

iQ Platform-compatible PAC System Recorder

e-Factory

Total maintenance solution

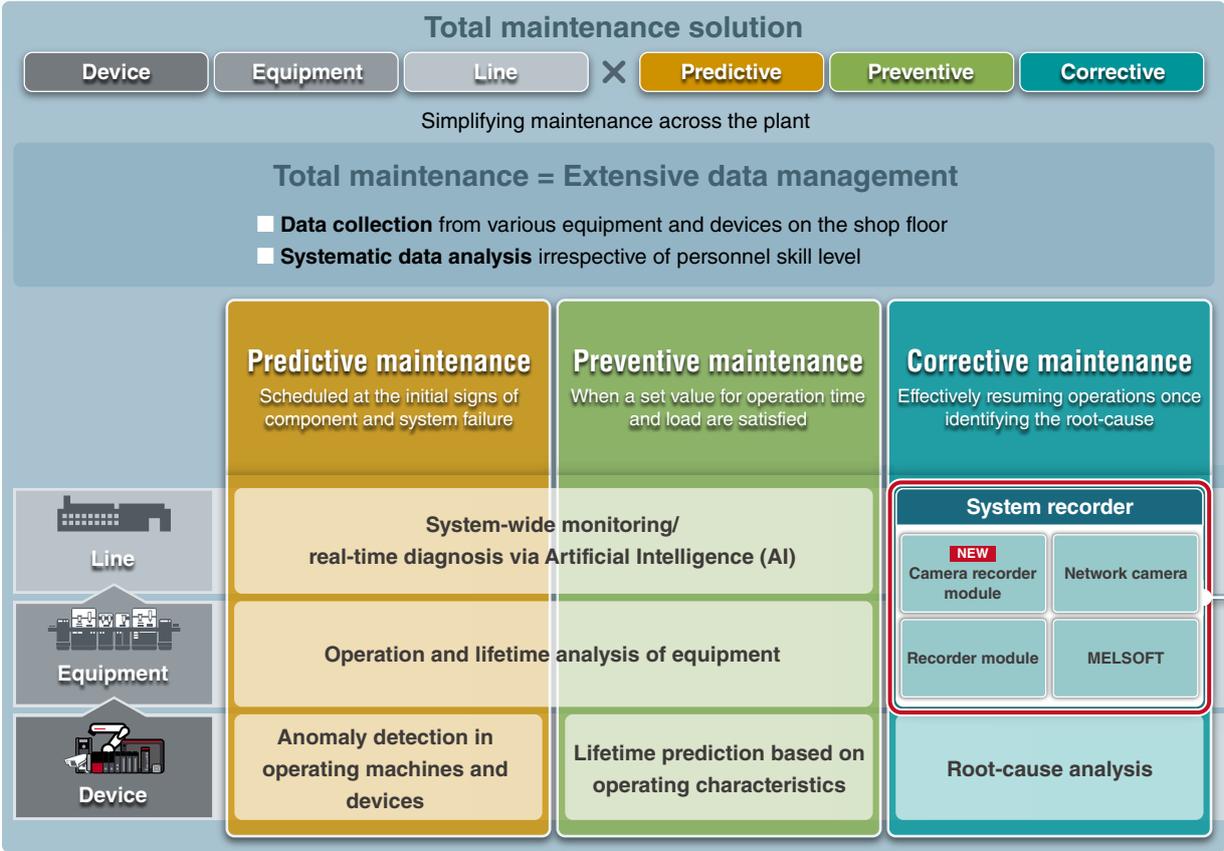


Bringing maintenance data
management to the next level

MELSEC iQ-R
series

Mitsubishi Electric’s solution for improving productivity through easier data management

Ensuring continuous production is a key factor in manufacturing from **device**, to **equipment** and across **multiple lines**. This can be achieved in various ways by recording and sampling production and machine operating data and utilizing this data within various stages of maintenance; from **1 predictive maintenance** to detect signs of error, periodical **2 preventive maintenance**, and **3 corrective maintenance** for prompt troubleshooting at the time of failure. Having an enhanced maintenance solution is Mitsubishi Electric’s goal of empowering the customer to reduce downtime and to ensure a manufacturing plants efficiency is running at optimum resulting in reduced operating and maintenance cost.



System-wide recording

- **Data recording and video feed**
 - Device/label collection h i
 - Event history recording h i
 - Network camera image recording h j k l
 - Automatic saving to file server j l
- **Drives status recording**
 - Servo system recording a f i
- **GOT (HMI) operation recording**
 - Recording of log and alarm data g

Simplified analysis

- **Data analysis with video feed**
 - Offline monitoring a b d e h
 - Log marker a b c
- **Comprehensive device relationship mapping**
 - Data flow analysis b

System recorder

The system recorder is a corrective maintenance solution that ensures effective resumption of operations reducing downtime through its extensive system-wide data recording and simplified analysis software features.

System-wide recording and simplified analysis

System-wide recording

Extensive recording ensures simpler cause analysis

Error cause identification is made simpler by the extensive recording of various equipment and device data together with a real-time video feed reducing the need for multiple retesting due to insufficient data.

System-wide

Irregularities between various equipment including control and drive systems together with operations are all linked.

Automatic system-wide recording

Recording of errors that can occur outside standard operating shifts.



- A Programmable controller CPU (entire bit/word data)
- B Servo status (command position, actual position, speed, torque)
- C Network camera video feed
- D Display and operation log of GOT (HMI)

Simplified analysis

Extensive data shown in the same timeline

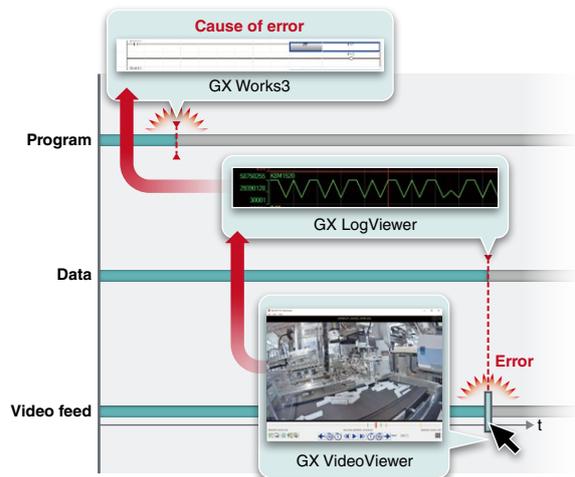
Waveform, data, program, operations log and video feeds are shown in sequence ready for analysis.

Easier cause identification

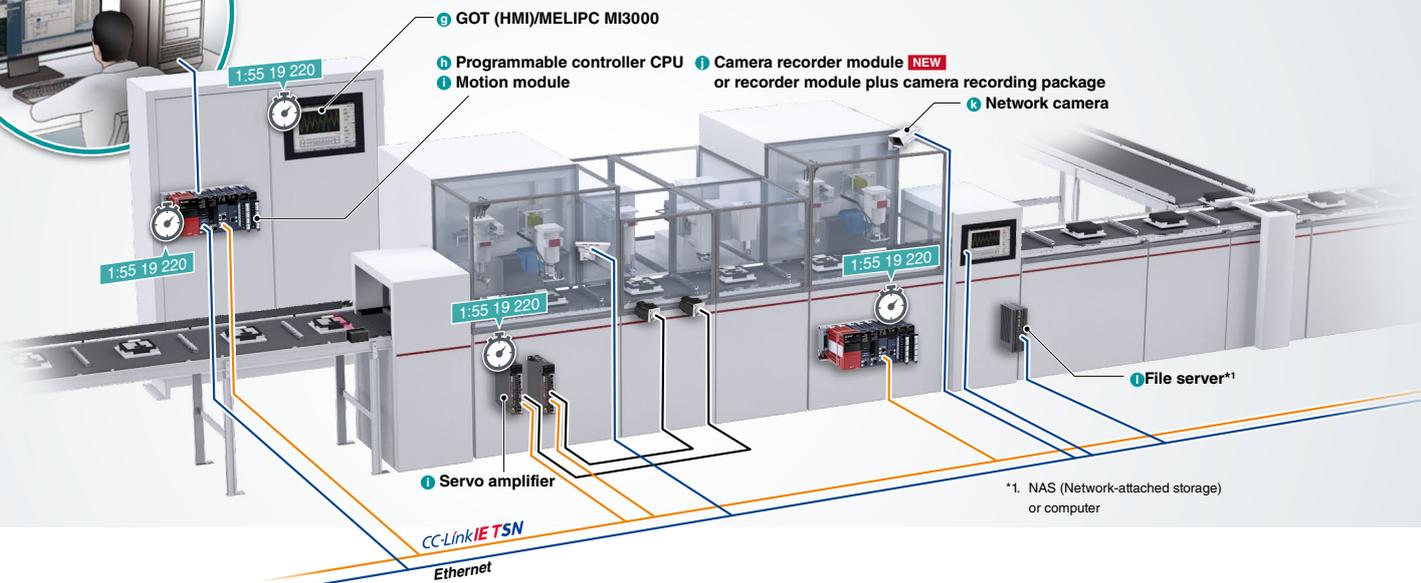
Data flow analysis makes understanding the root-cause of failures easier by showing the relationship between failed and normal devices.

Structured program ensures easier troubleshooting

Supports structured programs and device labels enabling easier resolution of problems.



- MELSOFT
- a GX LogViewer
 - b GX Works3
 - c GX VideoViewer
 - d GT Designer3
 - e GT SoftGOT2000
 - f MR Configurator2



*1. NAS (Network-attached storage) or computer

System-wide recording



When equipment fails or fall into an error status it can be quite difficult to highlight which components or process had caused the initial failure leading to a detailed fault-cause analysis prior to and after the event. In addition, collecting device data after the fault is difficult with no guarantee that the actual cause of the initial failure will be evident to ascertain especially if the system is quite complex. In contrast, Mitsubishi Electric's system recorder can record the entire process condition and offer an operations log for control data of multiple equipment and devices, allowing the reproduction (or playback) of the process offline, helping to highlight and show the actual cause of failure. The system recorder modules are very simple to use, and recording can be initiated by simple settings from the module and associated engineering tools.

■ Data recording and video feed

Complete system-wide recording

The MELSEC iQ-R Series modules (supporting system recording) enables complete collection of all device changes per controller scan time, therefore the error cause can be identified quickly. Collecting of all device data related to system modules and network in addition to the programmable controller CPU is possible.

Easily locate error point with structured program

Supporting structured programming enables the recording of not only devices but also labels. This eliminates concerns about physical device addresses and system configuration, easily identifying the errors point of origin.

Record status changes from external devices

Device and label operation from external devices can be recorded as historical events. This enables to accurately understand status changes specifically for each device and label.

Select ideal camera for the application

The network camera is used to record a live feed of the actual behavior and status of the machine. Any problems specific to the manufacturing process can be visualized easily. Various standard network cameras (compliant with industry standards) are supported with no proprietary hardware required enabling the choice to select the ideal camera for the application.

Easier retention and analysis of overall data

Collected data (recording files) can be automatically stored on the SD memory card of the system recorder modules and on a file server (such as NAS or computer) automatically based on the system configuration and data size.

● Drives status recording

Extensive recording of positional data from servo

Servo systems tend to operate at a much faster cycle time compared with a programmable controller making it difficult to capture. Collecting data using a time-stamp ensures that detailed positional data from the servo can be recorded.

● Operator process recording

Operation logs and alarms

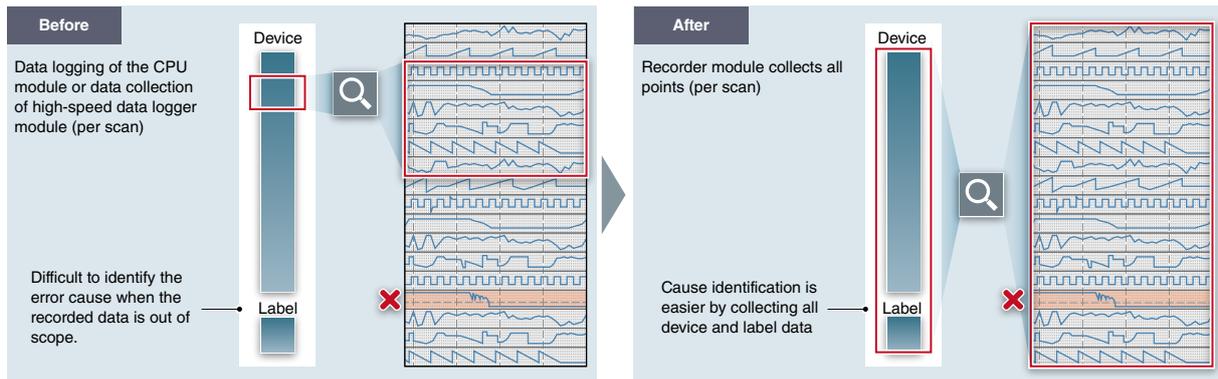
Operation logs can be recorded in the GOT (HMI) and MELIPC MI3000 in sequence. Alarms related to various devices can be checked and archived.

System-wide recording Control data

Device/label collection every (programmable controller) scan

① Collecting of all device and label data

The MELSEC iQ-R Series modules (supporting system recording) collect all device and label data per controller scan prior to and after an error event (together with a time-stamp). The cause of the error can be identified quickly since individual settings for recording specific devices and labels are unnecessary. Safety device and label collection are supported.



② Minimal impact on the scan time

The system recorder module series are designed for logging of all device and label data before and after a trigger occurs. Influence on the CPU scan time is minimal as the execution load is separated. This can be ideal for ensuring determinism in a control system. Influence on the CPU scan time is further minimized by filtering of device and labels. Collecting targets can be quickly selected by narrowing down with multiple filter conditions.

Select multiple filter conditions to narrow down specific device or labels

Specifying the collection target	
Device/label	
Sampling target	
Label data type	
Range	
Program file name	
Data name	
Comment	

③ Easy setting

Setting of the device trigger and the recording time before and after the event are only required irrespective of the device target recording range. Devices used within a program are recorded without any inconsistency.

Device setting
All devices enabled by default

Recording time (before/after trigger)
Both trigger point and recording time are easily legible

Automatic saving to file server

As a recording file storage, the SD memory card for the system recorder modules or a file server (such as a NAS or computer) can be selected. Remote retrieval of collected data directly from the file server is supported without requiring access on the shop floor.

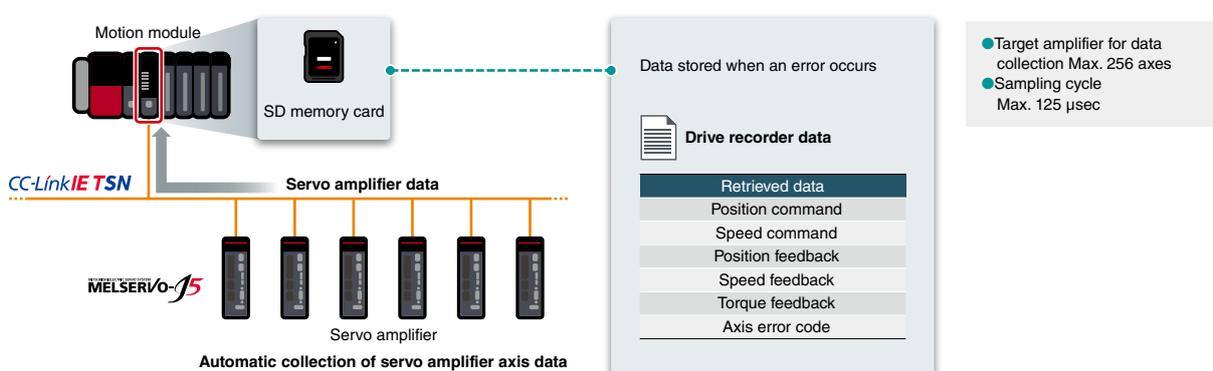
Collecting servo axis data in real-time

① Record all servo movement

Control data from the motion module can be collected even at high operating speeds. The data is collected using a time-stamp ensuring that detailed positional data can be grasped.

② Automatic collection without requiring a program

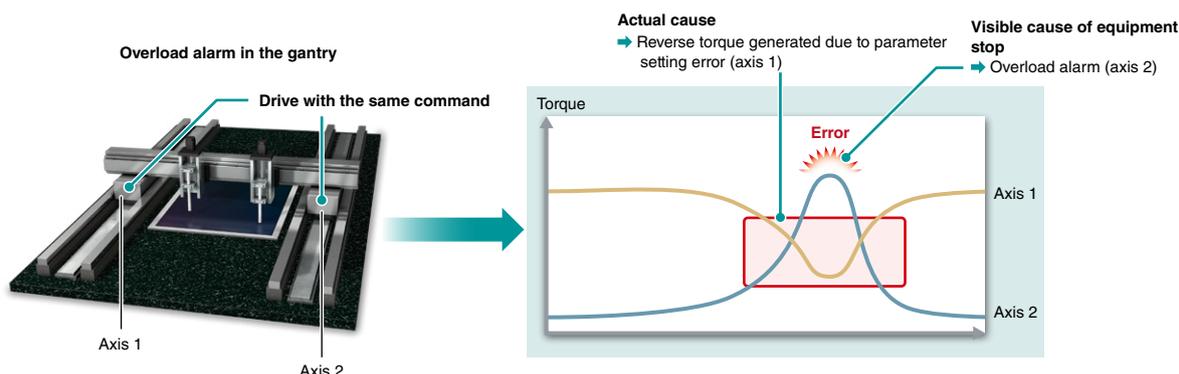
Motion data (speed, torque, and position) are automatically collected as log data between the MELSERVO-J5 Series servo amplifier and MELSEC iQ-R Series motion module without requiring any additional registration of parameters. Time-stamped data is saved in the motion modules SD memory card.



③ Troubleshooting utilizing entire system data

Troubleshooting is easier by collecting the entire systems servo axis data instead of just concentrating on one servo.

In the system below, when the equipment stops from an overload alarm in axis 2, an error cause can be found by checking the axis 1 data. It is apparent that the equipment stops due to reverse torque generated because of parameter setting error of axis 1.



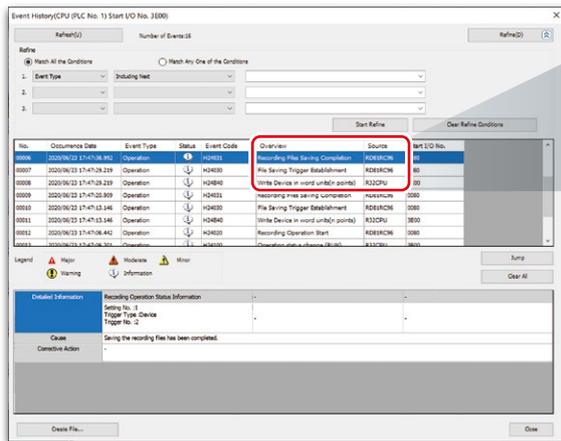
CC-Link IE TSN networked device logging

Manufacturing machines are equipped with various components consisting of servos, robots, inverters and remote devices in addition to the programmable controller. To facilitate the error cause identification between these networked devices, data (device data and labels) can be collected per scan for reproduction and playback in sequence. Making it is easier to understand and check the situation of these devices throughout the network.

System-wide recording Event history

Event history

Sometimes an error may arise from sudden changes in data value from an external device or due to a mistake with an operator's procedure. Device and label operation from external devices can be recorded as historical events. This enables to accurately understand status changes specifically for each device and label.



Overview	Source
Recording Files Saving Completion	RD81RC96
File Saving Trigger Establishment	RD81RC96
Write Device in word units(n points)	R32CPU

Recorded items
Operation from engineering tool
Device and label data registration via SLMP*1 Ethernet protocol
Device and label data registration using instructions (from external station or machine)
Device and label registration using "Simple CPU communications" (from external device)

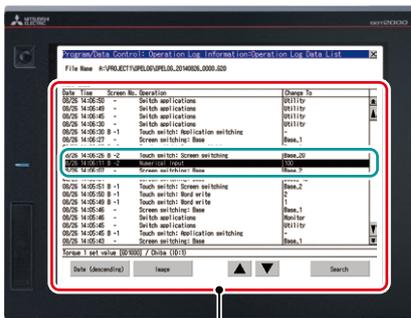
*1. SLMP: Seamless Message Protocol

Record operation log and alarm history

① Easier to identify error cause from operation log

Operation logs can be recorded in a SD or USB memory card from the GOT (HMI) in sequence. These logs can then be confirmed in the GOT (HMI) or MELIPC MI3000 on the shop floor. In addition to authentication, recording of specific operator logs can be identified easily.

Operation log list



Check log profile

Detailed information

```

Date/Time : 08/26/2020 14:06:11
Function : NUM_VAL
Numerical Input
Screen No : Base_2
Operation :
Torque 1 set value
Operator : Chiba (ID:1)
User ID : -
Action No : 1
Data Type : BIN16
Device : GD1000
Change To : 100
Change To(Oper.): 100
Chng From : 10
Chng From(Disp): 10
    
```

Check log details

Check log image



Image (GOT2000)

② Recording of system alarm history

System errors that have occurred are logged in the GOT (HMI) situated on the shop floor. Alarms related to each device with detailed logs showing specific network station number are supported. These features are ideal for large-scale systems.

System-wide recording Camera images

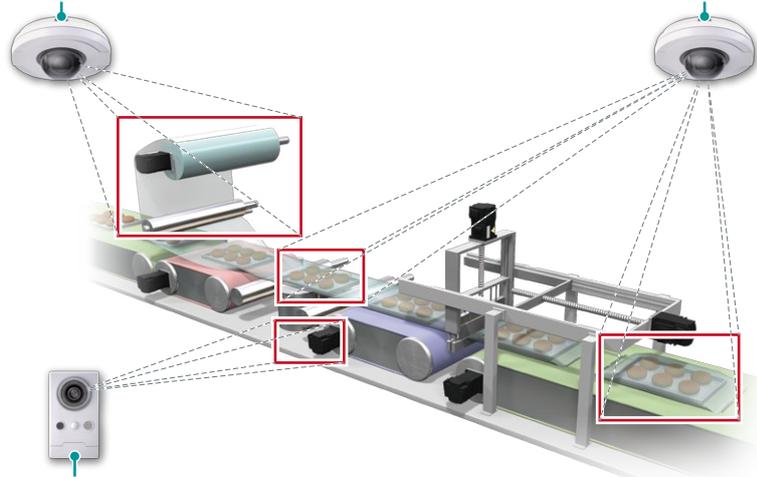
Utilize readily available network cameras

① Select network camera according to applications

In addition to operation and alarm logs, visual representation of errors in the form of a video feed are useful for showing actual processes in operation enabling quick identification of a specific error or process issue. Network cameras can be installed around equipment and/or processes enabling a real-time video feed close to the application. By supporting readily available network cameras offers a broad choice of functions that maybe specific to an application, such as for process speed and environment (ambient temperature, humidity, and installation space).

Wide angle/fish-eye lens type:
Enables panoramic view of an entire production line

Optical zoom type: Provides detailed and vivid images
PTZ (Pan-Tilt-Zoom) type: Pre-registered positions allowing multiple areas with a single camera.



Modular type: Installable within control enclosures with limited space

Wireless type: Greater installation flexibility as communication cables are not required

Installation environment	Applicable cameras
<ul style="list-style-type: none"> Wide-area coverage capturing entire process area Recording personnel operations 	Wide angle/fish-eye lens type
<ul style="list-style-type: none"> Detailed view Multiple viewing positions 	Optical zoom type PTZ (Pan-Tilt-Zoom) type
<ul style="list-style-type: none"> Limited installation space Difficulty installing communications cabling 	Modular type Wireless type

Recommended network cameras:
 • AXIS® COMMUNICATIONS (AXIS®) network camera*¹
 • ONVIF® Profile S compliant network camera **NEW**

*1. For more information, please contact your local Mitsubishi Electric sales office or representative.

② Optimized focusing on camera subject

Utilize PTZ (Pan, Tilt, Zoom) functionality for network cameras. Enables large area monitoring and focusing on specific areas of interest. Can be easily controlled from either the HMI (GOT) or MELIPC MI3000. Fine adjustments are supported while monitoring the live video feed.



Camera (Live/PTZ) setting screen



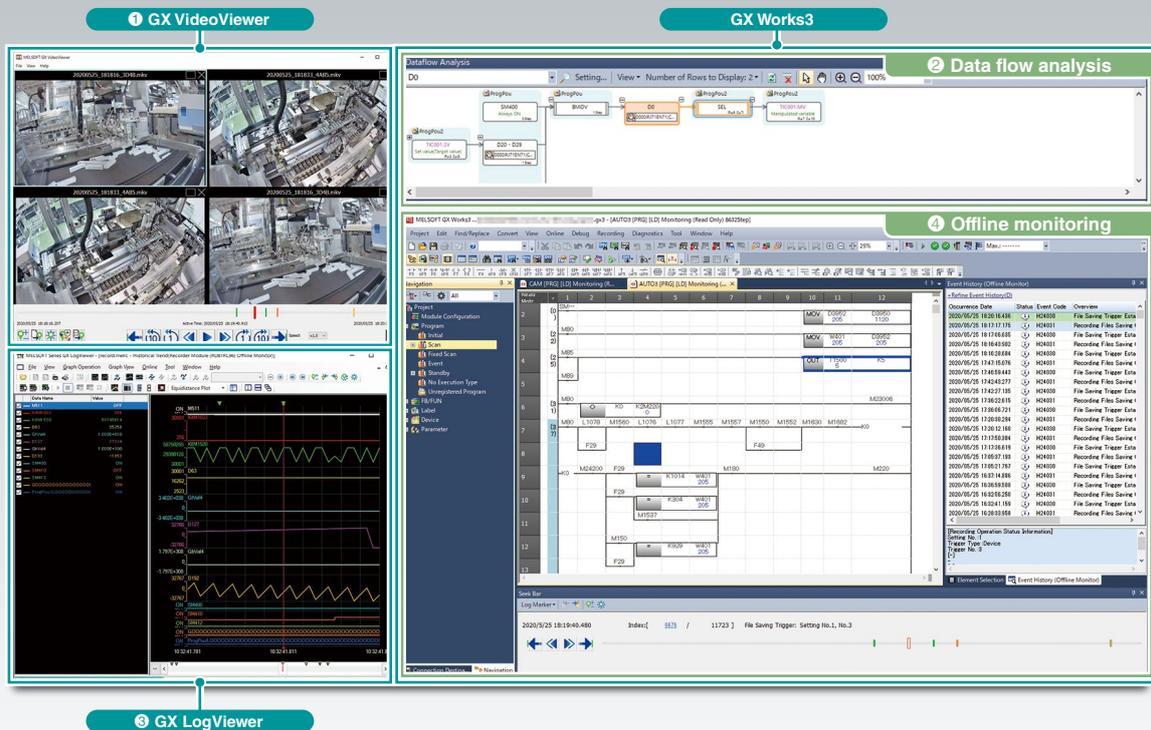
③ Long duration recording

Recording video feeds can require large storage capacity considering the frequency and amount of data being recorded. To overcome this the system recorder stores video feeds using the H.264 codec which compresses the data making space utilization more efficient. Together with GX VideoViewer feeds can be confirmed immediately.

④ Use external storage such as a NAS or computer

A file server (such as a NAS or computer) can be used as storage for camera images on the shop floor.

Simplified analysis



Finding the root-cause for errors in manufacturing can be a laborious process involving many areas of the support chain. One of the difficult aspects of fault finding is to find out why a specific process or application is behaving irregularly and to pinpoint the cause of these faults. The system recorder has a range of tools that simplify analysis and enables the support engineer to understand the process clearly. Data (such as control data, device/label values, and event history) can be recorded in real-time and for long durations. In addition to this, camera video feeds are recorded. The relationship between data can be visually shown in a state representational diagram (data flow analysis) allowing the support engineer to playback or return to a specific timeline and confirm the behavior of devices. All software screens are synchronized providing a clear timeline of events. To further expand the scope of support, recording files can be accessed locally onsite or remotely and distributed to various key personnel within the support chain.

1 GX VideoViewer Visual confirmation of irregular process behavior

Recorded video feeds taken from networked cameras can be confirmed on either readily available video playback software or the dedicated software GX VideoViewer. The dedicated software is intuitive in its design with minimum risk of exposure to non-authorized personnel as it is separate from GX Works3.

2 GX Works3 Relationship mapping between devices

Relationships between device and label data are shown as a flowchart on GX Works3. From here, engineers can highlight an area of concern and drill down to devices that are related to the original issue. Rather than combing through lines of logic program code, specific changes can be singled out pinpointing the actual code which is causing the data value.

3 GX LogViewer Device change analysis

Monitoring of device statuses can be done similar to an oscilloscope showing various data in waveform highlighting when a process is developing a fault.

4 GX Works3 Check between data changes and program offline

Relationship between changes in data values and the program can be easily confirmed offline. All relevant software screens are synchronized, allowing effective root-cause analysis of the program, operation, and input.

Data flow analysis function

① Visualize affected area of device/label

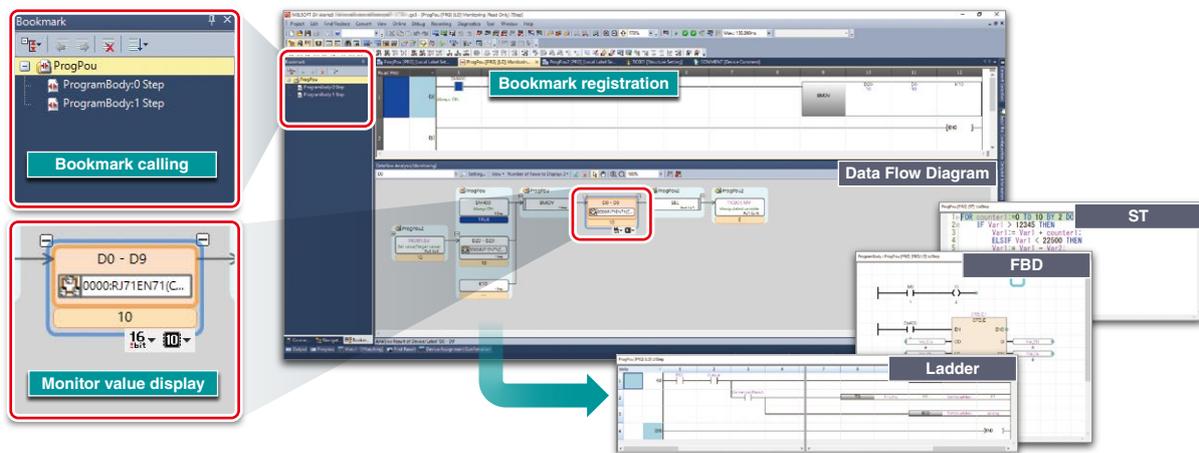
Device and labels together with the affected area can be visualized within the flowchart. The process flow from comments, instruction names, event history, and monitored values can be checked easily identifying the cause of an error.

② Bookmark milestone points

Easily bookmark reference points for areas of concern.

③ Main program languages supported

Analysis can be done for ladder programs, function block diagram (FBD), SFC (within ZOOM) and ST language programs.

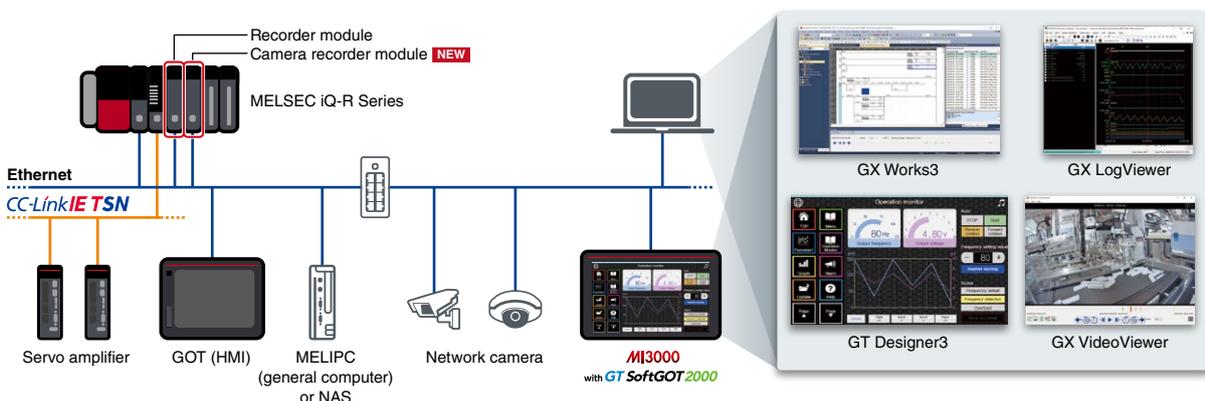


Simplified analysis of motion control

Analyzing motion module data is easily done directly in GX LogViewer, synchronizing the program, screen data and video feed similar to the programmable controller.

Simplified analysis using panel computer

Multiple data can be reproduced on a panel computer such as the MELIPC MI3000 (embedded Windows® OS). Considering the panel computer is situated on the shop floor, various historical alarms and operation logs can be confirmed efficiently at the point where a problem occurs.



System recorder related products specifications

System-wide recording Recording function (device and label collection, image recording)

Recorder module RD81RC96

Automatic collection of all device changes per controller scan time
(with time-stamp) prior to and after an error occurs.

- Collect all device/label and event history data
- Easily register device trigger and recording time before and after the event
- Network camera image recording (RD81RC96-CA only)

Camera recorder module RD81RC96-CA **NEW**



Recorder module, camera recorder module specifications

Item		RD81RC96	RD81RC96-CA
Recording target		Device/label, event history	Device/label, event history, camera image
Number of settings		Up to 4	
Recording method		File saving trigger only, recording startup trigger + file saving trigger	
File saving trigger		Device of the control CPU, elapsed time after completion of data collection (max.16 per recording setting)	
Recording startup trigger		Rise/fall accumulation period (1 per recording setting)	
Sampling method		Each scan, time specification, trigger instruction, safety cycle time	
Number of connectable modules		One recorder module per control CPU	Four camera recorder modules per control CPU*2
Applicable cameras*1	Camera type	-	ONVIF® Profile S compliant network camera
	Number of cameras	-	Max. 4 per module*3
Storage type		SD memory card, file server	
Compatible CPU module		R04/08/16/32/120(EN)CPU, R08/16/32/120SFCPU*4	

*1. For details of compatible camera, please refer to the technical news (FA-A-0326-A).

*2. Maximum of 4 camera recorder modules (RD81RC96-CA) can be used per control CPU according to the number of connected cameras. To use device/label collection, set recording operation setting of either RD81RC96 or RD81RC96-CA to "main". When the recording operation setting of RD81RC96-CA is set to "sub", only image recording is possible.

*3. Up to two modules when the recording operation setting is "main" and four modules when the recording operation setting is "sub".

*4. Compatible CPU modules can be checked from product information. Please refer to System recorder device configuration on P.15, relevant manual, or technical news.

System-wide recording Image recording

Camera recording package*5

Dedicated function blocks (FB) used in combination with the recording module.

Camera recording package specifications

Item		Camera recording package
Applicable cameras	Camera	AXIS® COMMUNICATIONS (AXIS®) Network camera*6
	Amount (max.)	RnCPU:16, RnENCPU:64, RJ71EN71:112*7
Save destination		File server
Included item	FB	Time setting, recording direction, virtual input port control
	Connection guideline	Commercially available network camera and connection and setup guideline for included FBs
Compatible module	CPU embedded Ethernet port	R00/01/02CPU*8, R04/08/16/32/120(EN)CPU
	Ethernet module	RJ71EN71

*5. For information on obtaining the package, please contact your local Mitsubishi Electric sales office or representative.

*6. For details of compatible camera, please refer to the technical news (FA-A-0306-A).

*7. The maximum number of cameras depends on the amount of available connections not used by other devices. For more information, please refer to MELSEC iQ-R Ethernet/CC-Link IE User's Manual (Startup) (SH-081256ENG).

*8. R00/01/02CPU do not support recording function of the RD81RC96 or RD81RC96-CA, therefore linkage with the camera recording images is not supported.

System-wide recording Network camera (Live/PTZ) setting screen

■ Camera adjustment on the operation panel*1 MI3000 GOT2000 (GT27, GT25)

Sample screens supporting live image streaming and PTZ adjustment of the network camera via the MELSEC iQ-R camera recorder module are available.

*1. For information on obtaining the sample screens, please contact your local Mitsubishi Electric sales office or representative.



System-wide recording Servo system recorder

■ Motion module RD78GH RD78G

■ Servo amplifier MR-J5 Series

Automatic collection of all servo control system drive axes data from the motion module and servo amplifier when an error occurs. Can be used for easy troubleshooting based on command and feedback values.

- Collect servo system recorder data without programming
- Data collection of all drive system axes



Simplified analysis Offline monitor

■ GX Works3, GX LogViewer, GT Designer3

Data/control program operation and GOT (HMI) display/operation log/alarm history can be displayed making it easier to visualize an error.

Offline monitor specifications

Item		Offline monitor
Play	Waveform data	Selected device, label (GX LogViewer*2)
	Control program	Ladder diagram, ST, FBD/LD program (GX Works3*2)
	GOT (HMI) screen	GOT (HMI) screen status display (GT Designer3*2)
	Operation log of GOT (HMI)/alarm history	Resource data (GT Designer3*2)
Operation bar/seek bar		Move by seek bar
Monitor function		Device block monitor, watch window, program monitor
Change point search		Conditional search, display in a list (GX LogViewer*2)
Waveform display		Selected device/label displayed in waveform (GX LogViewer*2)
	Device/label to be displayed	Max. 32

*2. GX Works3 Ver.1.065T or later, GX LogViewer Ver.1.106K or later, GT Designer3 Ver.1.236W or later

Simplified analysis Camera image replay function

GX VideoViewer*1

Recorded camera image can be checked by a general video replay software as well as dedicated GX VideoViewer allowing simultaneous replay of up to four screens.

Camera image replay function specifications

Item		Camera image replay function
Camera image replay		Play/pause, play forward/backward one frame, jump to the marked image, Select play speed (0.1/0.25/0.5/1/2/4/8x), select play forward/backward speed (1 frame/1 s/10 s) specify the image to play by moving the slider
Compatible file format	Within recording file	*.melrc
	Video*2	*.mkv, *.mp4, *.mov
Image resolution (pixel)		320 x 240*3, 640 x 480, 1280 x 720, 1920 x 1080
Recording frame rate (fps)	Camera recorder module	10, 30, 120, 200
	Camera recording package	10, 15, 25, 30, 50, 60, 100, 120

*1. GX VideoViewer is successor (upper compatible product) to Video Verification Tool. Please use GX VideoViewer in place of Video Verification Tool.

*2. Supported only when XML files (with time stamp) are stored in the same folder as video files. When video files are recorded using the camera recorder module or camera recording package, XML files are also generated. To replay video files recorded by the camera recorder module, use GX VideoViewer Ver. 1.009K or later.

*3. Supported only when using camera recording package.

Simplified analysis Log marker function

GX Works3, GX LogViewer, GX VideoViewer

Milestone points (log marker) can be added to the main video timeline enabling reference points for areas of concern. These points are synchronized with both GX Works3 and GX LogViewer including GX VideoViewer.

Log marker function specifications

Item	Log marker function
Marking	Add/delete marking position, read log marker information, jump to the marking position (GX VideoViewer, GX Works3, GX LogViewer*4), adding comments, change marking color

*4. GX Works3 Ver. 1.072A or later, GX LogViewer Ver. 1.106K or later, GX VideoViewer Ver. 1.009K or later

Simplified analysis Data flow analysis

GX Works3*5

Device/label data that have an area of concern can be easily selected from the flowchart, highlighting the relevant part of the program affecting the data value change.

Data flow analysis specifications

Item		Data flow analysis
Analysis target device		User device, safety user device*6, system device, safety system device*6, link direct device, module access device, CPU buffer memory access device, index register, file register, refresh data register, nesting, pointer, etc.
Analysis target label	Label	Global label, safety global label*6, local label, safety local label*6, module label, general/safety shared label*6, system label
	Modified label	Structure, array
Analysis target program	Programming language	Ladder diagram, ST, FBD/LD, SFC (within ZOOM)
	POU	Function block, function

*5. GX Works3 Ver. 1.065T or later, GX LogViewer Ver. 1.106K or later
GX Works3 Ver. 1.070Y or later when using safety CPU R08/16/32/120SFCPU

*6. Available when using safety CPU R08/16/32/120SFCPU

Windows is a registered trademark of Microsoft Corporation in the United States and other countries.
 AXIS is a registered trademark of Axis AB in various jurisdictions.
 ONVIF is a trademark of Onvif, Inc.
 All other company names and product names used in this document are trademarks or registered trademarks of their respective companies.

System recorder device configuration

Basic configuration

Collecting of all device and label data

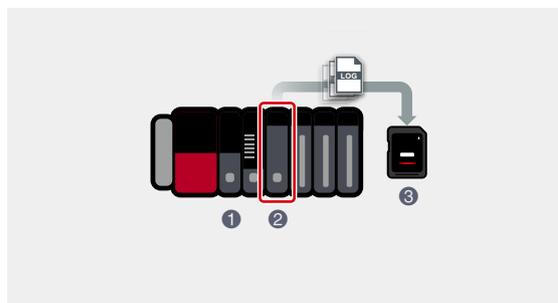
- 1 MELSEC iQ-R Series CPU module*1
- 2 Recorder module*2
- 3 SD memory card

*1. CPU modules with product information (3rd and 4th digits) stated below support collecting of all device and label data.

Model	Product information	Model	Product information	Model	Product information
R04CPU	*19" or later	R04ENCPU	*32" or later	R08SFPCPU	*05" or later
R08CPU	*20" or later	R08ENCPU	*30" or later	R16SFPCPU	
R16CPU	*20" or later	R16ENCPU	*27" or later	R32SFPCPU	
R32CPU	*17" or later	R32ENCPU	*30" or later	R120SFPCPU	
R120CPU	*17" or later	R120ENCPU	*22" or later		

For how to check product information, please refer to the MELSEC iQ-R Module Configuration Manual SH-081262ENG. Module firmware update may be required depending on modules.

- *2. GX Works3 (Ver.1.065T or later) is necessary for recording setting and module setting.
GX Works3 (Ver.1.070Y or later) is necessary when using RnSFPCPU.



Basic configuration + Camera recording package

Collecting of all device and label data and recording instructions to network camera from software

- 1 MELSEC iQ-R Series CPU module*3
- 2 Network camera*4
- 3 Camera recording package (FB and guideline)
- 4 Recorder module*5
- 5 SD memory card or file server (NAS or computer)
- 6 PoE switching hub (IEEE802.3at (PoE+) compliant)*6

*3. CPU modules with product information (3rd and 4th digits) stated below support collecting of all device and label data.

Model	Product information	Model	Product information
R04CPU	*19" or later	R04ENCPU	*32" or later
R08CPU	*20" or later	R08ENCPU	*30" or later
R16CPU	*20" or later	R16ENCPU	*27" or later
R32CPU	*17" or later	R32ENCPU	*30" or later
R120CPU	*17" or later	R120ENCPU	*22" or later

For how to check product information, please refer to the MELSEC iQ-R Module Configuration Manual SH-081262ENG. Module firmware update may be required depending on modules.

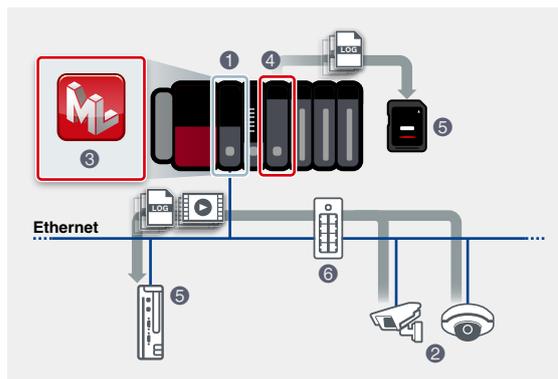
To use camera image recording only, below CPU modules can be used.

- R00/01/02/04/08/16/32/120CPU, R04/08/16/32/120ENCPU (no restriction to product information)
- In addition to the above CPU Ethernet ports, the Ethernet module (RJ71EN71) can also be used

*4. For details of compatible AXIS® COMMUNICATIONS (AXIS®) Network cameras, please refer to the technical news (FA-A-0306).

*5. GX Works3 (Ver.1.065T or later) is necessary for recording setting and module setting. GX Works3 (Ver.1.070Y or later) is necessary when using RnSFPCPU.

*6. PoE: Power over Ethernet



Basic configuration + Camera recorder module NEW

Collecting of all device and label data, storage of video data from network camera NEW

- 1 MELSEC iQ-R Series CPU module*7*8
- 2 Network camera*9
- 3 Camera recorder module*8
- 4 SD memory card or file server (NAS or computer)
- 5 PoE switching hub (IEEE802.3at (PoE+) compliant)

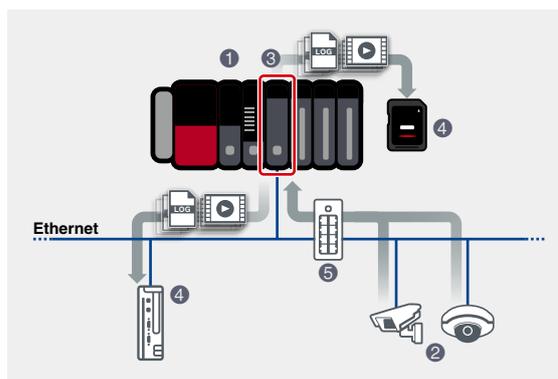
*7. CPU modules with product information (3rd and 4th digits) stated below support collecting of all device and label data.

Model	Product information	Model	Product information	Model	Product information
R04CPU	*19" or later	R04ENCPU	*32" or later	R08SFPCPU	*05" or later
R08CPU	*20" or later	R08ENCPU	*30" or later	R16SFPCPU	
R16CPU	*20" or later	R16ENCPU	*27" or later	R32SFPCPU	
R32CPU	*17" or later	R32ENCPU	*30" or later	R120SFPCPU	
R120CPU	*17" or later	R120ENCPU	*22" or later		

For how to check product information, please refer to the MELSEC iQ-R Module Configuration Manual SH-081262ENG. Module firmware update may be required depending on modules.

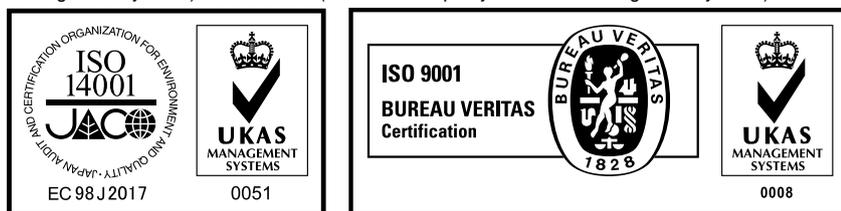
*8. GX Works3 (Ver.1.072A or later) is necessary for recording setting and module and camera setting (not yet supported).

*9. For details of ONVIF® Profile S compatible network camera and other compatible cameras, please refer to the technical news (FA-A-0326-A).



Country/Region	Sales office	Tel/Fax
USA	MITSUBISHI ELECTRIC AUTOMATION, INC. 500 Corporate Woods Parkway, Vernon Hills, IL 60061, U.S.A.	Tel : +1-847-478-2100 Fax : +1-847-478-2253
Mexico	MITSUBISHI ELECTRIC AUTOMATION, INC. Mexico Branch Boulevard Miguel de Cervantes Saavedra 301, Torre Norte Piso 5, Ampliacion Granada, Miguel Hidalgo, Ciudad de Mexico, Mexico, C.P.115200	Tel : +52-55-3067-7512
Brazil	MITSUBISHI ELECTRIC DO BRASIL COMERCIO E SERVICOS LTDA. Avenida Adelino Cardana, 293, 21 andar, Bethaville, Barueri SP, Brasil	Tel : +55-11-4689-3000 Fax : +55-11-4689-3016
Germany	MITSUBISHI ELECTRIC EUROPE B.V. German Branch Mitsubishi-Electric-Platz 1, 40882 Ratingen, Germany	Tel : +49-2102-486-0 Fax : +49-2102-486-7780
UK	MITSUBISHI ELECTRIC EUROPE B.V. UK Branch Travellers Lane, UK-Hatfield, Hertfordshire, AL10 8XB, U.K.	Tel : +44-1707-28-8780 Fax : +44-1707-27-8695
Ireland	MITSUBISHI ELECTRIC EUROPE B.V. Irish Branch Westgate Business Park, Ballymount, Dublin 24, Ireland	Tel : +353-1-4198800 Fax : +353-1-4198890
Italy	MITSUBISHI ELECTRIC EUROPE B.V. Italian Branch Centro Direzionale Colleoni - Palazzo Sirio, Viale Colleoni 7, 20864 Agrate Brianza (MB), Italy	Tel : +39-039-60531 Fax : +39-039-6053-312
Spain	MITSUBISHI ELECTRIC EUROPE, B.V. Spanish Branch Carretera de Rubi, 76-80-Apdo. 420, E-08190 Sant Cugat del Valles (Barcelona), Spain	Tel : +34-935-65-3131 Fax : +34-935-89-1579
France	MITSUBISHI ELECTRIC EUROPE B.V. French Branch 25, Boulevard des Bouvets, 92741 Nanterre Cedex, France	Tel : +33-1-55-68-55-68 Fax : +33-1-55-68-57-57
Czech Republic	MITSUBISHI ELECTRIC EUROPE B.V. Czech Branch, Prague Office Pekarska 621/7, 155 00 Praha 5, Czech Republic	Tel : +420-255-719-200
Poland	MITSUBISHI ELECTRIC EUROPE B.V. Polish Branch ul. Krakowska 48, 32-083 Balice, Poland	Tel : +48-12-347-65-00
Sweden	MITSUBISHI ELECTRIC EUROPE B.V. (Scandinavia) Hedvig Mollersgata 6, 223 55 Lund, Sweden	Tel : +46-8-625-10-00 Fax : +46-46-39-70-18
Russia	MITSUBISHI ELECTRIC (RUSSIA) LLC St. Petersburg Branch Piskarevsky pr. 2, bld 2, lit "Sch", BC "Benua", office 720; 195027 St. Petersburg, Russia	Tel : +7-812-633-3497 Fax : +7-812-633-3499
Turkey	MITSUBISHI ELECTRIC TURKEY Elektrik Urunleri A.S. Serifali Mah. Kale Sok. No: 41 TR 34775 Umraniye, Istanbul/Turkey	Tel : +90-216-969-2500 Fax : +90-216-661-4447
UAE	MITSUBISHI ELECTRIC EUROPE B.V. Dubai Branch Dubai Silicon Oasis, P.O.BOX 341241, Dubai, U.A.E.	Tel : +971-4-3724716 Fax : +971-4-3724721
South Africa	ADROIT TECHNOLOGIES 20 Waterford Office Park, 189 Witkoppen Road, Fourways, South Africa	Tel : +27-11-658-8100 Fax : +27-11-658-8101
China	MITSUBISHI ELECTRIC AUTOMATION (CHINA) LTD. Mitsubishi Electric Automation Center, No.1386 Hongqiao Road, Shanghai, China	Tel : +86-21-2322-3030 Fax : +86-21-2322-3000
Taiwan	SETSUYO ENTERPRISE CO., LTD. 6F, No.105, Wugong 3rd Road, Wugu District, New Taipei City 24889, Taiwan	Tel : +886-2-2299-2499 Fax : +886-2-2299-2509
Korea	MITSUBISHI ELECTRIC AUTOMATION KOREA CO., LTD. 7F to 9F, Gangseo Hangang Xi-tower A, 401, Yangcheon-ro, Gangseo-Gu, Seoul 07528, Korea	Tel : +82-2-3660-9569 Fax : +82-2-3664-8372
Singapore	MITSUBISHI ELECTRIC ASIA PTE. LTD. 307 Alexandra Road, Mitsubishi Electric Building, Singapore 159943	Tel : +65-6473-2308 Fax : +65-6476-7439
Thailand	MITSUBISHI ELECTRIC FACTORY AUTOMATION (THAILAND) CO., LTD. 12th Floor, SV.City Building, Office Tower 1, No. 896/19 and 20 Rama 3 Road, Kwaeng Bangpongpan, Khet Yannawa, Bangkok 10120, Thailand	Tel : +66-2682-6522-31 Fax : +66-2682-6020
Vietnam	MITSUBISHI ELECTRIC VIETNAM COMPANY LIMITED Unit 01-04, 10th Floor, Vincom Center, 72 Le Thanh Ton Street, District 1, Ho Chi Minh City, Vietnam	Tel : +84-28-3910-5945 Fax : +84-28-3910-5947
Indonesia	PT. MITSUBISHI ELECTRIC INDONESIA Gedung Jaya 8th Floor, JL. MH. Thamrin No.12, Jakarta Pusat 10340, Indonesia	Tel : +62-21-31926461 Fax : +62-21-31923942
India	MITSUBISHI ELECTRIC INDIA PVT. LTD. Pune Branch Emerald House, EL-3, J Block, M.I.D.C., Bhosari, Pune-411026, Maharashtra, India	Tel : +91-20-2710-2000 Fax : +91-20-2710-2100
Australia	MITSUBISHI ELECTRIC AUSTRALIA PTY. LTD. 348 Victoria Road, P.O. Box 11, Rydalmere, N.S.W 2116, Australia	Tel : +61-2-9684-7777 Fax : +61-2-9684-7245

Mitsubishi Electric Corporation Nagoya Works is a factory certified for ISO 14001 (standards for environmental management systems) and ISO 9001 (standards for quality assurance management systems).



MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE: TOKYO BLDG., 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
www.MitsubishiElectric.com