points on the screen simultaneously.
- \*5: The memory is a ROM that permits overwriting of new data without having to delete the existing data.
- \*6: Where more than one extension unit, barcode reader, and RFID controller are used, the sum of their current consumptions should be within the current level which the GOT can supply. For the currents which the extension units, barcode reader, and RFID controller consume and the current level which the GOT can supply, see "Notes for use" (page 81).
- \*7: If necessary, use a stylus pen meeting the following specifications.  
• Material: Polyacetal resin • Pen point radius: 0.8mm or more
- \*8: When using a stylus pen, it will be 100,000 times or more (operating force 0.98N max.). Since the touch panel is a consumable product structurally, it may not be used even fewer than above, depending on the usage method and environment.

### Power supply specifications

Item	Specification	
	GT1265/75-VNBA	GT1265/75-VNBD
Input power supply voltage	100 to 240VAC (+10%, -15%)	24VDC (+25%, -20%)
Input frequency	50/60Hz ±5%	-
Input maximum apparent power	44VA (at max. load)	-
Power consumption	18W or less	11W or less
	With backlight off	15W or less
Inrush current	40A or less (4ms, at max. load)	29A or less (2ms, at max. load)
Permissible instantaneous failure time	Within 20ms (100VAC or more)	Within 10ms
Noise resistance	Noise voltage 1500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz	Noise voltage 500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz
Withstand voltage <sup>*1</sup>	1500VAC for 1 minute between power supply terminal and ground	500VDC for 1 minute between power supply terminal and ground
Insulation resistance <sup>*1</sup>	10MΩ or higher with an insulation resistance tester (500VDC between power supply terminal and ground)	-
Applicable wire size	0.75 to 2 [mm <sup>2</sup> ]	
Clamp terminal	Clamp terminals for M3 screw RAV1.25-3, V2-S3.3, V2-N3A, FV2-N3A	
Tightening torque (terminal block's terminal screws)	0.5 to 0.8 [N·m]	

- \*1: In DC type products, the surge absorber is connected between the power supply and the ground to avoid a malfunction due to noise caused by the application of lightning surge. The values of the dielectric withstand voltage and insulation resistance are recorded when the surge absorber is not connected.

### Component names



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For Designers

For Initial Startup & Operations

For Maintenance Personnel

GT10

IQ Platform

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Specifications, External Dimensions

List of Connectable Models, etc.

# Specifications

## GT11 GT10

### General specifications

Item	Specification	
Operating ambient temperature	0°C to 50°C*5	
Other than display	0°C to 55°C (horizontal installation), 0°C to 50°C (vertical installation)*5	
Storage ambient temperature	-20°C to 60°C	
Operating ambient humidity*1	10 to 90%RH, no condensation	
Storage ambient humidity*1	10 to 90%RH, no condensation	
Vibration resistance	Conforming to JIS B 3502 and IEC 61131-2	
	Under intermittent vibration	Frequency: 5 to 8.4Hz, Acceleration: 3.5mm, Sweep count: 10 times each in X, Y and Z directions
	Under continuous vibration	Frequency: 8.4 to 150Hz, Acceleration: 9.8m/s <sup>2</sup> , Half amplitude: 1.75mm
		Frequency: 5 to 8.4Hz, Acceleration: 4.9m/s <sup>2</sup> , Sweep count: -
Impact resistance	Conforming to JIS B 3502 and IEC 61131-2 (147m/s <sup>2</sup> , 3 times each in X, Y and Z directions)	
Operating atmosphere	Free from oil mist, corrosive gases, flammable gases and excessive conductive dusts or direct sun beams (The same applies to unit storage.)	
Operating altitude*2	2000m or less	
Installation location	In control panel*6	
Overvoltage category*3	II or lower	
Contamination level*4	2 or less	
Cooling method	Self-cooling	
Grounding	Type D grounding (100Ω or less). Connect to panel if unable to ground.*7	

- \*1: Water bulb temperature for STN display type must be 39°C or lower.
  - \*2: Do not operate or store the GOT unit in pressurized environments where the pressure exceeds 0m elevation atmospheric pressure, as this could result in abnormal operation.
  - \*3: Assuming that the device is connected at some point between a public power distribution network and local system equipment. Category II applies to devices that are supplied with power from fixed equipment. The surge withstand voltage is 2500V for devices with ratings up to 300V.
  - \*4: Index that indicates the level of foreign conductive matter in the operating environment of the device. Contamination level 2 denotes contamination by non-conductive matter only, though momentary conductivity may occur due to occasional condensation.
  - \*5: 0 to 40°C for GT115□HS
  - \*6: Excluding GT115□HS
  - \*7: The 5VDC type requires no grounding.
- Do not use or store the GOT under direct sun light or in an environment with excessively high temperature, dust, humidity or vibration.
- For inquiries relating to products which conform to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

### Performance specifications

Item	Specification								
	GT1155-QTBD	GT1155-QSBD	GT1150-QLBD	GT1155-QTBDQ	GT1155-QSBDQ	GT1150-QLBDQ	GT1155HS-QSBD	GT1150HS-QLBD	
Type	TFT color LCD	STN color LCD	STN monochrome (black/white) LCD	TFT color LCD	STN color LCD	STN monochrome (black/white) LCD	STN color LCD	STN monochrome (black/white) LCD	
Screen size	5.7"								
Resolution	QVGA: 320 × 240 [dots]								
Display size	115(W) × 86(H) [mm] (in horizontal display mode)			115(W) × 86(H) [mm] (in horizontal display mode)			115(W) × 86(H) [mm]		
No. of displayed characters	16-dot standard font: 20 chars. × 15 lines (2-byte) 12-dot standard font: 26 chars. × 20 lines (2-byte) (in horizontal display mode)								
Display colors	256 colors		Monochrome (black/white) 16 gray scale	256 colors		Monochrome (black/white) 16 gray scale	256 colors		Monochrome (black/white) 16 gray scale
View angle	Right/left: 70°, Up: 70°, Down: 50° (in horizontal display mode)		Right/left: 45°, Up: 20°, Down: 40° (in horizontal display mode)	Right/left: 70°, Up: 70°, Down: 50° (in horizontal display mode)		Right/left: 55°, Up: 65°, Down: 70° (in horizontal display mode)	Right/left: 45°, Up: 50°, Down: 60° (Hardware versions A and B) • Right/left: 55°, Up: 65°, Down: 70° (Hardware version C or later)		Right/left: 45°, Up: 20°, Down: 40°
Contrast adjustment	16-step adjustment								
Intensity	400 [cd/m <sup>2</sup> ]	• 350 [cd/m <sup>2</sup> ] (Hardware versions A and B) • 380 [cd/m <sup>2</sup> ] (Hardware version C or later)	220 [cd/m <sup>2</sup> ]	400 [cd/m <sup>2</sup> ]	380 [cd/m <sup>2</sup> ]	220 [cd/m <sup>2</sup> ]	• 350 [cd/m <sup>2</sup> ] (Hardware versions A and B) • 380 [cd/m <sup>2</sup> ] (Hardware version C or later)	220 [cd/m <sup>2</sup> ]	
Intensity adjustment	8-step adjustment								
Life	Approx. 50,000 hours (operating ambient temperature: 25°C)								
Backlight	Cold-cathode fluorescent tube (not replaceable), with backlight OFF detection function. Backlight off time and screen save time can be set.								
Life*2	Approx. 75,000 hours or more	Approx. 54,000 hours or more	Approx. 75,000 hours or more	Approx. 54,000 hours or more	Approx. 75,000 hours or more	Approx. 54,000 hours or more	Approx. 75,000 hours or more	Approx. 54,000 hours or more	Approx. 75,000 hours or more
Touch panel	Matrix resistive type								
	300 keys/screen (matrix consisting of 15 lines × 20 columns)								
	Min. 16 × 16 [dots] (per key)								
	Max. 2 points								
Memory	1,000,000 times or more (operating force 0.98N or less)								
	3MB built-in flash memory (for saving project data and OS)								
	100,000 times								
Battery	512KB built-in SRAM (battery backup)								
	GT11-50BAT type lithium battery								
Backed up data	Clock data, alarm history, recipe data, time action set values								
	Replacement guideline approx. 5 years (operating ambient temperature: 25°C)								
Bus	1ch for QCPU (Q mode)/motion controller CPU (Q series) or 1ch for QnA/ACPU/motion controller CPU (A series)								
	Application: For bus connection of PLC								
RS-422/485	RS-422/485, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (female) Application: Communication with PLCs Terminal resistance*5: OPEN/110Ω/330Ω (switching by terminal resistance transfer switch)								
Built-in interface	RS-422/232, 1ch (Select one when using.) Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Round type, 32-pin (male) Application: Communication with connected devices								
	RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Mini-DIN 6-pin (female) Application: Communication with personal computer (project data read/write, OS installation, FA transparent function, etc.)								
USB	USB (full-speed 12Mbps), device 1ch Connector shape: Mini-B Application: Connection to personal computer (project data read/write, OS installation, FA transparent function)								
	USB (full-speed 12Mbps), device 1ch Connector shape: Mini-B Application: Connection to personal computer (project data read/write, OS installation, FA transparent function)								
CF card	Compact flash slot, 1ch Connector shape: TYPE I Application: Data transfer, data storage, GOT startup FAT16 format: max. 2GB, FAT32 format: not usable								
Optional function board	Embedded in main unit								
Buzzer output	Single tone (tone length adjustable)								
Protective construction*4	Front: IP67 In panel: IP2X			Front: IP67 In panel: IP2X			IP65 (when external connection cable is connected)		
External dimensions (without USB port cover)	164(W) × 135(H) × 56(D) [mm]			167(W) × 135(H) × 65(D) [mm]			176(W) × 220(H) × 93(D) [mm]		
Panel cut dimensions	153(W) × 121(H) [mm]			153(W) × 121(H) [mm]			-		
Weight	0.7 [kg] (excl. mounting brackets)			0.9 [kg] (excl. mounting brackets)			1.0 [kg] (main unit only)		
Applicable software package	GT Works3 Version1.31H or later								

### Power supply specifications

Item	Specification																							
	GT1155-QTBD	GT1155-QSBD	GT1155HS-QSBD	GT1150-QLBD	GT1150HS-QLBD	GT1155-QTBDQ	GT1155-QSBDQ	GT1150-QLBDQ	GT1150HS-QLBDQ	GT1055-QSBD	GT1050-QBBD	GT1045-QSBD	GT1040-QBBD											
Input power supply voltage	24VDC (+10%, -15%), ripple voltage of 200mV or less																							
Input frequency	-																							
Input maximum apparent power	-																							
Power consumption	9.84W or less (410mA/24VDC)			9.36W or less (390mA/24VDC)			11.16W or less (465mA/24VDC)			9.72W or less (405mA/24VDC)			7.92W or less (330mA/24VDC)			9.84W or less (410mA/24VDC)			9.36W or less (390mA/24VDC)			3.6W or less (150mA/24VDC)		
	[With backlight off]													4.32W or less (180mA/24VDC)			5.04W or less (210mA/24VDC)			4.32W or less (180mA/24VDC)			2.9W or less (120mA/24VDC)	
Inrush current	15A or less (2ms, at max. load)			26A or less (4ms, at max. load)			26A or less (4ms, at max. load)			15A or less (26.4V) 2ms			15A or less (26.4V) 2ms			15A or less (26.4V) 2ms								
Permissible instantaneous failure time	Within 5ms			Within 10ms			Within 10ms			Within 5ms			Within 5ms			Within 5ms								
Noise resistance	Noise voltage 1000Vp-p, noise width 1μs by noise simulator with noise frequency 30 to 100Hz			Noise voltage 500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz			Noise voltage 500Vp-p, noise width 1μs by noise simulator with noise frequency 25 to 60Hz			Noise voltage 1000Vp-p, noise width 1μs by noise simulator with noise frequency 30 to 100Hz			Noise voltage 1000Vp-p, noise width 1μs by noise simulator with noise frequency 30 to 100Hz			Noise voltage 1000Vp-p, noise width 1μs by noise simulator with noise frequency 30 to 100Hz								
Withstand voltage	500VAC for 1 minute between power supply terminal and ground																							
Insulation resistance	10MΩ or higher with an insulation resistance tester (500VDC between power supply terminal and ground)																							
Applicable wire size	0.75 to 2 [mm <sup>2</sup> ]*1																							
	Single-wire installation: 0.14 to 1.5 [mm <sup>2</sup> ] AWG26 to AWG16 (single wire) 0.14 to 1.0 [mm <sup>2</sup> ] AWG26 to AWG16 (stranded wire) 0.25 to 0.5 [mm <sup>2</sup> ] AWG24 to AWG20 (bar terminal with insulation sleeve) Two-wire installation: 0.14 to 0.5 [mm <sup>2</sup> ] AWG26 to AWG20 (single wire) 0.14 to 0.2 [mm <sup>2</sup> ] AWG26 to AWG24 (stranded wire)																							
Clamp terminal	Clamp terminals for M3 screw RAV1.25-3, V2-N3A, FV2-N3A*1																							
Tightening torque (terminal block's terminal screws)	0.5 to 0.8 [N·m]*1																							

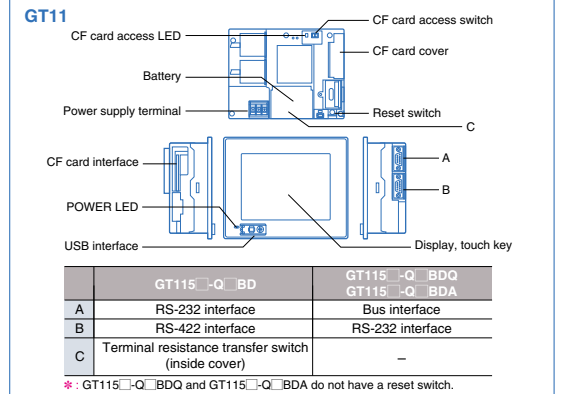
\*1: Excluding GT115□HS

### Performance specifications

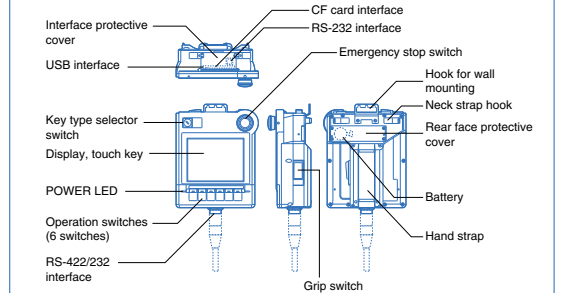
Item	Specification			
	GT1055-QSBD	GT1050-QBBD	GT1045-QSBD	GT1040-QBBD
Type	STN color LCD	STN monochrome (blue/white) LCD	STN color LCD	STN monochrome (blue/white) LCD
Screen size	5.7"			
Resolution	QVGA: 320 × 240 [dots]			
Display size	115(W) × 86(H) [mm] (in horizontal display mode)		96(W) × 72(H) [mm] (in horizontal display mode)	
No. of displayed characters	16-dot standard font: 20 chars. × 15 lines (2-byte), 12-dot standard font: 26 chars. × 20 lines (2-byte) (in horizontal display mode)			
Display colors	256 colors	Monochrome (blue/white) 16 gray scale	256 colors	Monochrome (blue/white) 16 gray scale
View angle	Right/left: 55°, Up: 65°, Down: 40° (in horizontal display mode)	Right/left: 45°, Up: 40°, Down: 70° (in horizontal display mode)	Right/left: 50°, Up: 40°, Down: 70° (in horizontal display mode)	Right/left: 45°, Up: 20°, Down: 40° (in horizontal display mode)
Contrast adjustment	16-step adjustment			
Intensity	380 [cd/m <sup>2</sup> ]	260 [cd/m <sup>2</sup> ]	150 [cd/m <sup>2</sup> ]	300 [cd/m <sup>2</sup> ]
Life	Approx. 50,000 hours (Time for display contrast reaches 20% at operating ambient temperature of 25°C)			
Backlight	Cold-cathode fluorescent tube (not replaceable) with backlight OFF detection function. Backlight off time and screen save time can be set.		LED (no need to replace) Backlight off time and screen save time can be set.	
	Approx. 75,000 hours or more	Approx. 54,000 hours or more	-	-
Life*2	(Time for display intensity reaches 50% at operating ambient temperature of 25°C)			
Touch panel	Matrix resistive type			
	Max. 50 keys/screen			
	Min. 16 × 16 [dots] (per key)			
	Max. 2 points			
Memory	1,000,000 times or more (operating force 0.98N or less)			
	Built-in flash memory for saving project data (3 MB or less) and OS			
	100,000 times			
Battery	512KB built-in SRAM (battery backup)			
	GT11-50BAT type lithium battery			
Backed up data	Clock data, alarm history, recipe data, time action set values			
	Replacement guideline approx. 5 years (operating ambient temperature: 25°C)			
RS-422/485	RS-422/485, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: D-sub 9-pin (female) Application: Communication with PLCs Terminal resistance*5: OPEN/110Ω/330Ω (switched by terminal resistance transfer switch)			
Built-in interface	RS-422/232, 1ch (Select one when using.) Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Round type, 32-pin (male) Application: Communication with connected devices			
	RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Mini-DIN 6-pin (female) Application: Communication with personal computer (project data read/write, OS installation, FA transparent function, etc.)			
Memory board	For installing memory board (GT10-50FMB) 1ch			
Buzzer output	Single tone (tone length adjustable)/none			
Protective construction*4	Conforming to IP67 (front panel)			
External dimensions	164(W) × 135(H) × 56(D) [mm]		139(W) × 112(H) × 41(D) [mm]	
Panel cut dimensions	153(W) × 121(H) [mm]		130(+1 -0)(W) × 103(+1 -0)(H) [mm]	
Weight (excl. mounting brackets)	0.7 [kg]		0.45 [kg]	
Applicable software package	GT Works3 Version1.31H or later			

- \*1: On LCD screens, bright dots (permanently lit) and black dots (not to be lit) generally appear. Because the large number of display elements exist on an LCD screen, it is not possible to reduce appearance of the bright and black dots to zero. Flickering may occur depending on the display colors. Note that the existence of bright and black dots is a standard characteristic of LCD screens, and it does not mean that the products are defective or damaged. Displaying one single screen for a long time can lead to burn-in, causing afterimages or image irregularities that could not disappear. Use the screen saver that is effective to prevent burn-in.
- \*2: Using the GOT screen save/backlight OFF functions prevents screen burn-in and extends the backlight life.
- \*3: The memory is ROM that permits overwriting of new data without having to delete the existing data.
- \*4: This does not guarantee protection in all users' environments. The specification is not applied when the interface protective cover and rear face protective cover are removed. The unit may not be used in an environment where it is exposed to splashing oil or chemicals for a long time or it is soaked with oil mist.
- \*5: In the case of GOT multi-drop connection, set the terminal resistance transfer switch on the GOT main unit according to the connection configuration.

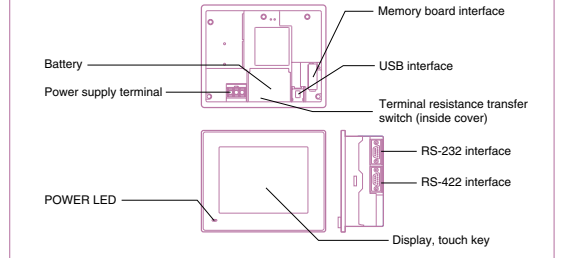
### Component names



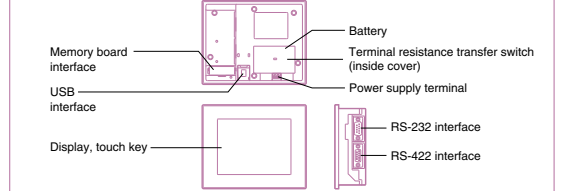
### GT115□HS (Handy)



### GT105□



### GT104□



# Specifications

## GT10

### Power supply specifications

Item	Specification			
	GT1030-HBD GT1030-HWD GT1030-HBD2 GT1030-HWD2	GT1030-HBDW GT1030-HWDW GT1030-HBDW2 GT1030-HWDW2	GT1020-LBD GT1020-LWD GT1020-LBD2 GT1020-LWD2	GT1020-LBDW GT1020-LWDW GT1020-LBDW2 GT1020-LWDW2
Input power supply voltage	24VDC (+10%, -15%), ripple voltage of 200mV or less		5VDC (±5%), supplied from PLC communication cable	
Input frequency	-			
Input maximum apparent power	-			
Power consumption	2.2W or less (90mA/24VDC)		1.1W or less (220mA/5VDC)	
With backlight off	1.7W or less (70mA/24VDC)		0.6W or less (120mA/5VDC)	
Inrush current	18A or less (26.4DCV) 1ms		13A or less (26.4DCV) 1ms	
Permissible instantaneous failure time	Within 5ms			
Noise resistance	Noise voltage 1000Vp-p, noise width 1μs by noise simulator with noise frequency 30 to 100Hz			
Withstand voltage	500VAC for 1 minute between power supply terminal and ground			
Insulation resistance	10MΩ or higher with an insulation resistance tester (500VDC between power supply terminal and ground)			
Applicable wire size	Single-wire installation: 0.14 to 1.5mm <sup>2</sup> , AWG26 to AWG16 (single wire), 0.14 to 1.0mm <sup>2</sup> , AWG26 to AWG16 (stranded wire), 0.25 to 0.5mm <sup>2</sup> , AWG24 to AWG20 (bar terminal with insulation sleeve) Two-wire installation: 0.14 to 0.5mm <sup>2</sup> , AWG26 to AWG20 (single wire), 0.14 to 0.2mm <sup>2</sup> , AWG26 to AWG24 (stranded wire)			
Clamp terminal	AI2.5-6BU, AI0.34-6TU, AI0.5-6WH (made by Phoenix Contact)			
Tightening torque (terminal block's terminal screws)	0.22 to 0.25 [N·m]			

Do not use or store the GOT under direct sun light or in an environment with excessively high temperature, dust, humidity or vibration.

For inquiries relating to products which conform to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

### Performance specifications

Item	Specification							
	GT1030-HBD GT1030-HWD GT1030-HBD2 GT1030-HWD2	GT1030-HBDW GT1030-HWDW GT1030-HBDW2 GT1030-HWDW2	GT1020-LBD GT1020-LWD GT1020-LBD2 GT1020-LWD2	GT1020-LBDW GT1020-LWDW GT1020-LBDW2 GT1020-LWDW2	GT1030-HBL GT1030-HWL GT1030-HBL2 GT1030-HWL2	GT1020-LBL GT1020-LWL GT1020-LBL2 GT1020-LWL2	GT1030-HBD2 GT1030-HWD2 GT1030-HBDW2 GT1030-HWDW2	GT1020-LBD2 GT1020-LWD2 GT1020-LBDW2 GT1020-LWDW2
Display <sup>*1</sup>	STN monochrome (black/white) LCD							
Screen size	4.5"				3.7"			
Resolution	288 × 96 [dots] (in horizontal mode)				160 × 64 [dots] (in horizontal mode)			
Display size	109.42(W) × 35.98(H)[mm](in horizontal mode)				86.4(W) × 34.5(H)[mm](in horizontal mode)			
No. of displayed characters	16-dot standard font: 36 chars. × 6 lines (1-byte) or 18 chars. × 6 lines (2-byte) (in horizontal mode) 12-dot standard font: 48 chars. × 8 lines (1-byte) or 24 chars. × 8 lines (2-byte) (in horizontal mode)				16-dot standard font: 20 chars. × 4 lines (1-byte) or 10 chars. × 4 lines (2-byte) (in horizontal mode)			
Display colors	Monochrome (black/white)							
View angle	Right/left: 30°, Up: 20°, Down: 30° (in horizontal display mode)							
Contrast adjustment	16-step adjustment							
Intensity	200 [cd/m <sup>2</sup> ] (in green)	500 [cd/m <sup>2</sup> ] (in white)	200 [cd/m <sup>2</sup> ] (in green)	500 [cd/m <sup>2</sup> ] (in white)	200 [cd/m <sup>2</sup> ] (in green)	300 [cd/m <sup>2</sup> ] (in white)	200 [cd/m <sup>2</sup> ] (in green)	300 [cd/m <sup>2</sup> ] (in white)
Intensity adjustment	8-step adjustment							
Life	Approx. 50,000 hours (Time for display contrast reaches 20% at operating ambient temperature of 25°C)							
Backlight	3-color LED (green, orange and red) (no need to replace)	3-color LED (white, pink and red) (no need to replace)	3-color LED (green, orange and red) (no need to replace)	3-color LED (white, pink and red) (no need to replace)	3-color LED (green, orange and red) (no need to replace)	3-color LED (white, pink and red) (no need to replace)	3-color LED (green, orange and red) (no need to replace)	3-color LED (white, pink and red) (no need to replace)
Function	Status control (color, on/flash/off) is available and screen save time setting can be set. PLC can control color and status of backlight based on system information.							
Touch panel	Matrix resistive type				Analog resistive type			
Type	Matrix resistive type				Analog resistive type			
No. of touch keys	Max. 50 keys/screen				Impossible			
Key size	Min. 16 × 16 [dots] (per key)				Min. 2 × 2 [dots] (per key)			
No. of simultaneous touch points	Max. 2 points				Impossible			
Life	1,000,000 times or more (operating force 0.98N or less)							
Memory	User memory <sup>*2</sup> : Built-in flash memory for saving project data (1.5MB or less) and OS				Built-in flash memory for saving project data (512KB or less), OS, alarm history, recipe data, time action set values			
Life (No. of writings)	100,000 times							
Battery	GT11-50BAT type lithium battery							
Backed up data	Clock data, alarm history, recipe data, time action set values							
Life	Replacement guideline approx. 5 years (operating ambient temperature: 25°C)							
For communication with PLC	GT1030-HBD/HWD, GT1030-HBDW/HWDW RS-422/485, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Connector terminal block, 9-pin Application: Communication with PLC Terminal resistance <sup>*3</sup> : OPEN/110Ω/330Ω (switched by terminal resistance transfer switch)		RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Connector terminal block, 9-pin Application: Communication with PLC		GT1020-LBD/LWD, GT1020-LBDW/LWDW RS-422/485 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Connector terminal block, 9-pin Application: Communication with PLC Terminal resistance <sup>*3</sup> : OPEN/110Ω/330Ω (switched by terminal resistance transfer switch)		RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Connector terminal block, 9-pin Application: Communication with PLC	
For communication with personal computer	RS-232, 1ch Transmission speed: 115200/57600/38400/19200/9600/4800bps Connector shape: Mini DIN 6-pin (female) Application: Communication with personal computer (project data read/write, OS installation, transparent function)							
Buzzer output	Single tone (tone length adjustable/none)							
Protective construction <sup>*4</sup>	Conforming to IP67 (front panel)							
External dimensions	145(W) × 76(H) × 29.5(D)[mm]				113(W) × 74(H) × 27(D)[mm]			
Panel cut dimensions	137(W) × 66(H)[mm]				105(W) × 66(H)[mm]			
Weight	GT1030-H <sub>D</sub> (W): 0.3kg (excl. mounting brackets) GT1030-H <sub>L</sub> (W): 0.28kg (excl. mounting brackets)		0.3kg (excl. mounting brackets)		GT1020-L <sub>D</sub> (W): 0.2kg (excl. mounting brackets) GT1020-L <sub>L</sub> (W): 0.18kg (excl. mounting brackets)		0.2kg (excl. mounting brackets)	
Applicable software packages	GT Works3 Version1.31H or later (not supported GT Works2/GT Designer 2)							

\*1: On LCD screens, bright dots (permanently lit) and black dots (not to lit) generally appear.

Because the large number of display elements exist on an LCD screen, it is not possible to reduce appearance of the bright and black dots to zero. Flickering may occur depending on the display colors.

Note that the existence of bright and black dots is a standard characteristic of LCD screens, and it does not mean that the products are defective or damaged.

Displaying one single screen for a long time can lead to burn-in, causing afterimages or image irregularities that could not disappear. Use the screen saver that is effective to prevent burn-in.

\*2: The memory is ROM that permits overwriting of new data without having to delete the existing data.

\*3: In the case of GOT multi-drop connection, set the terminal resistance transfer switch on the GOT main unit according to the connection configuration.

\*4: This does not guarantee protection in all users' environments. The specification is not applied when the interface protective cover and rear face protective cover are removed.

The unit may not be used in an environment where it is exposed to splashing oil or chemicals for a long time or it is soaked with oil mist.

# External dimensions

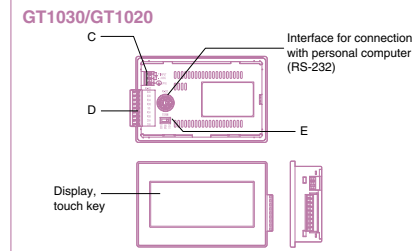
## GOT main units

### External dimensions

(Unit: mm)

<p>GT1695</p>	<p>GT1685</p>	<p>GT167□</p>	<p>GT166□</p>
<p>GT1655</p>	<p>GT1595</p>	<p>GT1585</p>	<p>GT157□</p>
<p>GT156□</p>	<p>GT155□</p>	<p>GT1275</p>	<p>GT1265</p>
<p>GT115□-Q□BD</p>	<p>GT115□-Q□BDQ GT115□-Q□BDA</p>	<p>GT16 Handy</p>	<p>GT11 Handy</p>
<p>GT105□</p>	<p>GT104□</p>	<p>GT1030</p>	<p>GT1020</p>

### Component names



Component	GT1030-HBD GT1030-HWD GT1030-HBDW GT1030-HWDW GT1020-LBD GT1020-LWD GT1020-LBDW GT1020-LWDW	GT1030-HBL GT1030-HWL GT1030-HBLW GT1030-HWLW GT1020-LBL GT1020-LWL GT1020-LBLW GT1020-LWLW	GT1030-HBD2 GT1030-HWD2 GT1030-HBDW2 GT1030-HWDW2 GT1020-LBD2 GT1020-LWD2 GT1020-LBDW2 GT1020-LWDW2
C	Power supply terminal	-	Power supply terminal
D	RS-422 interface	RS-422 interface, Power supply terminal	RS-232 interface
E	Terminal resistance transfer switch	-	-

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For Designers

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GT10

IQ Platform

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Specifications, External Dimensions

List of Connectable Models, etc.



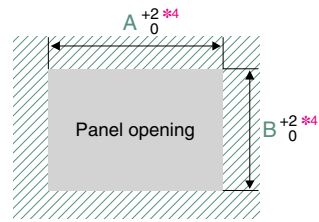
# External dimensions

## Panel cut dimensions

### When the GOT is installed

Screen size	Type of GOT main unit	A	B
15"	GT1695	383.5	282.5
	GT1595		
12.1"	GT1685*1	302	228
	GT1585*1		
10.4"	GT167* <sup>#2</sup>	289	200
	GT157* <sup>#2</sup>		
	GT1275		
8.4"	GT166	227	176
	GT156		
	GT1265		
5.7"	GT1655* <sup>#3</sup>	153	121
	GT155* <sup>#3</sup>		
	GT115* <sup>#3</sup>		
	GT105* <sup>#3</sup>		
	GT104		
4.7"	GT104	130	103
4.5"	GT1030	137	66
3.7"	GT1020	105	66

- \*1 : Same dimensions as A985GOT(-V)
- \*2 : Same dimensions as A975/970GOT(-B)
- \*3 : Same dimensions as F940GOT
- \*4 : For the GT104, GT1030 and GT1020, the tolerances are +1/0.



### When the CF card extension unit (mounting unit on control panel) is installed

Type	A	B
GT15-CFEX-C08SET	94.0	33.0

### Cautions when installing and uninstalling

When installing the CF card extension unit on the control panel, make sure that the extension unit does not interfere with the extension unit cable or the CF card interface of the GOT. Place the CF card extension unit at a distance of 25mm or more from the GOT. For installation locations, see the GT16 User's Manual (Hardware) or the GT15 User's Manual.

For compatibility with GOT900 series, see "Backward compatibility" (page 81).

## Product installation spacing

The GOT must have the clearances from other devices as shown in [Fig. A]. The GOT may require more distance than the dimensions shown in the table depending on the types of connection cables. Consider the connector dimensions and cable bending radius when designing the installation.

### GT16/GT15

Item	GT1695	GT1685	GT167	GT166	GT1655	GT1595	GT1585	GT157	GT156	GT155
GOT only	50 or more (20 or more)		61 or more		50 or more (20 or more)		50 or more (21 or more)		49 or more	
When a bus connection unit is installed	50 or more (20 or more)	50 or more (24 or more)	50 or more (33 or more)	50 or more (43 or more)	50 or more	50 or more (20 or more)	50 or more (35 or more)	50 or more (40 or more)	50 or more	50 or more
When a serial communication unit is installed	50 or more (20 or more)		49 or more		50 or more (20 or more)		50 or more (21 or more)		49 or more	
When an RS-422 conversion unit is installed	50 or more (20 or more)	50 or more (39 or more)	50 or more (48 or more)	58 or more	-	50 or more (20 or more)	50 or more (39 or more)	53 or more	58 or more	-
When an Ethernet communication unit is installed	50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)		50 or more (24 or more)		50 or more (24 or more)	
When the CC-Link communication unit (GT15-J61BT13) is installed	50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)	
When a MELSECNET/H communication unit (coaxial) is installed	50 or more (20 or more)	50 or more (25 or more)	50 or more (35 or more)	50 or more (42 or more)	64 or more	50 or more (20 or more)	50 or more (30 or more)	50 or more (35 or more)	50 or more (35 or more)	64 or more
When a MELSECNET/H communication unit (optical) is installed	50 or more (20 or more)*1	50 or more (23 or more)*1	50 or more (32 or more)*1	50 or more (42 or more)*1	79 or more	50 or more (20 or more)*1	50 or more (23 or more)*1	50 or more (37 or more)*1	50 or more (42 or more)*1	79 or more*1
When a CC-Link IE Controller Network communication unit is installed	50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)		50 or more (23 or more)		50 or more (28 or more)	
When a CC-Link IE Field Network communication unit is installed	50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)		50 or more (23 or more)		50 or more (28 or more)	
When a printer unit is installed	50 or more (20 or more)		50 or more (20 or more)		50 or more (29 or more)		50 or more (20 or more)		50 or more (29 or more)	
When a multimedia unit is installed	50 or more (20 or more)*2	61 or more*2	70 or more*2	80 or more*2	-	-	-	-	-	-
When a video input unit is installed	50 or more (20 or more)*2	61 or more*2	70 or more*2	80 or more*2	-	61 or more*2	75 or more*2	-	-	-
When a RGB input unit is installed	50 or more (20 or more)*2	61 or more*2	70 or more*2	80 or more*2	-	61 or more*2	75 or more*2	-	-	-
When a video/RGB input unit is installed	50 or more (20 or more)*2	61 or more*2	70 or more*2	80 or more*2	-	61 or more*2	75 or more*2	-	-	-
When a RGB output unit is installed	50 or more (20 or more)*2	61 or more*2	70 or more*2	80 or more*2	-	61 or more*2	75 or more*2	-	-	-
When a CF card unit is installed	50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)	
When a CF card extension unit is installed	50 or more (20 or more)	50 or more (49 or more)	58 or more	68 or more	50 or more	50 or more (20 or more)	50 or more (49 or more)	63 or more	68 or more	97 or more
When an audio output unit is installed	50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)	
When an external input/output unit is installed	50 or more (20 or more)		50 or more (29 or more)		50 or more (20 or more)		50 or more (24 or more)		50 or more (29 or more)	
B	50 or more (20 or more)		80 or more (20 or more)		80 or more (20 or more)		80 or more (20 or more)		80 or more (20 or more)	
C	50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)	
D	50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)		50 or more (20 or more)	
E	50 or more (20 or more)		100 or more		100 or more		50 or more (20 or more)		100 or more	

- \*1 : The distance varies depending on the cable to be used. For details, consult your local sales office. The values in the table are given for your reference only and may not reflect actual conditions.
- \*2 : The distances required when the coaxial cable 3C-2V (JIS C 3501) is used.
- \*3 : The distance varies depending on the cable to be used. When the bending radius of the cable is larger than the indicated value, keep a space appropriate to the bending radius.
- \*4 : When using a battery, the required dimension is greater than when using a CF card.

### GT12

GOT main unit	A, D	B	C	E
GT1275	50 or more	80 or more	When CF card is not used	50 or more
GT1265			When CF card is used	100 or more

### GT11

GOT main unit	A, D	B	C	E
GT1155	50 or more (20 or more)	80 or more*1	When CF card is not used	50 or more*2
GT1150			When CF card is used	100 or more

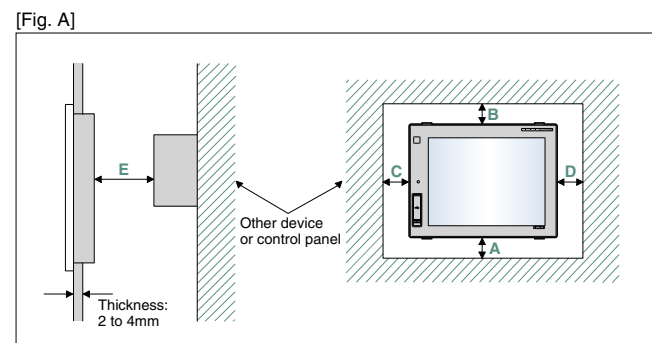
- \*1 : 50 or more (20 or more) in the case of vertical installation
- \*2 : 80 or more (20 or more) in the case of vertical installation

### GT10

GOT main unit	A	B	C	D	E
GT105	50 or more (20 or more)	80 or more (20 or more)	50 or more (20 or more)	50 or more (20 or more)	100 or more (20 or more)*3
GT1030	50 or more (20 or more)*1	50 or more (20 or more)	50 or more (20 or more)	50 or more (20 or more)	80 or more (20 or more)*2

- \*1 : 50 or more when a RS-232/USB conversion adapter is used.
- \*2 : 80 or more when a personal computer connection cable is used or when a personal computer RS-232 interface is used for connecting multiple GOTs.
- \*3 : 50 or more when a RS-232 interface is used for using an RS-232/USB conversion adapter.
- \*4 : 80 or more when using a USB cable or a memory board.

Dimensions shown in parentheses apply when there are no devices nearby (contactor, etc.) which produce radiated noise or heat. Even with these dimensions, however, the ambient temperature must never exceed 55°C. Depending on the unit and cable being used, a cable length longer than dimension A (or dimension D for the GT10) in above [Fig. A] may be required.

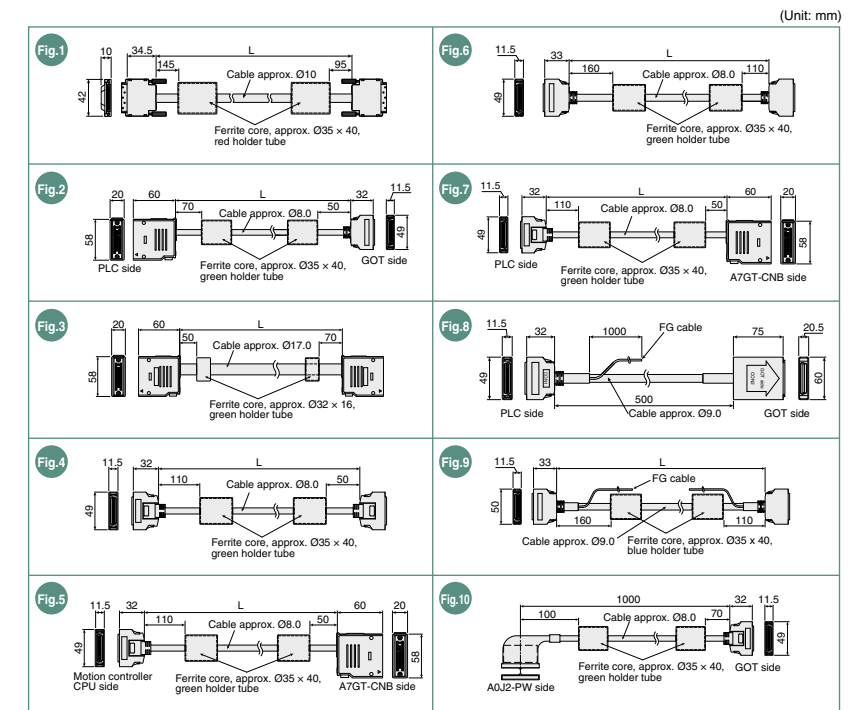
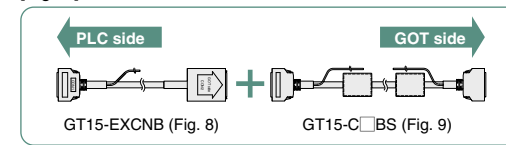


## Bus connection cables

Cable model name	Cable length (L)	External dimensions
GT15-QC-B	0.6, 1.2, 3, 5, 10m	Fig. 1
GT15-QC-BS	15, 20, 25, 30, 35m	Fig. 1
GT15-C-NB	1.2, 3, 5m	Fig. 2
GT15-AC-B	0.6, 1.2, 3, 5m	Fig. 3
GT15-A370C-B-S1	1.2, 2.5m	Fig. 4
GT15-A370C-B	1.2, 2.5m	Fig. 5
GT15-A1SC-B	0.7, 1.2, 3, 5m	Fig. 6
GT15-A1SC-NB	0.45, 0.7, 3, 5m	Fig. 7
GT15-C-EXSS-1*1	10.6, 20.6, 30.6m	Figs. 8 & 9
GT15-EXCNB	0.5m	Fig. 8
GT15-C-BS	0.7, 1.2, 3, 5, 10, 20, 30m	Fig. 9
GT15-J2C10B	1m	Fig. 10

- \*1 : GT15-C-EXSS-1 is a set consisting of GT15-EXCNB and GT15-C-BS. (See Fig. A.)

### [Fig. A]



## RS-422 cables

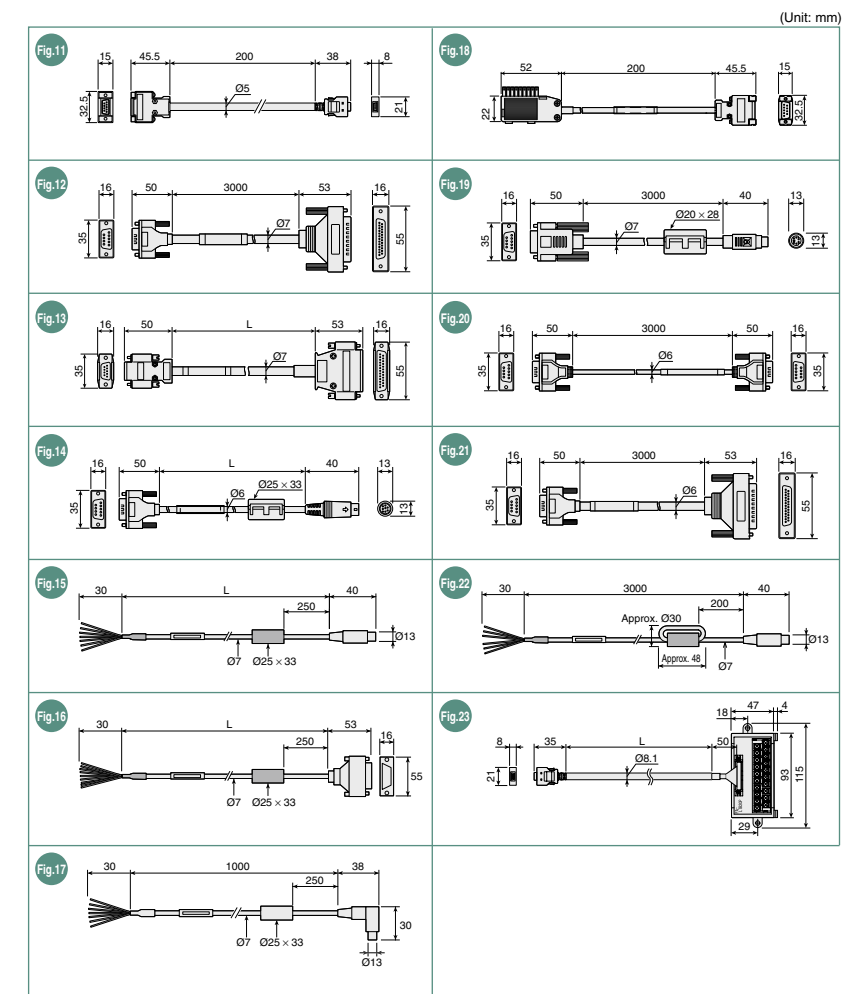
Cable model name	Cable length (L)	External dimensions
GT16-C02R4-9S	0.2m	Fig. 11
GT01-C30R4-25P	3m	Fig. 12
GT01-C-R4-25P	10, 20, 30m	Fig. 13
GT01-C-R4-8P	1, 3, 10, 20, 30m	Fig. 14
GT10-C-R4-8P	1, 3, 10, 20, 30m	Fig. 15
GT10-C-R4-25P	3, 10, 20, 30m	Fig. 16
GT10-C10R4-8PL	1m	Fig. 17
GT10-C02H-9SC	0.2m	Fig. 18

## RS-232 cables

Cable model name	Cable length (L)	External dimensions
GT01-C30R2-6P	3m	Fig. 19
GT01-C30R2-9S	3m	Fig. 20
GT01-C30R2-25P	3m	Fig. 21
GT10-C30R2-6P	3m	Fig. 22

## RS-485 terminal block conversion unit

Model name	Cable length (L)	External dimensions
FA-LTBGTR4CBL	0.5, 1, 2m	Fig. 23













# Function list

GT16 GT15 GT12 GT SoftGOT

Category	Function*1	Optional function board*2	Extended optional function OS installation*3	Other necessary devices*3	Details page	Model																				
						GT16					GT15					GT12					GT SoftGOT 1000 Version3					
						GT1695M	GT1685M	GT1675M	GT1675M	GT1675M	GT1665M	GT1665M	GT1662	GT1655	GT1665	GT1595	GT15					GT12	GT SoftGOT 1000 Version3			
						-XTB	-STB	-STB	-VTB	-VNB	-STB	-VTB	-VNB	-VTB	HS-VTBD	-XTB	GT1585(V)	GT1575(V)	GT1575	GT1575	GT1565	GT1562	GT1555	GT1275	GT1265	
						15"	12.1"	10.4"	10.4"	10.4"	8.4"	8.4"	8.4"	5.7"	6.5"	15"	12.1"	10.4"	10.4"	10.4"	8.4"	8.4"	5.7"	10.4"	8.4"	Ver.3
Connection configuration	Mitsubishi PLC bus connection					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Mitsubishi PLC CPU direct connection					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Mitsubishi PLC computer link connection					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Mitsubishi PLC MELSECNET/H connection					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Mitsubishi PLC MELSECNET/10 connection					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Mitsubishi PLC CC-Link IE Controller Network connection					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Mitsubishi PLC CC-Link IE Field Network connection					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Mitsubishi PLC CC-Link connection (ID station/via G4)					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Mitsubishi PLC Ethernet connection				*10	P.65	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Third party PLC connection						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Microcomputer connection						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	MODBUS®/RTU connection						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	MODBUS®/TCP connection						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Temperature controller connection						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Inverter connection						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Servo amplifier connection						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
CNC connection						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Robot controller connection						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
GOT multi-drop connection				*10	P.49	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Memory	Standard memory capacity					15MB	15MB	15MB	15MB	11MB	15MB	15MB	11MB	15MB	15MB	9MB	9MB	9MB	5MB	9MB	5MB	9MB	6MB	6MB	57MB	
	Total memory capacity when using optional memory (standard + optional)		Required*2 (GT15 only)		CF card	P.52-	Up to 57MB	Up to 57MB	Up to 57MB	Up to 57MB	Up to 53MB	Up to 57MB	Up to 53MB	Up to 57MB	Up to 57MB	Up to 57MB	Up to 57MB	Up to 53MB	Up to 57MB	Up to 53MB	Up to 57MB	Up to 57MB	Up to 57MB	Up to 57MB		
	65,536 colors					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	4,096 colors					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	256 colors					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	16 colors					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Monochrome (black/white) 16 gray scales					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Monochrome (black/white) 2 colors					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Monochrome (blue/white) 16 gray scales					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Resolution	1920 x 1200 dots (WUXGA) (max. at specified resolution)					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		1600 x 1200 dots (UXGA)					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		1280 x 1024 dots (SXGA)					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		1024 x 768 dots (XGA)					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		800 x 600 dots (SVGA)					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		640 x 480 dots (VGA)					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
320 x 240 dots (QVGA)						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
288 x 96 dots						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
160 x 64 dots						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Built-in interface		RS-232 interface					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		RS-422 interface					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		RS-422/232 interface					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		RS-422/485 interface					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		Bus interface					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		Ethernet interface					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	USB interface					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	USB host					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	USB device					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	CF card interface					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Optional function board interface					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Extension interface					2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	2ch	
	Multimedia & Video/RGB interface					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Video/RGB interface					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Others	Vertical display					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Clock function				(Battery)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Buzzer output						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Human sensor						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Printer		Required		(Printer unit)	P.33	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
CF card unit (CF card extension unit)				CF card unit/CF card extension unit		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Sound output		Required		Sound output unit		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
External input/output		Required		External input/output unit		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Video input / RGB input / RGB output		Required		Video/RGB unit	P.32	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
USB mouse/keyboard connection		Required			P.34	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Backlight OFF detection function						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Main unit functions		Start from CF card	Required*2 (GT15 only)		CF card		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		Project data read/write			(CF card/USB memory <GT16 only>)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		Resource data read					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
		FA transparent function				P.39	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Multi-channel function	Required*2 (GT15 only)			P.33	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch	Up to 4ch		
	Gateway function	Required		(CF card)	P.35	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	MES interface function	Required*2		(CF card)	P.35	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	SoftGOT-GOT link function	Required			P.27, 34	●																				





# Product list

## Main unit model name

**GT16 9 5 M - X T B A**

Code	Screen size	Code	Display colors	Code	Mounting type	Code	Resolution	Code	Display device	Code	Power supply	Code	Communication interface
9	15"	5	256 colors or more	V	Compatible with video/RGB	X	XGA (1024 × 768 dots)	T	TFT color (high brightness, wide viewing angle)	A	100 to 240VAC	Q	*1 With built-in bus connection interface for QCPU (Q mode)/motion controller CPU (Q series)
8	12.1"	2	16 colors	None	Panel mount type	S	SVGA (800 × 600 dots)	N	TFT color (blue/white)	D	24VDC	A	*1 With built-in bus connection interface for QnA/ACPU/motion controller CPU (A series)
7	10.4"	0	Monochrome	HS	Handy type	V	VGA (640 × 480 dots)	S	STN color	L	5VDC	2	*2 With built-in RS-232
6	8.4", 6.5"			M	Compatible with multimedia & Video/RGB	Q	QVGA (320 × 240 dots)	B	STN monochrome (blue/white)			None	*2 With built-in RS-422
5	5.7"					None	Q	L	STN monochrome (white/black, high contrast)				
4	4.7"							H					
3	4.5"												
2	3.7"												

<b>GT16</b>	High performance models with multimedia and a host of features and functions
<b>GT15</b>	Performance models ideal for a wide range of applications in a network or standalone environment
<b>GT12</b>	Large basic models with integrated features and communications
<b>GT11</b>	Small models with a host of advanced functions
<b>GT10</b>	Compact models with basic functions

Code	Main unit frame	Code	GT10 backlight
B	Black	W	White backlight
W	White	None	Green backlight

\* For inquiries relating to products which conform to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

## GOT main units

Model name	Screen size [resolution]	Display	Display colors (number of colors)	Power supply	Memory size	Remarks
GT1695	GT1695M-XTBA	15" XGA	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	100-240VAC	Compatible with multimedia & Video/RGB
	GT1695M-STBA	12.1" SVGA	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	100-240VAC	
GT1685	GT1685M-STBA	12.1" SVGA	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	100-240VAC	Compatible with multimedia & Video/RGB
	GT1685M-STBD	[800 × 600 dots]	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	100-240VAC	
GT16	GT1675	GT1675M-STBA	10.4" SVGA	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	Compatible with multimedia & Video/RGB
		GT1675M-STBD	[800 × 600 dots]	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	
	GT1675	GT1675M-VTBA	10.4" VGA	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	Compatible with multimedia & Video/RGB
		GT1675M-VTBD	[640 × 480 dots]	TFT color LCD	4,096 colors	
		GT1675-VNBA*	[640 × 480 dots]	TFT color LCD	16 colors	
		GT1675-VNBD*	[640 × 480 dots]	TFT color LCD	16 colors	
	GT166	GT1665M-STBA	8.4" SVGA	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	Compatible with multimedia & Video/RGB
		GT1665M-STBD	[800 × 600 dots]	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	
		GT1665M-VTBA	8.4" VGA	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	
		GT1665M-VTBD	[640 × 480 dots]	TFT color LCD	16 colors	
GT1655	GT1655-VTBD*	5.7" VGA [640 × 480 dots]	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	24VDC	
	GT1655-VTBD*	6.5" VGA [640 × 480 dots]	TFT color LCD (high brightness, wide viewing angle)	65,536 colors		
Handy GOT	GT1595	15" XGA	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	100-240VAC	Compatible with Video/RGB
	GT1595	[1024 × 768 dots]	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	24VDC	
GT15	GT1585	GT1585V-STBA	12.1" SVGA	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	Compatible with Video/RGB
		GT1585V-STBD	[800 × 600 dots]	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	
	GT1575	GT1575V-STBA	10.4" SVGA	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	Compatible with Video/RGB
		GT1575V-STBD	[800 × 600 dots]	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	
		GT1575-VTBA	10.4" VGA	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	
		GT1575-VTBD	[640 × 480 dots]	TFT color LCD	256 colors	
	GT1565	GT1565-VTBA	8.4" VGA	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	100-240VAC
		GT1565-VTBD	[640 × 480 dots]	TFT color LCD	16 colors	
		GT1562-VNBA	[640 × 480 dots]	TFT color LCD	16 colors	
		GT1562-VNBD	[640 × 480 dots]	TFT color LCD	16 colors	
GT1555	GT1555-VTBD	5.7" VGA [640 × 480 dots]	TFT color LCD (high brightness, wide viewing angle)	65,536 colors	24VDC	
	GT1555-VTBD	5.7" QVGA [320 × 240 dots]	STN color LCD	4,096 colors		
GT1275	GT1275-VNBA	10.4" VGA	TFT color LCD	256 colors	100-240VAC	
	GT1275-VNBD	[640 × 480 dots]	TFT color LCD	256 colors		
GT1265	GT1265-VNBA	8.4" VGA	TFT color LCD	256 colors	100-240VAC	
	GT1265-VNBD	[640 × 480 dots]	TFT color LCD	256 colors		
GT11	GT1155	GT1155-QTBD	TFT color LCD	256 colors	24VDC	
		GT1155-QTBDQ	TFT color LCD	256 colors		
		GT1155-QTBDQ	STN color LCD	256 colors		
		GT1155-QSBDQ	STN color LCD	256 colors		
	GT1150	GT1150-QLBD	STN monochrome LCD	Monochrome (black/white) 16 gray scales	3MB	
		GT1150-QLBDA	STN monochrome LCD	Monochrome (black/white) 16 gray scales		
		GT1150-QLBDA	STN monochrome LCD	Monochrome (black/white) 16 gray scales		
		GT1150-QLBDA	STN monochrome LCD	Monochrome (black/white) 16 gray scales		
	Handy GOT	GT1155HS-QSBD	STN color LCD	256 colors	24VDC	
		GT1150HS-QLBD	STN color LCD	256 colors		
GT10	GT105	5.7" QVGA [320 × 240 dots]	STN monochrome LCD	Monochrome (blue/white) 16 gray scales	24VDC	
	GT104	4.7" QVGA [320 × 240 dots]	STN monochrome LCD	Monochrome (blue/white) 16 gray scales		

## GOT main units

Model name	Screen size [resolution]	Display	Display colors (number of colors)	Power supply	Memory size	Remarks
GT1030	4.5" [288 × 96 dots]	GT1030-HBD*	3-color LED (green, orange, red)	24VDC	1.5MB	Dedicated to RS-422 connection Dedicated to RS-232 connection Dedicated to RS-422FX connection
		GT1030-HBL*	3-color LED (white, pink, red)	5VDC		
		GT1030-HBDW*	3-color LED (green, orange, red)	24VDC		
		GT1030-HBDW*	3-color LED (white, pink, red)	5VDC		
		GT1030-HBLW*	3-color LED (green, orange, red)	24VDC		
	4.5" [288 × 96 dots]	GT1030-HWD*	3-color LED (green, orange, red)	24VDC	1.5MB	Dedicated to RS-422 connection Dedicated to RS-232 connection Dedicated to RS-422FX connection
		GT1030-HWD*	3-color LED (white, pink, red)	5VDC		
		GT1030-HWDW*	3-color LED (green, orange, red)	24VDC		
		GT1030-HWDW*	3-color LED (white, pink, red)	5VDC		
		GT1030-HWLW*	3-color LED (green, orange, red)	24VDC		
GT1020	3.7" [160 × 64 dots]	GT1020-LBD	3-color LED (green, orange, red)	24VDC	512KB	Dedicated to RS-422 connection Dedicated to RS-232 connection Dedicated to RS-422FX connection
		GT1020-LBL	3-color LED (white, pink, red)	5VDC		
		GT1020-LBDW	3-color LED (green, orange, red)	24VDC		
		GT1020-LBDW2	3-color LED (white, pink, red)	5VDC		
		GT1020-LBLW	3-color LED (green, orange, red)	24VDC		
	3.7" [160 × 64 dots]	GT1020-LWD	3-color LED (green, orange, red)	24VDC	512KB	Dedicated to RS-422 connection Dedicated to RS-232 connection Dedicated to RS-422FX connection
		GT1020-LWD2	3-color LED (white, pink, red)	5VDC		
		GT1020-LWDW	3-color LED (green, orange, red)	24VDC		
		GT1020-LWDW2	3-color LED (white, pink, red)	5VDC		
		GT1020-LWLW	3-color LED (green, orange, red)	24VDC		

\*1 : Not supported by GT Works2/GT Designer2.

## Communication interface

Product name	Model name	Specifications	Applicable model						
			GT16	GT15	GT12	GT11	Handy GOT	GT10	
Bus connection unit	GT15-QBUS	Bus connection (1ch) unit standard model for QCPU (Q mode)/motion controller CPU (Q series)	●	●	—	—	—	—	
	GT15-QBUS2	Bus connection (2ch) unit standard model for QCPU (Q mode)/motion controller CPU (Q series)	●	●	—	—	—	—	
	GT15-ABUS	Bus connection (1ch) unit standard model for QnA/ACPU/motion controller CPU (A series)	●	●	—	—	—	—	
	GT15-ABUS2	Bus connection (2ch) unit standard model for QnA/ACPU/motion controller CPU (A series)	●	●	—	—	—	—	
	GT15-75QBUSL	Bus connection (1ch) unit thin model*1 for QCPU (Q mode)/motion controller CPU (Q series)	●	●	—	—	—	—	
	GT15-75QBUS2L	Bus connection (2ch) unit thin model*1 for QCPU (Q mode)/motion controller CPU (Q series)	●	●	—	—	—	—	
	GT15-75ABUSL	Bus connection (1ch) unit thin model*1 for QnA/ACPU/motion controller CPU (A series)	●	●	—	—	—	—	
	GT15-75ABUS2L	Bus connection (2ch) unit thin model*1 for QnA/ACPU/motion controller CPU (A series)	●	●	—	—	—	—	
	Serial communication unit	GT15-RS2-9P	RS-232 serial communication unit (D-sub 9-pin (male))	●	●	—	—	—	—
		GT15-RS4-9S	RS-422/485 serial communication unit (D-sub 9-pin (female))*2 *3	●	●	—	—	—	—
GT15-RS4-TE		RS-422/485 serial communication unit (terminal block)*2 *3 * Usable only when connecting to temperature controllers/indicating controllers via RS-485 or in GOT multi-drop connection	●	●	—	—	—	—	
RS-422 conversion unit	GT15-RS2T4-9P	RS-232 → RS-422 conversion unit	●*6	●*4	—	—	—	—	
	GT15-RS2T4-25P	RS-422 connector: 9-pin RS-422 connector: 25-pin	●*6	●*4	—	—	—	—	
MELSECNET/H communication unit	GT15-J71LP23-25	Standard station unit (optical loop)	●	●	—	—	—		
CC-Link IE Controller Network communication unit	GT15-J71BR13	Standard station unit (coaxial bus)	●	●	—	—	—		
CC-Link IE Field Network communication unit	GT15-J71GP23-SX	Standard station unit (optical loop)	●	●	—	—	—		
CC-Link communication unit	GT15-J71GF13-T2	Intelligent device station unit	●	●	—	—	—		
Ethernet communication unit	GT15-J61BT13	Intelligent device station unit (supporting CC-Link version 2)	●	●	—	—	—		
Serial multi-drop connection unit	GT15-J71E71-100	Ethernet (100Base-TX) unit	—	—	—	—	—		
Connector conversion adapter	GT01-RS4-M	For GOT multi-drop connection	●*5	●*5	●*5	●*5	●*5		
CC-Link interface unit	GT10-9PT5S	Conversion connector between D sub 9-pin male and Europe terminal block 5-pin	—	—	●*5	●*5	●*5		
	GT11HS-CCL	CC-Link interface unit for Handy GOT	—	—	—	—	—		
	GT11H-CCL	CC-Link interface unit for Handy GOT	—	—	—	—	—		

\*1 : The unit cannot be used stacked on other units. \*2 : The unit may not be able to be used depending on the connection destination. See "List of connectable models" (page 65). \*3 : The unit cannot be used when connecting to temperature controllers/indicating controllers via RS-485 (2-wire type). \*4 : The unit cannot be used with the GT1575. \*5 : For the hardware version compatible with GOT, please contact your local sales office. For the instructions for connection of GT16/GT15, please contact your local sales office. \*6 : The unit cannot be used with the GT1655.

## Optional units

Product name	Model name	Specifications	Applicable model					
			GT16	GT15	GT12	GT11	Handy GOT	GT10
Printer unit	GT15-PRN	USB slave (PictBridge) for printer connection, 1ch * Cable for printer connection (3m) included	●	●	—	—	—	—
Multimedia unit	GT16M-MMR	For video input (NTSC/PAL) 1ch motion image playback	●*2	—	—	—	—	—
Video input unit	GT16M-V4	For video input (NTSC/PAL) 4ch	●*2	—	—	—	—	—
	GT15V-75V4	For video input (NTSC/PAL) 4ch	—	●*3	—	—	—	—
RGB input unit	GT16M-R2	For analog RGB input 2ch	●*2	—	—	—	—	—
	GT15V-75R1	For analog RGB input 1ch	—	●*3	—	—	—	—
Video/RGB input unit	GT16M-V4R1	For video input (NTSC/PAL) 4ch / analog RGB 1ch composite input	●*2	—	—	—	—	—
	GT15V-75V4R1	For video input (NTSC/PAL) 4ch / analog RGB 1ch composite input	—	●*3	—	—	—	—
RGB output unit	GT16M-ROUT	For analog RGB output 1ch	●*2	—	—	—	—	—
	GT15V-75ROUT	For analog RGB output	—	●*3	—	—	—	—
CF card unit	GT15-CFCD	For additional CF card port (B drive) on the back of the GOT	●	●	—	—	—	
CF card extension unit	GT15-CFEX-C08SET	For additional CF card port (B drive) at the front of the control panel*1	●	●	—	—	—	
Sound output unit	GT15-SOUT	For sound output	●	●	—	—	—	
External input/output unit	GT15-DIOR	For external input/output devices and operation panel connection (negative common input / source type output)	●	●	—	—	—	
	GT15-DIO	For external input/output devices and operation panel connection (positive common input / sink type output)	●	●	—	—	—	

\*1 : Includes unit to be installed on the control panel, unit to be installed on the GOT, and connection cable (0.8m). \*2 : Excluding the GT16□□-VNB□ and GT1655. \*3 : Only the GT1585V and GT1575V are supported.

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For Designers

For Initial Startup & Operations

For Maintenance Personnel

GT10

IQ Platform

MELSEC Process Control

Specifications, External Dimensions

List of Connectable Models, etc.



# Product list

## Software

Product name	Model name	Contents
GT Works3 Version1	SW1DNC-GTWK3-E	Single license <English version>
	SW1DNC-GTWK3-EA	Multiple-license <English version> <sup>*3</sup>
License key for GT SoftGOT1000 <sup>*1</sup>	GT15-SGTKEY-U	For USB port
Personal computer remote operation function (Ethernet) license <sup>*2</sup>	GT16-PCRAKEY	1 license

\*1 : To use GT SoftGOT1000, a license key for GT SoftGOT1000 is necessary for each personal computer.  
 \*2 : 1 license is required for 1 GOT unit.  
 \*3 : The desired number of licenses (2 or more) can be purchased. For details, please contact your local sales office.

## Options

Product name	Model name	Specifications	Applicable model					
			GT16	GT15	GT12	GT11	Handy GOT	GT10
Backlight	GT16-90XLT	For GT1695M-XTB	●	—	—	—	—	—
	GT16-80SLT	For GT1685M-STB	●	—	—	—	—	—
	GT16-70SLT	For GT1675M-STB	●	—	—	—	—	—
	GT16-70VLT	For GT1675M-VTB <sup>*1</sup>	●	—	—	—	—	—
	GT16-70VLT	For GT1675M-VTB <sup>*2</sup>	●	—	—	—	—	—
	GT16-70VLT	For GT1675M-VTB <sup>*3</sup>	●	—	—	—	—	—
	GT16-60SLT	For GT1665M-STB	●	—	—	—	—	—
	GT16-60VLT	For GT1665M-VTB	●	—	—	—	—	—
	GT16-60VLT	For GT1662-VNB	●	—	—	—	—	—
	GT15-90XLT	For GT1595-XTB	—	●	—	—	—	—
	GT15-80SLT	For GT1585V-STB /GT1585-STB	—	●	—	—	—	—
	GT15-70SLT	For GT1575-STB <sup>*3</sup>	—	●	—	—	—	—
	GT15-70VLT	For GT1575V-STB /GT1575-VTB /GT1575-STB <sup>*4</sup>	—	●	—	—	—	—
	GT15-70VLT	For GT1575-VNB /GT1572-VNB	—	●	—	—	—	—
	GT15-60VLT	For GT1565-VTB	—	●	—	—	—	—
GT12-70VLT	For GT1275-VNB	—	—	●	—	—	—	
GT12-60VLT	For GT1265-VNB	—	—	●	—	—	—	
Optional function board	GT16-MESB	For MES interface function	●	—	—	—	—	—
	GT15-FNB	(No expansion memory)	—	●	—	—	—	—
	GT15-QFNB	(No expansion memory)	—	●	—	—	—	—
	GT15-QFNB16M	+ 16MB expansion memory	—	●	—	—	—	—
	GT15-QFNB32M	+ 32MB expansion memory	—	●	—	—	—	—
	GT15-QFNB48M	+ 48MB expansion memory	—	●	—	—	—	—
GT15-MESB48M	+ 48MB expansion memory	—	●	—	—	—	—	
GT11-50FNB	—	—	—	—	● <sup>*5</sup>	● <sup>*6</sup>	—	
GT10 memory loader	GT10-LDR	For GT1030/GT1020 (for OS project data transfer) no power source required	—	—	—	—	—	●
GT10 memory board	GT10-50FMB	For GT105 /GT104 (for OS and project data transfer)	—	—	—	—	—	●
Protective sheet	GT16-90PSCB	Clear, 5 sheets	●	—	—	—	—	—
	GT16-90PSGB	Anti-glare, 5 sheets	●	—	—	—	—	—
	GT16-90PSCW	Clear (frame: white), 5 sheets	●	—	—	—	—	—
	GT16-90PSGW	Anti-glare (frame: white), 5 sheets	●	—	—	—	—	—
	GT16-90PSCB-012	Clear (USB protective cover type), 5 sheets <sup>*14</sup>	●	—	—	—	—	—
	GT15-90PSCB	Clear, 5 sheets	—	●	—	—	—	—
	GT15-90PSGB	Anti-glare, 5 sheets	—	●	—	—	—	—
	GT15-90PSCW	Clear (frame: white), 5 sheets	—	●	—	—	—	—
	GT15-90PSGW	Anti-glare (frame: white), 5 sheets	—	●	—	—	—	—
	GT16-80PSCB	Clear, 5 sheets	●	—	—	—	—	—
	GT16-80PSGB	Anti-glare, 5 sheets	●	—	—	—	—	—
	GT16-80PSCW	Clear (frame: white), 5 sheets	●	—	—	—	—	—
	GT16-80PSGW	Anti-glare (frame: white), 5 sheets	●	—	—	—	—	—
	GT16-80PSCB-012	Clear (USB protective cover type), 5 sheets <sup>*14</sup>	●	—	—	—	—	—
	GT15-80PSCB	Clear, 5 sheets	—	●	—	—	—	—
	GT15-80PSGB	Anti-glare, 5 sheets	—	●	—	—	—	—
	GT15-80PSCW	Clear (frame: white), 5 sheets	—	●	—	—	—	—
	GT15-80PSGW	Anti-glare (frame: white), 5 sheets	—	●	—	—	—	—
	GT16-70PSCB	Clear, 5 sheets	●	—	—	—	—	—
	GT16-70PSGB	Anti-glare, 5 sheets	●	—	—	—	—	—
	GT16-70PSCW	Clear (frame: white), 5 sheets	●	—	—	—	—	—
	GT16-70PSGW	Anti-glare (frame: white), 5 sheets	●	—	—	—	—	—
	GT16-70PSCB-012	Clear (USB protective cover type), 5 sheets <sup>*14</sup>	●	—	—	—	—	—
	GT15-70PSCB	Clear, 5 sheets	—	●	—	—	—	—
	GT15-70PSGB	Anti-glare, 5 sheets	—	●	—	—	—	—
	GT15-70PSCW	Clear (frame: white), 5 sheets	—	●	—	—	—	—
	GT15-70PSGW	Anti-glare (frame: white), 5 sheets	—	●	—	—	—	—
	GT11-70PSCB	Clear, 5 sheets	—	—	●	—	—	—
	GT16-60PSCB	Clear, 5 sheets	●	—	—	—	—	—
	GT16-60PSGB	Anti-glare, 5 sheets	●	—	—	—	—	—
GT16-60PSCW	Clear (frame: white), 5 sheets	●	—	—	—	—	—	
GT16-60PSGW	Anti-glare (frame: white), 5 sheets	●	—	—	—	—	—	
GT16-60PSCB-012	Clear (USB protective cover type), 5 sheets <sup>*14</sup>	●	—	—	—	—	—	
GT15-60PSCB	Clear, 5 sheets	—	●	—	—	—	—	
GT15-60PSGB	Anti-glare, 5 sheets	—	●	—	—	—	—	
GT15-60PSCW	Clear (frame: white), 5 sheets	—	●	—	—	—	—	
GT15-60PSGW	Anti-glare (frame: white), 5 sheets	—	●	—	—	—	—	
GT11-60PSCB	Clear, 5 sheets	—	—	●	—	—	—	
GT16H-60PSC	Protective sheet for 6.5" screen (for GT16 Handy GOT)	Clear, 5 sheets	—	—	—	●	—	
GT16-50PSCB	Clear, 5 sheets	●	—	—	—	—	—	
GT16-50PSGB	Anti-glare, 5 sheets	●	—	—	—	—	—	
GT16-50PSCW	Clear (frame: white), 5 sheets	●	—	—	—	—	—	
GT16-50PSGW	Anti-glare (frame: white), 5 sheets	●	—	—	—	—	—	
GT16-50PSCB-012	Clear (USB protective cover type), 5 sheets <sup>*14</sup>	●	—	—	—	—	—	
GT15-50PSCB	Clear, 5 sheets	—	●	—	—	—	—	
GT15-50PSGB	Anti-glare, 5 sheets	—	●	—	—	—	—	
GT15-50PSCW	Clear (frame: white), 5 sheets	—	●	—	—	—	—	
GT15-50PSGW	Anti-glare (frame: white), 5 sheets	—	●	—	—	—	—	
GT11-50PSCB	Clear, 5 sheets	—	—	●	—	—	—	
GT11-50PSGB	Anti-glare, 5 sheets	—	—	●	—	—	—	
GT11-50PSCW	Clear (frame: white), 5 sheets	—	—	●	—	—	—	
GT11-50PSGW	Anti-glare (frame: white), 5 sheets	—	—	●	—	—	—	

## Options

Product name	Model name	Specifications	Applicable model												
			GT16	GT15	GT12	GT11	Handy GOT	GT10							
Protective sheet	GT11H-50PSC	Protective sheet for 5.7" screen (for GT11 Handy GOT)	—	—	—	—	●	—							
	GT10-50PSCB	Clear, 5 sheets	—	—	—	—	—	●							
	GT10-50PSGB	Anti-glare, 5 sheets	—	—	—	—	—	●							
	GT10-50PSCW	Clear (frame: white), 5 sheets	—	—	—	—	—	●							
	GT10-50PSGW	Anti-glare (frame: white), 5 sheets	—	—	—	—	—	●							
	GT10-40PSCB	Clear, 5 sheets	—	—	—	—	—	●							
	GT10-40PSGB	Anti-glare, 5 sheets	—	—	—	—	—	●							
	GT10-40PSCW	Clear (frame: white), 5 sheets	—	—	—	—	—	●							
	GT10-40PSGW	Anti-glare (frame: white), 5 sheets	—	—	—	—	—	●							
	GT10-30PSCB	Clear, 5 sheets	—	—	—	—	—	●							
	GT10-30PSGB	Anti-glare, 5 sheets	—	—	—	—	—	●							
	GT10-30PSCW	Clear (frame: white), 5 sheets	—	—	—	—	—	●							
	GT10-30PSGW	Anti-glare (frame: white), 5 sheets	—	—	—	—	—	●							
	GT10-20PSCB	Clear, 5 sheets	—	—	—	—	—	●							
	GT10-20PSGB	Anti-glare, 5 sheets	—	—	—	—	—	●							
GT10-20PSCW	Clear (frame: white), 5 sheets	—	—	—	—	—	●								
GT10-20PSGW	Anti-glare (frame: white), 5 sheets	—	—	—	—	—	●								
USB protective cover	GT16-UCOV	Protective cover for USB interface on main unit front panel (for replacement)	●	—	—	—	—	—							
	GT15-UCOV		●	—	—	—	—								
	GT11-50UCOV		—	●	—	—	—								
Oil resistant cover <sup>*7</sup>	GT05-90PCO	Oil resistant cover for 15" screen	●	●	—	—	—	—							
	GT05-80PCO	Oil resistant cover for 12.1" screen	●	●	—	—	—								
	GT05-70PCO	Oil resistant cover for 10.4" screen	●	●	—	—	—								
	GT05-60PCO	Oil resistant cover for 8.4" screen	●	●	—	—	—								
	GT16-50PCO	Oil resistant cover for 5.7" screen	●	—	—	—	—								
	GT05-50PCO	Oil resistant cover for 5.7" screen	—	●	—	—	—								
	GT10-40PCO	Oil resistant cover for 4.7" screen	—	—	●	—	—								
	GT10-30PCO	Oil resistant cover for 4.5" screen	—	—	—	●	—								
	GT10-20PCO	Oil resistant cover for 3.7" screen	—	—	—	—	●								
	Emergency stop switch guard	GT16H-60ESCOV	Cover for accidental operation prevention of emergency stop switch (for GT16 Handy GOT)	—	—	—	—	●	—						
GT11H-60ESCOV		Cover for accidental operation prevention of emergency stop switch (for GT11 Handy GOT)	—	—	—	—	—	●							
Stand	GT15-90STAND	Stand for 15" type	●	●	—	—	—	—							
	GT15-80STAND	Stand for 12.1" type	●	●	—	—	—	—							
	GT15-70STAND	Stand for 10.4"/8.4" type	●	●	—	—	—	—							
CF card	GT05-50STAND	Stand for 5.7" type	—	—	—	—	—	●							
	GT05-MEM-128MC	128MB flash ROM	●	●	●	●	●	—							
	GT05-MEM-256MC	256MB flash ROM	●	●	●	●	●	—							
	GT05-MEM-512MC	512MB flash ROM	●	●	●	●	●	—							
	GT05-MEM-1GC	1GB flash ROM	●	●	●	●	●	—							
	GT05-MEM-2GC	2GB flash ROM	●	●	●	●	●	—							
	GT05-MEM-4GC	4GB flash ROM	●	●	●	●	●	—							
Memory card adapter	GT05-MEM-8GC	8GB flash ROM	●	●	●	●	●	—							
	GT05-MEM-16GC	16GB flash ROM	●	●	●	●	●	—							
Attachment	GT15-70ATT-98	Attachment for 10.4" type	A985GOT <sup>*8</sup>	A870GOT-SWS	A870GOT-TB	A870GOT-TWS	A870GOT-SW	A870GOT-SB	GT167 →GT157 GT1275	●	—	—	—	—	
	GT15-70ATT-87	Attachment for 10.4" type	A97 / GOT	A870GOT-TW	A870GOT-TW	A870GOT-TW	A870GOT-TW	A870GOT-TW	A870GOT-TW	●	—	—	—	—	
	GT15-60ATT-97	Attachment for 8.4" type	A960GOT	A870GOT-EWS	A77GOT-EL-S5	A870GOT-EW	A77GOT-EL-S3	A870GOT-EB	A77GOT-EL	GT166 →GT156 GT1265	●	—	—	—	
	GT15-60ATT-87	Attachment for 8.4" type	A960GOT	A77GOT-CL-S5	A77GOT-L-S5	A77GOT-CL-S3	A77GOT-L-S3	A77GOT-CL	A77GOT-L	●	—	—	—	—	
	GT15-60ATT-77	Attachment for 8.4" type	A956WGOT	A85 / GOT	A85 / GOT	A85 / GOT	A85 / GOT	A85 / GOT	A85 / GOT	GT1655 →GT155 GT115	●	—	—	—	
	GT15-50ATT-95W	Attachment for 5.7" type	A956WGOT	A85 / GOT	A85 / GOT	A85 / GOT	A85 / GOT	A85 / GOT	A85 / GOT	●	—	—	—	—	
	GT15-50ATT-85	Attachment for 5.7" type	A85 / GOT	A85 / GOT	A85 / GOT	A85 / GOT	A85 / GOT	A85 / GOT	A85 / GOT	●	—	—	—	—	
	GT15-BAT	Battery for backup of clock data and maintenance time notification data	● <sup>*11</sup>	—	—	—	—	—	—	—	—	—	—	—	—
	GT11-50BAT	Battery for backup of clock data, alarm history, recipe data, time action set values (for replacement)	● <sup>*12</sup>	—	—	—	—	—	—	—	—	—	—	—	—

\*1 : Function version C or earlier.  
 \*2 : Function version D or later.  
 \*3 : Function version B or earlier.  
 \*4 : Function version C or later.  
 \*5 : Excluding the GT115-Q□BDQ and GT115-Q□BDA.  
 \*6 : Excluding the GT1020.  
 \*7 : Check if the oil resistant cover can be used in the actual environment before use.  
 \*8 : When using the oil resistant cover, the front USB interface and human sensor cannot be used.  
 \*9 : Including the GP250□ and GP260□ manufactured by Pro-face.  
 \*10 : Can be used only with the GT16 Handy.  
 \*11 : Excluding GT1655. Application: Battery for backup of clock data, maintenance time notification data, system log data, SRAM user area (for replacement).  
 \*12 : Can be used only with the GT1655. Application: Battery for backup of clock data, maintenance time notification data, system log data, SRAM user area (for replacement).  
 \*13 : Can be used only with the GT16 Handy. Application: Battery for backup of clock data, maintenance time notification data, system log data, SRAM user area (for replacement).  
 \*14 : The front-face USB interface cannot be used when using a protective sheet that covers the USB protective cover area.





Cables for third party FA devices

Product name	Model name	Cable length	Third party products #1	GOT connection destination	Applicable model #2						
					GT16	GT15	GT12	GT11	Handy GOT	GT10	
RS-232 cable	Cable for YASKAWA Electric PLC	GT09-C30R20201-9P	3m	PLC CPU: GL120/GL130/MP-920/MP-930/CP-9200(H)/PROGIC-8 (port 1) MEMOBUS module: JAMSC-IF60/JAMSC-IF61 Communication module: 217IF/CP-217IF (when connected to CN1)/217IF-01/218IF-01							
		GT09-C30R20202-15P	3m		PLC CPU: PROGIC-8 (port 2)						
		GT09-C30R20203-9P	3m		PLC CPU: CP-9300MS						
		GT09-C30R20204-14P	3m		PLC CPU: MP-940						
	Cable for Yokogawa Electric PLC	GT09-C30R20301-9P	3m	MEMOBUS module: CP-217IF (when connected to CN2) Yokogawa Electric personal computer module: LC01-0N/LC02-0N CPU port/D-sub 9-pin conversion cable: KM10-0C/KM10-0S Personal computer link module: F3LC01-1N/F3LC11-1N/F3LC11-1F/F3LC12-1F PLC CPU: NFPC100/NFJT100							
		GT09-C30R20305-9S	3m		Converter: ML2-□						
RS-422 cable	Cable for Allen-Bradley (Rockwell Automation, Inc.) PLC	GT09-C30R20304-9S	3m	PLC CPU: SL500 series							
		GT09-C30R20701-9S	3m		HMI adapter						
	Cable for OMRON PLC	GT09-C30R40101-9P	3m	PLC CPU: CV500/CV1000/CV2000/CVM1 Serial communication unit: CJ1W-SCU41 Serial communication board: CQM1-SCB41/CS1W-SCB41 Communication board: C200HW-COM03/COM06							
		GT09-C100R40101-9P	10m		Base mount type host link unit: C200H-LK202-V1/C500-LK201-V1						
		GT09-C200R40101-9P	20m								
		GT09-C300R40101-9P	30m								
		GT09-C30R40102-9P	3m								
		GT09-C100R40102-9P	10m								
		GT09-C200R40102-9P	20m								
		GT09-C300R40102-9P	30m								
GT09-C30R40103-5T		3m									
GT09-C100R40103-5T		10m									
GT09-C200R40103-5T	20m										
Cable for KEYENCE PLC	GT09-C30R41101-5T	3m	Communication board: CP1W-CIF11/CP1W-CIF12/CJ1W-CIF11								
	GT09-C100R41101-5T	10m									
	GT09-C200R41101-5T	20m									
	GT09-C300R41101-5T	30m									
Cable for Sharp Manufacturing Systems PLC	GT09-C30R40601-15P	3m	Multi-communication unit: KV-L20/KV-L20R/KV-L20V (port 2)								
	GT09-C100R40601-15P	10m									
	GT09-C200R40601-15P	20m									
	GT09-C300R40601-15P	30m									
	GT09-C30R40602-15P	3m									
	GT09-C100R40602-15P	10m									
	GT09-C200R40602-15P	20m									
	GT09-C300R40602-15P	30m									
	GT09-C30R40603-6T	3m									
	GT09-C100R40603-6T	10m									
Cable for JTEKT PLC	GT09-C200R41201-6C	20m	PLC CPU: PC3J/PC3JL Communication module: PC/CMP2-LINK								
	GT09-C300R41201-6C	30m									
	GT09-C30R40501-15P	3m									
	GT09-C100R40501-15P	10m									
Cable for TOSHIBA PLC	GT09-C200R40501-15P	20m	PLC CPU: T2/T3H/model3000(S3)								
	GT09-C300R40501-15P	30m									
	GT09-C30R40502-6C	3m									
	GT09-C100R40502-6C	10m									
	GT09-C200R40502-6C	20m									
	GT09-C300R40502-6C	30m									
	GT09-C30R40503-15P	3m									
	GT09-C100R40503-15P	10m									
	GT09-C200R40503-15P	20m									
	GT09-C300R40503-15P	30m									
Cable for Hitachi Industrial Equipment Systems PLC	GT09-C30R40401-7T	3m	PLC CPU: T2E/model2000(S2)								
	GT09-C100R40401-7T	10m									
	GT09-C200R40401-7T	20m									
	GT09-C300R40401-7T	30m									
Cable for Hitachi PLC	GT09-C30R41301-9S	3m	Intelligent serial port module: COMM-H/COMM-2H								
	GT09-C100R41301-9S	10m									
	GT09-C200R41301-9S	20m									
Cable for Fuji Electric FA Components & Systems PLC	GT09-C300R41301-9S	30m	PLC CPU: LQP510 Communication module: LQE565/LQE165								
	GT09-C30R41001-6T	3m									
	GT09-C100R41001-6T	10m									
Cable for Yaskawa Electric PLC	GT09-C200R41001-6T	20m	RS-232C/485 interface capsule: FFK120A-C10 General interface module: NC1L-RS4/FFU120B								
	GT09-C300R41001-6T	30m									
	GT09-C30R40201-9P	3m									
	GT09-C100R40201-9P	10m									
	GT09-C200R40201-9P	20m									
	GT09-C300R40201-9P	30m									
Cable for Yokogawa Electric PLC	GT09-C30R40202-14P	3m	MEMOBUS module: JAMSC-120NOM27100/JAMSC-IF612								
	GT09-C100R40202-14P	10m									
	GT09-C200R40202-14P	20m									
	GT09-C300R40202-14P	30m									
	GT09-C30R40301-6T	3m									
	GT09-C100R40301-6T	10m									
	GT09-C200R40301-6T	20m									
	GT09-C300R40301-6T	30m									
	GT09-C30R40302-6T	3m									
	GT09-C100R40302-6T	10m									
Cable for Temperature controller	GT09-C200R40302-6T	20m	PLC CPU: MP940								
	GT09-C300R40302-6T	30m									
	GT09-C30R40303-6T	3m									
	GT09-C100R40303-6T	10m									
	GT09-C200R40303-6T	20m									
	GT09-C300R40303-6T	30m									
Cable for PLC	GT09-C30R40304-6T	3m	Personal computer link module: F3LC11-2N								
	GT09-C100R40304-6T	10m									
	GT09-C200R40304-6T	20m									
	GT09-C300R40304-6T	30m									
	GT09-C30R40304-6T	3m									
	GT09-C100R40304-6T	10m									
Cable for Temperature controller	GT09-C200R40304-6T	20m	Personal computer link module: LC02-0N								
	GT09-C300R40304-6T	30m									
	GT09-C30R40304-6T	3m									
	GT09-C100R40304-6T	10m									
	GT09-C200R40304-6T	20m									
	GT09-C300R40304-6T	30m									
Cable for Temperature controller	GT09-C30R40304-6T	3m	Temperature controller: GREEN series								
	GT09-C100R40304-6T	10m									
	GT09-C200R40304-6T	20m									
	GT09-C300R40304-6T	30m									
	GT09-C30R40304-6T	3m									
	GT09-C100R40304-6T	10m									
Cable for Temperature controller	GT09-C200R40304-6T	20m	Temperature controller: UT2000 series								
	GT09-C300R40304-6T	30m									
	GT09-C30R40304-6T	3m									
	GT09-C100R40304-6T	10m									
	GT09-C200R40304-6T	20m									
	GT09-C300R40304-6T	30m									

#1 : Items listed above are developed by Mitsubishi Electric System & Service Co., LTD., and sold through your local sales office.  
 #2 : The applicable connection configuration and cable vary depending on the GOT main unit. For more details, see the GOT1000 Series Handbook and the GOT1000 Series Connection Manual.  
 #3 : RS-422 cables less than 10m and the RS-232 cable less than 3m can be used when the connector conversion box for the Handy GOT is used.  
 #4 : Can be used only with the GT105□ and GT104□.  
 #5 : To connect with RS-422/485 interface of GT16 main unit, an RS-422 conversion cable (GT16-C02R4-9S) is necessary.

Backward compatibility

Project data

**GT Designer/GT Designer2 → GT Works3 compatibility \***  
 Project data created in GT Designer2 can be used in GT Works3.  
 Project data created in GT Designer can be used in GT Works3 after the data is converted by GT Designer2/GT Designer2 Classic.

**GOT900 series → GOT1000 series compatibility \***  
**Using data from the GOT-A900 series**  
 Project data for the GOT-A900 series can be used in the GOT1000 series.  
 For the details, see Technical Bulletin No.GOT-A-0009 "Precautions when Replacing GOT-A900 Series with GOT1000 Series".

**Using data from the GOT-F900 series**  
 Project data for the GOT-F900 series can be used in the GOT1000 series.  
 For the details, see "Replacement Guidance (for GOT1000 Series) – From GOT-F900/A950 Handy Series to GOT1000 Series" (JY997D39301).

\*Some data and functions cannot be used in the GOT1000 series.

Cables

- For details on using the GOT-A900 series bus connection cables, RS-422 cables and RS-232 cables with the GOT1000 series, see Technical Bulletin No.GOT-A-0009.
- For details regarding use of the GOT-F900 series RS-422 cable with the GOT1000, please contact your local sales office.
- The bus connection cables, RS-422 cables and RS-232 cables for the GOT1000 series cannot be used for the GOT900 series.  
 (For details regarding use of bus connection cables in systems where both the GOT-A900 and GOT1000 series coexist, see Technical Bulletin No. GOT-A-0009.)

Panel cut dimensions

- GOT900 series → GOT1000 series compatibility**
- The A985GOT(-V) and GT1685/GT1585, A975/970GOT(-B) and GT167□/GT157□, F940GOT and GT1655/GT155□/GT115□/GT105□ have the same panel dimensions, respectively. Therefore, it is not necessary to change the mounting hole size.
  - Although the A95□ differs in panel cut dimensions from the GT1655, GT155□, GT115□-Q□BDQ and GT115□-Q□BDA, the GOT900 series model can be replaced with any of the GOT1000 series ones without changing the mounting hole size.

Selection of optional units and devices

Using the optional functions listed in the table below may require optional devices or units as shown. Note that the availability of the function or the required optional units and devices may vary depending on the model of the GOT main unit.  
 Functions not listed in the table below may also require a CF card or a USB memory device depending on the application. For details, see "Function list" (page 70) and "GT Designer3 Version1 Screen Design Manual."  
 An optional function board or a CF card may be necessary depending on the function version and hardware version of the GOT main unit or available space of the user area.  
 For details, see "Optional function board, CF card, and USB memory selection <GT16/GT15/GT12/GT11>" (page 82).  
 — : Function that cannot be used on the model

Function	Required optional units and devices					
	GT16	GT16 Handy	GT15	GT12	GT11	GT10
Memory extension	CF card	CF card	Optional function board: GT15-QFNB□□M or GT15-MESB48M CF card	—	—	—
Multi-channel function	Not necessary	Not necessary	Optional function board: GT15-QFNB□□M or GT15-MESB48M	Not necessary	—	—
Multimedia function#1	Multimedia unit: GT16M-MMR CF card for multimedia	—	—	—	—	—
Video/RGB function	Video input#1 #2	Video input unit: GT16M-V4 or Video/RGB input unit: GT16M-V4R1	—	Video input unit: GT15V-75V4 or Video/RGB input unit: GT15V-75V4R1	—	—
	RGB input#1 #2	RGB input unit: GT16M-R2 or Video/RGB input unit: GT16M-V4R1	—	RGB input unit: GT15V-75R1 or Video/RGB input unit: GT15V-75V4R1	—	—
	RGB output#1 #2	RGB output unit: GT16M-ROUT	—	RGB output unit: GT15V-75ROUT	—	—
CF card unit/CF card extension unit	CF card unit: GT15-CFCD or CF card extension unit: GT15-CFEX-C08SET	—	CF card unit: GT15-CFCD or CF card extension unit: GT15-CFEX-C08SET	—	—	—
Sound output function	Sound output unit: GT15-SOUT	—	Sound output unit: GT15-SOUT	—	—	—
Remote personal computer operation function (serial)#1 #2	RGB input unit: GT16M-R2 or Video/RGB input unit: GT16M-V4R1	—	RGB input unit: GT15V-75R1 or Video/RGB input unit: GT15V-75V4R1	—	—	—
External input/output function, operation panel function	External input/output unit: GT15-DIO or GT15-DIOR	—	External input/output unit: GT15-DIO or GT15-DIOR	—	—	—
File transfer function (FTP client)	USB memory device or CF card	USB memory or CF card	CF card	—	—	—
Gateway function	Not necessary	Not necessary	Ethernet communication unit: GT15-J71E71-100	Not necessary	—	—
MES interface function	Optional function board: GT16-MESB	—	Ethernet communication unit: GT15-J71E71-100 Optional function board: GT15-MESB48M	—	—	—
Document display function	CF card	CF card	Optional function board: GT15-QFNB□□M or GT15-MESB48M CF card	—	—	—
Operation log function	CF card	CF card	CF card	—	—	—
Backup/restoration function	USB memory device or CF card	USB memory or CF card	CF card	CF card	—	—
Maintenance time notification function	Not necessary (equipped with battery as standard feature)	Not necessary (equipped with battery as standard feature)	Battery: GT15-BAT	—	—	—
CNC data input/output function#3	USB memory device or CF card	—	CF card	—	—	—
Ladder monitor function#4 (when using Q/L/QnA ladder monitor function)	Not necessary	Not necessary	Optional function board: GT15-QFNB□□M or GT15-MESB48M	—	—	—
SFC monitor function#4	CF card	CF card	Optional function board: GT15-QFNB□□M or GT15-MESB48M CF card	—	—	—
Motion SFC monitor function#4	CF card	CF card	Optional function board: GT15-QFNB□□M or GT15-MESB48M CF card	—	—	—
Ladder editor function#5	CF card	CF card	Optional function board: GT15-QFNB□□M or GT15-MESB48M CF card	—	—	—
Report function	Printer unit: GT15-PRN (when PictBridge-compatible printer is used) CF card	—	Printer unit: GT15-PRN (when PictBridge-compatible printer is used) CF card	—	—	—
Hard copy function	Saving files on CF card	CF card	CF card	CF card	—	—
	Printing by printer	Printer unit: GT15-PRN (when PictBridge-compatible printer is used)	—	Printer unit: GT15-PRN (when PictBridge-compatible printer is used)	—	—

#1 : Excluding the GT16□□-VNB□ and GT1655. #4 : Excluding QVGA of the GT155□.  
 #2 : For the GT15, only the GT1585V and GT1575V are applicable. #5 : Excluding the GT155□.  
 #3 : Only XGA and SVGA of the GT16 and GT15 are applicable. #6 : Including the GT11 Handy.

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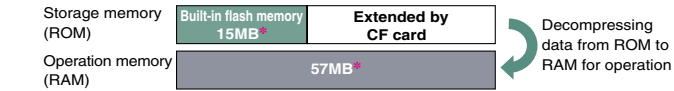


Optional function board, CF card, and USB memory selection <GT16/GT15/GT12/GT11>

When using the GT16

**When using optional functions & extended functions**  
When using the MES interface function, install the optional function board GT16-MESB. No optional boards are necessary when using other functions. Some functions, however, may require a CF card due to OS installation. See below for details.

**Storage memory (ROM) and operation memory (RAM)**  
The GOT operates by decompressing the OS and project data, which is stored in the storage memory (ROM), into the operation memory (RAM). Since the GT16 compresses some data before storing it in the storage memory (ROM), the data size becomes larger when decompressed in the operation memory (RAM). The GT16 has a 15MB\* built-in flash memory for storage memory (ROM) as a standard feature. The CF card expands the memory capacity if the OS and project data exceeds 15MB\*. The GT16 has a 57MB\* operation memory (RAM) as a standard feature. The operation memory is not extendable. The built-in flash memory is for "drive C". The CF card is for "drive A (standard)" or "drive B (extension)."

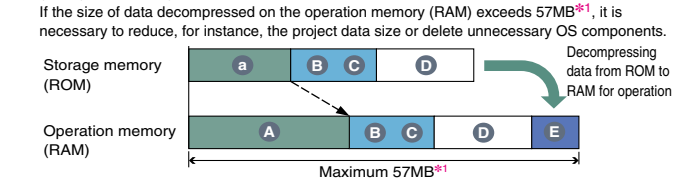


\* Differs depending on the GOT main unit model.

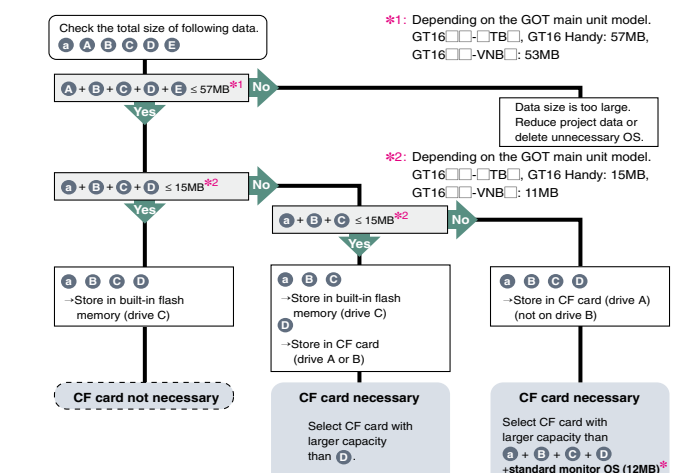
**Types and capacities of data and CF card selection**

Data type	Data capacity
<b>A</b> Extended function OS and optional function OS stored in ROM	Capacity of "GT16(ROM)" in [Table A] on page 84
<b>A</b> Extended function OS and optional function OS decompressed in RAM	Capacity of "GT16(RAM)" in [Table A] on page 84
<b>B</b> Communication driver	Check with [Table B] on page 84.
<b>C</b> Special data	Check with a screen design software.
<b>D</b> Project data	Check with a screen design software.
<b>E</b> Buffering area	Check with a screen design software.

As for the extended function OS and optional function OS, when decompressing the compressed data **A** in the storage memory (ROM) to the operation memory (RAM), the data size becomes larger as shown in **A**. The buffering area **E** is an area for storing resource data for the functions such as logging and advanced alarms. It uses the operation memory (RAM). The data size differs depending on the setting. When the file save mode is specified in the screen design software, the accumulated resource data is stored in the designated storage (drive A or B). (The storage memory (ROM) is not used.) If the size of data decompressed on the operation memory (RAM) exceeds 57MB\*<sup>1</sup>, it is necessary to reduce, for instance, the project data size or delete unnecessary OS components.



Necessity and capacity of the CF card depends on the data size. Determine the necessity and capacity of the CF card according to the following flow chart.



\*: When storing the extended function OS and optional function OS in the CF card (drive A), the standard monitor OS (standard monitor OS, standard font, etc.) needs to be stored in the CF card (drive A).

**CF card and USB memory capacities**

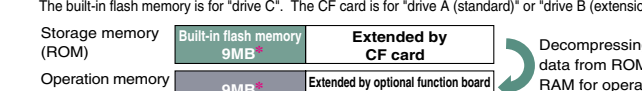
The CF card and USB memory capacities are as follows. FAT16 format: max. 2GB, FAT32 format: max. 32GB. (Boot OS and standard monitor OS of GT Designer3 Ver.1.17T or later must be installed in order to use a CF card or USB memory with a capacity exceeding 2GB. Such CF cards and USB memories cannot be used with GT Works2 / GT Designer2.)

When using the GT15

**When using optional functions & extended functions**  
When using the following function, install the optional function board GT15-MESB48M. • MES interface function  
When using the following function, install the optional function board GT15-QFNBM or GT15-MESB48M. • SFC monitor function • Motion SFC monitor function  
When using the following functions, install the optional function board GT15-QFNBM or GT15-MESB48M. • Multi-channel function • Document display function • MELSEC-Q/L/QnA ladder monitor function

The following GOT requires no optional function boards when using optional functions other than above. • GT15: hardware version D or later  
To activate the built-in optional function board in the GOT, it is necessary to install the standard monitor OS on the GOT using GT Designer Version 2.55H or later. Some functions, however, require an optional function board with expansion memory (GT15-QFNBM or GT15-MESB48M) and a CF card. See below for details.

**Storage memory (ROM) and operation memory (RAM)**  
The GOT operates by decompressing the OS and project data, which is stored in the storage memory (ROM), into the operation memory (RAM). The GT15 has a 9MB\* memory for the storage memory (ROM) and the operation memory (RAM) as a standard feature. When the OS or the project data exceeds 9MB\*, use a CF card and an optional function board with expansion memory (GT15-QFNBM or GT15-MESB48M) to increase the memory capacity. The built-in flash memory is for "drive C". The CF card is for "drive A (standard)" or "drive B (extension)."

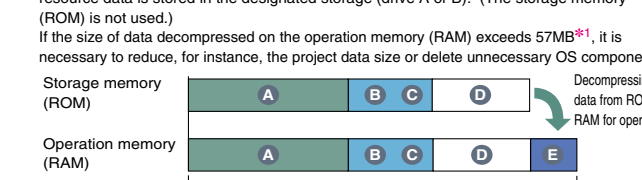


\* Differs depending on the GOT main unit model: GT15-□□-□□TB□: 9MB, GT15-□□-VNB□: 5MB

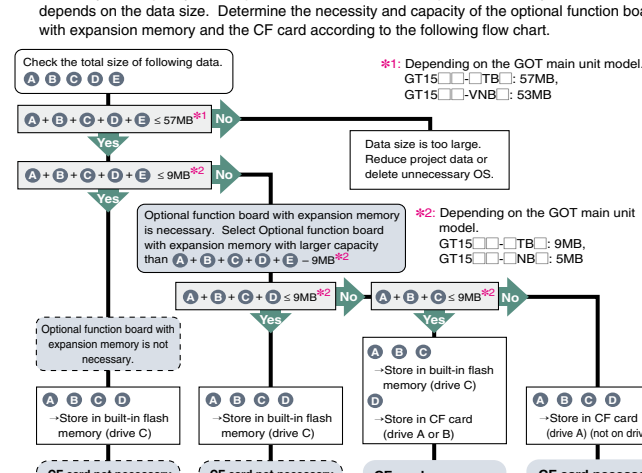
**Types and capacities of data and CF card selection**

Data type	Data capacity
<b>A</b> Extended function OS, optional function OS	Capacity of "GT15" on [Table A] on page 84
<b>B</b> Second communication driver and onwards	150KB for each
<b>C</b> Special data	Check with a screen design software.
<b>D</b> Project data	Check with a screen design software.
<b>E</b> Buffering area	Check with a screen design software.

The buffering area **E** is an area for storing resource data for the functions such as logging and advanced alarms. It uses the operation memory (RAM). The data size differs depending on the setting. When the file save mode is specified in the screen design software, the accumulated resource data is stored in the designated storage (drive A or B). (The storage memory (ROM) is not used.) If the size of data decompressed on the operation memory (RAM) exceeds 57MB\*<sup>1</sup>, it is necessary to reduce, for instance, the project data size or delete unnecessary OS components.



Necessity and capacity of the optional function board with expansion memory and the CF card depends on the data size. Determine the necessity and capacity of the optional function board with expansion memory and the CF card according to the following flow chart.



\*: When storing the extended function OS and optional function OS in the CF card (drive A), the standard monitor OS (standard monitor OS, standard font, first communication driver, etc.) needs to be stored in the CF card (drive A).

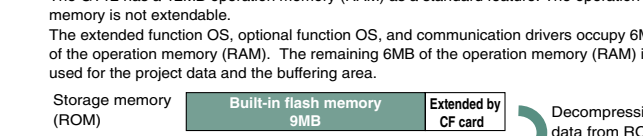
**CF card capacities**

The CF card capacities are as follows. FAT16 format: max. 2GB, FAT32 format: not usable

When using the GT12

**When using optional functions & extended functions**  
The optional function board is not required when using the optional functions or extended functions. Some functions, however, may require a CF card due to OS installation. See below for details.

**Storage memory (ROM) and operation memory (RAM)**  
The GOT operates by decompressing the OS and project data, which is stored in the storage memory (ROM), into the operation memory (RAM). The GT12 has a 9MB built-in flash memory for storage memory (ROM) as a standard feature. The CF card expands the memory capacity if the OS and project data exceeds 9MB. Up to 6MB of project data can be stored in the storage memory (ROM) or a CF card. When storing the project data to the storage memory (ROM), the maximum size of the project data may be less than 6MB depending on the data size of the extended function OS, optional function OS, and communication drivers.

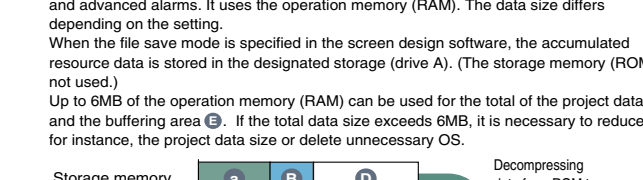


The built-in flash memory is for "drive C". The CF card is for "drive A (standard)".

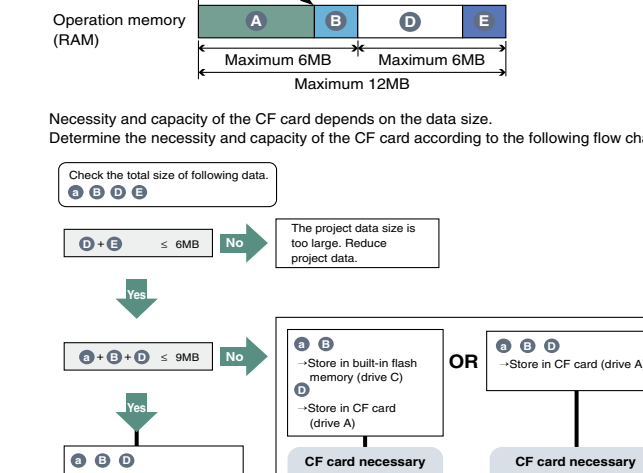
**Types and capacities of data and CF card selection**

Data type	Data capacity
<b>A</b> Extended function OS and optional function OS stored in ROM	Capacity of "GT12(ROM)" in [Table A] on page 84
<b>A</b> Extended function OS and optional function OS decompressed in RAM	Capacity of "GT12(RAM)" in [Table A] on page 84
<b>B</b> Communication driver	Check with [Table B] on page 84.
<b>D</b> Project data	Check with a screen design software.
<b>E</b> Buffering area	Check with a screen design software.

As for the extended function OS and optional function OS, when decompressing the compressed data **A** in the storage memory (ROM) to the operation memory (RAM), the data size becomes larger as shown in **A**. Up to 6MB of the operation memory (RAM) can be used for the total of the data **A** and the data **E**. The buffering area **E** is an area for storing resource data for the functions such as logging and advanced alarms. It uses the operation memory (RAM). The data size differs depending on the setting. When the file save mode is specified in the screen design software, the accumulated resource data is stored in the designated storage (drive A). (The storage memory (ROM) is not used.) Up to 6MB of the operation memory (RAM) can be used for the total of the project data **D** and the buffering area **E**. If the total data size exceeds 6MB, it is necessary to reduce, for instance, the project data size or delete unnecessary OS.



Necessity and capacity of the CF card depends on the data size. Determine the necessity and capacity of the CF card according to the following flow chart.



\*: When storing the extended function OS and optional function OS in the CF card (drive A), the standard monitor OS (standard monitor OS, standard font, etc.) needs to be stored in the CF card (drive A).

**CF card capacities**

The CF card capacities are as follows. FAT16 format: max. 2GB, FAT32 format: not usable

When using the GT11

**When using optional functions**  
Since the following GOT models have a built-in optional function board (GT11-50FNB), it is unnecessary to mount an optional function board to use optional functions shown in [Table A]. • GT115-□□-BDQ • GT115-□□-BDA • GT1155-QTBD • GT115-□□-HS-Q□BD: Version B or later • GT115-□□-Q□BD: Version C or later

**CF card capacities**  
The CF card capacities are as follows. FAT16 format: max. 2GB, FAT32 format: not usable

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MELSOFT GT Works3 (English version) operating environment

Item	Details																																					
PC	PC/AT compatible machine on which the following OS operates																																					
OS	<ul style="list-style-type: none"> <li>Microsoft® Windows® 2000 Professional Service Pack 4 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*1</li> <li>Microsoft® Windows® XP Professional Service Pack 2 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*1,*3,*4</li> <li>Microsoft® Windows® XP Home Edition Service Pack 2 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*1,*3,*4</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft® Windows Vista® Ultimate (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2,*3,*4</li> <li>Microsoft® Windows Vista® Enterprise (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2,*3,*4</li> <li>Microsoft® Windows Vista® Business (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2,*3,*4</li> <li>Microsoft® Windows Vista® Home Premium (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2,*3,*4</li> <li>Microsoft® Windows Vista® Home Basic (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2,*3,*4</li> <li>Microsoft® Windows® 7 Ultimate (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2,*3,*5,*9,*10</li> <li>Microsoft® Windows® 7 Enterprise (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2,*3,*5,*9,*10</li> <li>Microsoft® Windows® 7 Professional (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2,*3,*5,*9,*10</li> <li>Microsoft® Windows® 7 Home Premium (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2,*3,*9,*10</li> <li>Microsoft® Windows® 7 Starter (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2,*3,*4</li> </ul>																																				
CPU	1 GHz or more recommended																																					
Required memory	512 MB or more recommended	1 GB or more recommended																																				
Display	Resolution XGA (1024 x 768 dots) or more																																					
Available hard disk space	To install GT Designer3: 2 GB or more recommended To run GT Designer3: 512 MB or more recommended																																					
Display colors	High Color (16 bits) or more																																					
Software	<p>Simulation on a PC requires the following software:</p> <ul style="list-style-type: none"> <li>* GX Works2 version 1.12N or later*6 or GX Simulator version 5.00A or later*6.</li> <li>*The applicable software version of GX Works2 or GX Simulator varies depending on the PLC CPU to be simulated.</li> </ul> <table border="1"> <thead> <tr> <th>PLC CPU to be simulated</th> <th>GX Simulator</th> <th>GX Works2</th> </tr> </thead> <tbody> <tr> <td>QCPU (A mode), ACPU, motion controller CPU (A series)</td> <td>Version 5.00A or later</td> <td>—</td> </tr> <tr> <td>QnACPU</td> <td rowspan="2">Version 5.40E or later</td> <td rowspan="2">Version 1.24A or later</td> </tr> <tr> <td>FX0 series, FX0N series, FX0S series, FX1 series, FX1N series, FX1NC series, FX1S series, FX2 series, FX2C series, FX2N series, FX2NC series</td> </tr> <tr> <td>QCPU (Q mode) (excluding Q00J, Q00, and Q01 CPUs)</td> <td rowspan="2">Version 6.00A or later</td> <td rowspan="2">Version 1.12N or later</td> </tr> <tr> <td>Q00JCPU, Q00CPU, Q01CPU</td> </tr> <tr> <td>Q02PHCPU, Q06PHCPU</td> <td>Version 7.20W or later</td> <td rowspan="4">—</td> </tr> <tr> <td>Q12PHCPU, Q25PHCPU</td> <td>Version 6.10L or later</td> </tr> <tr> <td>Q12PRHCPU, Q25PRHCPU</td> <td>Version 6.20W or later</td> </tr> <tr> <td>FX3uc Series</td> <td>Version 7.08J or later</td> </tr> <tr> <td>FX3u Series*7</td> <td rowspan="2">Version 7.22Y or later</td> <td rowspan="2">Version 1.24A or later</td> </tr> <tr> <td>FX3a Series*7</td> </tr> <tr> <td>Q00UJCPU, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU, Q20UDHCPU, Q26UDHCPU, Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU, Q20UDEHCPU, Q26UDEHCPU</td> <td>Version 7.23Z or later</td> <td>Version 1.12N or later</td> </tr> <tr> <td>LCPU</td> <td>—</td> <td>Version 1.24A or later</td> </tr> <tr> <td>Q50UDEHCPU, Q100UDEHCPU</td> <td>—</td> <td>Version 1.30G or later</td> </tr> </tbody> </table>		PLC CPU to be simulated	GX Simulator	GX Works2	QCPU (A mode), ACPU, motion controller CPU (A series)	Version 5.00A or later	—	QnACPU	Version 5.40E or later	Version 1.24A or later	FX0 series, FX0N series, FX0S series, FX1 series, FX1N series, FX1NC series, FX1S series, FX2 series, FX2C series, FX2N series, FX2NC series	QCPU (Q mode) (excluding Q00J, Q00, and Q01 CPUs)	Version 6.00A or later	Version 1.12N or later	Q00JCPU, Q00CPU, Q01CPU	Q02PHCPU, Q06PHCPU	Version 7.20W or later	—	Q12PHCPU, Q25PHCPU	Version 6.10L or later	Q12PRHCPU, Q25PRHCPU	Version 6.20W or later	FX3uc Series	Version 7.08J or later	FX3u Series*7	Version 7.22Y or later	Version 1.24A or later	FX3a Series*7	Q00UJCPU, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU, Q20UDHCPU, Q26UDHCPU, Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU, Q20UDEHCPU, Q26UDEHCPU	Version 7.23Z or later	Version 1.12N or later	LCPU	—	Version 1.24A or later	Q50UDEHCPU, Q100UDEHCPU	—	Version 1.30G or later
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Q50UDEHCPU, Q100UDEHCPU	—	Version 1.30G or later																																				
Others	Mouse, keyboard, printer, CD-ROM drive, sound function (sound card)*8 and loudspeakers*8 used with the above OS																																					
Applicable GOT	GOT1000 Series																																					

\*1 : Installation requires administrator authority. Simulating the GOT-A900 requires administrator authority.  
 \*2 : Installation requires administrator authority. Using GT Works3 requires an account higher than the standard user.  
 To use GT Works3 with another application, if an administrator account is used to run the application then use an administrator account to run GT Works3.  
 Simulating the GOT-A900 requires administrator authority.  
 \*3 : The following functions are not supported:  
 Compatibility Mode, Fast User Switching, Desktop Theme (Font) Change, Remote Desktop  
 \*4 : Only the 32-bit OS is applicable.  
 \*5 : Windows XP Mode is not supported.  
 \*6 : Use GT Simulator3, GX Developer, GX Simulator, and GX Works2 of the same language version.  
 \*7 : The GOT-A900 cannot be simulated.  
 \*8 : May be required when the simulation function is used.  
 \*9 : Windows Touch features are not supported.  
 \*10 : The 32-bit OS and the 64-bit OS (NEW) are applicable.

GT SoftGOT1000 Version3 (English version) operating environment

Item	Description	
	With DOS/V personal computer	With PC CPU module
Personal computer	PC/AT compatible machine on which the following OS operates	CONTEC PC CPU unit (PPC-852-212, PPC-852-217, PPC-852-226)*7
OS	<ul style="list-style-type: none"> <li>Microsoft® Windows® 2000 Professional Service Pack 4 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*2,*4</li> <li>Microsoft® Windows® XP Professional Service Pack 2 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*3,*4,*9</li> <li>Microsoft® Windows® XP Home Edition Service Pack 2 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*3,*4,*9</li> <li>Microsoft® Windows® XP Embedded (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*3,*4,*9</li> <li>Microsoft® Windows Vista® Ultimate (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*3,*4,*9</li> <li>Microsoft® Windows Vista® Enterprise (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*3,*4,*9</li> <li>Microsoft® Windows Vista® Business (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*3,*4,*9</li> <li>Microsoft® Windows Vista® Home Premium (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*3,*4,*9</li> <li>Microsoft® Windows Vista® Home Basic (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*3,*4,*9</li> <li>Microsoft® Windows® 7 Ultimate (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*3,*4,*12,*13,*14</li> <li>Microsoft® Windows® 7 Enterprise (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*3,*4,*12,*13,*14</li> <li>Microsoft® Windows® 7 Professional (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*3,*4,*12,*13,*14</li> <li>Microsoft® Windows® 7 Home Premium (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*3,*4,*13,*14</li> <li>Microsoft® Windows® 7 Starter (English, Simplified Chinese, Traditional Chinese, Korean, German versions)*3,*4,*9</li> </ul>	
CPU	Recommended: 1GHz or more	
Required memory	Other than Microsoft® Windows Vista®, Microsoft® Windows® 7: 512MB or more Microsoft® Windows Vista®, Microsoft® Windows® 7: 1GB or more recommended	
Display	Resolution of VGA (640 x 480 dots) or more	
Free hard disk space*1	For installation: 2GB or more recommended For execution: 512MB or more recommended	
Display colors	High Color (16 bit) or more	
Hardware*6	GT15-SGTKEY-U (License key (for USB port))	GT15-SGTKEY-U (License key (for USB port))
Software	When creating or editing project data : GT Designer3*5 When using with PX Developer : PX Developer Version 1.14Q or later GT Designer3 Version 1.01B or later	
Other	Mouse, keyboard, printer, CD-ROM drive, sound function (sound speaker), or speaker	

Specification

Item	Description
Resolution (dots)	640 x 480, 800 x 600, 1024 x 768, 1280 x 1024, 1600 x 1200 Specifiable resolution (640 to 1920 x 480 to 1200)
Display colors	65,536 colors
Memory capacity	57MB
Connection configuration*10	Bus connection*11, CPU direct connection, computer link connection, CC-Link IE Controller Network connection, CC-Link IE Field Network connection, MELSECNET connection, Ethernet connection

\*1 : Use of GT Designer3 and PX Developer requires additional memory space. For free space required when using the PX Developer monitoring tool, refer to the PX Developer Version1 Operation Manual (Monitor Tool). Additional memory space is also required when using user-created applications.  
 \*2 : Administrator authority is required to install GT SoftGOT1000.  
 \*3 : Administrator authority is required to install and operate GT SoftGOT1000.  
 \*4 : The following functions are not supported.  
 • Compatibility Mode • Fast User Switching  
 • Desktop Theme (Font) Change • Remote Desktop  
 \*5 : GT Designer3 and GT SoftGOT1000 must be installed from the same GT Works3 suite.  
 \*6 : The PC must be equipped with a USB port to use the GT15-SGTKEY-U. The PC must be equipped with a parallel port (Centro/printer connector) to use the GT15-SGTKEY-P.  
 \*7 : For CONTEC PC CPU unit, refer to the manual for the PC CPU module.  
 \*8 : Use is possible only when PPC-852-226 is preinstalled.  
 \*9 : Supported only by the 32-bit OS.  
 \*10 : The required devices vary depending on the connection configuration.  
 \*11 : Connectable only when using a PC CPU unit.  
 \*12 : Windows XP Mode is not supported.  
 \*13 : Windows Touch features are not supported.  
 \*14 : The 32-bit OS and the 64-bit OS (NEW) are applicable.

Please confirm the following product warranty details before using this product.

Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company. However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion. Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

Gratis Warranty Term

The gratis warranty term of the product shall be for thirty-six (36) months after the date of purchase or delivery to a designated place.

Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be forty-two (42) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

Gratis Warranty Range

- The customer shall be responsible for the primary failure diagnosis unless otherwise specified. If requested by the customer, Mitsubishi Electric Corporation or its representative firm may carry out the primary failure diagnosis at the customer's expense. The primary failure diagnosis will, however, be free of charge should the cause of failure be attributable to Mitsubishi Electric Corporation.
- The range shall be limited to normal use within the usage state, usage methods, usage environment, etc. which follow the conditions, precautions, etc. given in the instruction manual, user's manual, caution labels on the product, etc.
- Even within the gratis warranty term, repairs shall be charged for in the following cases.
  - Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
  - Failure caused by unapproved modifications, etc., to the product by the user.
  - When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
  - Failure that could have been avoided if consumable parts designated in the user's manual etc. had been correctly serviced or replaced.
  - Replacing consumable parts such as the battery, backlight and fuses.
  - Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
  - Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
  - Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

Onerous repair term after discontinuation of production

- Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued. Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.
- Product supply (including repair parts) is not available after production is discontinued.

Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center. Note that the repair conditions at each FA Center may differ.

Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to damages caused by any cause found not to be the responsibility of Mitsubishi, loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products, special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products, replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

Changes in product specifications

The specifications given in the catalogs, manuals or technical documents are subject to change without prior notice.

Product application

- In using the Mitsubishi graphic operation terminal, the usage conditions shall be that the application will not lead to a major accident even if any problem or fault should occur in the graphic operation terminal device, and that backup and fail-safe functions are systematically provided outside of the device for any problem or fault.
- The Mitsubishi graphic operation terminal has been designed and manufactured for applications in general industries, etc. Thus, applications in which the public could be affected such as in nuclear power plants and other power plants operated by respective power companies, and applications in which a special quality assurance system is required, such as for Railway companies or Public service purposes shall be excluded from the graphic operation terminal applications. In addition, applications in which human life or property that could be greatly affected, such as in aircraft, medical applications, incineration and fuel devices, manned transportation equipment for recreation and amusement, and safety devices, shall also be excluded from the graphic operation terminal range of applications. However, in certain cases, some applications may be possible, providing the user consults the local Mitsubishi representative outlining the special requirements of the project, and providing that all parties concerned agree to the special circumstances, solely at our discretion. In some of these cases, however, Mitsubishi Electric Corporation may consider the possibility of an application, provided that the customer notifies Mitsubishi Electric Corporation of the intention, the application is clearly defined and any special quality is not required.

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