

Changes for the Better

iQ Platform
Graphic Operation Terminal
GOT2000 Series



Your window to better production control

GOT2000

Graphic Operation Terminal

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

Graphic Operation Terminal

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Support



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 Comprehensive communication options in an all-in-one GOT

Gesture

Multi-media

Video/RGB

Extension unit

15 inch Coming soon



XGA

GT2715-XTBA
GT2715-XTBD

Resolution: 1024x768
Display colors: 65536 colors

12.1 inch



SVGA

GT2712-STBA
GT2712-STBD
GT2712-STWA [White model]
GT2712-STWD [White model]

Resolution: 800x600
Display colors: 65536 colors

8.4 inch



SVGA

GT2708-STBA
GT2708-STBD

Resolution: 800x600
Display colors: 65536 colors

8.4 inch



VGA

GT2708-VTBA
GT2708-VTBD

Resolution: 640x480
Display colors: 65536 colors

Compliant with safety standards including UL Standards, shipping standards (coming 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.

10.4 inch

10.4 inch



SVGA

**GT2710-STBA
GT2710-STBD**

Resolution: 800×600
Display colors: 65536 colors



VGA

**GT2710-VTBA
GT2710-VTBD
GT2710-VTWA [White model]
GT2710-VTWD [White model]**

Resolution: 640×480
Display colors: 65536 colors

Line up

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Support

SoftGOT Turn your personal computer into a GOT!

GOT2000 compatible HMI software

GT SoftGOT2000 Version 1

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

Resolution: 640 × 480, 800 × 600, 1024 × 768, 1280 × 1024, 1600 × 1200,
resolution specification (640 to 1920 × 480 to 1200)
Display color: 65536 colors

* GT SoftGOT2000 Version 1 is included with GT Works3.
A separate license key must be mounted during use.



GOT2000 - Designed to meet your industrial automation needs.



Flexible interface (Standard SD card slot)

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.
* Located on the back of the white model.

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.
* Located on the back of the white model.



Simple design

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

LED backlight

The long life cycle minimizes maintenance and replacement costs.

High-speed processing

GT27

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

(Monitor performance is 2-fold or more higher)

Comparison of GT27/GT16 monitor performance



Increased memory capacity

GT27

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.

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

Comparison of GT27/GT16 ROM capacity



Easy operations with multi-touch gestures

GT27

Use intuitive gestures to zoom in/out and to scroll.

➔ See page 8 for details.



Crisp display with outline fonts and PNG images

GT27

Customize screen designs using parts library and fonts that are crisp even when enlarged or reduced.



Enhanced lineup

GT27

The new GOT2000 is suitable for applications in any industry. The new white model GOT 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. Coming soon



Line up

Features

Functions

FA Solutions

Specifications

Product list

Support

Extension interface & Auxiliary extension interface

A communication unit or option unit can be mounted.

RS-232

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

RS-422/485

Easily connect to various serial devices.

SD card slot

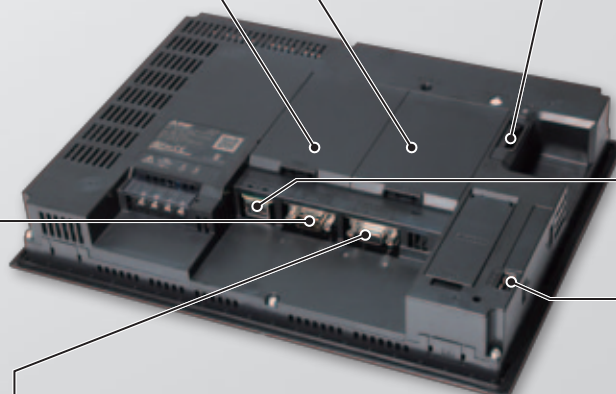
Save large volumes of data, including alarms and logging data.

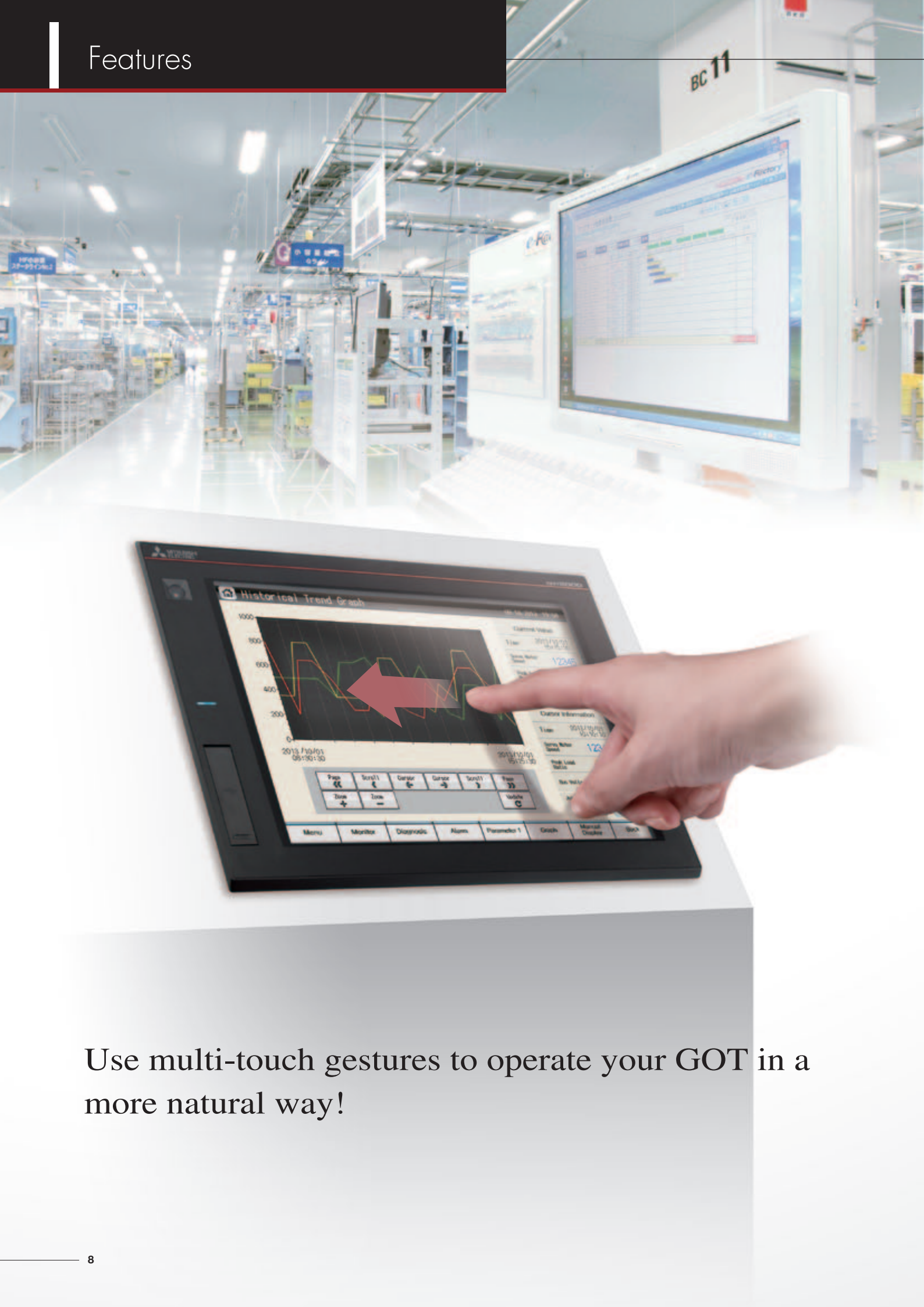
Ethernet

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

USB host

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



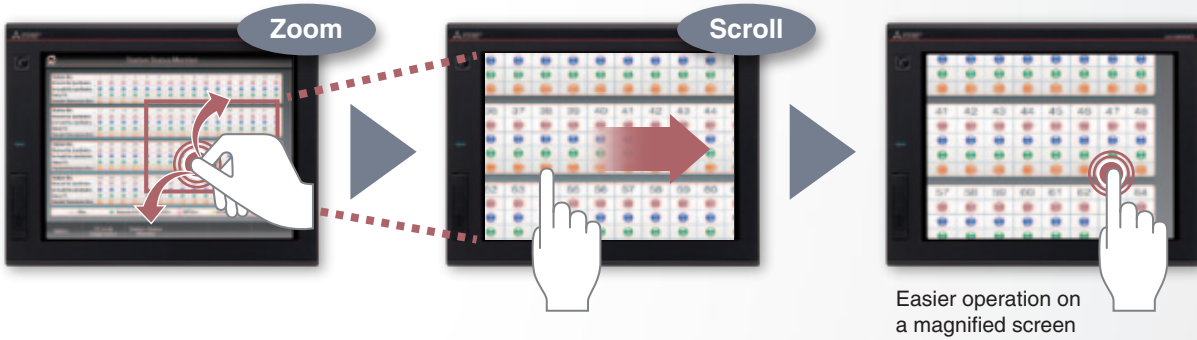


Use multi-touch gestures to operate your GOT in a more natural way!

Screen Gestures

GT27

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.



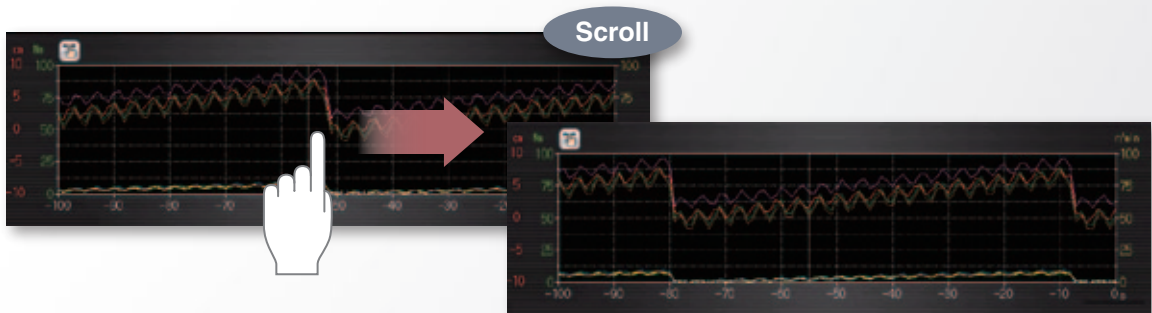
Object Gestures

GT27

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



2-point press operation prevents incorrect operations

GT27

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

<Before>

2-point pressing switch was prepared separately



<GOT2000>

You only need the GOT!



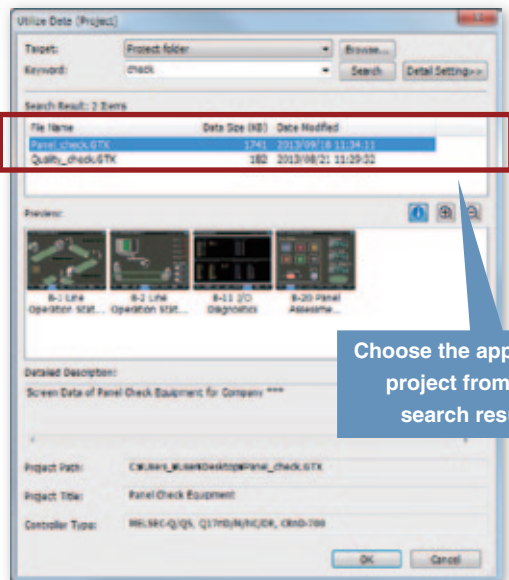
* Cautions apply to the arrangement of the 2-point pressing switch.

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

GOT2000 has many sample projects that can be used when designing screens. Just select a sample and apply it to your screen.

Alarm



Recipe



Device monitor



GOT Screen Design Software MELSOFT GT Works3+plus

Line up

Features

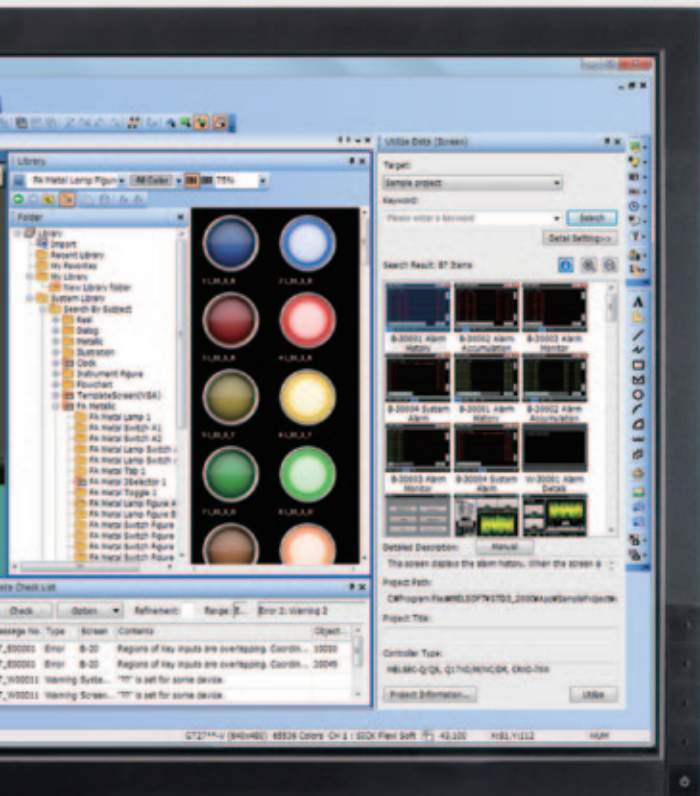
Functions

FA Solutions

Specifications

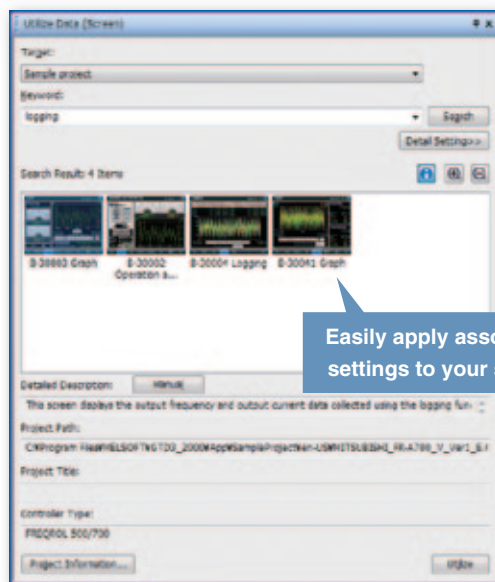
Product list

Support



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) 08157).



Programmable controller



Simple motion



Q Motion

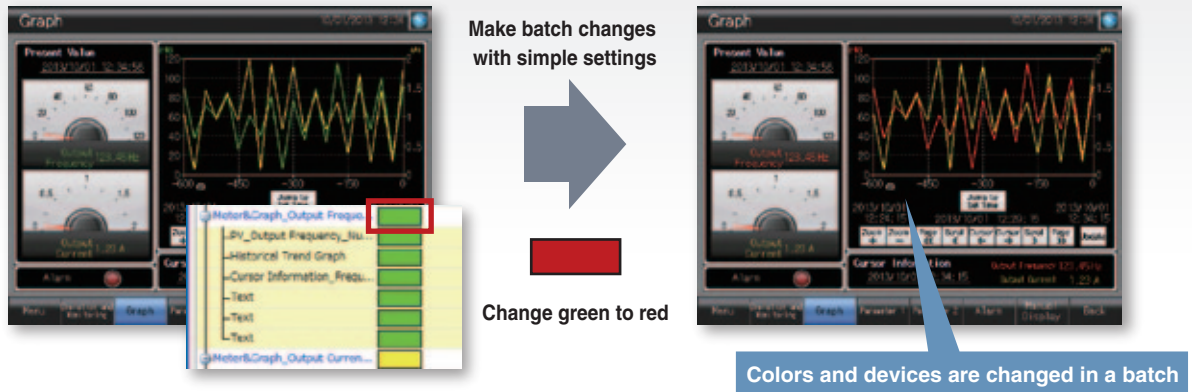


Easy Operations to Reduce Engineering Time

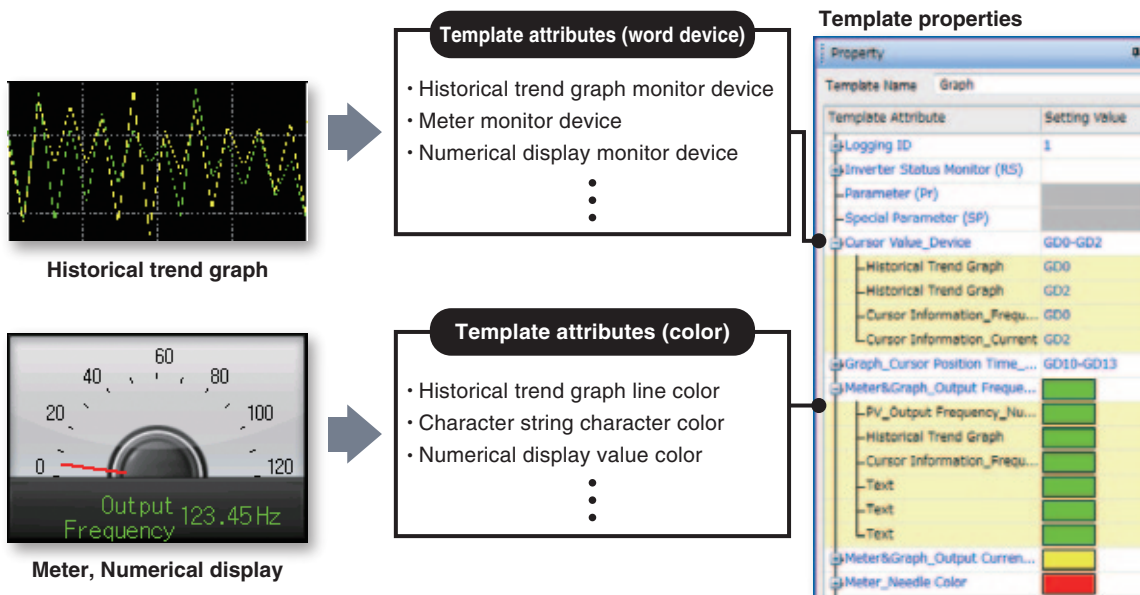
The GOT2000 Series and GOT1000 Series are supported with this single software!

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.



- **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

GOT Screen Design Software
MELSOFT GT Works3+plus

Line up

Features

Functions

FA Solutions

Specifications

Product list

Support

Quickly set devices with “Input Assist”!

When setting your devices, "Input Assist" provides a list of applicable devices, complete with device comment, and device definitions.

① Enter a device name

② Applicable devices found in the project and recently used devices are displayed in a list.

③ Select and set a device from the list.

GT Works3 device setting dialog

② Enter a keyword

① Import comment file

③ Applicable devices and device comments imported from GX Works2 are displayed in a list.

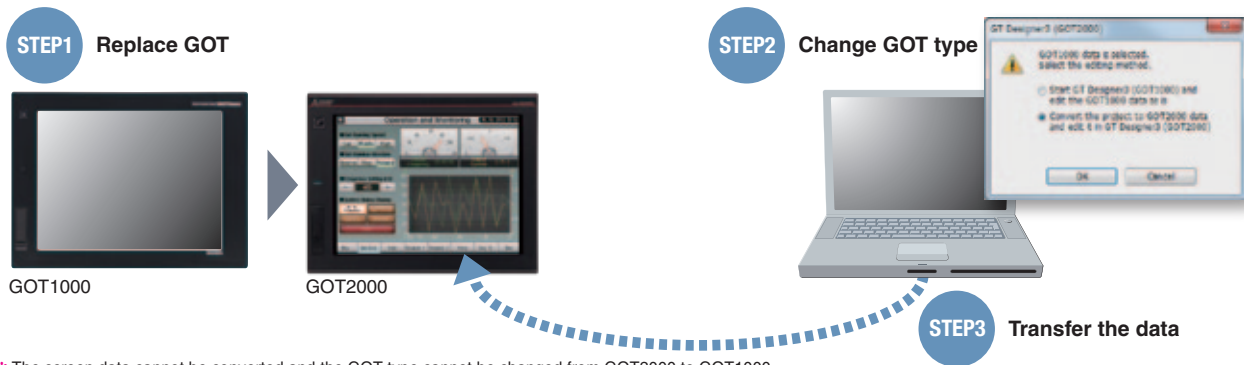
④ Select and set a device from the list.

Device comment set with GX Works2/GX Developer

Device Name	Device Comment
M0	Equipment A Normal
M1	Equipment B Normal
M2	
M3	
M4	
M5	
M6	
M7	
M8	
M9	
M10	Equipment A Buzzer Stop
M11	Equipment A Buzzer Stop Cancel
M12	Equipment A Module 1 Interlock
M13	Equipment A Module 2 Interlock
M14	Equipment A Module 3 Interlock
M15	

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.



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

An Easy and Flexible HMI Solution

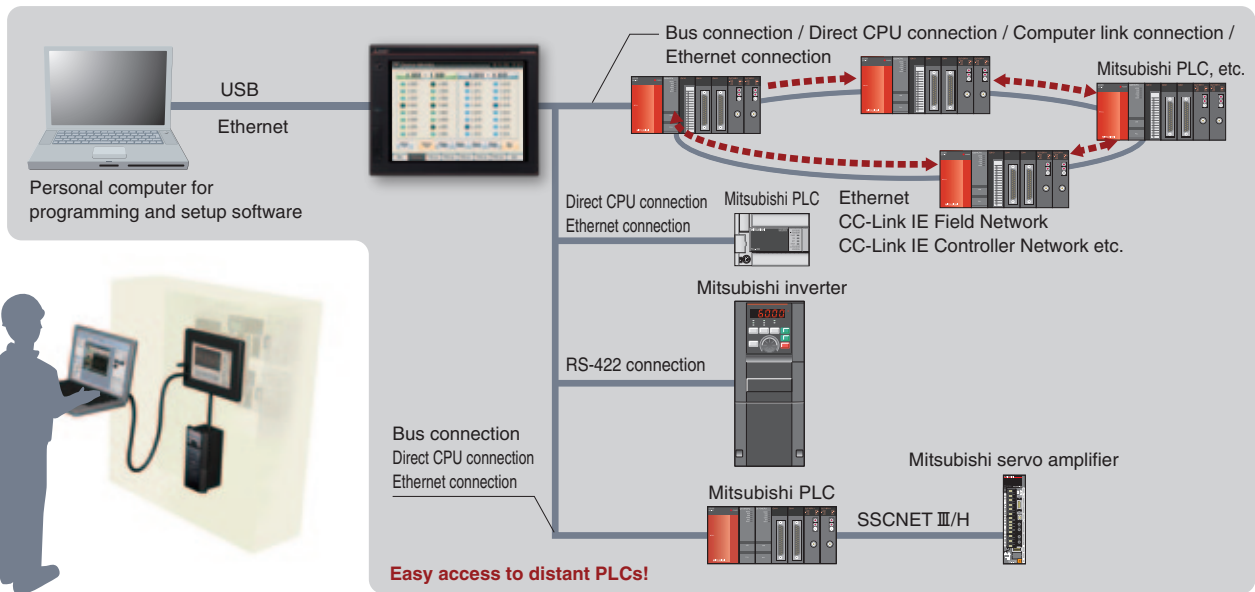
Simplifying startup and debugging

FA Transparent Function

GT27

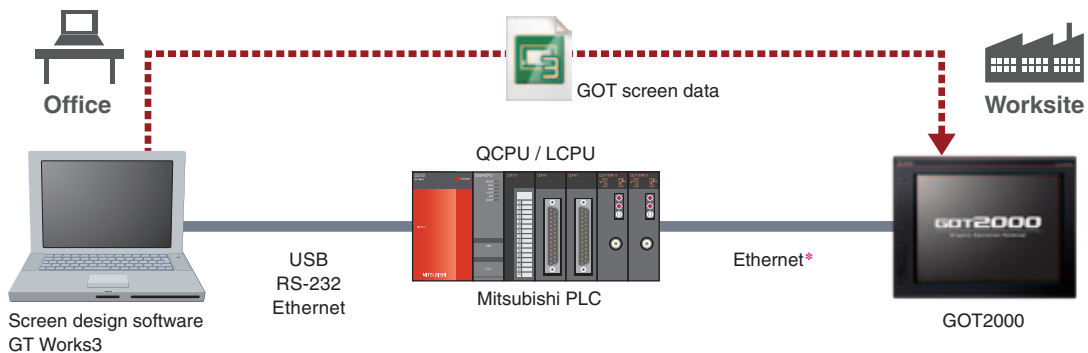
Simplifying the startup process of industrial automation systems

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.



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. 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.

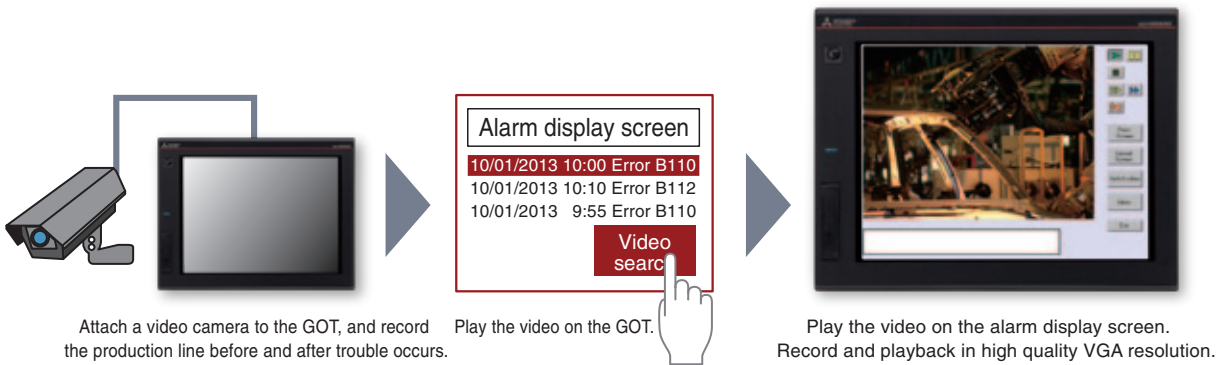


* This feature does not apply to a GOT connected to a CPU's built-in Ethernet port.

Record the worksite state Multimedia Function

GT27

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.

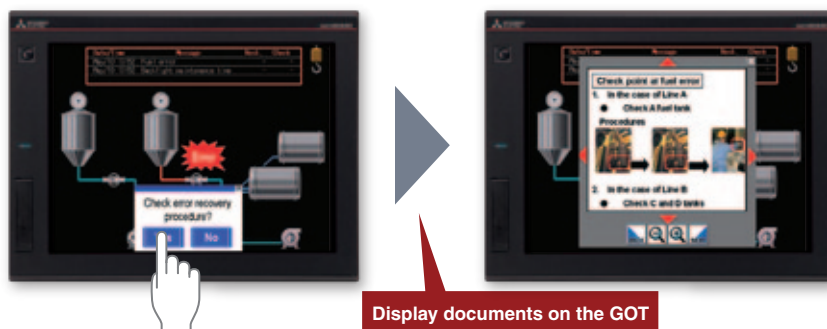
<Longtime mode> ...Approximately two days worth of video image can be recorded. The recording size is QVGA (320×240), frame rate is 15fps.

Review documents at the production site Document Display

GT27

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



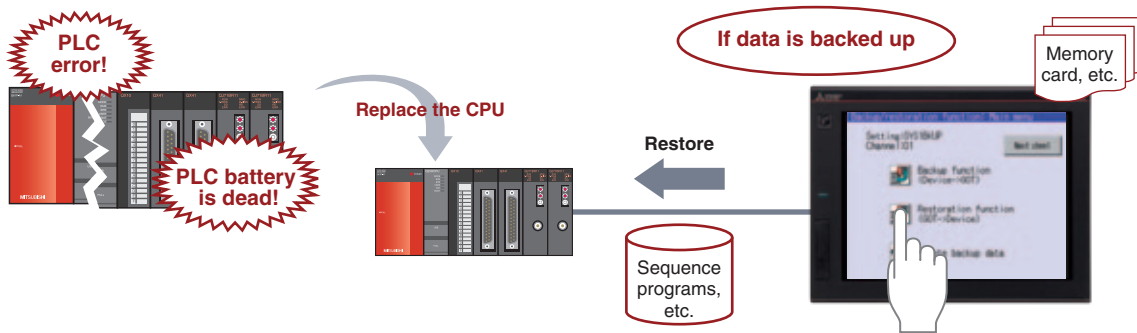
An Easy and Flexible HMI Solution

Easily backup and restore programs

Backup/Restore

GT27

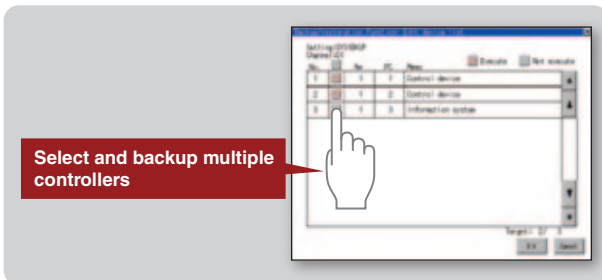
Data such as the programs and parameters of the programmable controller CPU, motion controller, robot controller and CNC can be backed up onto the GOT's SD card or USB memory. With a backup of data in the GOT, there's no need to use a personal computer when replacing the industrial devices such as the 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-Q Series (excluding Q12PRH/Q25PRHCPU), L Series, FX Series
 Motion controller Q Series (SV13/SV22 only), CNC C70 **Coming soon**
 Robot controller (CR750/751-Q, CR750/751-D, CRnQ-700, CRnD-700) **Coming soon**
- <Supported connection types> Bus connection, direct CPU connection, computer link connection, Ethernet connection

Back up multiple controllers at the same time

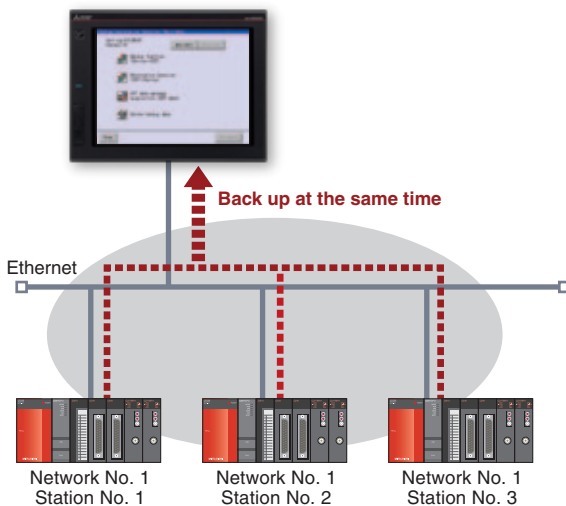
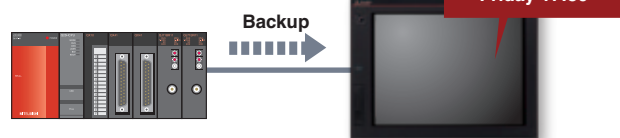
Multiple controllers connected on Ethernet can be backed up at the same time, reducing the time needed to back up each controller separately.



Automatic backup

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

Backup every Friday at 17:30

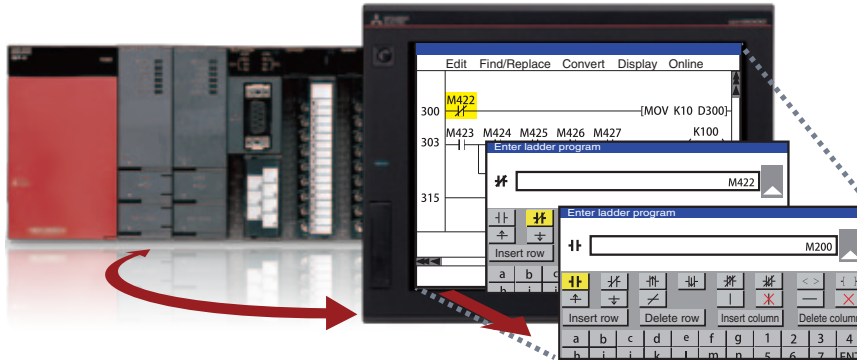


Monitor and edit ladder programs without a personal computer

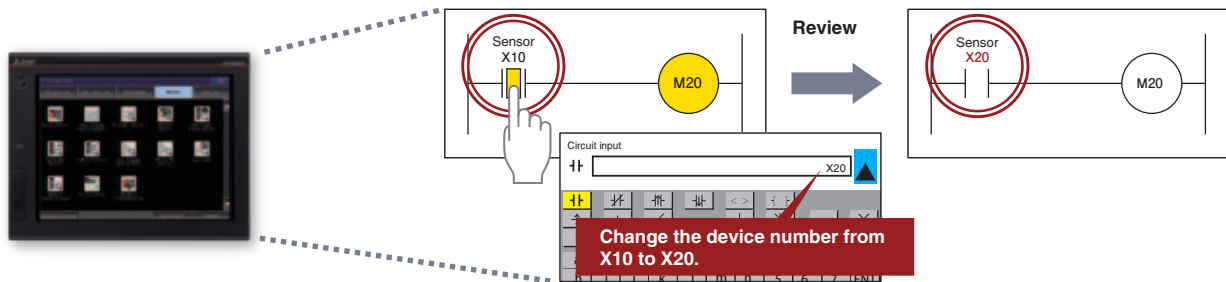
Sequence Program Monitor

GT27

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/QnUDPVCPU), L Series, Motion controller Q Series (programmable controller CPU section)



An Easy and Flexible HMI Solution

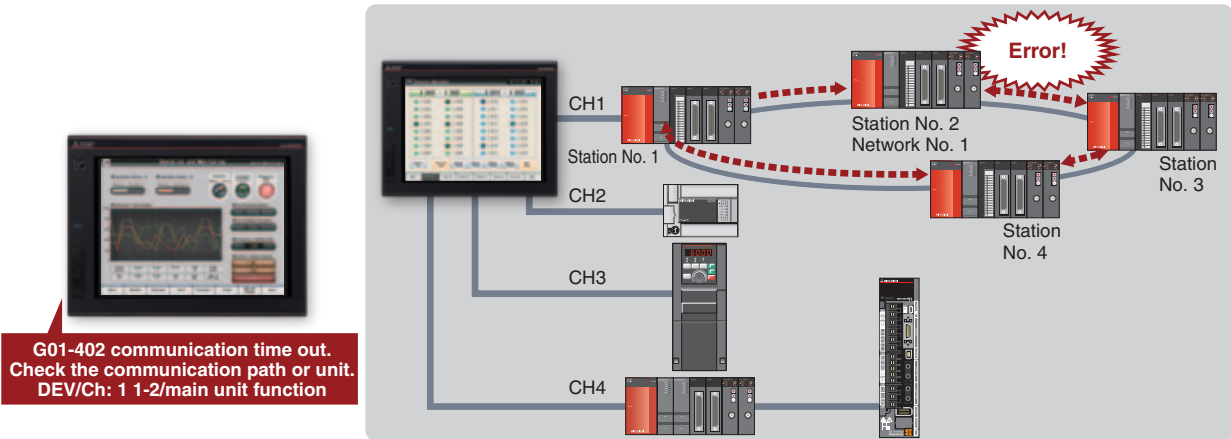
Identify the cause of alarms

System Alarms

GT27

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.



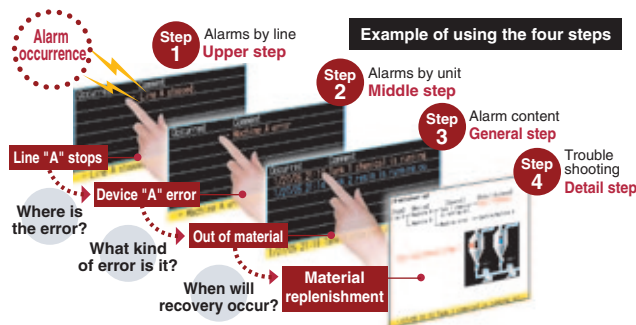
Easily search for causes when alarm occurs

Alarm Function

GT27

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.



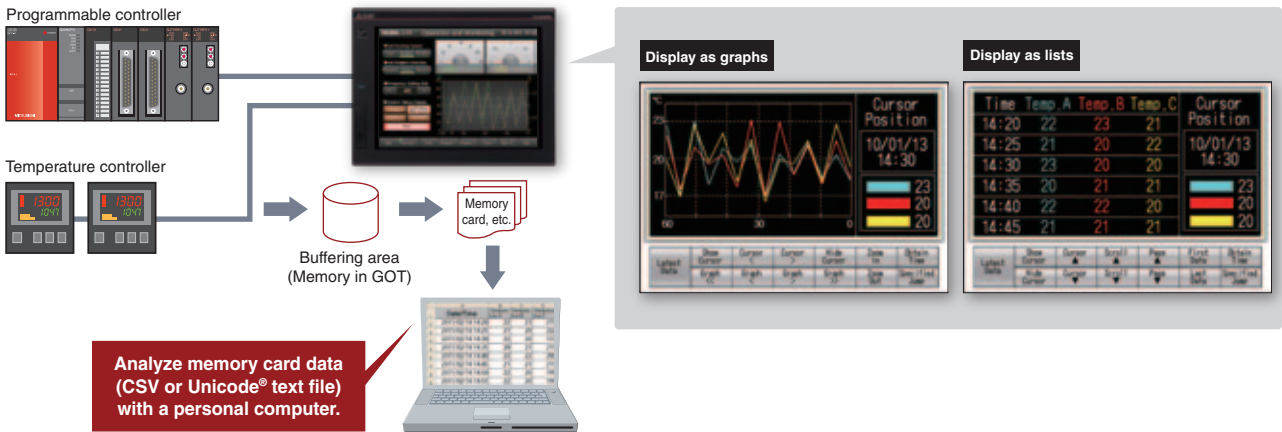
The alarm function works with the logging graph, so that the situation at alarm occurrence or graph error can be seen easily.



Easily collect data Logging & Graphs and Lists

GT27

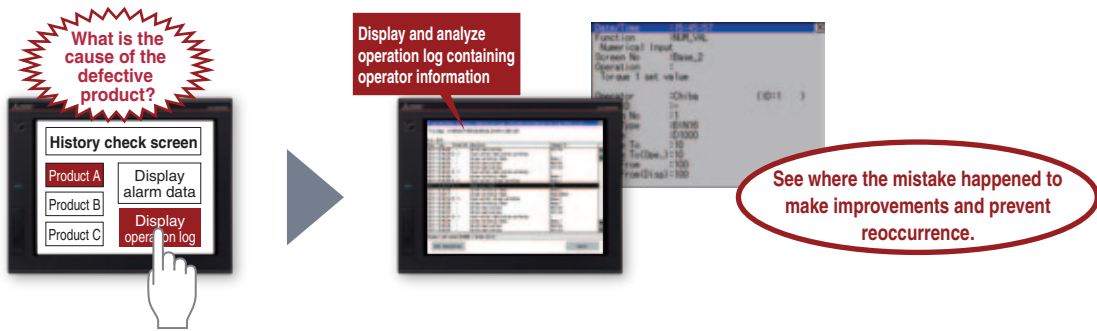
Use the GOT to collect data from the programmable controller and temperature controllers. The data can be displayed in graphs and lists. It can also be exported to a personal computer for further analysis. The logging data can be saved in the built-in SRAM even if the power fails.



Easily identify the cause from operation history Operator Authentication & Operation Log

GT27

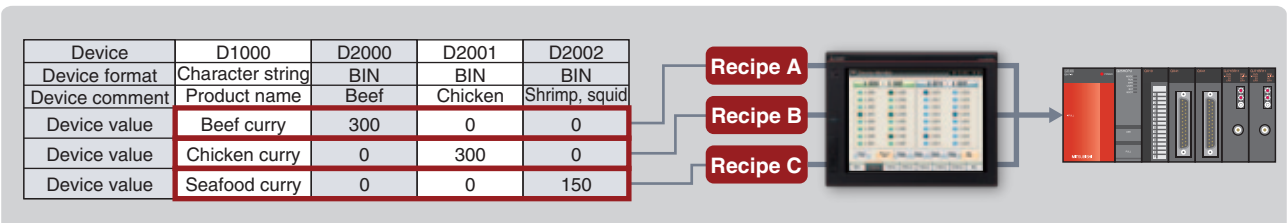
The operation and display level (authority) can be set for each operator to strengthen security and prevent operation errors from reoccurring. The operation log file saved with the operator information can be viewed to identify causes, and help make improvements and prevent recurrence.



Perform changeover even without changing the ladder program Recipe Function

GT27

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. Data such as the production quantity and product name can be exported from the programmable controller to the GOT where it can be confirmed. 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



Powerful Remote Access Options

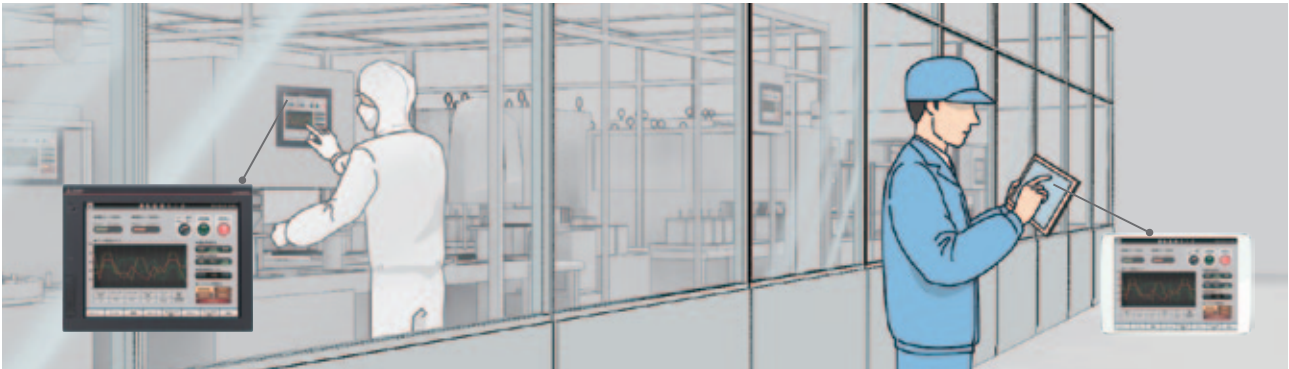
Operate GOT remotely

GOT Remote Access (VNC Server)

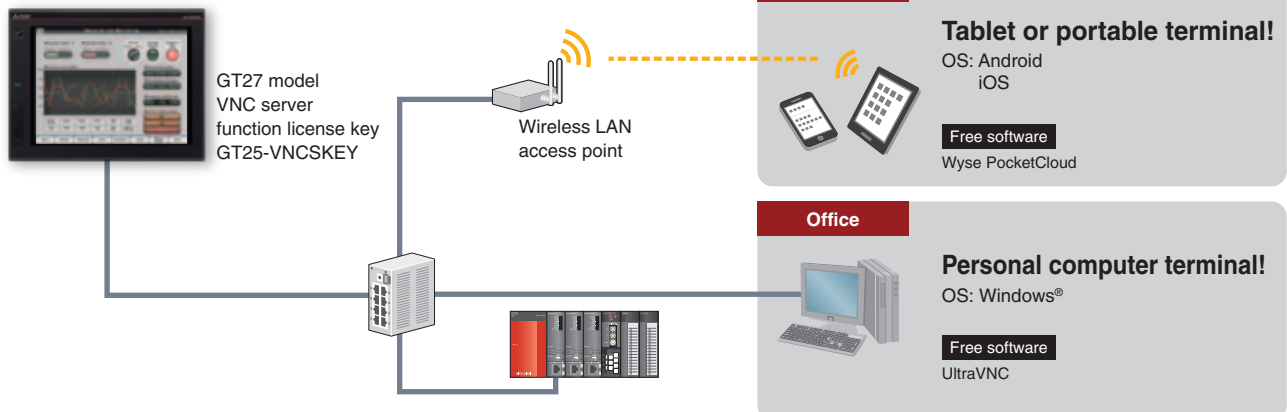
GT27

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.

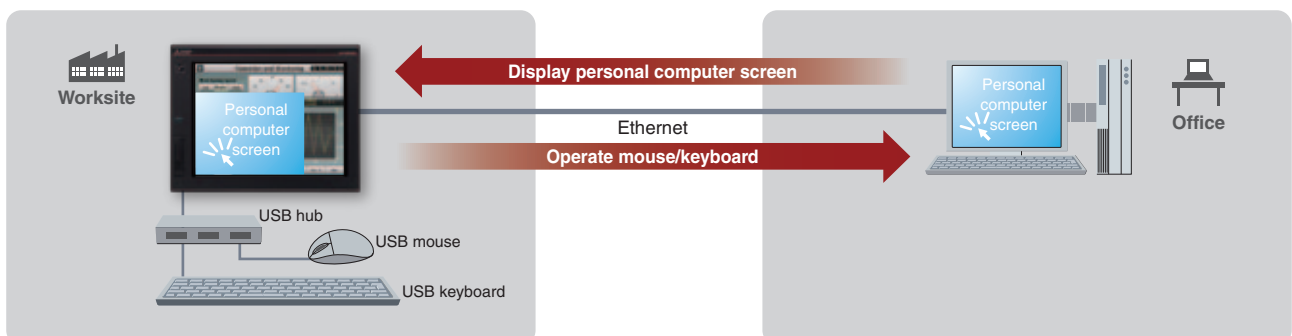
Use GOT to remotely operate a personal computer

Remote Personal Computer Operation (Ethernet)

GT27

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

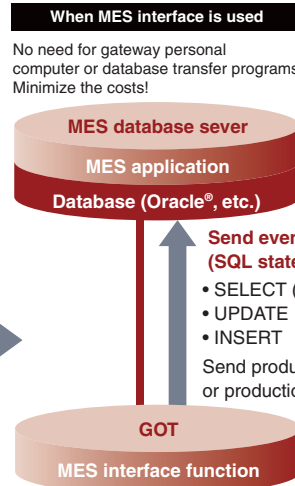
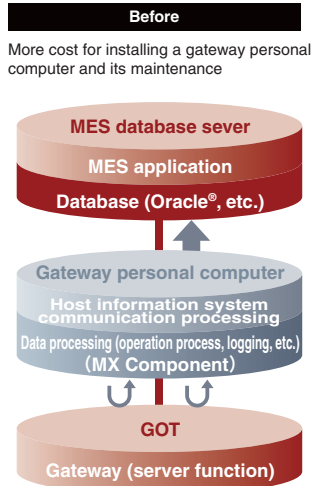
MES Interface Function **Coming soon**

GT27

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-MESKEY) is required.

- SELECT (Select/MultiSelect)
- UPDATE
- INSERT



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® 8i/9i/10g/11g • Microsoft® Access® 2000/2003/2007/2010
- Microsoft® SQL Server® 2000/2005/2008/2008 R/2012
- Microsoft® SQL Server® 2000 Desktop Engine (MSDE2000)
- Wonderware® Historian 9.0

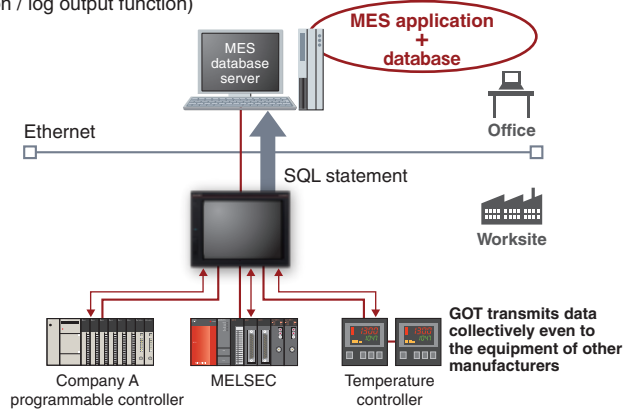
* Compatible only with 32-bit versions.

<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.

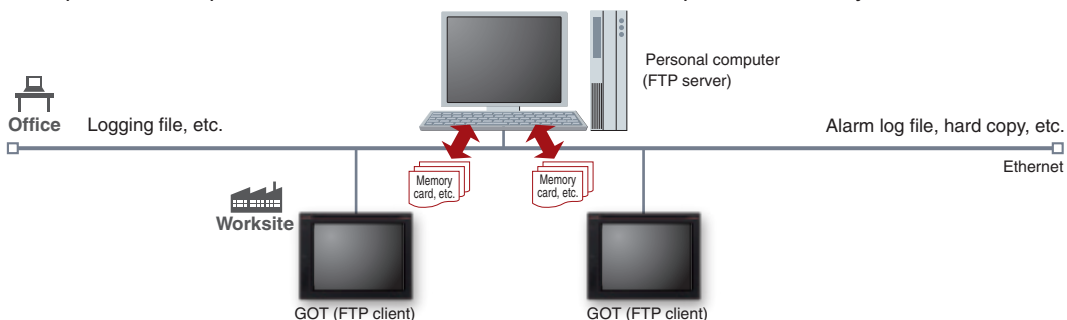


Send and retrieve files between a GOT and personal computer

File Transfer (FTP Client) Function

GT27

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

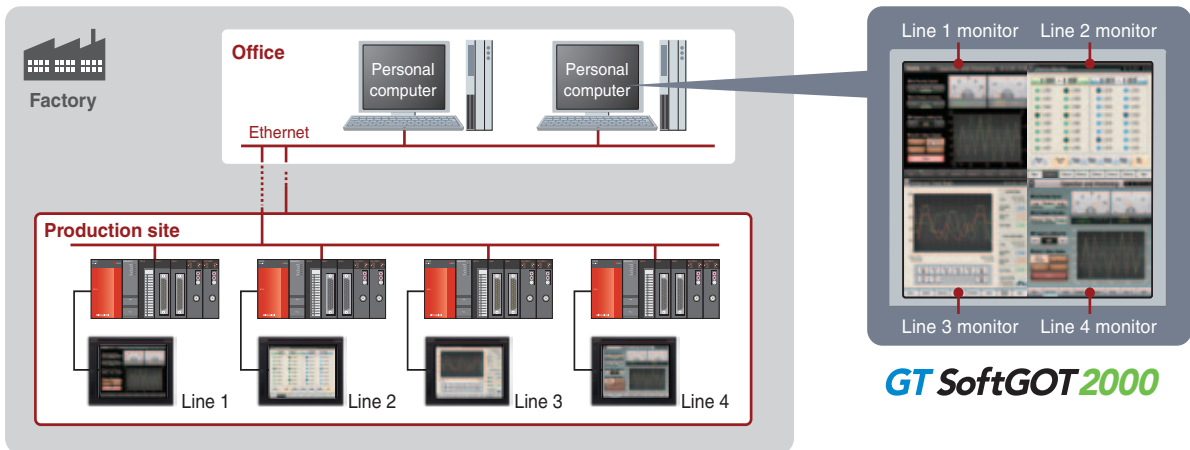
Monitor the production site from a remote location

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 New

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

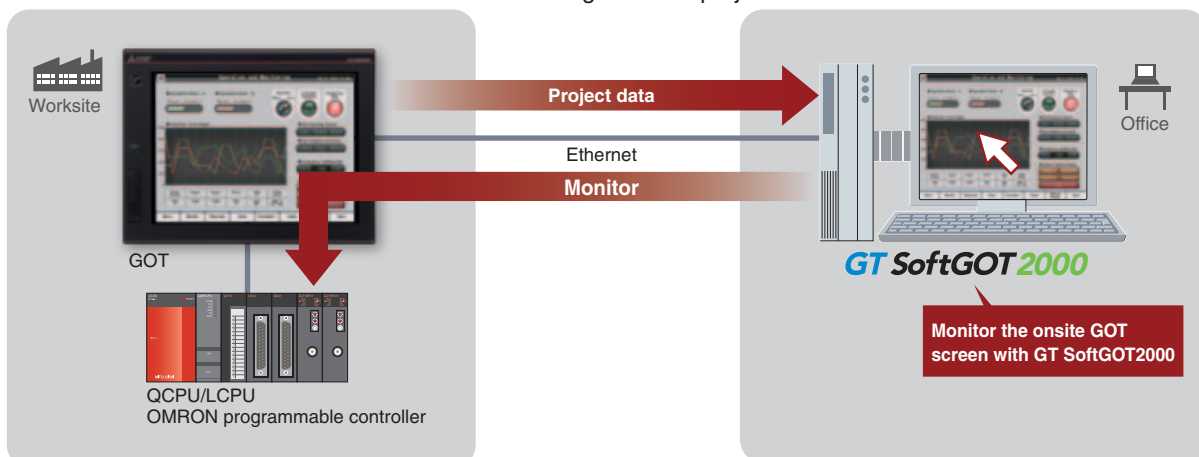
Turn your desktop into a graphic monitoring window with the full-screen and back-screen mode.

GOT2000 compatible HMI software
GT SoftGOT2000 Version 1

Remote monitoring with SoftGOT SoftGOT-GOT Link Function

GT27

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.

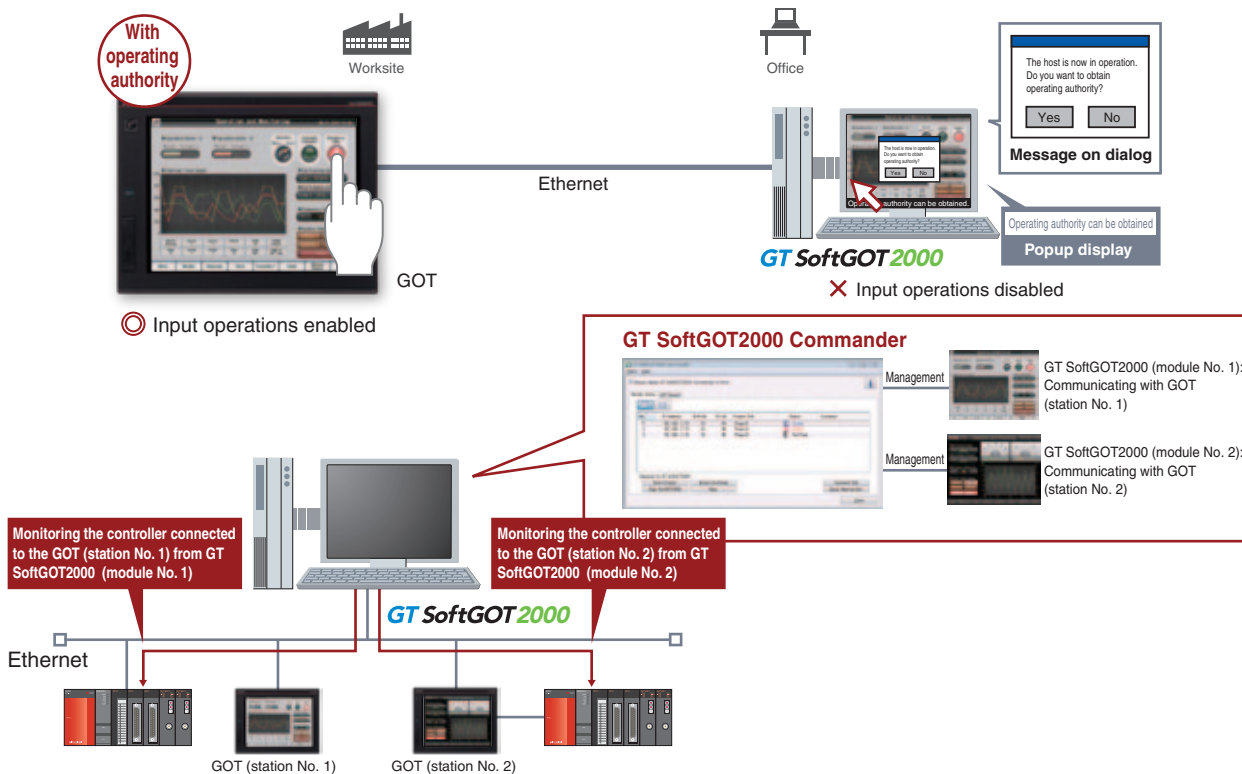


Control multiple SoftGOT modules GT SoftGOT2000 Commander

GT27

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.



Line up

Features

Functions

FA Solutions

Specifications

Product list

Support

“Easier Operations!”

The GOT2000 engages various industrial devices to support maintenance



Simplify ladder monitoring and editing!

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

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

<Sequence program monitor function>

Included with software

Provided sample screen data

- Programmable controller connection samples
- CC-Link network monitors
- Device monitors
- Simple motion connection samples

Easily monitor various controllers without creating screens!



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.

<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-J3-A connection sample

personnel and reduce downtime.



+ FA Solutions

Line up

Features

Functions

FA Solutions

Specifications

Product list

Support

Easily debug your programs without opening the cabinet!



General-purpose Inverter
FREQROL

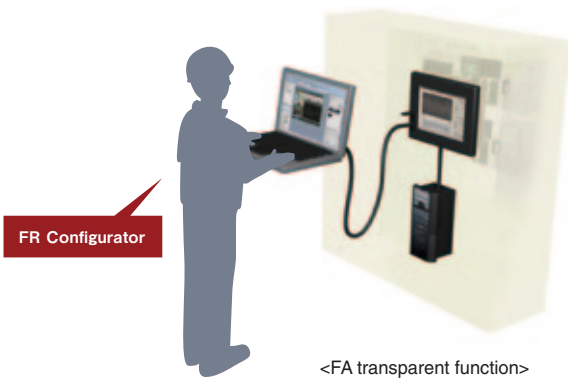
Connected with a personal computer, the GOT acts as a transparent gateway to enable startup and adjustment of equipment using FR Configurator.

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 **Coming soon**
- A700 connection sample
- D700 connection sample
- E700 connection sample
- F700P connection sample



FR Configurator

<FA transparent function>



Industrial Robot
MELFA

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>



Numerical Control Unit
C70 Series

Quickly recover from trouble! **Coming soon**

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.



Replace CPU

Restore

Memory card, etc.

<Backup/Restore function>

Machining programs, etc.

“More Options!”

The GOT2000 engages various industrial devices to support maintenance

Unique functions designed for iQ Platform controllers!



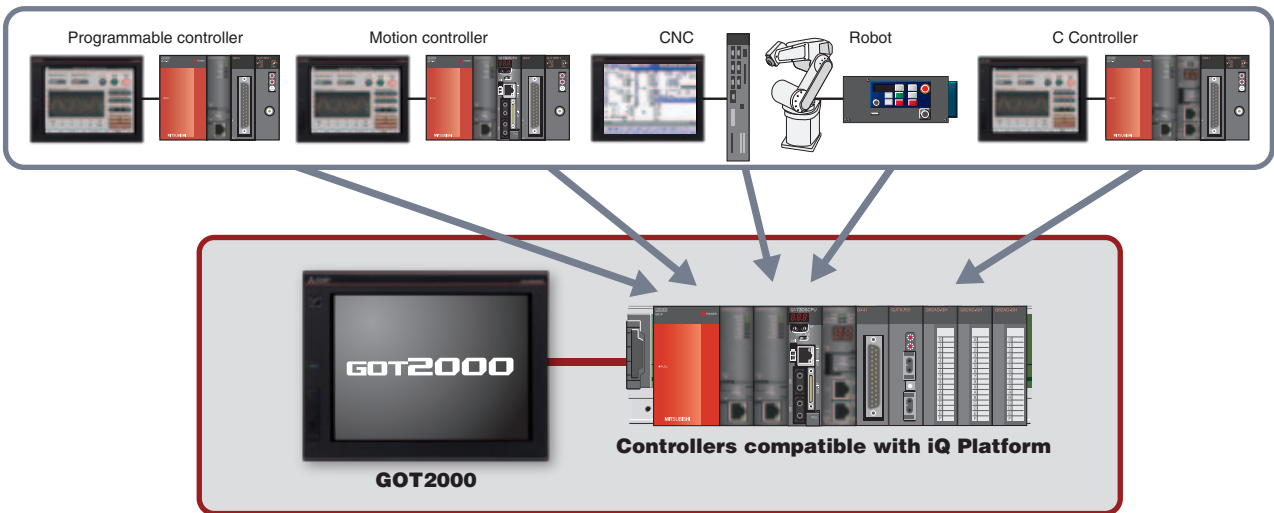
Mitsubishi FA Integrated Platform optimizes the front line of production

Platform

“iQ Platform,” the next generation integrated platform

- improved Quality
- intelligent & Quick
- innovation & Quest

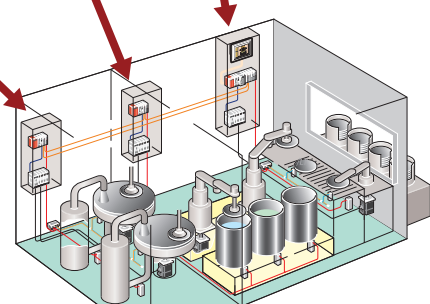
With high speed control and convenience fully assured, controllers compatible with the iQ Platform and the GOT2000 are the keys to higher productivity at lower cost. PLCs, motion controllers, CNCs, robot controllers, and C controllers are integrated into one as controllers compatible with the iQ Platform. The GOT2000 integrates different types of monitor units that were previously connected to each controller.




① Reduce engineering costs
The FA integrated software suite, MELSOFT iQ Works, in which the GT Works3 screen design software is included, allows for efficient design of systems and monitor screens for each controller.

② Reduce spare parts cost
A single GOT2000 can take the place for several types of monitor units, thus greatly reducing costs for spare parts.

③ Powerful support for maintenance
The GOT2000 has a variety of useful maintenance functions including the “Q motion monitor function” and “CNC monitor function”. **Coming soon** Use these reliable functions for troubleshooting.



Quickly reduce total costs by creating a seamless integrated engineering environment



MELSOFT iQ Works

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



+ FA Solutions

personnel and reduce downtime.

Line up

Features

Functions

FA Solutions

Specifications

Product list

Support

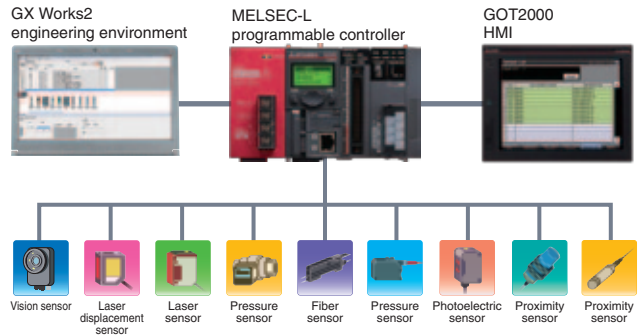
Powerful support for sensor startup, operation, and maintenance!

iQSS iQ Sensor Solution

Sensors used in production sites are incorporating more features and becoming more complex. Are you spending lots of time and money managing your configuration tools, or starting up and servicing your sensor systems? To simplify sensor configuration and maintenance, Mitsubishi Electric has collaborated with various manufacturers and developed **OneTool**. This powerful integration of sensors, programmable controllers, GOTs, and engineering tools is the solution to reducing your TCO.

This is the iQ Sensor Solution (iQSS).

* TCO: Total Cost of Ownership



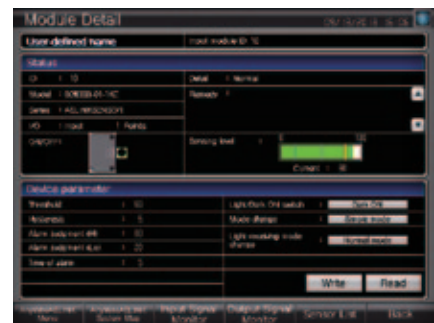
Previously Sensor status could not be monitored collectively and was time consuming

With GOT2000 ? The statuses are displayed on one screen!

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



Input signal monitor screen

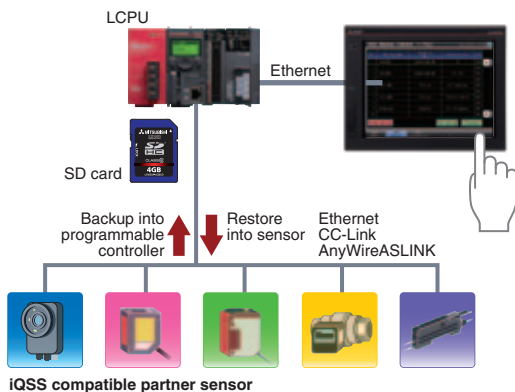


Sensor detailed information (Parameter setting screen)

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

With GOT2000 ? Unify the configuration of all settings with a single operation!

Backup and restore the parameters of any iQSS partner sensor to the SD card mounted on the LCPU, allowing work time to be reduced.



iQSS compatible partner sensor



iQSS backup (sensor -> programmable controller) screen

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 B3502 and IEC61131-2	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 ²	—	
Shock resistance	Compliant with JIS B3502, IEC 61131-2 (147 m/s ² (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 indicates 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.

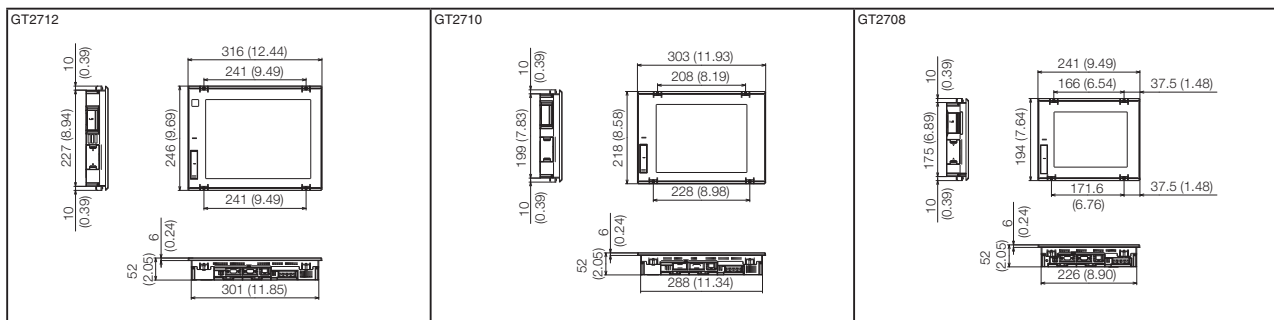
For inquiries relating to the status of conforming to UL, cUL, and CE directives and shipping directives, please contact your local sales office.

Power supply specifications

Item	Specifications					
	GT2712-STBA GT2712-STWA	GT2710-STBA GT2710-VTBA GT2710-VTWA	GT2708-STBA GT2708-VTBA	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	44W or less	41W or less	45W or less	42W or less	39W or less
	Stand alone	19W	17W	15W	18W	15W
	Stand alone with backlight off	10W	10W	10W	8W	8W
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

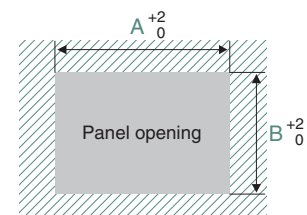
Unit: mm (inch)



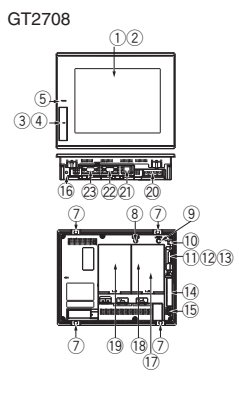
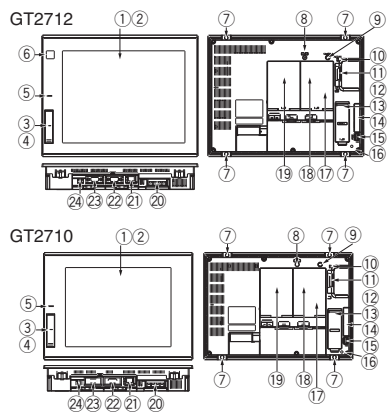
Panel cutting dimensions

Unit: mm (inch)

Screen size	Model	A	B	Remarks
12.1"	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 (GT2712 only)
- 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										
	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				
		TFT color LCD									
Display section *1 *2	Display device	TFT color LCD									
	Screen size	12.1"			10.4"			8.4"			
	Resolution	SVGA: 800x600 dots			VGA: 640x480 dots			SVGA: 800x600 dots VGA: 640x480 dots			
	Display size	246.0(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)			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. 60,000 hours or more (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	Maximum 2 points									
	Life	1 million times or more (operating force 0.98N or less)									
Human sensor	Detection distance	1m			-			-			
	Detection temperature	Temperature difference between human body and ambient air: 4°C or higher									
User memory	User memory capacity	Memory for storage (ROM): 57MB Memory for operation (RAM): 128MB									
	Life (No. of writings)	100,000 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)	2ch (front face/rear face)		1ch (rear face)		2ch (front face/rear face)		1ch (rear face)		2ch (front face/rear face)	
		Maximum transfer speed: High-Speed 480Mbps Connector shape: USB-A									
	USB (device)	1ch (front face)		1ch (rear face)		1ch (front face)		1ch (rear face)		1ch (front 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									
	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	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 Version1.105K 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 an environment where it is exposed to splashing oil or chemicals for a long time or it is soaked with oil mist.

Specifications / Product list

Function list

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

● : Supported - : Not supported

Category	Function name	Necessary devices	GT27	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		●	●	
	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	●	●
		Serial printer output		●	●*2
		PictBridge printer output		●	●*2
	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	●	-		
Report function	Serial printer output		●	●*3	
	PictBridge printer output		●	●*3	
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)	-	
	Station No. switching		●	●	
	Screen gesture function		●	-	
Object gesture function		●	-		
Vertical display		●	-		
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		●	-	
	Q motion monitor		●	-	
	Motion SFC monitor	SD card or USB memory	●	-	
	CNC monitor		●*4	-	
	CNC data I/O	SD card or USB memory	●*4	-	
	CNC machining program edit		●*4	-	
	Log viewer	(SD card or USB memory)	●	-	
MELSEC-FX list editor		●	-		
FX ladder monitor		●	-		
MELSEC-L troubleshooting		●	-		

*1 Necessary units when using GT27 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.

GOT model name

GT27 12 - S T B A

GT27	Comprehensive communication options in an all-in-one GOT	Code	Screen size	Code	Resolution	Code	Display section	Code	Panel color	Code	Power supply type
		15	15"	X	XGA	T	TFT color	B	Black	A	100 to 240VAC
		12	12.1"	S	SVGA			W	White	D	24VDC
		10	10.4"	V	VGA						
		8	8.4"								

GOTs

Category	Model name	Screen size	Display section	Display color	Panel color	Power supply	Remarks				
GT27	GT2715 GT2715-XTBA	15" XGA	TFT color	65536 colors	Black	AC	Multimedia & Video/RGB compliant Multi-touch compliant				
	GT2715-XTBD					DC					
	GT2712	GT2712-STBA			12.1" SVGA	Black		AC			
		GT2712-STBD						DC			
		GT2712-STWA				White		AC			
		GT2712-STWD						DC			
	GT2710	GT2710-STBA			10.4" SVGA	TFT color		65536 colors	Black	AC	
		GT2710-STBD								DC	
		GT2710-VTBA								AC	
		GT2710			GT2710-VTBD				10.4" VGA	White	AC
					GT2710-VTWA						DC
					GT2710-VTWD						DC
	GT2708	GT2708-STBA			8.4" SVGA	TFT color		65536 colors	Black	AC	
		GT2708-STBD								DC	
		GT2708-VTBA			8.4" VGA				White	AC	
		GT2708-VTBD								DC	

* 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
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	●
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.

Option units

Product name	Model name	Specifications	Applicable model
			GT27
Printer unit	GT15-PRN	USB slave (PictBridge) for printer connection, 1ch Cable for connection between printer unit and printer (3m) included	● New
Multimedia unit	GT27-MMR-Z	For video input (NTSC/PAL) 1ch, Record video images/play video files	●
Video input unit	GT27-V4-Z	For video input (NTSC/PAL) 4ch	●
RGB input unit	GT27-R2-Z	For analog RGB input 2ch	●
Video/RGB input unit	GT27-V4R1-Z	For video input (NTSC/PAL) 4ch / analog RGB 1ch input	●
RGB output unit	GT27-ROUT-Z	For analog RGB output 1ch	●
Sound output unit	GT15-SOUT	For sound output (φ3.5 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)	●

Product list

Software

Product name	Model name	Contents		
HMI screen design software MELSOFT GT Works3 *1	SW1DND-GTWK3-E	English Version	Standard license product	DVD-ROM
	SW1DND-GTWK3-EA		Volume license product *2	
	SW1DND-GTWK3-EAZ		Additional license product *2 *7	
FA Integrated Engineering Software MELSOFT iQ Works *1 *3 *4	SW1DND-IQWK-E	English Version	Standard license product (Version1.77F or later)	DVD-ROM
License key for GT SoftGOT2000 *5	GT27-SGTKEY-U	USB port licence key		
PC remote operation function (Ethernet) license *6	GT25-PCRAKEY	1 license		
VNC® server function license *6	GT25-VNCSKEY	1 license (License for GOT remote access function)		
MES interface function license *6	GT25-MESIFKEY Coming soon	1 license		

*1 CD-ROM product is also available. For inquiries, please contact your local sales office.

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

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

*4 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]
- Servo Setup Software [MELSOFT MR Configurator2]
- Screen Design Software for Graphic Operation Terminal [MELSOFT GT Works3]
- Robot Engineering Software [MELSOFT RT ToolBox2 mini]

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

*6 1 license is required for 1 GOT unit.

*7 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	
Protective sheet *1	Protective sheet *1	GT27-15PSGC Coming soon	For 15"	Surface treatment: anti-glare Sheet color: transparent USB environmental protection cover area: open Number of sheets included in a set: 5	●	
		GT25-12PSGC	For 12.1"		●	
		GT25-10PSGC	For 10.4"		●	
	Protective sheet *1	Protective sheet *1	GT25-08PSGC	For 8.4"	Surface treatment: anti-glare Sheet color: transparent USB environmental protection cover area: open Number of sheets included in a set: 5	●
			GT27-15PSCC Coming soon	For 15"		●
			GT25-12PSCC	For 12.1"		●
			GT25-10PSCC	For 10.4"		●
			GT25-08PSCC	For 8.4"		●
			GT25-12PSCC-UC	For 12.1"		Surface treatment: anti-glare Sheet color: transparent USB environmental protection cover area: closed *2 Number of sheets included in a set: 5
GT25-10PSCC-UC	For 10.4"	●				
GT25-08PSCC-UC	For 8.4"	●				
USB environmental protection cover		GT25-UCOV	Protective cover for USB interface on GOT front panel (for replacement)		●	
Protective cover for oil *3	Protective cover for oil *3	GT20-15PCO Coming soon	For 15"	Protective cover for oil on GOT front panel (for replacement)	●	
		GT20-12PCO	For 12.1"		●	
		GT20-10PCO	For 10.4"		●	
		GT20-08PCO	For 8.4"		●	
Stand	Stand	GT15-90STAND	For 15"	Stand for GOT front panel (for replacement)	●	
		GT15-80STAND	For 12.1"		●	
		GT15-70STAND	For 10.4"/8.4"		●	
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	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 8.4"	For conversion from GT167□, GT157□, A97□, GOT	●	
		GT15-60ATT-96		For conversion from A960GOT	●	
		GT15-60ATT-87		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	●	
Battery		GT11-50BAT	Battery for backup of SRAM data and clock data		● (For replacement)	

*1 The while 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	Specifications	Applicable model GT27
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-QCNB 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-QCNB	-	-	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) Between L6ADP-R2 and RS-422 cable (GT01-C□R4-25P) [MINI-DIN6 pin and D-sub 25-pin]	●
		FA-CNV2405CBL	0.5m			
RS-422 cable	QnA/FXCPU 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]	●
		GT01-C100R4-25P	10m			
		GT01-C200R4-25P	20m			
		GT01-C300R4-25P	30m			
	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]	●
		GT09-C100R4-6C	10m			
		GT09-C200R4-6C	20m			
		GT09-C300R4-6C	30m			
	FXCPU direct connection cable	GT01-C10R4-8P	1m	-	Between FXCPU and GOT Between FXCPU communication function extension board and GOT [Between MINI-DIN 8-pin connector and D-sub 9-pin]	●
		GT01-C30R4-8P	3m			
		GT01-C100R4-8P	10m			
		GT01-C200R4-8P	20m			
		GT01-C300R4-8P	30m			
RS-232 cable	Q/LCPU direct connection cable	GT01-C30R2-6P	3m	-	Between Q/LCPU and GOT Between L6ADP-R2 and personal computer (GT SoftGOT2000) [Between MINI-DIN 6-pin and D-sub 9-pin]	●
	FXCPU direct connection cable Data transfer cable	GT01-C30R2-9S	3m	-	Between FXCPU communication function extension board and GOT/personal computer (GT SoftGOT2000) Between FXCPU communication function adapter and GOT/personal computer (GT SoftGOT2000) [Between D-sub 9-pin and D-sub 9-pin]	●
	FXCPU direct connection cable	GT01-C30R2-25P	3m	-	Between FXCPU communication function adapter and GOT/personal computer (GT SoftGOT2000) [Between D-sub 25-pin connector and D-sub 9-pin]	●
	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]	●
	Computer link connection cable	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]	●
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	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]	●
	Printer connection cable					

*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.

Cables for non-Mitsubishi FA products

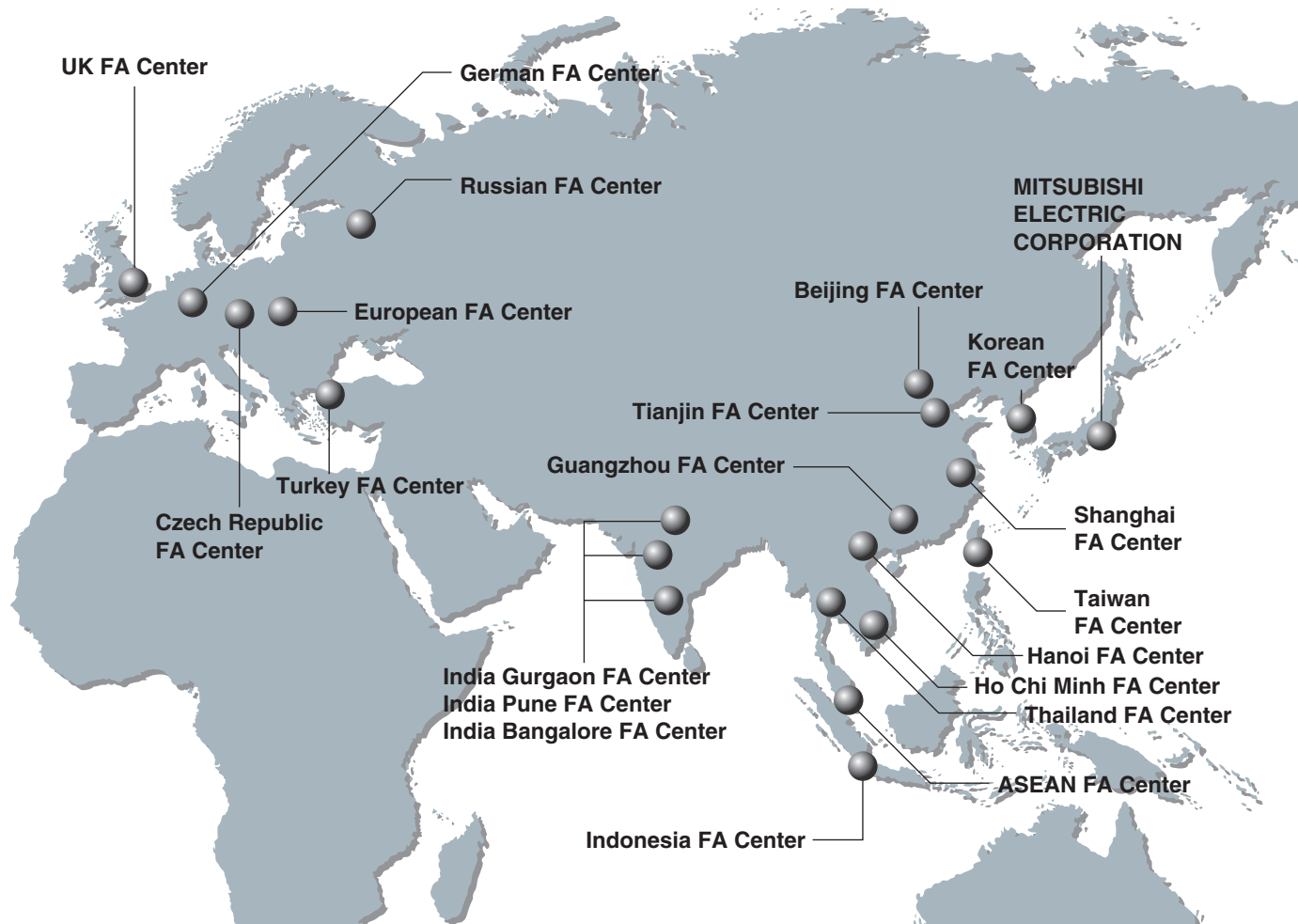
RS-232 and RS-422 cables are available from every manufacturer. For more details, please see the GOT2000 Series Connection Manual.

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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Line up

Features

Functions

FA Solutions

Specifications

Product list

Support

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FAQ

Inquiry

Q Where should we contact if we are interested in purchasing the software or need technical information?

A Please contact your local sales office for any inquiries about the product.

Products

Q We are currently using the GOT1000 Series screen design software GT Works3. Do we need to purchase new screen design software to design screen data for the GOT2000 Series?

A The GOT2000 Series screen data can be designed with GT Works3 Version 1.100E or later. If your version of GT Works3 is older than Version1.100E, there is no need to purchase the new version. For more details, please contact your local sales office.

Q What language is available?

A GT Works3 is available in English, Japanese, and Chinese.

Q Can the GOT1000 Series screen data be used with the GOT2000 Series?

A The GOT1000 Series screen data can be used with the GOT2000 Series just by changing the GOT type.

Q Can the GOT2000 Series screen data be used with the GOT1000 Series?

A The GOT2000 Series screen data cannot be converted into the GOT1000 Series screen data, and thus cannot be used with the GOT1000 Series.

Overseas standard

ISO9001 and ISO14001 certified.

All of Mitsubishi Electric's FA component products have acquired the international quality assurance "ISO9001" and the environment management system standard "ISO14001" certification.

Mitsubishi's products comply with various standards and laws.

Mitsubishi's products also comply with various safety standards including UL standards, shipping standards, and radio laws.

<Safety Standards>

Mark	Standards/Agency	Country/Region
CE	EN Standards	Europe
UL	UL Standards	United States
cUL	Canadian Standards Association (CSA)	Canada

<Radio Laws>

Mark	Law	Country
KC	Korea Radio Waves Act	Korea

For the details on the approval model within each standards, please contact your local sales office.

<Shipping Standards> To be supported soon

Abbrev.	Certification Organization	Country
ABS	American Bureau of Shipping	United States
BV	Bureau Veritas	France
DNV	Det Norske Veritas	Norway
GL	Germanischer Lloyd	Germany
LR	Lloyd's Register	England
NK	NIPPON KAIJI KYOKAI	Japan
RINA	Registro Italiano Navale	Italy

Warranty

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

- (1) 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.
- (2) 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.
- (3) Even within the gratis warranty term, repairs shall be charged for in the following cases.
 - ① Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
 - ② Failure caused by unapproved modifications, etc., to the product by the user.
 - ③ 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.
 - ④ Failure that could have been avoided if consumable parts designated in the user's manual etc. had been correctly serviced or replaced.
 - ⑤ Replacement of consumable parts (battery, display device, touch panel, fuse, etc.).
 - ⑥ 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.
 - ⑦ Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
 - ⑧ 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

- (1) 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.
- (2) 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

- (1) 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.
- (2) 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.

FA Products

PLC | MELSEC-Q Series Universal Model



Introducing the high-speed QCPU (QnUDVCPU) for faster processing of large data volumes.

- ◎Realize high-speed, high-accuracy machine control with various iQ Platform compatible controllers and multiple CPUs.
- ◎Easily connect to GOTs and Programming tools using built-in Ethernet port.
- ◎25 models from 10k step small capacity to 1000k step large capacity, are available.
- ◎Seamless communication and flexible integration at any network level.

Product Specifications

Program capacity	10k steps to 1000k steps
Number of I/O points [X/Y], number of I/O device points [X/Y]	256 points to 4096 points/8192 points
Basic instruction processing speed (LD instruction)	120 ns to 1.9 ns
External connection interface	USB (all models equipped), Ethernet, RS-232, memory card, extended SRAM cassette
Function module	I/O, analog, high-speed counter, positioning, simple motion, temperature input, temperature control, network module
Module extension style	Building block type
Network	Ethernet, CC-Link IE controller network, CC-Link IE field network, CC-Link, CC-Link/LT, MELSECNET/H, SSCNETIII (/H), AnyWire, RS-232, RS-422

Programmable Controller | MELSEC-L Series



“Light & Flexible” condensing various functions easily and flexibly.

- ◎CPU equipped as a standard with various functions including counter, positioning and CC-Link.
- ◎The base-less structure with high degree of freedom saves space in the control panel.
- ◎Easily confirm the system status and change the settings with the display unit.
- ◎Ten models are available in program capacities from 20 k steps to 260 k steps.

Product specifications

Program capacity	20 k steps/60 k steps/260 k steps
Number of input/output points [X/Y]	1024 points/4096 points
Number of input/output device points [X/Y]	8192 points
Basic instruction processing speed (LD instruction)	60 ns/ 40 ns/ 9.5 ns
External connection interface	USB, Ethernet, RS-232, SD memory card, CC-Link (L26CPU-BT/PBT)
Function modules	I/O, analog, high-speed counter, positioning, simple motion, temperature control, network module
Unit expansion style	Base-less structure
Network	Ethernet, CC-Link IE Field network, CC-Link, CC-Link/LT, SSCNETIII(/H), RS-232, RS-422

Programmable Controller | MELSEC-F Series



All-in-One Micro Programmable Controller equipped with all necessary functions in a compact body

- ◎Supporting small-scale control from 10 points to 384 points (using CC-Link) with an outstanding cost performance.
- ◎Wide range of options available for additional functions required by your system.
- ◎Easy to use and highly reliable. More than 12 million units have shipped worldwide. (April 2013)
- ◎Small-scale control is available in various networks such as CC-Link, Ethernet, and MODBUS.

Product specifications

Program capacity	16k steps (FX3S) to 64 k steps (FX3U/FX3UC)
Number of input/output points	10 points (FX3S) to 384 points (FX3U/FX3UC with CC-Link)
Basic instruction processing speed	0.21 μs (FX3S) to 65 ns (FX3U/FX3UC)
External connection interface	RS-422, USB (FX3S/FX3G/FX3GC/FX3GE only), Ethernet (FX3GE only), CC-Link/LT (FX3UC-32MT-LT(-2) only)
Built-in functions	I/O, high-speed counter input, positioning pulse output, analog (FX3GE only)
Extended functions	I/O, analog, temperature control, high-speed counter, positioning, network
Unit expansion style	Backplane-less design
Network	Ethernet, CC-Link, CC-Link/LT, SSCNETIII, CANopen, J1939, RS-232C, RS-422, RS-485, MODBUS

FA Products

AC Servo

Mitsubishi General-Purpose AC Servo MELSERVO-J4 Series



Industry-leading level of high performance servo

- ◎ Industry-leading level of basic performance: Speed frequency response (2.5kHz), 4,000,000 (4,194,304p/rev) encoder
- ◎ Advanced one-touch tuning function achieves the one-touch adjustment of advanced vibration suppression control II, etc.
- ◎ Equipped with large capacity drive recorder and machine diagnosis function for easy maintenance.
- ◎ 2-axis and 3-axis servo amplifiers are available for energy-conservative, space-saving, and low-cost machines.

Product Specifications

Power supply specifications	1-phase/3-phase 200V AC, 3-phase 400V AC
Command interface	SSCNET III/H, SSCNET III (compatible in J3 compatibility mode), CC-Link IE Field Network interface with Motion, pulse train, analog
Control mode	Position/Speed/Torque/Fully closed loop
Speed frequency response	2.5kHz
Tuning function	Advanced one-touch tuning, advanced vibration suppression control II, robust filter, etc.
Safety function	STO, SS1 SS2, SOS, SLS, SBC, SSM (compatible when combined with motion controller)
Compatible servo motor	Rotary servo motor (rated output: 0.05 to 22kW), linear servo motor (continuous thrust 50 to 3000N), direct drive motor (rated torque: 2 to 240N·m)

Inverter

FR-A800 Series



High-functionality, high-performance inverter

- ◎ Realize even higher responsiveness during real sensor-less vector control or vector control, and achieve faster operating frequencies.
- ◎ The latest automatic tuning function supports various induction motors and also sensor-less PM motors.
- ◎ The standard model is compatible with EU Safety Standards STO (PLd, SIL2). Add options to support higher level safety standards.
- ◎ A variety of useful functions provide USB memory support and customization with a PLC function.

Product Specifications

Inverter capacity	200V class: 0.4kW to 90kW, 400V class: 0.4kW to 500kW
Control method	High-carrier frequency PWM control (Select from V/F, advanced flux vector, real sensor-less vector or PM sensor-less vector control), vector control (when using options)
Output frequency range	0.2 to 590Hz (when using V/F control or advanced flux vector control)
Regenerative braking torque (Maximum tolerable usage rate)	200V class: 0.4K to 1.5K (150% at 3%ED) 2.2K/3.7K (100% at 3%ED) 5.5K/7.5K (100% at 2%ED) 11K to 55K (20% continuous) 75K or more (10% continuous), 400V class: 0.4K to 7.5K (100% at 2%ED) 11K to 55K (20% continuous) 75K or more (10% continuous)
Starting torque	200% 0.3Hz (3.7K or less), 150% 0.3Hz (5.5K or more) (when using real sensor-less vector, vector control)

Three-Phase Motor

High Performance Energy-Saving Motor Super Line Premium Series SF-PR



High Efficiency & Compatible. New Launch of Super Line Premium Series SF-PR Model

- ◎ Compared to general-purpose motor SF-JR model, generated loss is reduced by 37% on average, and it is compatible with highly efficient premium IE3.
- ◎ Easy replacement is achieved as mounting dimension (frame number) is compatible with general-purpose motor SF-JR model.
- ◎ One motor can accommodate different power sources of Japan and the U.S. Three ratings in Japan meet the Top Runner standards, while it corresponds to EISA in the U.S.
- ◎ Can be driven by inverters as standard. Advanced magnetic-flux vector control by our FR-A800 achieves steady torque drive up to 0.5Hz.

Product Specifications

Number of poles	2-poles, 4-poles, 6-poles
Voltage-Frequency	200/200/220/230V 50/60/60/60Hz EISA 230V 60Hz or 400/400/440/460V 50/60/60/60Hz EISA 460V 60Hz
Exterior	Totally enclosed fan cooled type (inside, outside installation)
Protection system	IP44
Electrically-driven power system	Motor with 2-poles over 11kW is dedicated for a direct connection. Motors with 4-poles and 6-poles are for both direct and crossed belt connections.
Rotation direction	Counter-clock-wise (CCW) direction viewed from the edge of axis.
Compatible standard	JEC-2137-2000 (Efficiency is compatible with IEC 60034-30.)

Robot

MELFA F Series



High speed, high precision and high reliability industrial robot

- ◎Compact body and slim arm design, allowing operating area to be expanded and load capacity increased.
- ◎The fastest in its class using high performance motors and unique driver control technology.
- ◎Improved flexibility for robot layout design considerations.
- ◎Optimal motor control tuning set automatically based on operating position, posture, and load conditions.

Product Specifications

Degrees of freedom	Vertical:6	Horizontal:4
Installation	Vertical:Floor-mount, ceiling mount, wall mount (Range of motion for J1 is limited) Horizontal:Floor-mount	
Maximum load capacity	Vertical:2-20kg	Horizontal:3-20kg
Maximum reach radius	Vertical:504-1503mm	Horizontal:350-1,000mm

Magnetic Starter

MS-T Series



Exceed your expectations.

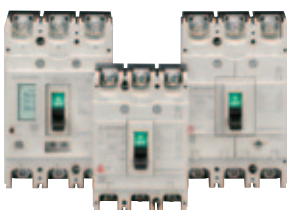
- ◎10A frame model is over 16% smaller with a width of just 36mm!!
- ◎New integrated terminal covers.
- ◎Reduce your coil inventory by up to 50%.
- ◎Be certified to the highest international levels while work is ongoing to gain other country.

Product specifications

Frame	10 A to 32 A
Applicable standards	Certification to various standards including IEC, JIS, CE, UL, TÜV, CCC.
Terminal cover	Standard terminal cover improves safety, simplifies ordering, and reduces inventory, etc.
Improved wiring	Wiring and operability are improved with streamlining wiring terminal BC specifications.
Operation coil rating	Wide range of operation coil ratings reduces number of coil types from 14 (N Series) to 7 types and simplifies selection.
Option units	Diverse lineup includes Auxiliary Contact Block, Operation Coil Surge Absorber Unit, Mechanical Interlock Unit.

Low Voltage Circuit Breakers

Mitsubishi WS-V Series Molded Case Circuit Breakers, Earth Leakage Circuit Breakers



Technologies based on long year experience realize more improved performance.

- ◎The new electronic circuit breakers can display various measurement items.
- ◎Improvement of breaking performance with new breaking technology “Expanded ISTAC”.
- ◎Compliance with global standard for panel and machine export.
- ◎Commoditization of internal accessories for shorter delivery time and stock reduction.

Product Specifications.

Frame	32-250A Frame
Applicable standard	Applicable to IEC, GB, UL, CSA, JIS and etc.
Expansion of UL listed product line-up	New line-up of 480VAC type with high breaking performance for SCCR requirement
Commoditization of internal accessories	Reduction of internal accessory types from 3 to 1
Commoditization for AC and DC circuit use	Common use of 32/63A frame in both AC and DC circuit
Compact size for easy to use	Thermal adjustable and electronic circuit breakers are same size as 250AF fixed type
Measuring Display Unit (MDU) breakers	MDU breakers measure, display and transmit energy date to realize energy management.

FA Products

CNC

Mitsubishi Numerical Control Unit C70 Series

iQ Platform compatible CNC to provide TCO reduction effect.

- ◎A CNC structured in building block method on iQ Platform.
- ◎High performance CNC integrated with high-speed PLC offers high-speed control to reduce cycle time.
- ◎A wide variety of FA products helps construct flexible lines.



Product specifications

Maximum number of control axes (NC axis + spindle + PLC axis)	16 axes
Maximum number of part system	Machining center system: 7 systems, Lathe system: 3 systems
Maximum number of NC axes per part system	8 axes
Maximum program capacity	2,000 kB (5,120 m)
Maximum number of files to store	124 files/252 files
Number of input/output points	4,096 points
Safety observation function	Safety signal comparison function, speed monitoring function, duplexed emergency stop

For detailed information, please refer to: <http://www.mitsubishielectric.com/fa/worldwide/index.html>

EDM

Wire EDM MV1200R

Next-generation Innovations of our best selling Performance Machine.

- ◎Total running cost reduced up to 42%, which is accounted for 90% by filter, ion exchange resin and power consumption.
- ◎Improved productivity by an innovative automatic wire threading.
- ◎Faster machining is realized with improved power-supply performance.
(Rz3. 5 μ m/Ra0. 45 μ m with 3cuts) (Rz2. 0 μ m/Ra0. 28 μ m with 4cuts)



Product Specifications

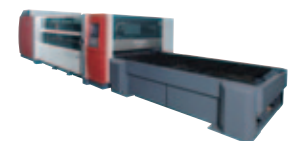
Model	MV1200R
Machining travel (X×Y×Z)[mm] (in)	400(15.7)×300(11.8)×220(8.7)(XY axis OPT-drive specifications)
Machining travel (U×V)[mm] (in)	±60(2.4)×±60(2.4)(OPT-drive specifications)
Max. taper angle [°]	15° (maximum 200mm)(7.9°)
Max. workpiece dimensions [mm] (in)	810(31.9)×700(27.6)×215(8.5)
Wire diameter [mm] (in)	0.1(.004) to 0.3(.012) ^{*1}
Dielectric fluid	Water
Footprint (W×D)[mm] (in)	2025(79.7)×2760(108.7)

※1: Φ 0.2(0.08) DD guides and Φ 1.5(0.06) jet nozzle are standard equipment.

Laser Processing Machine | CO₂ 2-Dimensional Laser Processing Machine eX-Series

A global standard CO₂ 2-dimensional laser processing systems.

- ◎Productivity has been dramatically enhanced owing to improved acceleration and the latest control technologies exclusive to Mitsubishi Electric.
 - ◎2 Action Cutting allows for the entire process, from job setup to parts cutting, to be completed in two simple actions.
 - ◎When not processing, the system switches to ECO mode and the resonator stops idling. Minimizes energy consumption, reducing running costs by up to 99%^{*1} during standby.
- *1: Compared to the previous LV-Series with Mitsubishi's designated benchmark shape.



Product specifications

Model Name	ML3015eX
Drive system	Flying optic (3-axis beam movement)
Stroke (X×Y×X) [mm]	3100×1565×150
Rapid feedrate [m/min]	X,Y axes: Max. 100; Z-axis: Max. 65
Processing feedrate [m/min]	Max. 50
Positioning accuracy [mm]	0.05 / 500 (X,Y axes)
Repeat accuracy [mm]	± 0.01 (X,Y axes)
Rated output [W]	4500

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iQ Platform Graphic Operation Terminal GOT2000 Series

Precautions for Choosing the Products

This catalog explains the typical features and functions of the GOT2000 series HMI and does not provide restrictions and other information on usage and module combinations. When using the products, always read the user's manuals of the products. Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi; machine damage or lost profits caused by faults in the Mitsubishi products; damage, secondary damage, accident compensation caused by special factors unpredictable by Mitsubishi; damages to products other than Mitsubishi products; and to other duties.

For safe use

- To use the products given in this catalog properly, always read the related manuals before starting to use them.
- The products within this catalog have been manufactured as general-purpose parts for general industries and have not been designed or manufactured to be incorporated into any devices or systems used in purpose related to human life.
- Before using any product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi.
- The products within this catalog have been manufactured under strict quality control. However, when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.

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