

# FA REMOTE SOLUTIONS

**e-Factory**





# GLOBAL IMPACT OF MITSUBISHI ELECTRIC



Through Mitsubishi Electric's vision, "Changes for the Better" are possible for a brighter future.

## *Changes for the Better*

"Changes for the Better" represents the Mitsubishi Electric Group's attitude to "always strive to achieve something better", as we continue to change and grow. Each one of us shares a strong will and passion to continuously aim for change, reinforcing our commitment to creating "an even better tomorrow".

Mitsubishi Electric is involved in many areas including the following:

### **Energy and Electric Systems**

A wide range of power and electrical products from generators to large-scale displays.

### **Electronic Devices**

A wide portfolio of cutting-edge semiconductor devices for systems and products.

### **Home Appliance**

Dependable consumer products like air conditioners and home entertainment systems.

### **Information and Communication Systems**

Commercial and consumer-centric equipment, products and systems.

### **Industrial Automation Systems**

Maximizing productivity and efficiency with cutting-edge automation technology.

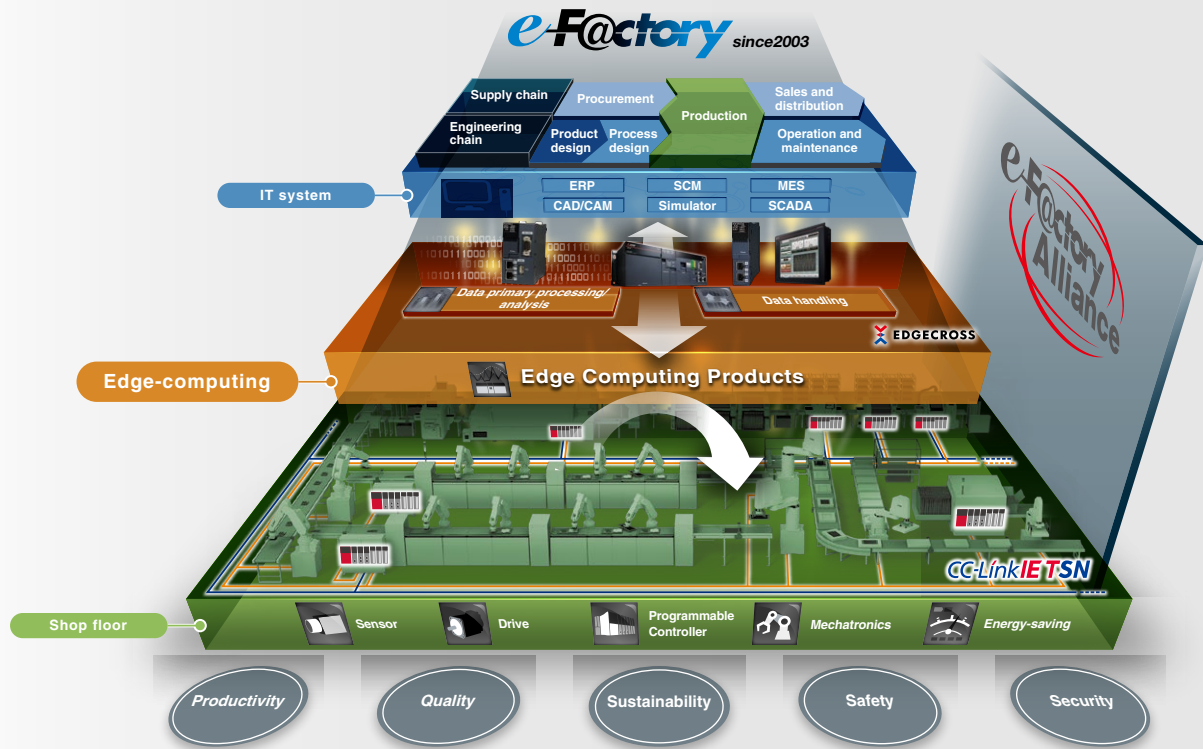
Our advances in AI and IoT are adding new value to society in diverse areas from automation to information systems. The creation of game-changing solutions is helping to transform the world, which is why we are honored to be recognized in the 2019 "Forbes Digital 100" as one of world's most influential digital corporations.







The “e-F@ctory” FA-IT integrated solution proposes ways of utilizing FA and IT technologies that reduce the total cost of development, production, and maintenance activities, continuously support customer kaizen activities, and promote monozukuri that is one step ahead.



# INDEX

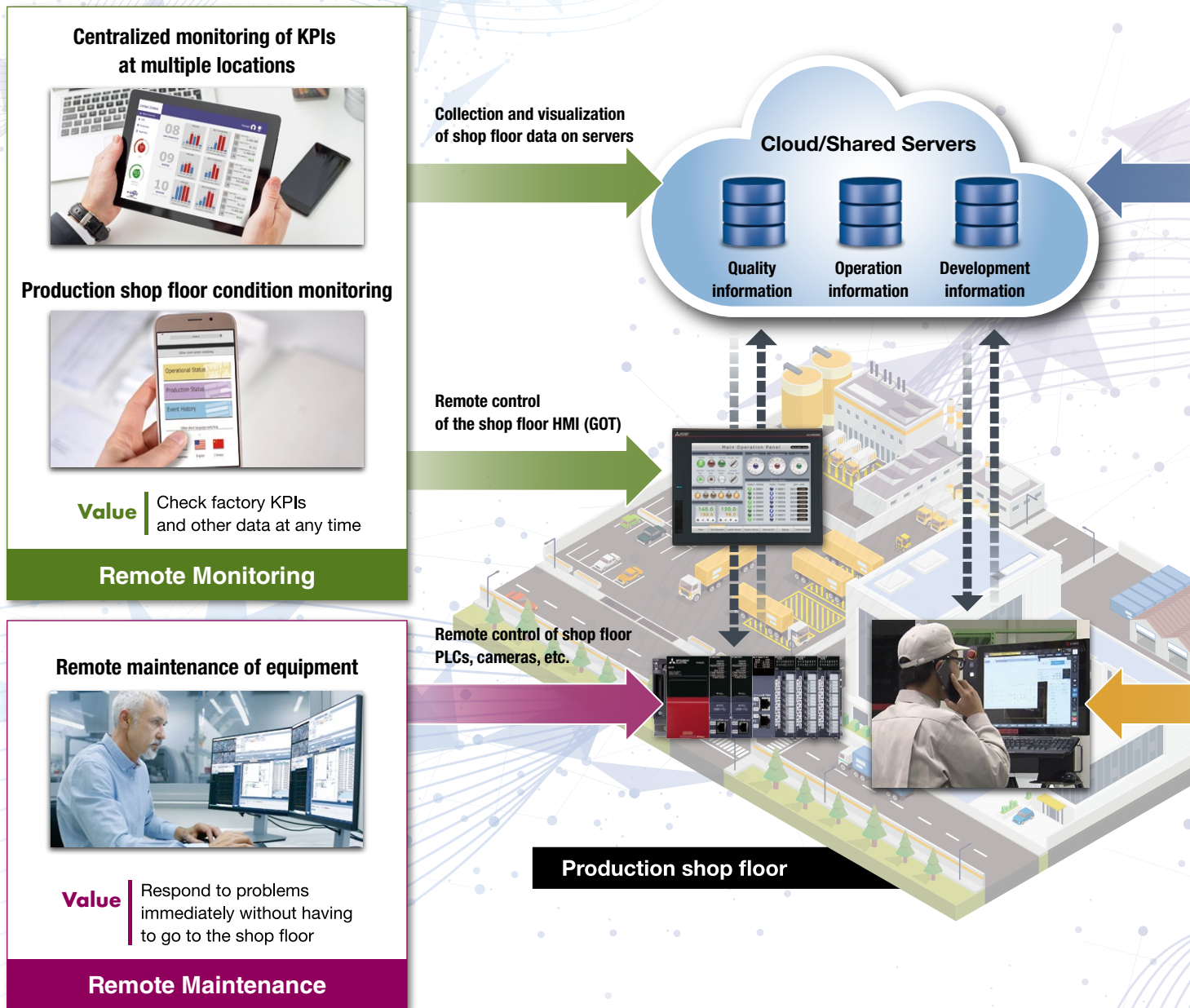
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# Accelerating the shift to remote monozukuri and diversifying work styles in the FA remote solutions provide this support.

Technological innovation is accelerating the diversification of work styles, and the manufacturing industry is no exception. As it becomes the norm to address monitoring, maintenance, service, and development requirements anywhere, anytime, tangible benefits include less production downtime and reduced travel costs.

Mitsubishi Electric's FA remote solutions facilitate the diversification of work styles and contribute to improving the competitiveness of all companies involved in monozukuri.



## Building a safer and more reassuring security environment



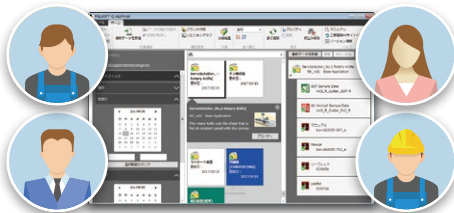
### Promotion of multi-layer defense:

We recommend adopting multi-layer defense in your FA system to ensure efforts for security measures in accordance with Mitsubishi Electric's FA Security Guidelines be implemented at each layer (human layer, physical layer, network layer, device layer), and achieve manufacturing at factories with a safe and reassuring security environment.



# INDEX

## Design and development from anywhere with smooth collaboration



**Value** | Able to smoothly collaborate with partner companies even while working from home in the same environment as the shop floor

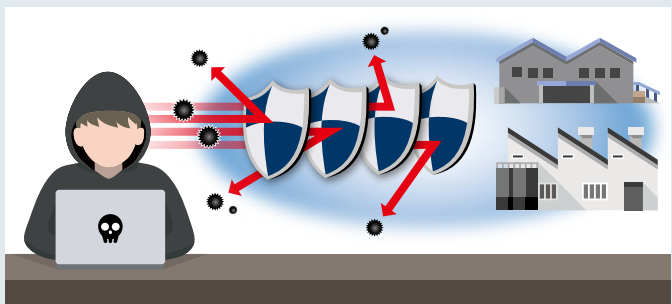
### Remote Design and Development

## Instant expert response



**Value** | Experts respond immediately even in the event of equipment trouble

### Remote Services



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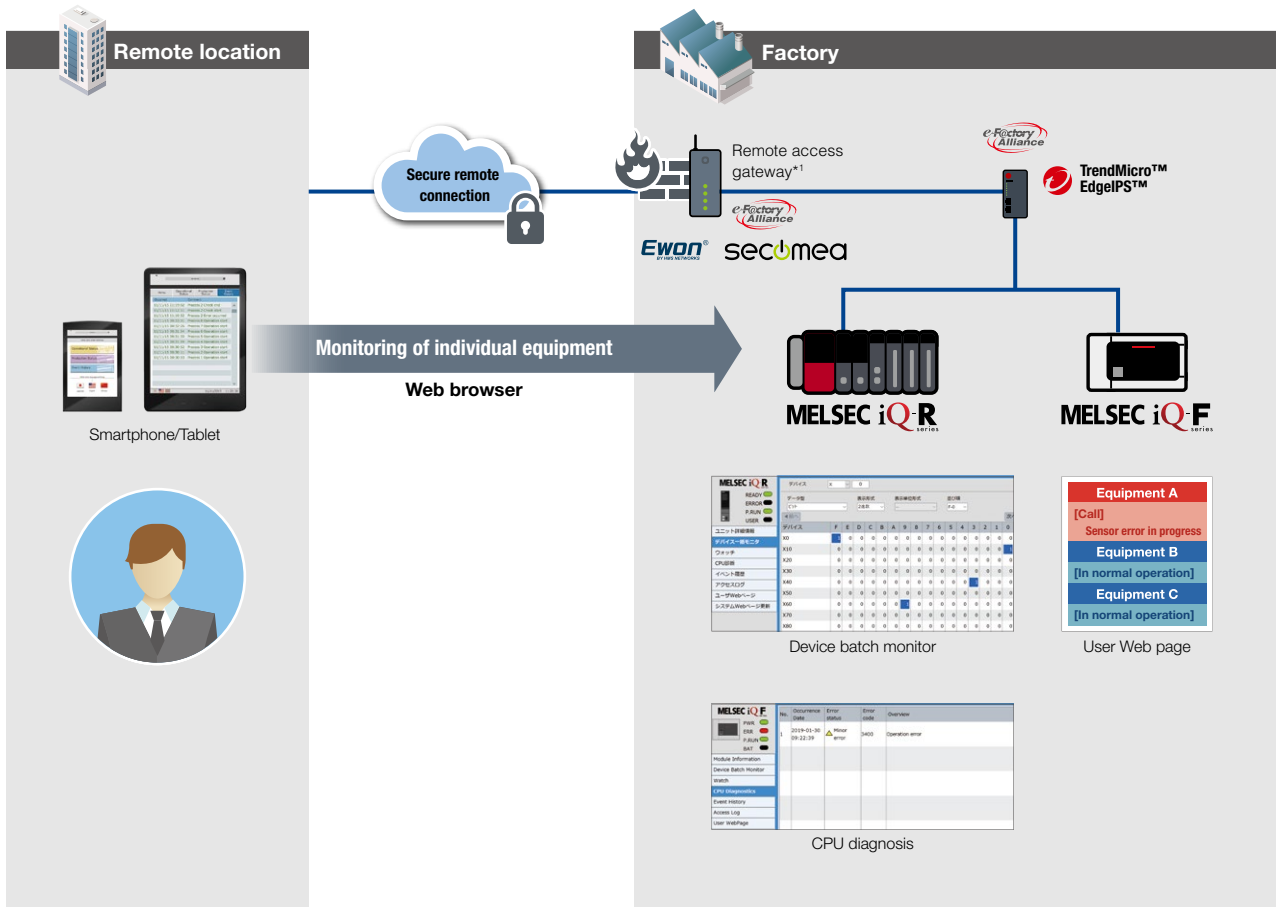
Remote Monitoring Case 1

# Easily check equipment status from a remote location

## Solution

Check equipment status on a web browser using the PLC's web server function.

- \* Using the Ewon/Secomea remote solution, users can easily and safely construct a remote access environment.
- \* TrendMicro™ EdgelPS™ security solutions create a more secure remote access environment.



\*1 Operations are confirmed with the Ewon Cosy and Secomea SiteManager Series.

## Benefits

- Even without a special-purpose tool, users can view equipment status via a smartphone or tablet web browser, and then respond appropriately based on facts and data.
- IDS/IPS enables the detection and blocking of unauthorized network access and the construction of a secure remote connection environment.

## Product and Solution Introduction

MELSEC iQ-R Series	P.20	MELSEC iQ-F Series	P.20
HMS Industrial Networks HMS Ewon Cosy Series	P.38	Kanematsu Communications Secomea SiteManager Series	P.39
Trend Micro Cyber security solution for FA systems	P.40		

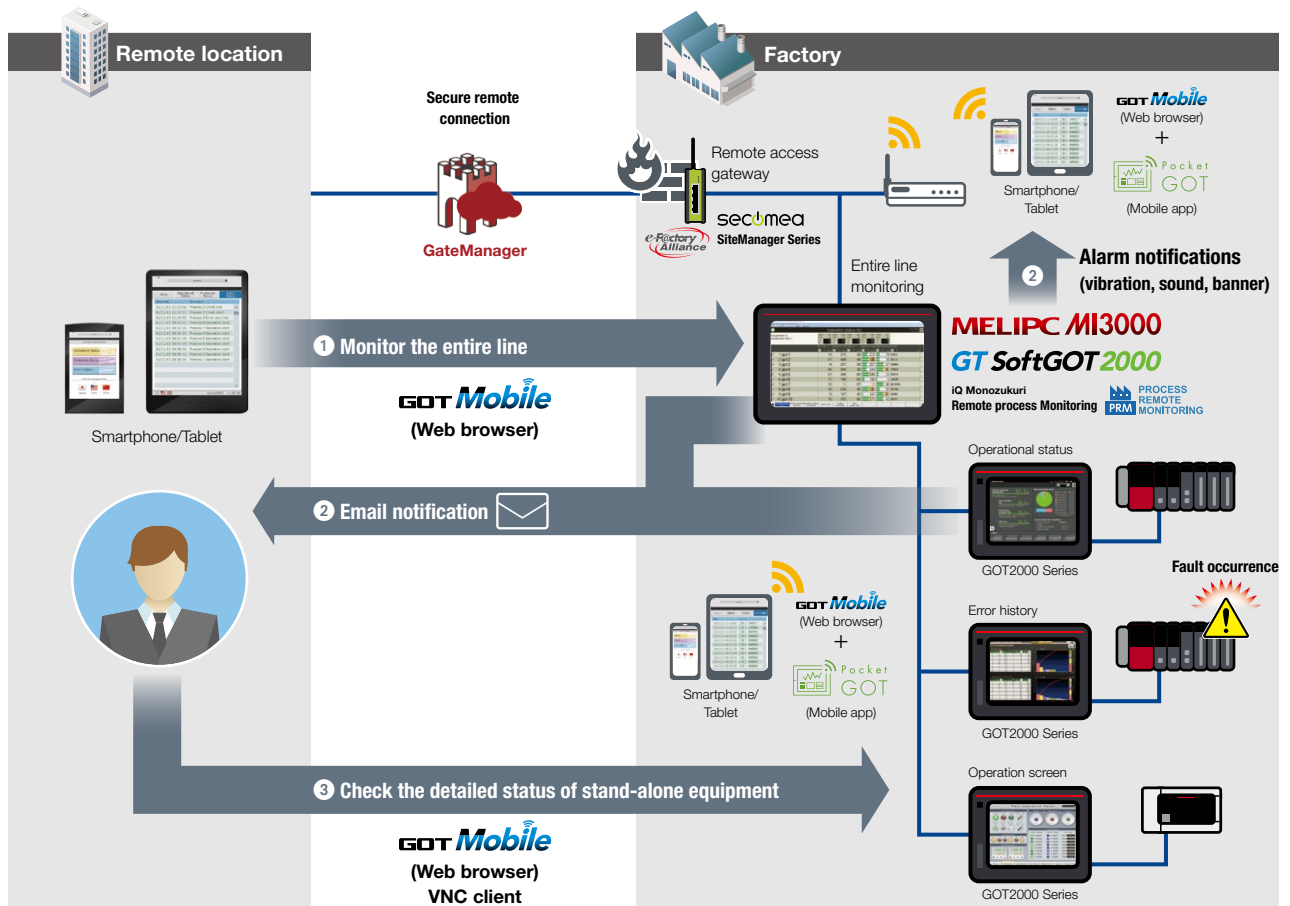


## Understand the operating status of production line equipment and the overall line from remote locations

### Solution

- (1) The GOT Mobile function monitors the entire line via the GOT2000 and GT SoftGOT2000 on the shop floor.
- (2) Timely receipt of shop floor abnormalities using the email send function and the alarm receiving function of the mobile app Pocket GOT.
- (3) By utilizing the GOT mobile and VNC server functions, check the operation status and cycle time visualized by e-F@ctory support modules, etc.

\* Using Secomea remote solutions, users can easily and safely build a remote access environment.



\* Please refer to the relevant product catalog for supported functions and restrictions of each model.

### Benefits

- Email notifications and mobile app alarms alert users of abnormalities, enabling them to swiftly take action.
- Even from an off-site location, users can check the equipment or the overall line status using a web browser or a VNC client on smartphones and tablets, and take appropriate actions.

### Product and Solution Introduction

Industrial Computer MELIPC Series

P.24

GOT2000 Series

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e-F@ctory Starter Package

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Kanematsu Communications  
Secomea SiteManager Series

P.39



Remote Monitoring Case 3

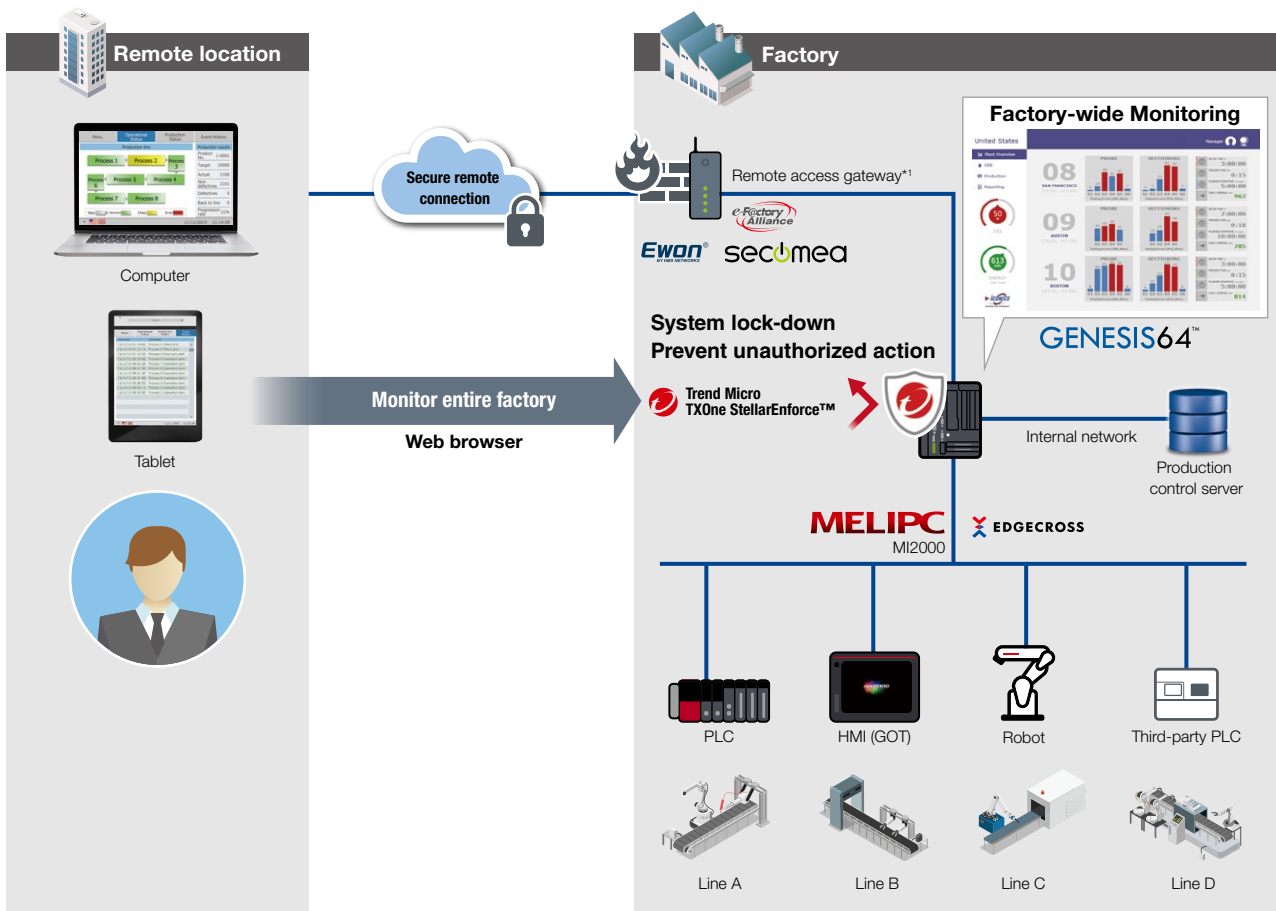
## Monitor operating status of overall factory from a remote location

### Solution

Introduce GENESIS64™ to a production site for centralized monitoring of operating status, production information, and quality information on a web browser.

\* Using the Ewon/Secomea remote solution, users can easily and safely construct a remote access environment.

\* Introduce TXOne StellarEnforce™ to lock down your system and prevent unauthorized action. Also prevent unauthorized action via remote connection.



\*1 Operations are confirmed with the Ewon Cosy and Secomea SiteManager Series.

\*2 Be aware of CPU and memory load.

### Benefits

- Able to check production status on a graphical screen from a remote location just as if the user was on the shop floor.
- The lockdown feature of TXOne StellarEnforce™ enables you to create a secure remote connection environment.

### Product and Solution Introduction

Industrial Computer MELIPC Series	P.24	SCADA GENESIS64™	P.25
Open Platform Edgexross	P.34	e-Factory Alliance HMS Industrial Networks HMS Ewon Cosy Series	P.38
e-Factory Alliance Kanematsu Communications Secomea SiteManager Series	P.39	e-Factory Alliance Trend Micro Cyber security solution for FA systems	P.40

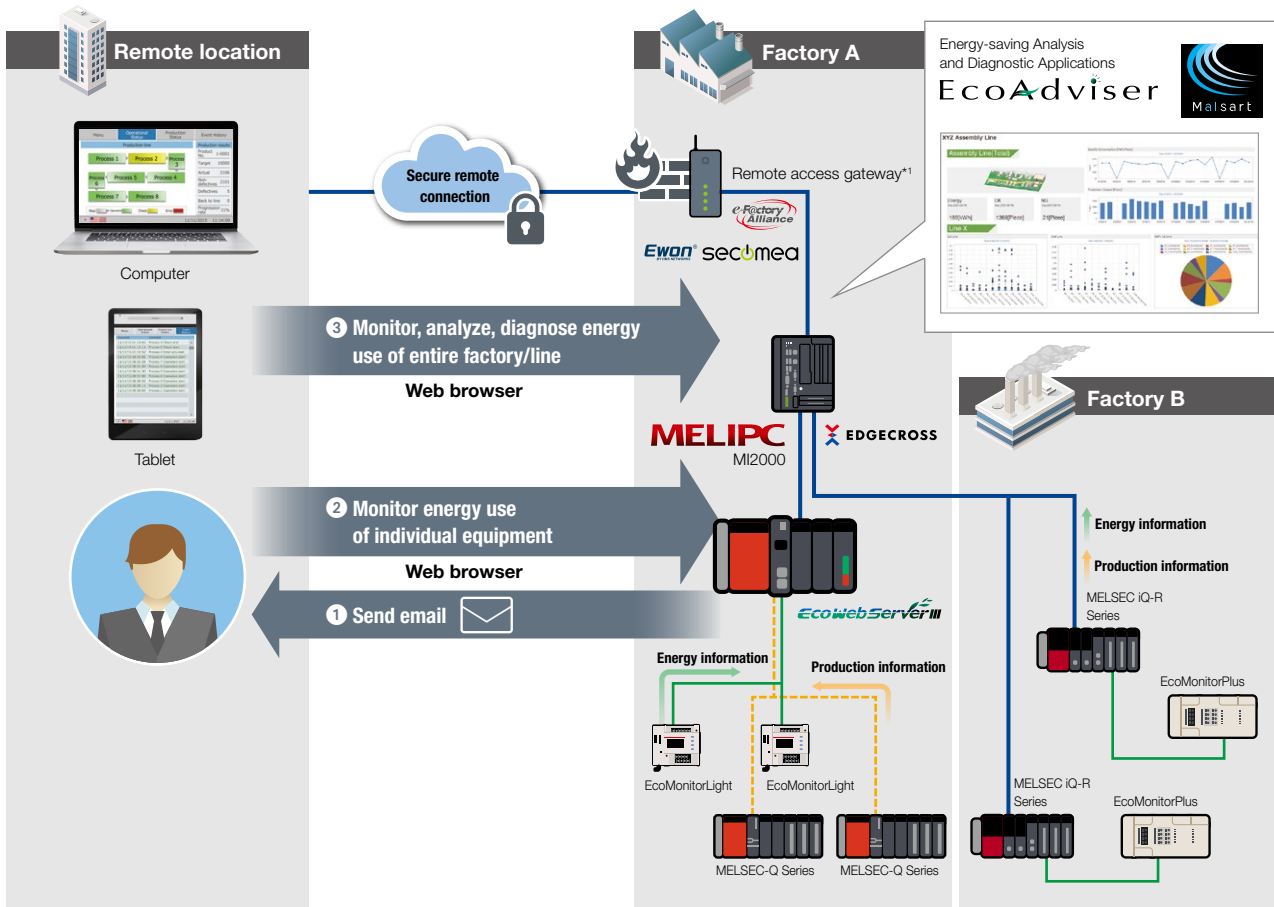


## Monitor factory energy use from a remote location

### Solution

- (1) Email notifications from EcoWebServerIII alert users of equipment errors and exceeded demand target values.
- (2) Energy/Demand-related information can be reviewed from a remote location on a web browser.
- (3) The “EcoAdviser” Energy Saving Support Software analyzes energy use of the entire factory/line and provides the user with diagnostic results.

\* Using the Ewon/Secomea remote solution, users can easily and safely construct a remote access environment.



\*1 Operations are confirmed with the Ewon Cosy and Secomea SiteManager Series.

### Benefits

- By detecting equipment errors and exceeded demand target values through email notifications, customers can respond swiftly.
- Improve efficiency by checking factors that cause energy loss using AI diagnosis from anywhere.

### Product and Solution Introduction

Industrial Computer MELIPC Series	P.24	Energy-saving Analysis and Diagnostic Applications EcoAdviser	P.29
Energy-saving Data Collecting Server EcoWebServerIII	P.30	Open Platform Edgecross	P.34
e-Factory Alliance HMS Industrial Networks HMS Ewon Cosy Series	P.38	e-Factory Alliance Kanematsu Communications Secomea SiteManager Series	P.39

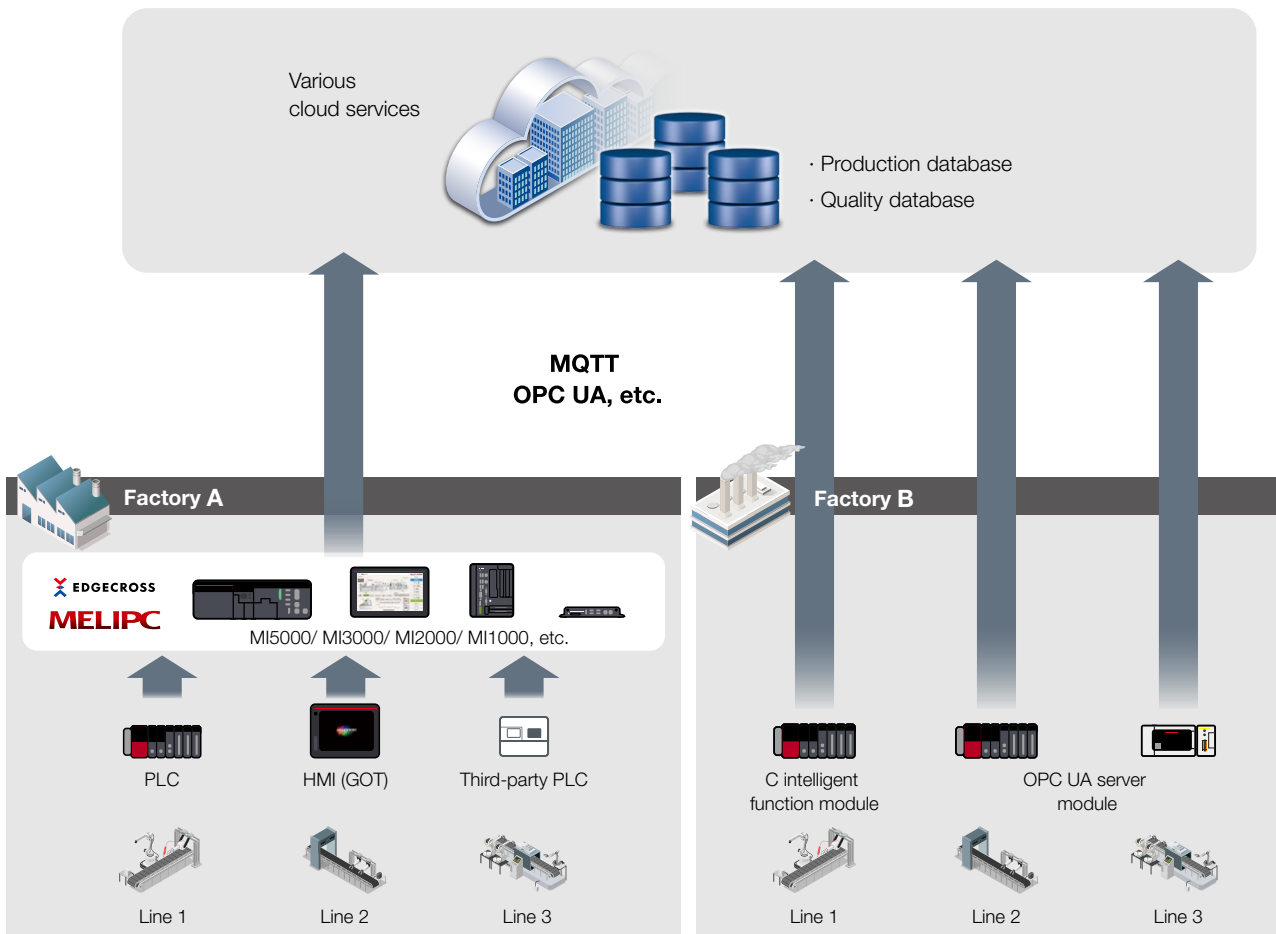


Remote Monitoring Case 5

## Collect and utilize production and quality data on a global scale, including overseas plants

### Solution

- (1) Equipment operation information and quality information are collected via the various modules of Edgecross and PLCs.
- (2) Connect to the cloud with secure communication protocols such as MQTT and OPC UA.



\*1 VM: Virtual machine. This use case uses Microsoft® Azure® Virtual Machines.

### Benefits

- Build data infrastructure for production and quality information.
- Can be deployed companywide as global standard infrastructure.

### Product and Solution Introduction

C Controller Module/ C Intelligent Function Module	P.22
Industrial Computer MELIPC Series	P.24

OPC UA Server Module	P.23
Open Platform Edgecross	P.34

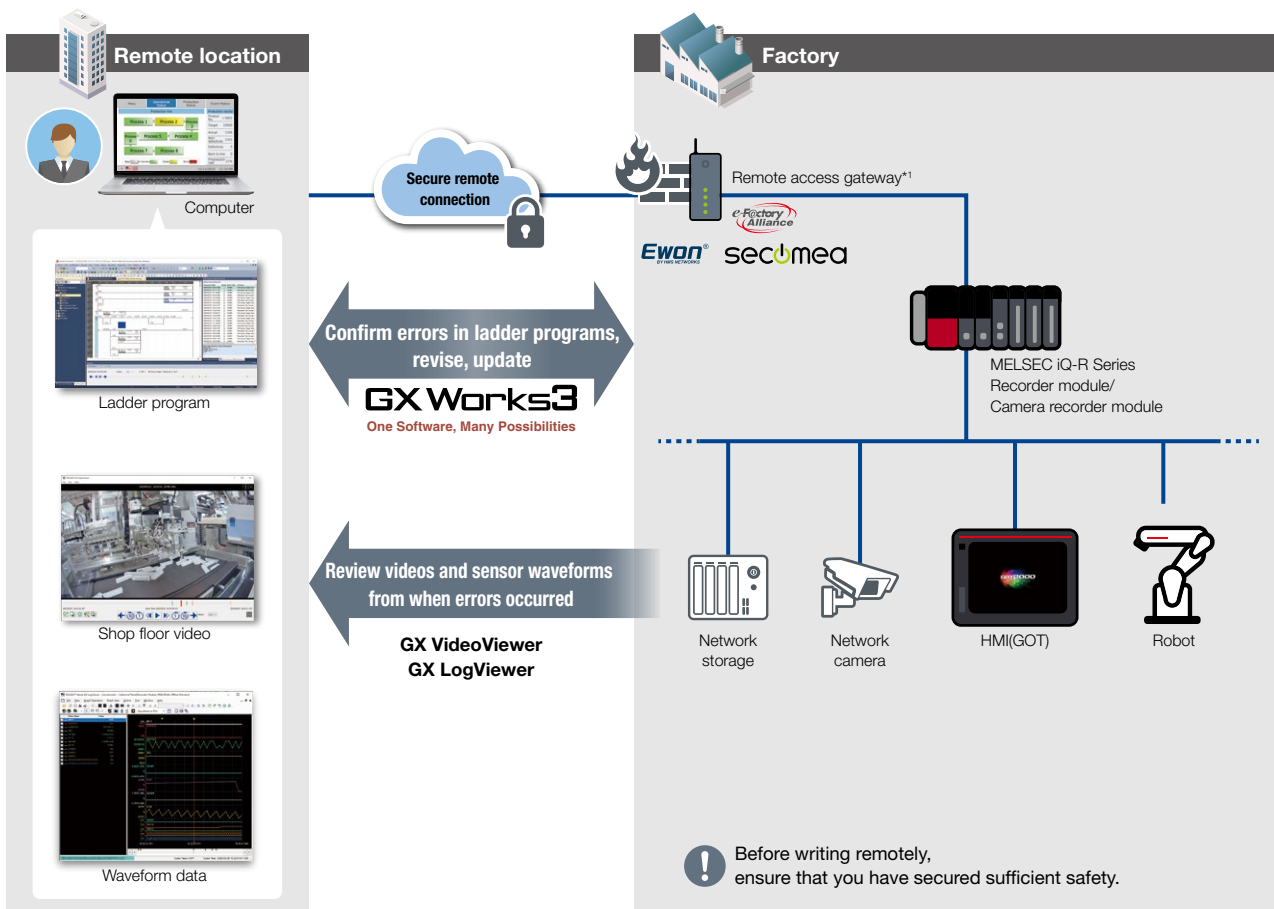


## Be able to smoothly handle issues and start-up production lines even without engineers on the shop floor

### Solution

- (1) A system recorder records all equipment operational data and camera images when an error occurs.
- (2) Log markers are used from remote locations to synchronize display of video and waveform data from ladder programs and shop floor, and share analysis contents.

\* Using the Ewon/Secomea remote solution, users can easily and safely construct a remote access environment.



\*1 Operations are confirmed with the Ewon Cosy and Secomea SiteManager Series.

### Benefits

- Downtime is reduced as equipment designers and maintenance personnel can immediately begin remote surveys and make accurate decisions based on data.
- Service call costs are reduced by resolving problems with a single command.
- Related personnel can view the operating data and videos of equipment in real time and share knowledge to solve problems smoothly.

### Product and Solution Introduction

System Recorder	P.18	MELSOFT GX Works3	P.31
HMS Industrial Networks HMS Ewon Cosy Series	P.38	Kanematsu Communications Secomea SiteManager Series	P.39



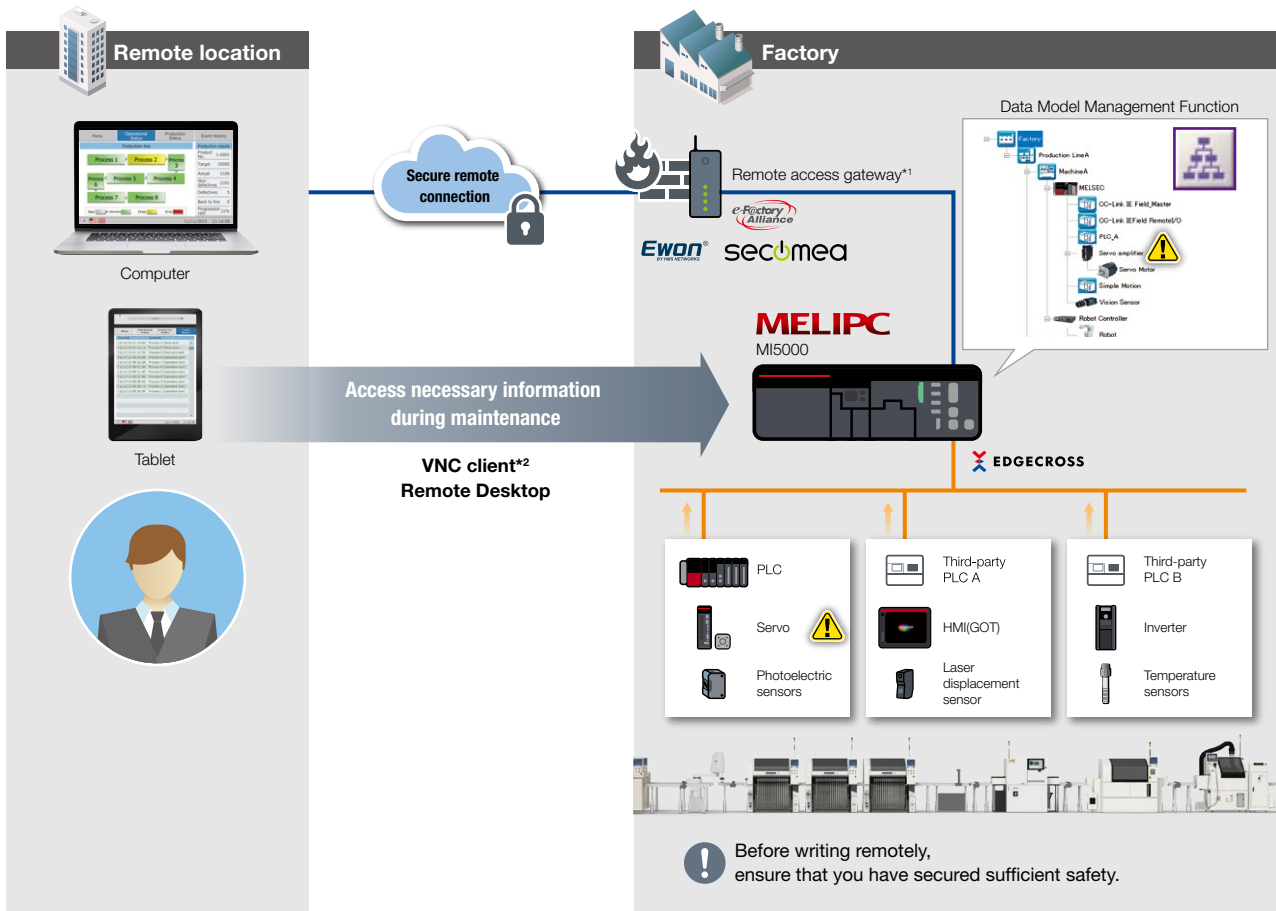
**Remote Maintenance** Case 7

## Be able to immediately access device configuration and other relevant information for equipment requiring maintenance from a remote location

### Solution

- (1) Pre-register factory/line/equipment configuration and related information (device, manual, and program) with the Edgexross data model management function.
- (2) The Edgexross data model management function enables the user to narrow down to the target equipment, ascertain the current status, and perform maintenance from a remote location.

\* Remote environments are built easily and securely using Ewon/Secomea remote solutions



\*1 Operations are confirmed with the Ewon Cosy and Secomea SiteManager Series.

\*2 When connecting with VNC Client, the computer (MI5000) installed with Edgexross requires VNC server software.

### Benefits

- The equipment configuration is provided in a tree structure so the relationship between equipment can be intuitively understood.
- Necessary information can be understood immediately, enabling swift and accurate maintenance to be performed.

### Product and Solution Introduction

Industrial Computer MELIPC Series **P.24**

Open Platform Edgexross **P.34**

HMS Industrial Networks  
HMS Ewon Cosy Series **P.38**

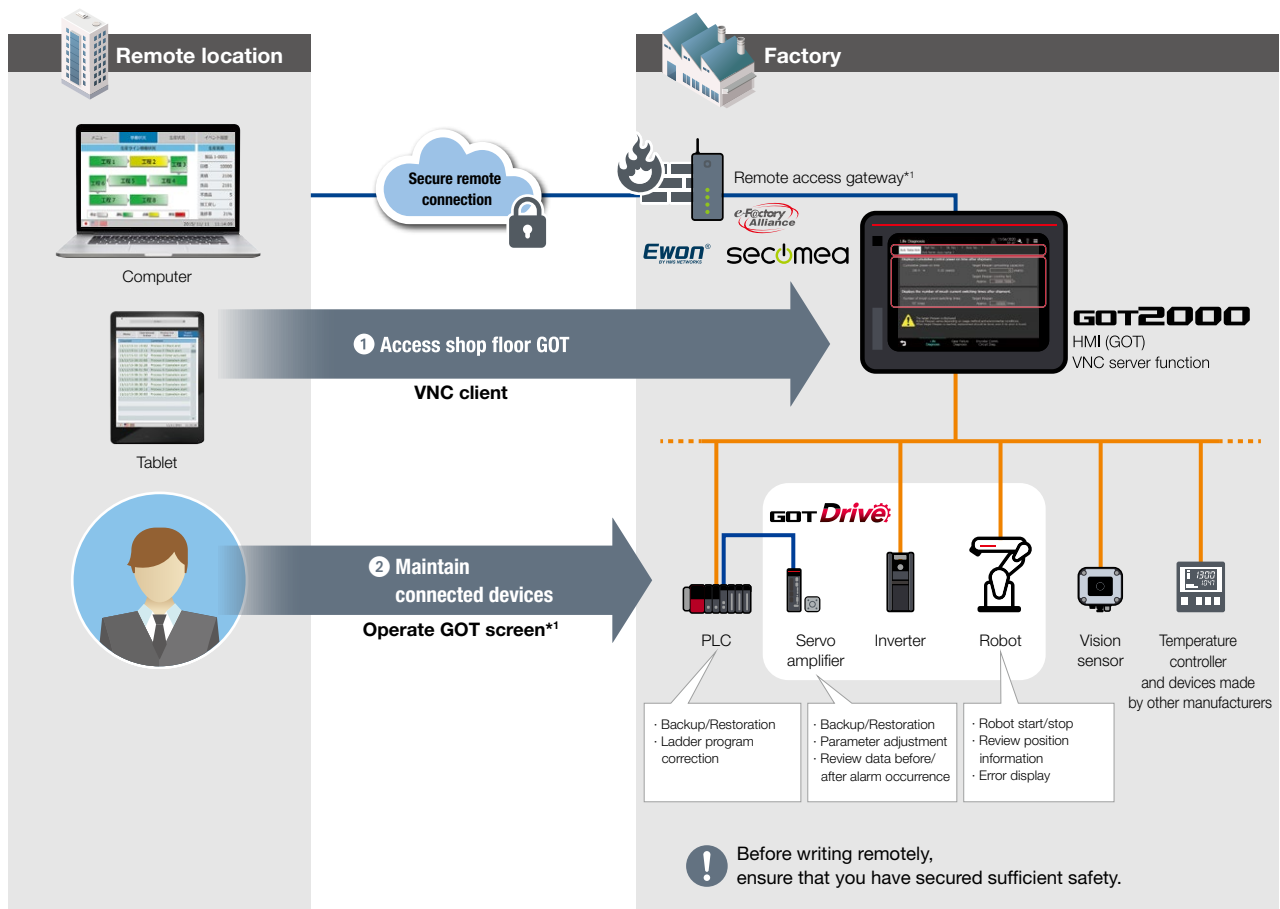
Kanematsu Communications  
Secomea SiteManager Series **P.39**

## Perform maintenance on various FA devices easily, even from remote locations

### Solution

- (1) The VNC server function of the GOT2000 Series enables users to display and operate GOT screens "as is" using a VNC client at remote locations.
- (2) Monitor and maintain Mitsubishi Electric devices such as PLCs, servo amplifiers, inverters, robots on GOT screens.

\* Using Ewon/Secomea remote solutions, users can easily and safely build a remote access environment.



\*1 Operations are confirmed with the Ewon Cosy and Secomea SiteManager Series.

\* Please refer to the relevant product catalog for supported functions and restrictions of each model.

### Benefits

- By linking GOT with individual FA devices, users can review information and perform maintenance using GOT even from remote locations.
- Possible to minimize the introduction of new devices and introduce remote maintenance.

### Product and Solution Introduction

GOT2000 Series

P.26



HMS Industrial Networks  
HMS Ewon Cosy Series

P.38



Kanematsu Communications  
Secomea SiteManager Series

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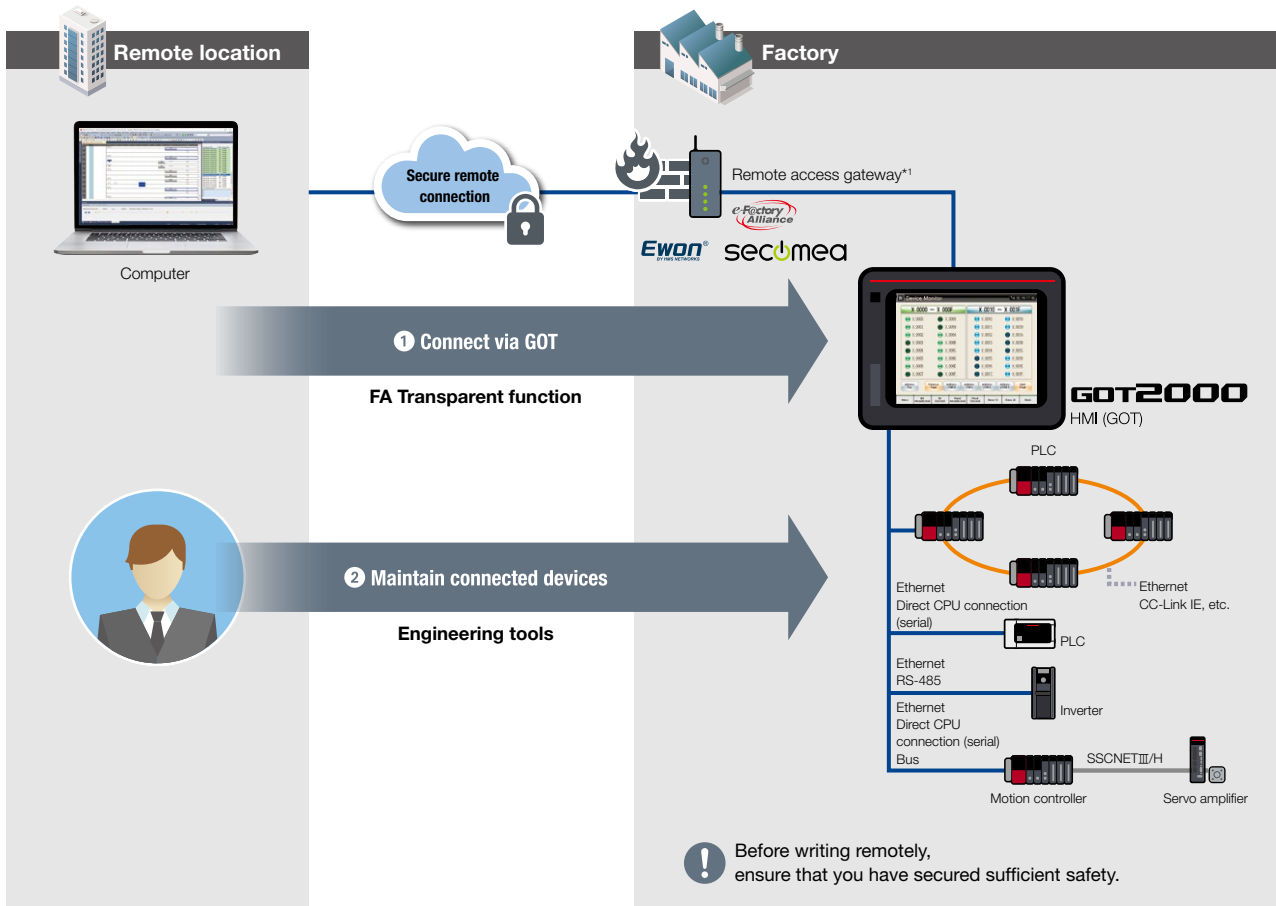
Remote Maintenance Case 9

## Perform detailed maintenance on various FA devices from remote locations

### Solution

- (1) Utilize the FA Transparent function of the GOT2000 Series to connect to individual FA devices from remote locations.
- (2) Perform maintenance on individual FA devices from a remote PC using an engineering tool.

\* Using Ewon/Secomea remote solutions, users can easily and safely build a remote access environment.



\*1 Operations are confirmed with the Ewon Cosy and Secomea SiteManager Series.  
 \* Please refer to the relevant product catalog for supported functions and restrictions of each model.

### Benefits

- By linking GOT with individual FA devices, users can review information and perform maintenance using GOT even from remote locations.
- Not just simplified, basically all engineering tool functions are available.

### Product and Solution Introduction

GOT2000 Series **P.26**

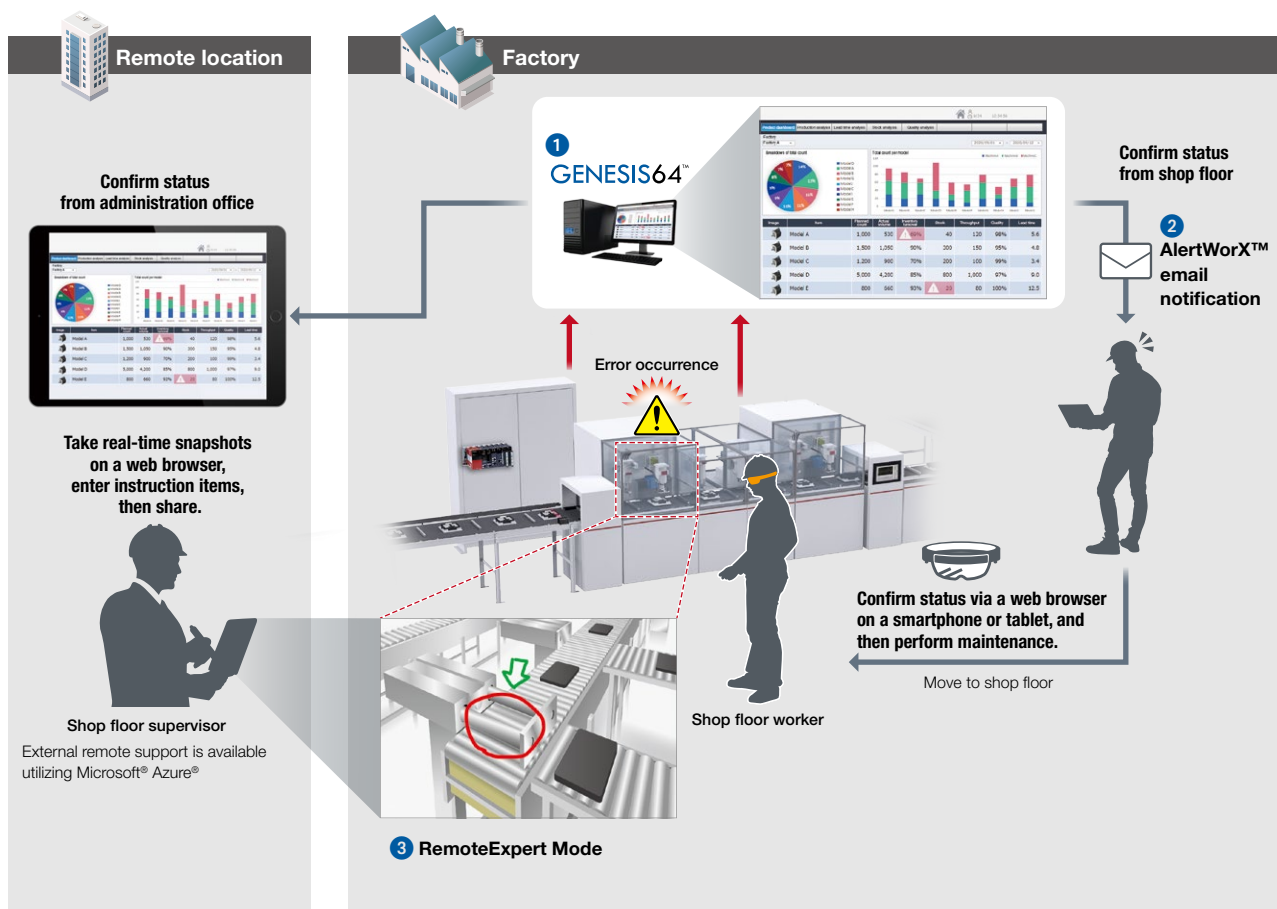
HMS Industrial Networks  
 HMS Ewon Cosy Series **P.38**

Kanematsu Communications  
 Secomea SiteManager Series **P.39**

## Utilize audio and/or images from a remote location to give specific instructions for equipment maintenance in real-time

### Solution

- (1) Visualization of factory, line, and equipment status using GENESIS64™.
- (2) AlertWorX™ sends an email notification when an equipment error occurs.
- (3) RemoteExpert mode enables maintenance to be performed in accordance with instructions using audio and images.



### Benefits

- Users can give specific instructions to conduct maintenance with greater certainty than audio alone.
- Reduce maintenance time using real-time instructions with images.

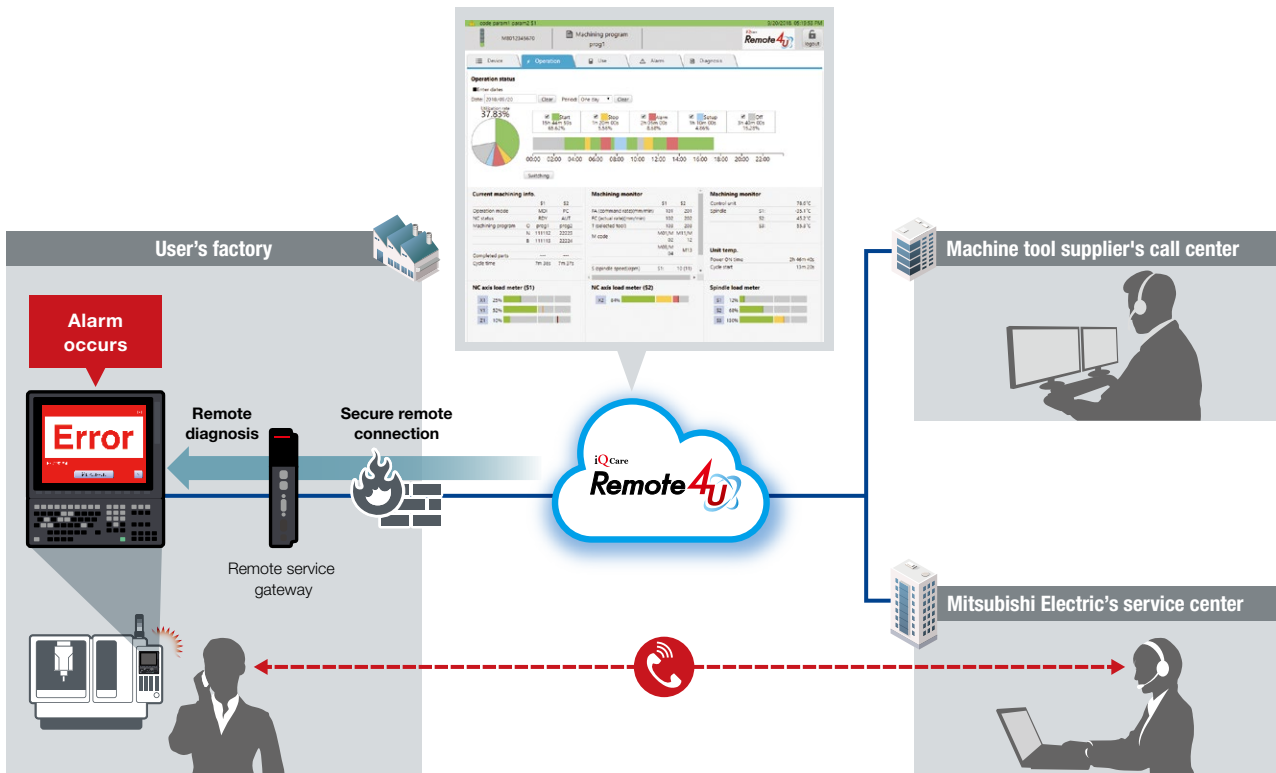
### Product and Solution Introduction



## Propose remote services to users for machine tools

### Solution

- (1) Through the iQ Care Remote4U platform, added a remote service function to machines equipped with Mitsubishi Electric's computerized numerical controllers (CNC).
- (2) Through a cloud server provided by Mitsubishi Electric, enabled remote access from the machine manufacturer's call center or our service center.



\* Please contact your nearest Mitsubishi Electric overseas office regarding which regions offer this service.

### Benefits

- Able to monitor operating information for machines equipped with Mitsubishi Electric CNC in real-time.
- Remote diagnosis of CNCs on users' machines improves maintainability and reduces machine downtime.

### Product and Solution Introduction

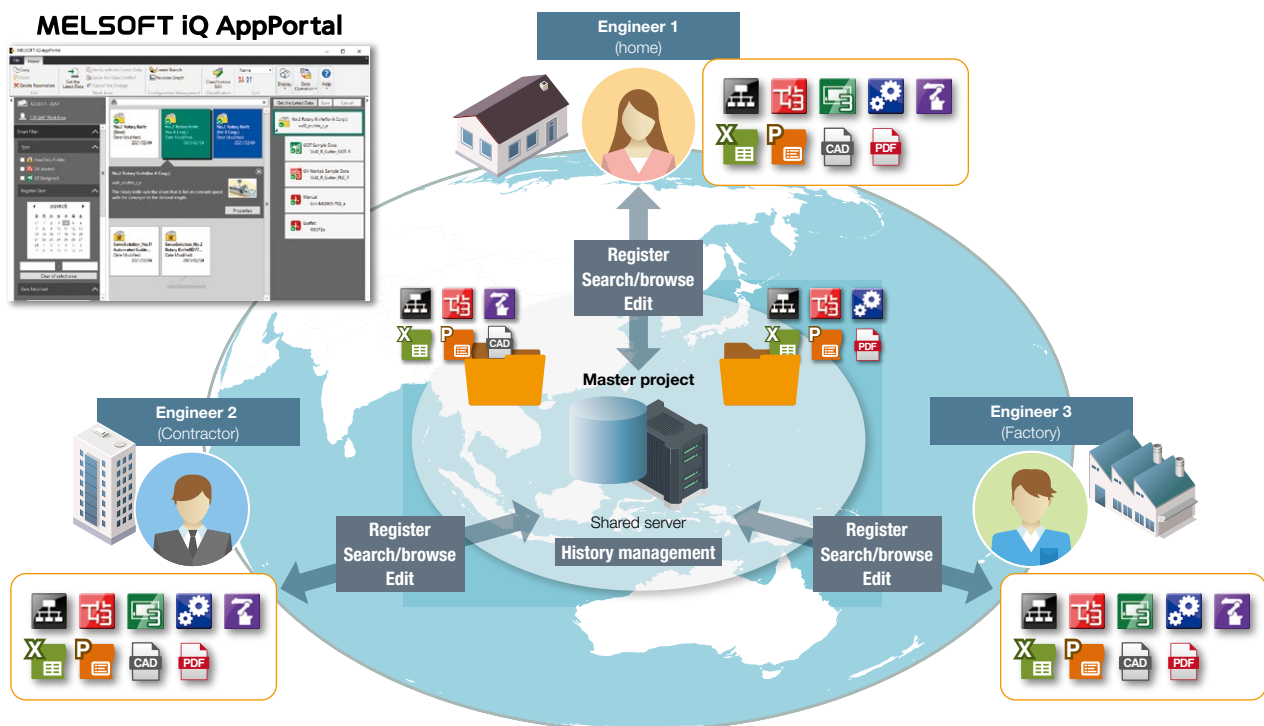
Numerical Control (CNC) Remote Service  
iQ Care Remote4U **P.33**



## Streamline the development of large-scale programs such as PLCs

### Solution

- (1) Using MELSOFT iQ AppPortal, materials and programs related to equipment design are centrally managed on an internal server.
- (2) Each person in charge simultaneously proceeds with development while referring to the same materials and programs in all scenes.



### Benefits

- Monitor rework by preventing accidental overwriting of the latest files edited by other people.
- Ascertain changed locations and latest version based on history management to secure quality.

### Product and Solution Introduction



## 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.

Data before and after the set trigger can be collected with a timestamp every scan. This eliminates the need to worry about what data is being collected when setting up recording and supports swift recovery operations.



### Breakdown maintenance solutions with System Recorder

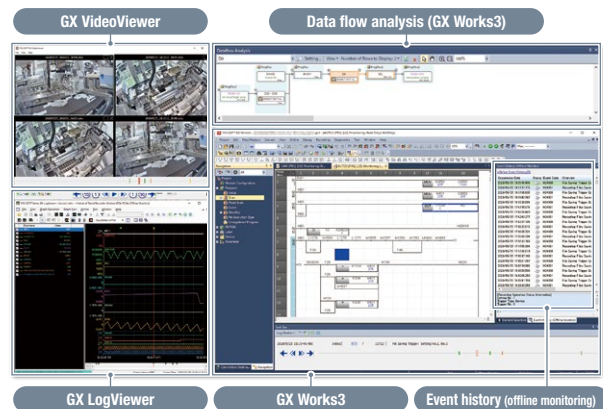
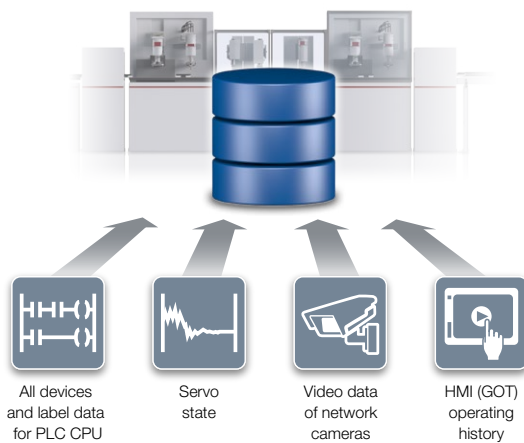
Significantly reduces machine downtime with “complete recording” and “easy analysis” of system operating status during error

#### Complete recording

- Complete recording of all data required for error analysis
- Complete system recording
- Complete prolonged recording

#### Easy analysis

- Display all data on the same timeline
- Expresses influencing factors in straightforward terms
- High-productivity programs also offer speedy solutions



## Complete recording

When problems arise for equipment with multiple devices, it is necessary to find out the facts before and after such an occurrence (when, where, and what happened) in order to recover normal operation.

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.



### Want to record video and data

Recording function (MELSEC iQ-R Series)

- **All device/label logging per sequence scan**  
Recorder Unit exhaustively records changes in all devices/labels
- **All labels/FB logging of the PLC**  
Unconsciously records all device addresses/system configurations
- **Event history**  
Records device/label operations from external devices
- **General-purpose network camera video**  
Records visual information such as work behavior and user's behavior

### Also want to record drive system conditions

MELSERVO-J5 Series/MELSEC iQ-R Series Motion module

- **All device/label logging per sequence scan**  
Timestamped and accurate recording of motion control data that operates faster than a PLC scan

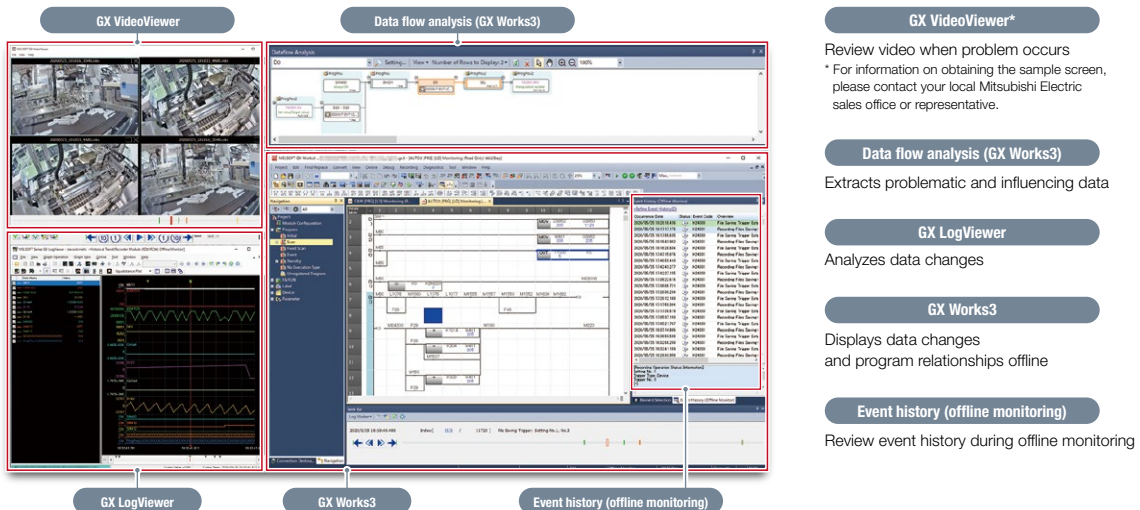
### Also want to record users' operations

GOT2000 Series

- **Records HMI (GOT) operation history and alarm history**  
Records operation history of shop floor workers and alarm information for connected devices

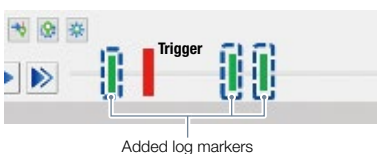
## Easy analysis

The data collected through complete recording (recording file) can be reproduced offline together with program operation transition. Moreover, by confirming data together with camera video footage, this function enables marking of potentially problematic points (time of error occurrence) from the video. The reviewer can share the equipment conditions at the marked time with shop floor workers, maintenance personnel and designers, thus smoothly communicating to ensure everyone has the same understanding of the error occurrence status from vast amounts of video data and, ultimately, easily identifying the cause of the error.



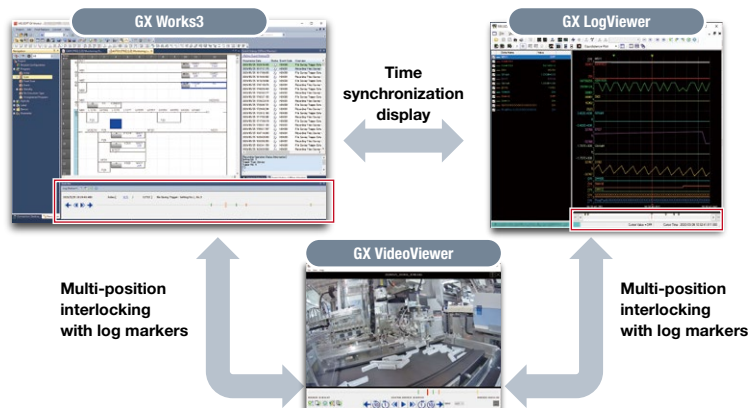
### Conceptual Image of Function

- 1 Use the "Add Marking" button to add log markers to points requiring attention



- 2 Share points requiring attention between tools

- GX Works3** Circuit monitor toolbar
- GX LogViewer** Top of waveform display graph
- GX VideoViewer** Video display seek bar







## MELSEC iQ-R/iQ-F Series CPU module

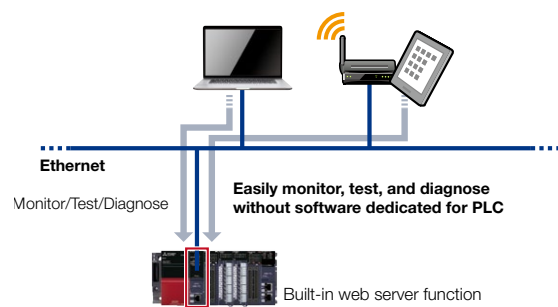
The system recorder is a corrective maintenance solution that ensures effective resumption of operations reducing downtime through its extensive system-wide data recording and simplified analysis software features.

Data before and after the set trigger can be collected with a timestamp every scan. This eliminates the need to worry about what data is being collected when setting up recording and supports swift recovery operations.



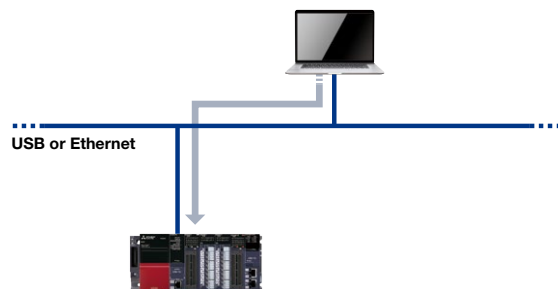
### Web Server Function

By accessing the web server from a web browser of a computer, tablet, etc., it is possible to write and read data of devices belonging to the CPU unit, batch monitor device data, perform device tests, etc. Moreover, by setting access authority for each user, it is possible to limit the pages each user can view/write to.



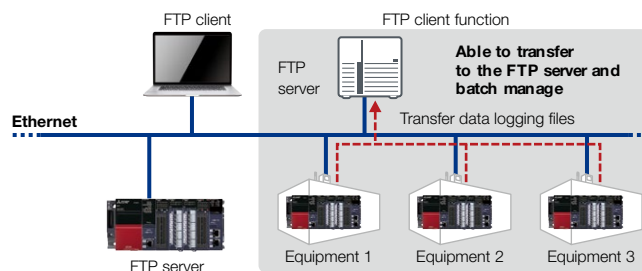
### Data Logging Function

By installing a CPU unit logging setting tool on a computer in a remote location, the CPU unit can be accessed via EZ Socket in order to read, write, or delete logging settings.



### FTP Server/Client Function

By installing general-purpose FTP client software on a computer at a remote site, a user can access the CPU's FTP server from the FTP client software. It is also possible to automatically transfer logging files to the FTP server. (FTP client function)



	iQ-R	iQ-F	
		FX5U/FX5UC	FX5UJ
Web server function	△	●	●
Data logging function	●	●	●
FTP server	●	●	●
FTP client function	△	●	Coming soon

●: Supported △: Partially supported  
(Please see the catalog for details.)





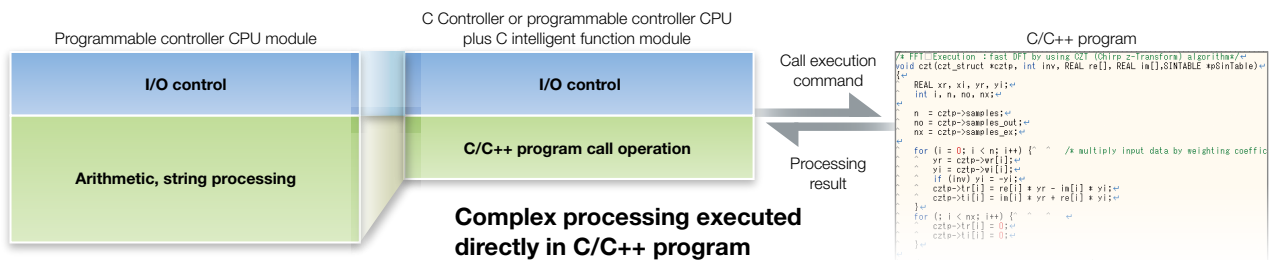
## C Controller Module/ C Intelligent Function Module

The C intelligent function module series are available with a dual-core Arm®-based controller that supports Linux® (supports multiple applications) or VxWorks® (advanced data analysis) operating systems which allows execution of complex programs, thereby providing a robust and deterministic alternative to computer-based systems. Utilizing a fan-less hardware design, modules are ideal for clean fab-based environments, where dust circulation can be detrimental to the production environment, and can be used for applications such as in-line production quality testing or as a gateway for various industry-specific communications protocols.



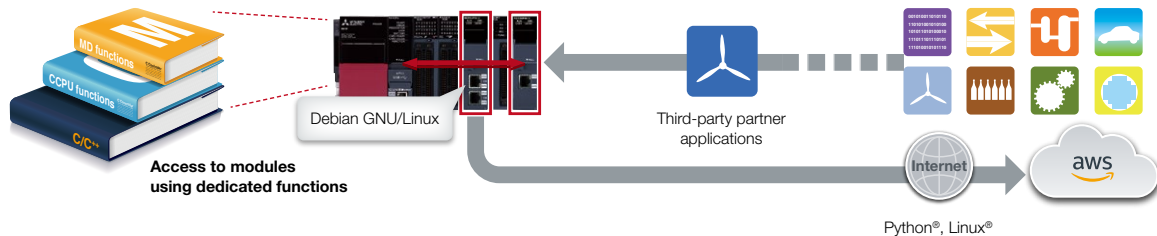
### Realize complex arithmetic equations in C/C++

The C intelligent function module enables the execution of C/C++ programs when paired with a standard MELSEC iQ-R Series programmable controller CPU, emulating the same features as a standalone C Controller. Representing complex arithmetic and string equations in C/C++ programs is much easier than implementing in ladder form, thereby reducing overall development time and program size. Additionally, intellectual property is simplified as the result of separating it from the ladder program.



### Linux®/VxWorks® realizes easier configuration of various control systems

Dedicated functions and communications libraries are provided, enabling access to the control system modules. In addition, various partner applications are available, supporting different manufacturing equipment features. By utilizing the information community of Debian GNU/Linux allows machines to adopt the latest data processing technology (software package). Key features such as remote operation, predictive maintenance, and remote maintenance of machines can be easily implemented through connection with third-party cloud services.

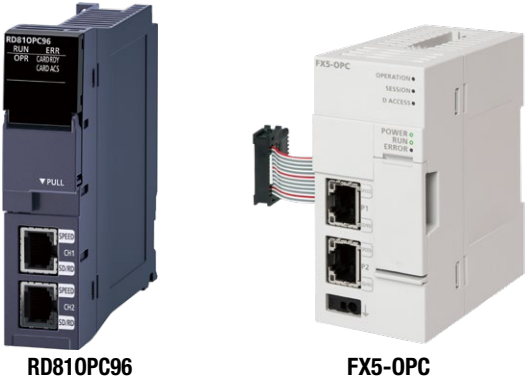






## OPC UA Server Module

The MELSEC iQ-R Series OPC UA server module integrates the OPC UA server directly into the equipment control system as a robust alternative to a computer-based configuration. OPC Unified Architecture (OPC UA) is a platform-independent communications standard developed by the OPC foundation that offers reliable and secure data communications between the manufacturing-level and IT-level systems.



### Robust security with protection against unauthorized data access

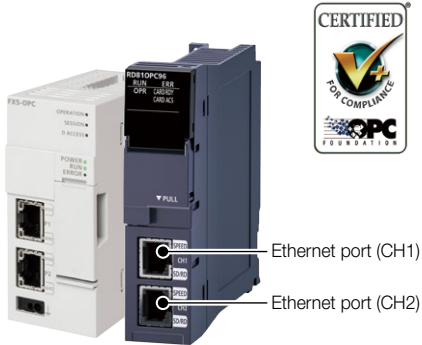
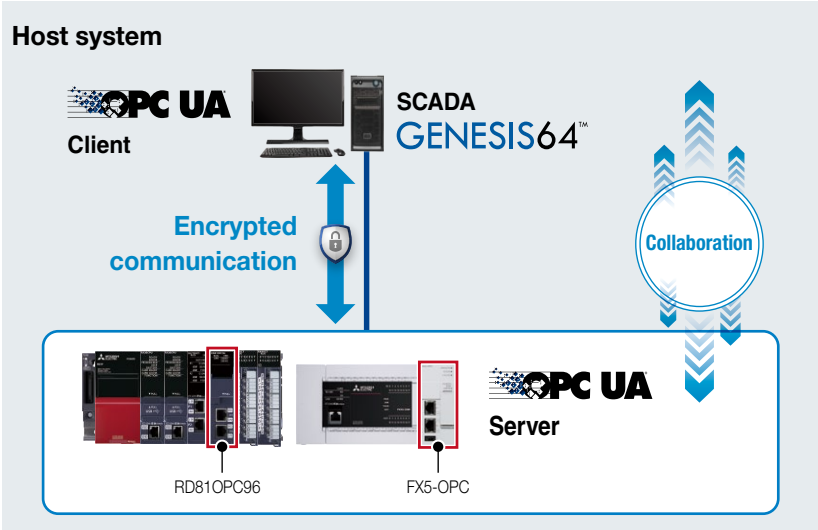
OPC UA security function such as certificate, encrypt and signature can be set based on system requirements. RD80OPC96 can also further enhance security by separating IT and FA networks.

### Embedded OPC UA server improves system reliability and reduces cost

The OPC UA server module improves reliability by eliminating the requirement for a computer-based server, which can be vulnerable to security risks such as computer viruses. Less hardware maintenance is required, reducing overall system cost as industrial control systems have a longer product service life compared to computers. Efficient tag data management provided utilizing data structure format and storage of tag names within the equipment. This enables easy reference of the necessary data when building host systems.

### Easily set OPC UA tags

Programmable controller CPU labels can be easily set as OPC UA tag names with engineering tools, which helps to shorten the development period.





## Industrial Computer MELIPC Series

Mitsubishi Electric's industrial-use PC MELIPC Series makes it possible to build systems with edge computing utilizing IoT at a high degree of freedom due to its robust features specifically for FA use and adoption of general-purpose applications. The lineup consists of four product types to suit various data utilization scenarios depending on the application; from a high-end model supporting a high-performance processor and CC-Link IE field network capable of high-speed communication to a simple and compact low-range model.



# MELIPC

Pre-installed with Edgecross – an open software platform suited to data utilization



Edgecross\*1, a software platform in the edge computing domain, is preinstalled, therefore through combination with Edgecross-compatible software, it supports preventive maintenance and building of systems for quality improvement, etc. by utilizing shop floor data.

\*1 An open software platform provided by the Edgecross Consortium, a general incorporated association.  
<https://www.edgecross.org/en/solution/feature.html>

### MI5000

Windows®

VxWorks®

One unit can process production information and control equipment in real-time

By operating VxWorks®, a real-time OS, in addition to Windows®, device control and information processing functions are consolidated into one unit, thus contributing to reduced system build costs and space-saving.

Moreover, control and production information of equipment connected via CC-Link IE field network are communicated at a maximum speed of 1ms, realizing high-precision device control and high-speed collection of production information.



Intel® Core™ i7

### MI3000

Windows®

Panel computers equipped with integrated high resolution touch screens

Large screen and high resolution LCD panel is equipped as standard for data display and touch operation. Light-touch operation is realized with a PCAP touch panel that is widely used for smartphones and tablet devices. The touch panel with high transmittance offers clear and high visibility display.

In addition, GT SoftGOT2000 is preinstalled\*2 to easily achieve monitoring equivalent to the GOT2000 Series.

\*2 Does not require a separately-sold license key for GT SoftGOT2000 (for USB port).



GT SoftGOT2000

21.5" widescreen Full HD

### MI2000

Windows®

Realizing optimal IoT for the production shop floor by expanding various systems

Intel® Core™ i3



Intel® Core™ i3 is adopted as the CPU, and performs not only data collection, but also simple analysis, diagnosis, and monitoring of collected data to contribute to quality improvement. It also features a 2.5" HDD/SSD slot\*3 and a PCI Express®/PCI slot\*4 to accumulate large amounts of data and expand functionality.

\*3 2.5" HDD/SSD slots are available on MI2000 only.

\*4 MI3000 is PCI Express® only.

### MI1000

Windows®

Links with existing equipment to realize low-cost IoT integration on the production shop floor

Intel® ATOM™



The energy-saving Intel® Atom™ E3826 is adopted and enables computer functions in a compact size of 26 mm in height. It is space-saving and can easily be expanded to existing facilities, contributing to IoT support for customer facilities.

## SCADA GENESIS64™

Supporting improvement in our customers' operations by leveraging data that was not previously visible. GENESIS64™ is an IoT platform that centrally manages FA and IT data, and is capable of monitoring and analyzing various data. It offers an optimal monitoring integrated solution responding to customers' requests, such as the realization of factory automation, smart buildings, and social infrastructure systems.



iQ Edgecross

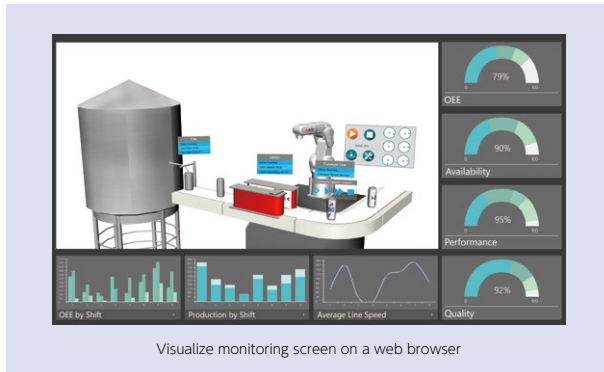
GENESIS64™

## WebHMI™/MobileHMI™

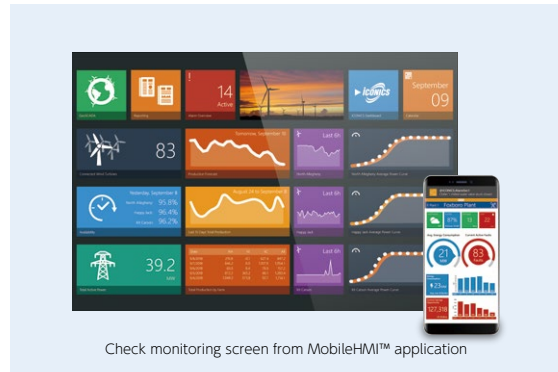
### Remote monitoring

Bring SCADA visualization to any device. Create displays on the desktop that can responsively scale to run on any mobile client. Leverage native apps to provide a consistent user experience on any smartphone, tablet, or HTML5 compliant web browser\*. GENESIS64™ responsive UI technology flawlessly transitions between clients to provide a consistent user experience.

#### WebHMI™



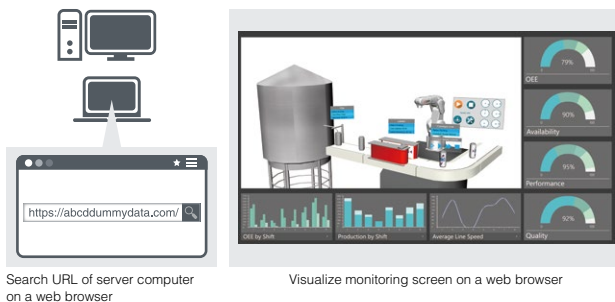
#### MobileHMI™



## AlarmWorX™/AlertWorX™

### Alarm visualization/ Notification

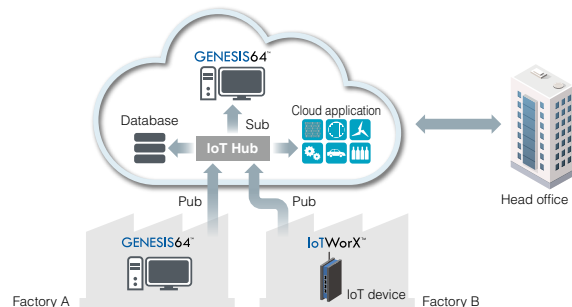
Equipped with functions such as collection, storage, and visualization necessary to utilize measurement data without programs or ladders, making it easy to build an energy monitoring system.



## IoTWorX™

### IoT communication function for Cloud

IoTWorX™ combines cutting-edge micro SCADA software technology with integrated SCADA, analytics, and mobile solutions running in the cloud. It includes open connectivity to assets, secure cloud communications, and built-in real-time visualization and analytics.







## GOT2000 Series

The GOT2000 Series HMI provides a range of models that meet the needs of your shop floor. The GOT2000 boasts advanced functionality, acts as a seamless gateway to other industrial automation devices, all while increasing productivity and efficiency.

GT SoftGOT2000 is the HMI software that runs on personal computers and panel computers. It can be used to monitor and operate the information of industrial devices that are connected to a personal computer or a panel computer via a network.

\* To use GT SoftGOT2000, installation of a license key (GT27-SGTKEY-U) is required separately.



**GOT2000**  
Graphic Operation Terminal

iQ Edgecross  
GOT2000-compatible HMI software  
**GT SoftGOT2000** Version1

### Monitor your shop floor from a remote location

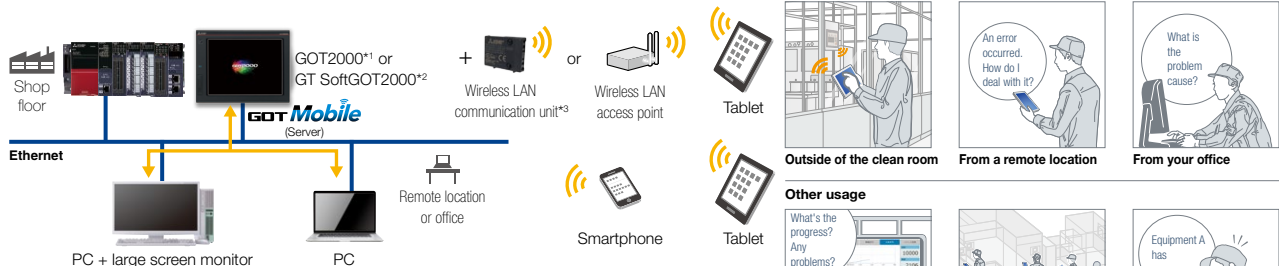
Compatible GOT : **GT27** **GT25** **GT23** **GT21** **GS21** **GT SoftGOT2000**

#### GOT Mobile function

Use a web browser on tablets to check the equipment status from a remote location.

Multiple\*1\*2 information devices (clients) can simultaneously access GOT so that you can view and operate a different screen on each device.

#### Simultaneous monitoring on multiple\*1\*2 information devices



\*1 If the GOT Mobile server is GOT2000 (GT27, GT25), up to five information devices can monitor a single GOT simultaneously. A separate GOT Mobile function license (GT25-WEBSKEY-□) for GOT2000 is required.

\*2 If the GOT Mobile server is GT SoftGOT2000, up to 15 information devices can monitor a single GT SoftGOT2000 module simultaneously. A separate GOT Mobile function license (SGT2K-WEBSKEY-□) for GT SoftGOT2000 is required.

\*3 The wireless LAN communication unit cannot be used with GT2505, GT25 handy, or GT SoftGOT2000. A separate access point is required.

#### ■ Safety Precautions

When using the remote control function, ensure the safety of the field site by being prepared to handle unexpected situations such as communication delays and interruptions.

### Mobile app on Android™ enables remote monitoring in real time

Compatible GOT : **GT27** **GT25** **GT23** **GT21** **GS21** **GT SoftGOT2000**

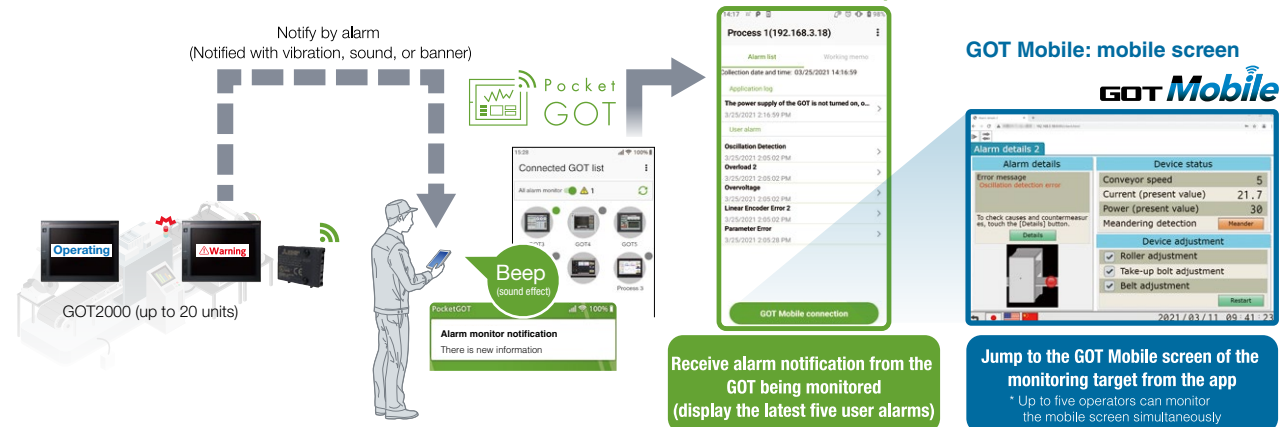
#### Pocket GOT

By installing the Pocket GOT mobile app on a mobile terminal, the app collects the status of user alarms occurring in the GOT2000 or GT SoftGOT2000 being monitored and notifies you with vibration, sound, or banner when a new alarm is detected.

On the user alarm reception screen of Pocket GOT, you can check a list of the latest five alarms that are currently occurring. Pocket GOT can register up to 20 GOTs.

The status of the GOT where the user alarm has occurred can be checked on the mobile terminal by starting the GOT Mobile function from the user alarm reception screen.

#### Pocket GOT: user alarm reception screen



## Remote monitoring of GOT from a computer or tablet

Compatible GOT : **GT27** **GT25** **GT23** **GT21** **GS21** **GT SoftGOT2000**

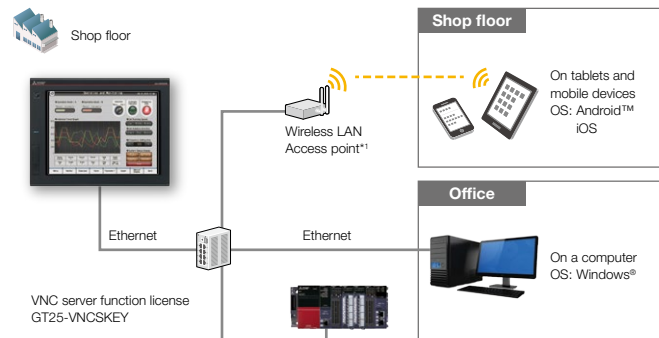
### VNC® server function

Users can view and operate the same functions as GOT on a computer or tablet. (Utility functions screens including the sequence program monitor are also supported.) Because the shop floor GOT screens are displayed and monitored “as is,” there is no need to create screens dedicated for remote monitoring and maintenance.

\* A separate license (GT25-VNCSKEY) is required to use the VNC server function.

\* Supported by GT2107-W only among GT21 models.

\*1 A separate access point is not required if a wireless LAN communication unit is installed on GOT. (Access point mode is supported by GT Works3 Ver.1.144A and later)



## Smooth debugging

Compatible GOT : **GT27** **GT25** **GT23** **GT21** **GS21** **GT SoftGOT2000**

### FA transparent function

By connecting a computer to the front USB interface on the GOT, the GOT acts as a transparent gateway to enable programming, startup, and adjustment of industrial devices. Users do not have to bother with opening the electrical cabinet or changing cable connections.

Moreover, users can open programming/setup software to start up and adjust industrial devices using a computer in a remote location that is connected to the shop floor GOT via Ethernet. To connect shop floor GOT and industrial devices, Ethernet, CC-Link IE connection, and Direct CPU connection (serial) are supported.

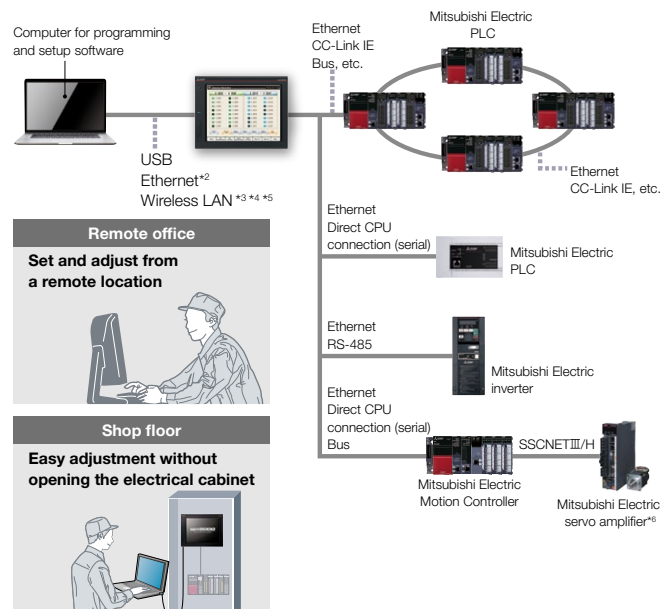
\*2 GT23, GT21, and GS21 cannot be used when GOT is connected to devices via Ethernet.

\*3 Not supported by GT2505, GT25 handy, GT23, GT21, and GS21.

\*4 Installation of a wireless LAN communication unit (GT25-WLAN) is required on the GOT.

\*5 For the countries where the wireless LAN communication unit can be used and other details, please refer to the GOT2000 catalog (L/NA)08270ENG).

\*6 GT21 and GS21 do not support connection to Mitsubishi Electric servo amplifiers.



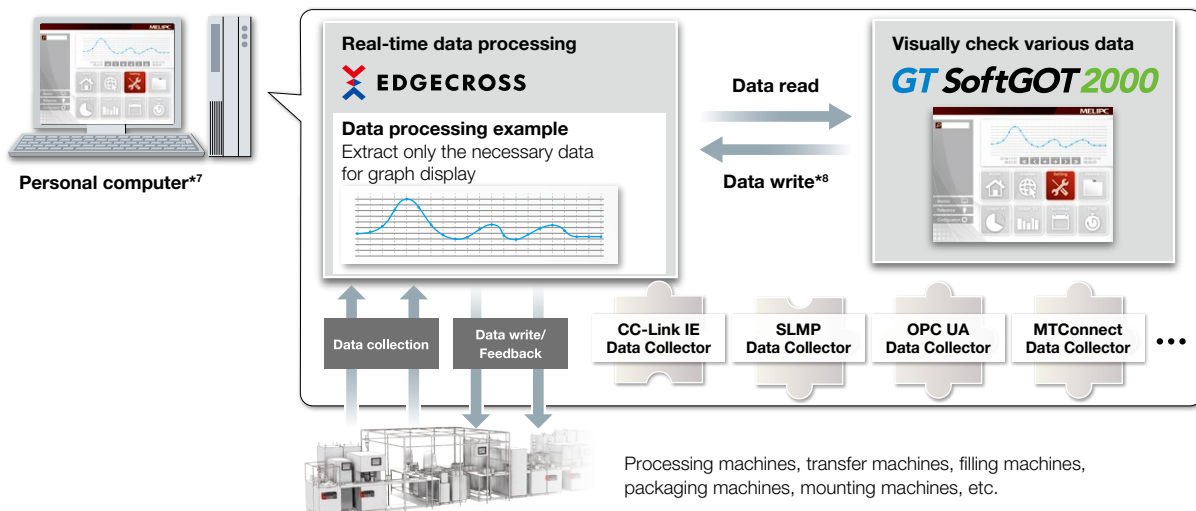
## Edgecross enables visualization of the shop floor

Compatible GOT : **GT27** **GT25** **GT23** **GT21** **GS21** **GT SoftGOT2000**

### Edgecross interaction

Edgecross is the open software platform in Japan in the edge computing field that coordinates factory automation and IT systems. Edgecross analyzes and diagnoses data near the shop floor and enables real time feedback to the production, data collection, and sending or receiving data to/from facilities and equipment regardless of vendors and network types.

The data collected by Edgecross can be easily visualized and analyzed using various functions such as trend graph display on GT SoftGOT2000.



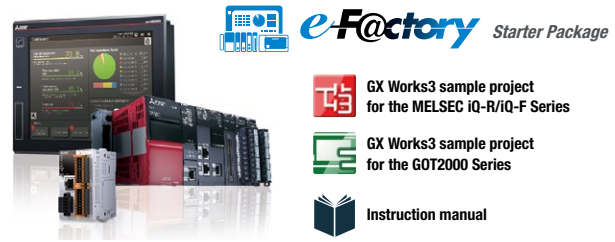
\*7 It is required to install Edgecross Basic Software, Data Collector, and GT SoftGOT2000 on a personal computer.

\*8 To write data from GT SoftGOT2000 to Edgecross Basic Software, installation of MELSOFT GT OPC UA Client software is required separately.



## e-F@ctory Starter Package

The e-F@ctory Starter Package consists of sample projects for the PLC MELSEC iQ-R/iQ-F Series and HMI GOT2000 Series. By providing programs for visualization, easy analysis, etc., in sample project form, this product single-handedly integrates IoT on the production shop floor with basic settings such as device allocation and parameter settings. The e-F@ctory Starter Package helps to provide solutions to various issues that may occur when introducing IoT systems such as investigation period and budget.



### Visualization of overall equipment efficiency **iQ-R** **iQ-F**

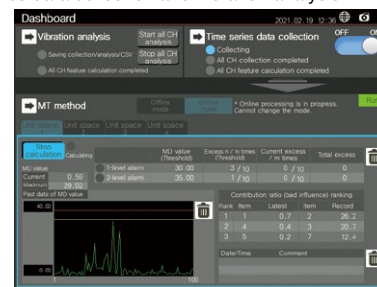
A general display of equipment production/operating status, including overall equipment efficiency and production volume.



\* The sample screen shown above is from the MELSEC iQ-R Series.

### Detection of irregularities using the MT method **iQ-R** **iQ-F**

Expresses degree of divergence between regular data and input data in numerical form and detects errors. The iQ-R Series also includes a function to input feature quantity derived from time series data collection and vibration analysis.



\* The sample screen shown above is from the MELSEC iQ-R Series.

### Error detection by monitoring cylinder operation time **iQ-R** **iQ-F**

Measures and monitors cylinder conditions, operations, and equipment operating cycles to identify any sign of errors.

No.	Name	Measured value (min)	Threshold (min)	Alarm	Result
1	Cyl.Indr001	4521	5531	4000	5000
		4901	5531	4100	5000
2	Cyl.Indr002	4940	5531	4000	5000
		5321	5531	4100	5000
3	Cyl.Indr003	5033	5531	4000	5000
		4527	5531	4100	5000
4	Cyl.Indr004	4513	3700	3000	6000
		5308	4529	3500	5000
5	Cyl.Indr005	4921	5531	4000	5000
		5313	5531	4100	5000

\* The sample screen shown above is from the MELSEC iQ-R Series.

### Error detection by monitoring analog waveform status **iQ-R**

Uses thresholds to monitor the shape of the waveform. Guard band monitoring makes it possible to monitor the waveform status of analog waveform data such as electrical current and temperature. Accordingly, it is possible to detect abnormal waveform fluctuation that was difficult to detect with threshold monitoring based on simple upper/lower limits.



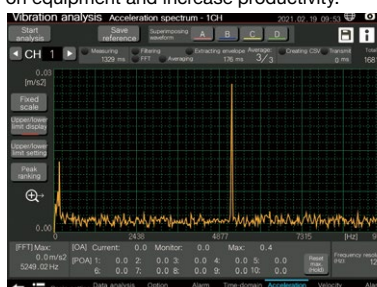
### Management of equipment/process changes **iQ-R**

Users can manage change points according to the 4M and 5M+1E perspectives used in quality management, and then use this information for cause analysis when a problem arises.

No.	Machine	Setting	Start	End	Start	End	Start	End	Start	End
1	Machine1	ROA2PLD	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	Machine1	ROA2PLD	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
3	Machine1	ROA2PLD	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
4	Machine1	ROA2PLD	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
5	Machine1	ROA2PLD	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
6	Machine1	ROA2PLD	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
7	Machine1	ROA2PLD	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
8	Machine1	ROA2PLD	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
9	Machine1	ROA2PLD	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

### Error detection by frequency analysis of vibration waveform **iQ-R**

Uses vibration analysis (FFT) to express vibration created by equipment, devices, and products in numerical form and visualize the status. Detection of abnormal vibration makes it possible to perform preventive maintenance on equipment and increase productivity.





## Energy-saving Analysis and Diagnostic Applications EcoAdviser

This software uses energy data and production information collected from EcoWebServerIII or Edgecross-compatible products to create graphs and dashboard screens. In addition, Mitsubishi Electric's Maisart AI technology is installed to provide total support for energy-saving activities ranging from understanding the current situation to extracting energy loss, diagnosing factors, and verifying the effectiveness of energy-saving measures.



**iQ** Edgecross

### Understanding the Current Situation - Rich graph display facilitates speedy comprehension of current energy use

Can create seven types of graphs to suit the purpose of current status comprehension, consumption unit management, or applied analysis.



Rate (Pie chart)



Rank (Bar chart)



Time series



Variation (Box plot)



Correlation (Scatter plot)



Factor (Pareto chart)



Distribution (Histogram)



**Dashboard function allows user to freely customize the display contents, thereby enabling used as a tool for visualization on the shop floor as well.**

### Loss Extraction - Utilizing AI and Mitsubishi Electric's unique know-how for automatic extraction of production equipment energy loss

Focusing on the five major perspectives of energy-savings derived from Mitsubishi Electric's know-how accumulated over many years, EcoAdviser utilizes AI to automatically extracts energy loss from electrical energy and production volume.

- Energy loss can be extracted simply by selecting the diagnosis period
- Ranking-type display in order of equipment with high energy loss
- Displays daily energy loss for each of the five major perspectives of energy-savings and highlights places where loss is higher than usual



### Factor Diagnosis - Utilizing AI to diagnose factors causing energy loss

Utilizes AI to assess date/time information, production information, etc. and rank items with high correlation as factors causing energy loss to provide a diagnosis together with anticipated improvement results.

Energy-loss factor diagnosis

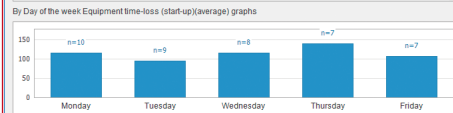
Diagnosis period: 3/12/2020 - 4/30/2020  
Equipment name: Line 2 of printed board manufa  
Energy saving points: (1)Equipment time-loss (start-up)

Rank	Energy-loss factor (type)	Energy-loss factor (detail)	Expected improved resu@%resu@	Does this information help you ?
1	Manufacturing starting time	9[Time]	75	<input type="radio"/> Yes <input type="radio"/> No
2	Production volume	330-410[Q]	123	<input type="radio"/> Yes <input type="radio"/> No
3	Day of the week	Thursday	142	<input type="radio"/> Yes <input type="radio"/> No
4	Production volume (the prev.)	220-44[Q]	85	<input type="radio"/> Yes <input type="radio"/> No
5	Equipment start-up time	4[Time]	62	<input type="radio"/> Yes <input type="radio"/> No

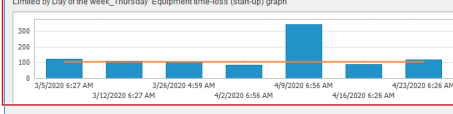
4 Apply evaluation

\*Tips\*  
Using ByDay of the week Equipment time-loss (start-up)(average) graphs, you can compare operational statuses which losses are high and low. Then you can find some energy-saving activities.

By Day of the week Equipment time-loss (start-up)(average) graphs



Limited by Day of the week\_Thursday Equipment time-loss (start-up) graph



#### Point 1

##### Ranking display of factors most likely to cause energy loss

- Default factors include equipment start-up time, production start time, day of the week, production volume, etc.
- Collected arbitrary data can also be added as factors (production model type, temperature, humidity, etc.)

#### Point 2

##### Displays improvement effect in monetary terms if measure is implemented (rough estimate)

#### Point 3

##### Learns selected effectiveness and reflects in factor diagnosis from next time onwards

#### Point 4

##### For each selected factor, presents information that can be more noticeable in shop floor improvements

- Advice
- Energy loss by factor
- Energy loss by one factor limitation



### Effect Verification - Easy visualization of improvements after implementation of energy-saving measures

Simply by selecting the period before/after the measure was implemented, users can confirm the improvement in energy loss in terms of electrical energy consumption and cost.

By revising energy-saving measures while verifying effects, energy-saving initiatives can be rolled out with good continuity.



## Energy-saving Data Collecting Server EcoWebServerIII

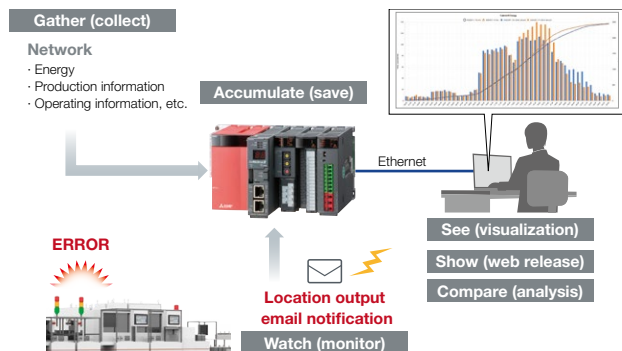
EcoWebServerIII is a product that facilitates data analysis needed to achieve energy-savings simply by setting the collection of measurement data of measurement instruments connected to a field network (CC-Link or MODBUS®). EcoWebServerIII can also convert the data into graph format utilizing a web browser and display current values.



**EcoWebServerIII**

### Function required for energy-savings provided as a standard feature

Equipped with functions necessary to collect, save, visualize, etc. measurement data without programs or ladders, thereby simplifying the construction of energy monitoring systems.



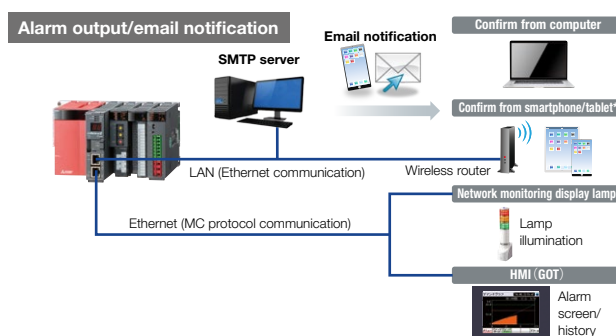
### Converts measurement data to graph format on a web browser

- Featuring built-in applications specifically for energy savings (graph creation function, etc.), EcoWebServerIII contributes to factory energy-saving measures.
- With a HTTP server function, EcoWebServerIII sends the data it collects to the Intranet via Ethernet. Users can confirm energy consumption in real-time from any kind of device.



### Detection of exceeded target values and equipment errors by alarm output and email notification

- When targets are exceeded or an equipment error occurs, users are notified by alarm output and email notification, allowing them to instantly notice the change in conditions. This accelerates the PDCA cycle from the time of problem occurrence until a measure is implemented, thus increasing productivity.
- Also supports smartphones/tablets, enabling users to confirm alarm content and emails while on the shop floor.



\* For details, please consult with your network administrator (or the relevant department).

### Full lineup of measurement instruments to suit various purposes and applications

#### EcoMonitorPlus



#### EcoMonitor Plus

#### MELSEC iQ-R Series Energy Measuring Module



#### ME96SS Ver.B Series



- Layered expansion to suit the purpose with a building-block approach
- Basic unit lineup includes a control unit equipped with an energy-saving automatic control function.
- Optional units support saving of measurement data (in CSV file format) to SD memory cards and various communications.

- One module can measure various items including electrical energy, reactive power, current, and voltage.
- By synchronizing with production information and control programs, users can manage energy consumption in detailed consumption units by individual model type and/or process. This contributes to energy savings on the production line and higher productivity.

- Electronic Multi-Measuring Instrument ME96SS Ver. B Series supports the realization of measuring and monitoring systems that are user-friendly and have easy-to-see displays.
- Using an optional Plug-in Module can achieve Analog/Pulse/Contact output, Contact input, CC-Link and MODBUS® TCP communications and Backup (with SD card) functions.

#### EcoMonitorLight



#### EcoMonitor Light

#### MDU Breaker (MDU: Measuring Display Unit)



- With a built-in LCD display, settings, measurement, and display necessary for energy measurement can all be performed on a single unit.
- In the same way as EcoMonitorPlus, optional units support saving of measurement data to SD memory cards and various communication.

- Consolidates a breaker, VT/CT for measurement, and measurement display unit into one and supports energy savings by saving space, and reducing installation work and wiring.
- The measurement display unit is available in a variety of installation styles, including main body installation, built-in display, stand-alone built-in display unit, and panel installation (photo shows main body installation).
- Supports a wide variety of networks (CC-Link, MODBUS®, electrical energy pulse output).

## MELSOFT GX Works3

GX Works3 is simple, user-friendly new-generation engineering software featuring structured programming and a variety of new functions and technologies designed for use with the control systems of MELSEC iQ-R and MELSEC iQ-F Series products.



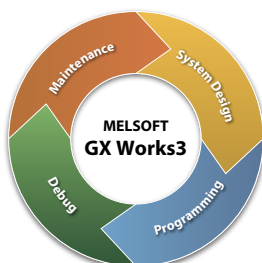
**GX Works3**  
One Software, Many Possibilities

### Intuitive engineering software covering the product development cycle

- Graphic-based configuration realizing easier programming
- Integrated motion-control system configuration
- Complies with IEC 61131-3

### Simple point and click programming architecture

- Straightforward graphic based system configuration design
- MELSOFT library enables efficient programming through “Module Label/FB”
- Extensive version control features



#### Tab view multiple editors

Conveniently work on multiple editors without having to switch software screens.

#### Module label/FB

Automatically generate module function blocks simply by selecting one and placing it directly into the ladder editor.

#### Simple motion setting tool

Easily configure the simple motion module with this convenient integrated tool.

#### Navigation window

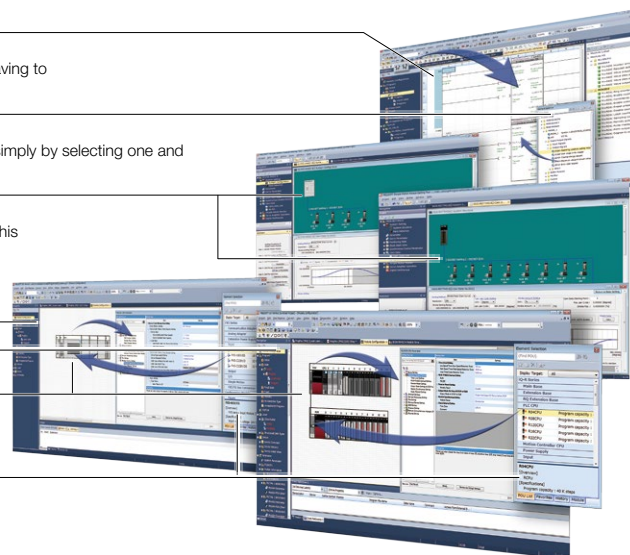
Easily access project components  
Organize program file list.

#### Module configuration

Easily parameterize each module directly from the configuration editor.

#### Module list

Simply drag & drop modules directly into the module configuration.



### Global realization by multi-language support

- Users can easily change the language of menus and messages in GX Works3 (multiple languages supported in a single package).
- No difference in functions between displayed languages, thereby allowing smooth introduction to production bases around the world.

### Simultaneous editing function enables efficient program editing

- Several people can create and simultaneously edit local projects from a single master project shared on the company network or cloud.
- Enables concurrent program design without the need to wait for upstream process program editing to be completed.





## MELSOFT iQ AppPortal

iQ AppPortal is a software to batch manage MELSOFT product project files, design drawings, documents, etc. by individual purpose.

Files can be registered using an easy drag-and-drop operation. By easily leaving editing history after registration, users can also view editing history and retrieve past data with ease. If there is a conflict with another person's edited file, you can compare the changes to prevent mistakes such as unintentionally overwriting other people's edits. Moreover, the branch creation function and revision graph help to reduce the workload of diversion development/management by making it instantly apparent when data has been diverted, when it began being diverted, the diversion source, and diversion destination.



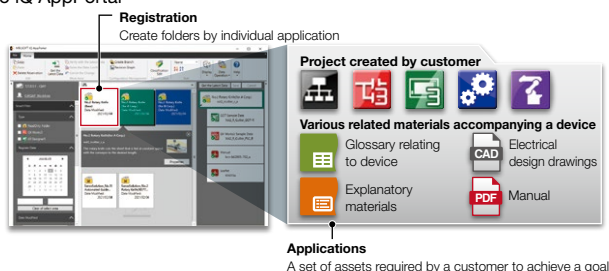
## MELSOFT iQ AppPortal

Application Integrated Management Software

### Registration

#### Batch management by individual application

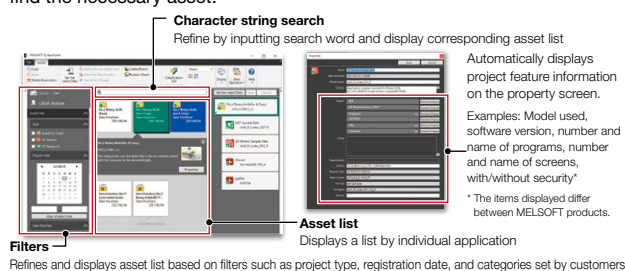
Assets can be registered easily by dragging and dropping from Explorer to iQ AppPortal



### Viewing/Searching

#### Review asset information without opening a project

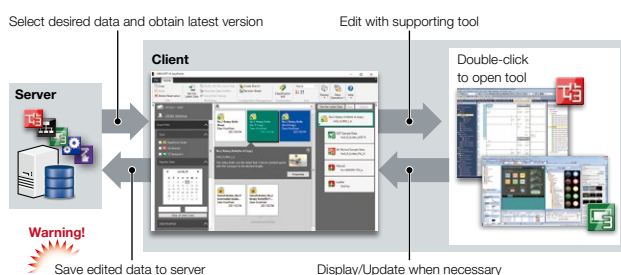
Using filters and character string searches, users can quickly and easily find the necessary asset.



### Utilization

#### Prevents overwriting of content edited by other users

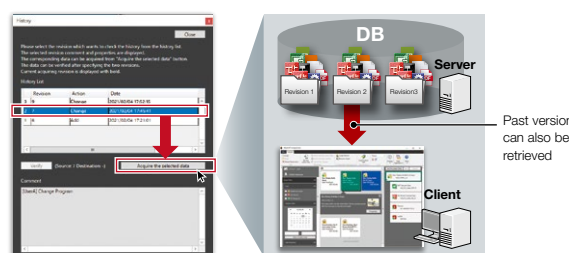
When a user tries to overwrite a file edited by someone else, a warning is issued upon upload to the server. This feature prevents users unintentionally overwriting another user's edited content.



### History management

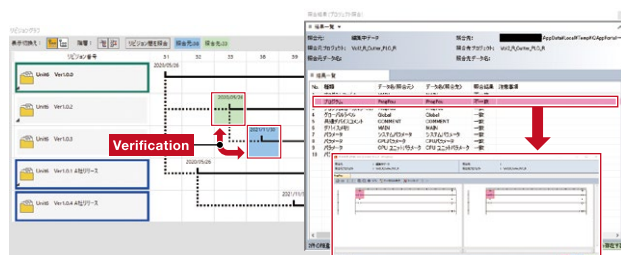
#### Detailed evaluation of change history and retrieval of past files

Users can save the history of the changed asset along with comments. It is also possible to retrieve past versions of files from the history log, thereby making it easy to manage history with reference to past file names, etc.



### Verification

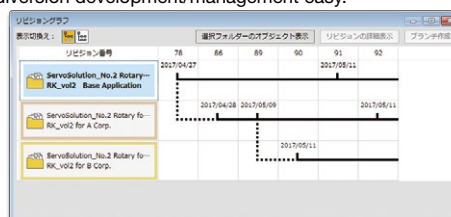
It is possible to check changes in project files, design drawings, and documents of MELSOFT products by verification. It makes it easy to see what's changed when there's a data conflict or change.



### Branch Management

Users can easily create new applications based on existing ones. By managing as a new folder, users can also develop similar applications in parallel.

Moreover, a revision graph allows users to instantly see when and from which application the new application was created as a branch, thus making diversion development/management easy.



## Numerical Control (CNC) Remote Service iQ Care Remote4U

This service enables real-time access to operation information of machines equipped with Mitsubishi Electric CNCs. It helps to reduce downtime by improving maintainability through remote diagnosis of user's machines equipped with our CNCs.

\* Please contact your nearest Mitsubishi Electric overseas office regarding which regions offer this service.

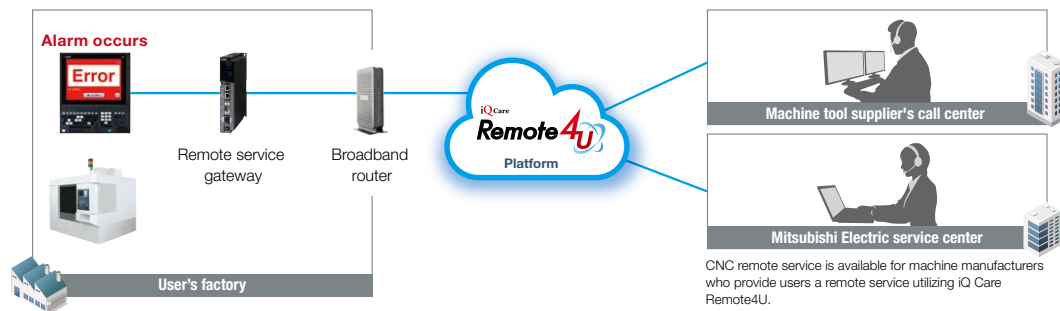


### CNC Remote Service (for Machine Tool Manufacturers)

Simply by purchasing a platform license, users can take advantage of our remote service for machine tools equipped with Mitsubishi Electric CNCs. Mitsubishi Electric prepares the cloud server, thus reducing the cost involved in introducing and maintaining the remote service. Moreover, by introducing this remote service, machine manufacturers can improve the efficiency of their service work.

#### iQ Care Remote4U Platform

Machine remote service can be easily introduced by leveraging the iQ Care Remote4U platform



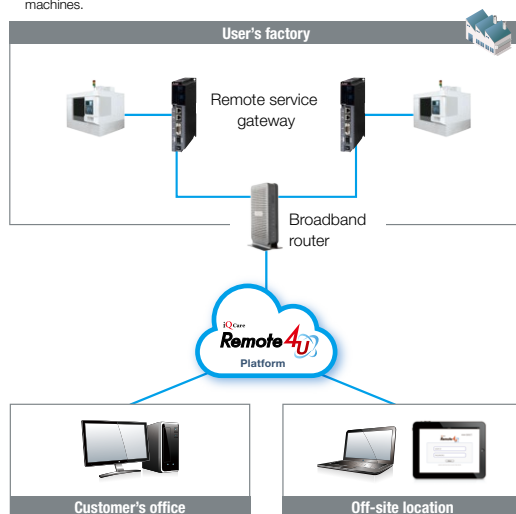
### CNC Remote Service (for Users)

#### Dashboard function\*1

**Dashboard function contributes to production process improvement and running cost reduction**

Users can monitor operating information for machines equipped with Mitsubishi Electric CNCs in real-time.

\*1 Different from the dashboard function of Mitsubishi Electric EDMs and laser processing machines.

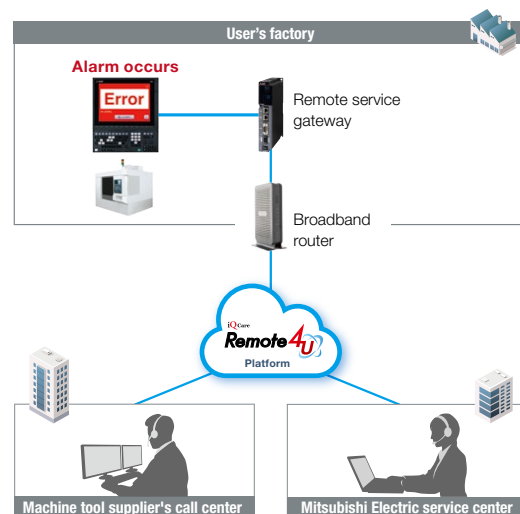


Users can access from the web browser of a commercially sold computer, smartphone, or tablet without having to install dedicated software (must enter an ID and password).

#### Remote diagnosis function

**Improving maintainability with a remote diagnosis function**

Mitsubishi Electric can remotely support its CNCs installed in customers' machines from its service center.



Remote diagnosis of machines is also possible if there is a contract with a machine manufacturer who holds a license for the iQ Care Remote4U platform.

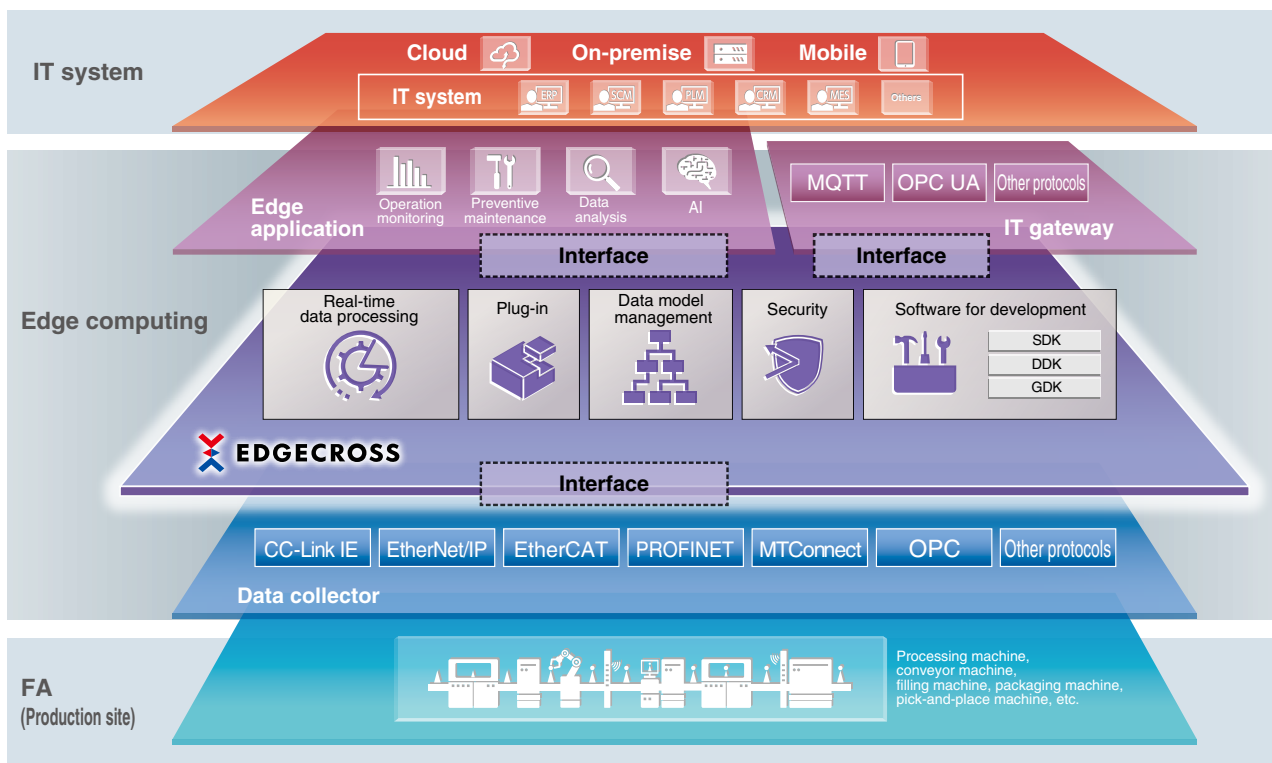


## Edgecross

Integration of IoT in manufacturing is accelerating to strengthen competitiveness and create new value. Based on this trend, the Edgecross Consortium will contribute to the development of IoT in the manufacturing industry with the aim of creating new added value that transcends the boundaries of companies and industries with a focus on the edge computing field .



### Creating new value with a focus on the edge computing domain



### Contact us

Edgecross Consortium Secretarial office  
 Info@edgexcross.org

Room 301-2, Main Bldg., Kikai Shinko Kaikan Bldg., 3-chome 5-8 Shibakoen, Minato-ku, Tokyo, Japan 105-0011

■ Edgecross Consortium  
<https://www.edgexcross.org/>





## CC-Link IE TSN

CC-Link IE TSN supports TCP/IP communications and applies it to industrial architectures through its support of TSN enabling real-time communications. With its flexible system architecture and extensive setup and troubleshooting features make CC-Link IE TSN ideal for building an IIoT infrastructure across the entire manufacturing enterprise.

### What is Time-Sensitive Networking (TSN)?

TSN is the IEEE-defined standard technology that enables deterministic messaging on standard Ethernet. The technology ensures deterministic communications by utilizing the time synchronization method (IEEE 802.1AS) and time-sharing method (IEEE 802.1Qbv). With the addition of these standards to Ethernet technology, real-time control communication and non-real time information communication can be mixed, which is not possible with conventional Ethernet communications.

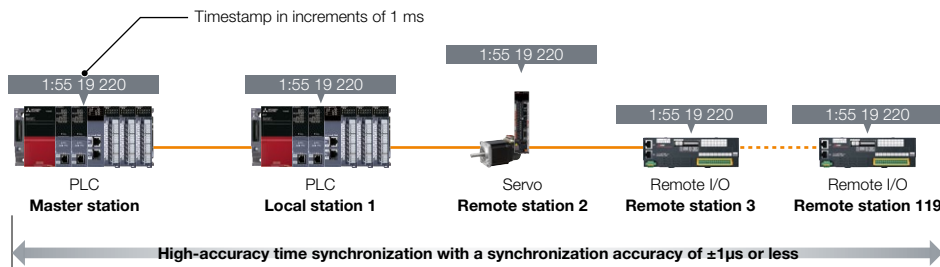


TSN technology enables the transfer of deterministic communication even when delivering the information communication data of IT systems on the same network. By increasing network bandwidth and giving priority to CC-Link IE TSN communications and TCP/IP communications, devices that use general Ethernet communications can be connected to the same network without affecting real-time control communication performance.



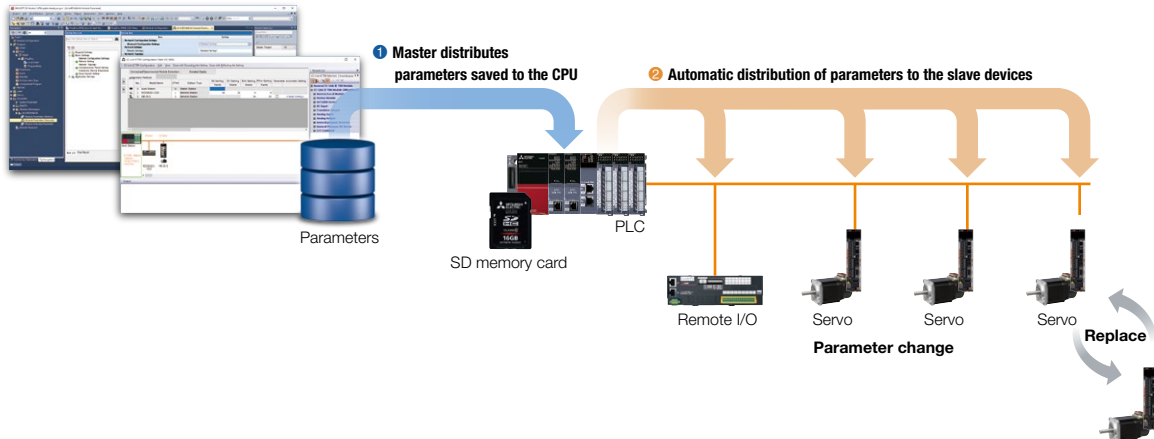
### Time series analysis using high-accuracy time synchronization

Achieves high-accuracy time synchronization with a synchronization accuracy of  $\pm 1\mu\text{s}$  or less and retains timestamp information in each connected station at increments of 1 ms. Error history can be displayed in time series, therefore enabling users to accurately analyze what happened and the cause of the problem from the exact time an error occurs.



### Easy replacement of slave devices through automatic parameter distribution [Reducing start-up time]

When power is turned on or there is contingency, the master device automatically distributes parameters saved on the CPU unit to slave devices. As such, even when a slave device is replaced, there's no need to separately write parameters to it; making for smooth replacement.



# e-Factory Alliance

## PARTNERS

Partners



Broad knowledge and skill  
as a comprehensive  
FA manufacturer



Know-how of all fields  
relating to monozukuri

Co-creation

Customer



Giving customers  
back the values born  
from co-creation





# e-F@ctory Ecosystem – Co-creation with over 1000 Partners\*

As a solutions provider, we collaborate with many partners across all monozukuri fields. This ecosystem provides optimal solutions in various regions and fields in response to the issues experienced by our customers.

\*As of March 2022

Collaborating with the partners across the world



**Producing entire production systems**  
**Achieving advanced systems integration**



IT



Production shop floor



Robots



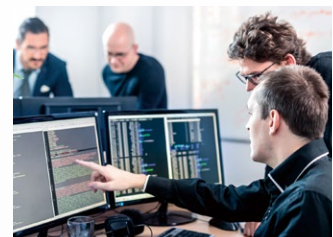
**Development of application software strengthening connection affinity with Mitsubishi Electric FA devices**



ERP/MES/SCADA



CAD/CAM/3D simulator



Data analysis



**Provide device compatibility with Mitsubishi Electric FA equipment**  
**Achieve improved system builds and maintainability**



Sensors



RFID



Related network devices



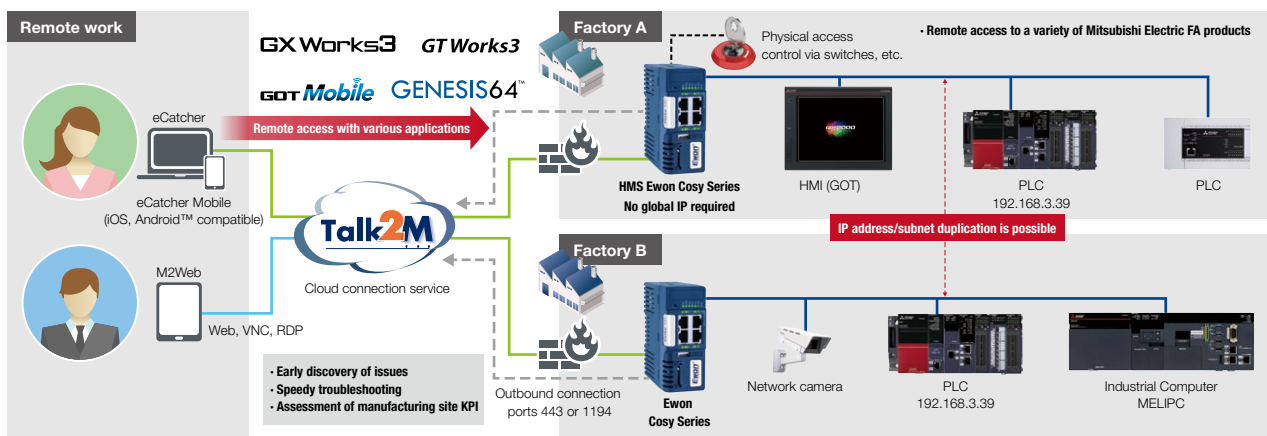


## HMS Industrial Networks HMS Ewon Cosy Series

With the Cosy Series (remote access gateway) and Talk2M (cloud connection service), users can access Mitsubishi Electric FA devices from anywhere in the world and safely perform troubleshooting of equipment and devices, thus reducing support cost and downtime. A secure connection is achieved through measures such as exclusive outbound connection, two-layer authentication, connection audit tracing, and access control using physical external key switches. We have obtained ISO27001 security certification and have testing performed regularly by NVISO to check for external intrusions. NVISO is a cybersecurity consulting company with a solid track record of providing cybersecurity-related services for all Belgian banks. Access is possible not only from a computer using eCatche (client software), but also remotely from an iOS or Android™ device installed with eCatcher Mobile on a browser of MELSEC or GOT. Moreover, assuming installation on a control panel, Ewon Cosy has been designed with specifications suited to industrial use, such as 24 VDC input, industrial EMC support, wide operating temperature range, and DIN rail mounting.



### Conceptual image of remote access



### Reasons why the Ewon Cosy Series is the manufacturers' choice

<p>Ranked most reliable service in the North American market for six consecutive years</p>	<p>Easy setup that only an FA manufacturer can provide</p>	<p>Overwhelming number of VPN servers for connection anywhere in the world</p>	<p>Highly secure performance with VPN connection</p>	<p>Highly experienced, enriched manufacturer support</p>	<p>Robust product specifications suited to industrial environments</p>
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### Product data

Remote access gateway Cosy			
Internet connection	Wired LAN	Wi-Fi	4G/LTE*1
Product model	EC61330	EC6133C	EC6133F/G/H*2
Common specifications	RJ45 x 4 (10/100Mbps), USB x 1, DI x 2/DO x 1, Rating: 12-24 VDC, Operating temperature range: -25 to 60°C, DIN rail mounting		

\*1 Antennas for 4G models sold separately.  
\*2 F for APAC, G for EU, H for North America.

Free cloud service*2 <b>Talk2M Free +</b>	
Number of registered devices	Unlimited
Number of registered users	Unlimited
Number of concurrent views	5
Number of concurrent connections	1
Monthly data volume	3GB

\*3 Talk2M Pro is also available for a fee.



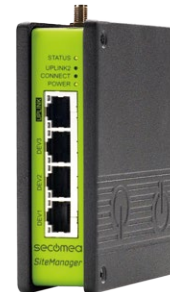
### Flexy Series - Industrial IoT gateway for host models also included in the lineup

In addition to the Cosy remote access, this solution also facilitates smooth IIoT transition by collecting data from a remote manufacturing site and connecting individual cloud services with OPC UA, MQTT, etc.

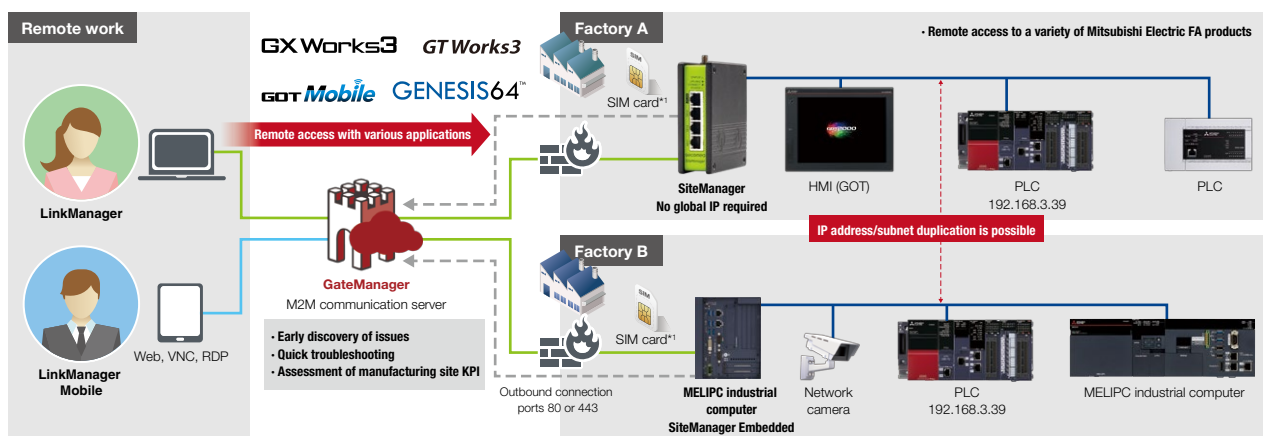
## Kanematsu Communications Secomea SiteManager Series

With SiteManager (remote access gateway), GateManager (relay M2M communication server), and LinkManager (client software), it is possible to access Mitsubishi Electric FA devices to monitor and perform maintenance on machinery and equipment at a manufacturing site, thus reducing business trip/transportation costs, and enabling quicker response. A secure connection is achieved through measures such as exclusive outbound connection, encryption using SSL/TSL, multi-factor authentication using certificates, SMS, etc., access authority using an individual device, audit log, etc. The Secomea solution has obtained security certification from ProtectEM GmbH (a German third-party organization) and conforms to Industry 4.0. In addition to SiteManager's main unit being designed with a robust aluminum housing, SiteManager Embedded (embedded software) can be used to make industrial computers such as MELIPC, etc. function as a gateway.

sec<sup>o</sup>mea  
SiteManager



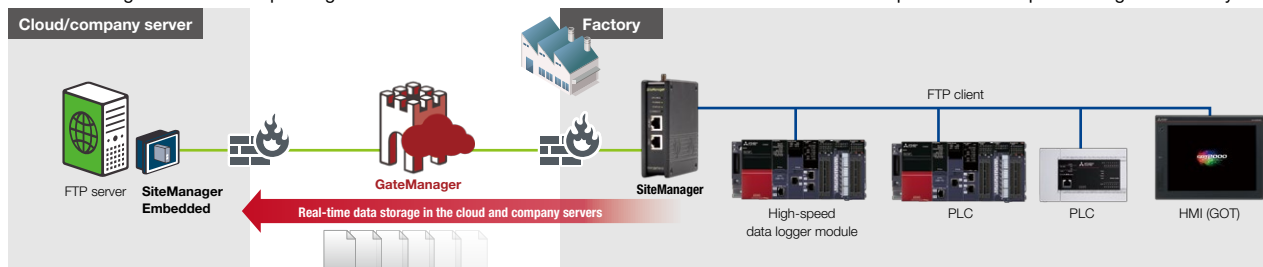
### Conceptual image of remote access



\*1 SIM card can be inserted by adding a separate communication module.

### Constant connection option "LogTunnel" use case

Two SiteManager units are set up facing each other to establish a secure constant connection with intuitive operations and a periodic log collection by FTP.



Not only FTP, but all protocols including HTTP, OPC UA, and MQTT can be used, and traceability systems as well as SCADA system construction are supported.

Secomea SiteManager also offers constant connection at the same time as maintenance of FA devices through remote access using LinkManager.

### Lineup

With various versions available to suit the user's environment and purpose of use, SiteManager Embedded software can be installed and used on industrial devices.



SiteManager Model number	Internet connection method			
	LAN	3G/4G	Wi-Fi	
Maximum number of device connection settings	5	1129	1139	1149
	10	1529	1539	1549
	25	3329	3339	3349
	100	3529	3539	3549

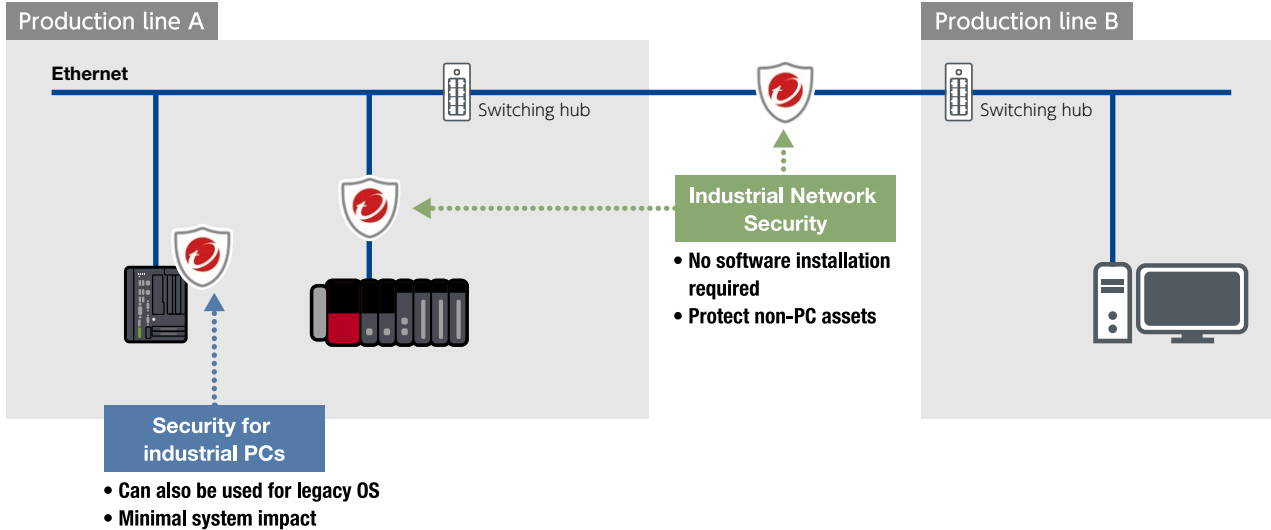


Unlike the SiteManager hardware product, SiteManager Embedded is a software gateway that can be installed in a MELIPC, etc. to function as a secure access gateway. It operates as a seamless service in the background on various OS. SiteManager Embedded is very light, and therefore uses minimal system resources.



## Trend Micro Cyber security solution for FA systems

As a cybersecurity measure for FA systems, Trend Micro provides solutions tailored to customers' environments and conditions. There are products that can prevent malware infection in factories\*1, prevent damage spread, and protect vulnerable systems. Depending on the target equipment, there are two methods of protection: security for industrial PCs and industrial network security.



	Security for industrial PCs*2	Industrial Network Security*3
<b>Examples of protected objects</b>	<ul style="list-style-type: none"> <li>• Industrial PCs, touch panel PCs</li> <li>• Equipment running on Windows® OS</li> <li>• Legacy OS systems</li> <li>• Stand-alone/Air-Gapped systems</li> </ul>	<ul style="list-style-type: none"> <li>• Assets other than PCs, PLC (programmable controllers), controllers, purpose-specific terminals</li> <li>• Protection by individual production line</li> <li>• PCs for which software installation is difficult</li> </ul>
<b>Security products</b>	<p><b>Software</b></p> <p><b>TXOne StellarEnforce™</b> Industrial lockdown software Lock down (fixed function) and protect legacy systems</p> <p><b>TXOne StellarProtect™</b> Comprehensive industrial endpoint protection Protect equipment that frequently experiences external connections and configuration changes</p> <p><b>Virtual Appliances*4</b></p> <p><b>TXOne StellarOne™</b> Centralized-management console of the above software</p> <p><b>Portable Tools</b></p> <p><b>Trend Micro Portable Security™ 3</b> For stand-alone and air-gapped systems Malware scanning and cleanup tool Health check of equipment with a tool resembling USB flash drive</p>	<p><b>Hardware Appliances</b></p> <p><b>EdgeIPS™ / EdgeIPS™ Pro</b> Industrial Next-generation IPS Protect critical equipment in the factory network</p> <p><b>EdgeFire™</b> Industrial Next-generation Firewall Factory network segmentation</p> <p><b>Virtual Appliances*4</b></p> <p><b>OT Defense Console™</b> Industrial Central Management Console Flexible operation of the Edge series</p>

\*1 Malware is a generic term for malicious program and includes worms and viruses.

\*2 Please refer to the URL on the right for details on security for industrial PCs. [https://www.trendmicro.com/en\\_us/business/products/iot/industrial-endpoint-security.html](https://www.trendmicro.com/en_us/business/products/iot/industrial-endpoint-security.html)

\*3 Please refer to the URL on the right for details on industrial network security. [https://www.trendmicro.com/en\\_us/business/products/iot/industrial-network-security.html](https://www.trendmicro.com/en_us/business/products/iot/industrial-network-security.html)

\*4 Virtual Appliance is software (OVA file) that the customer prepares and installs and uses in a virtual environment.

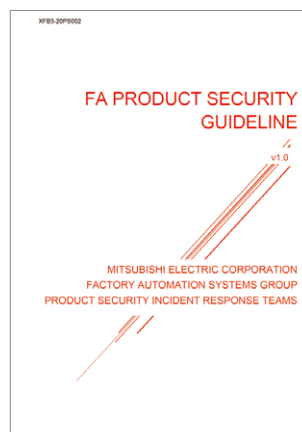


## Mitsubishi Electric FA Product Security Guidelines



Mitsubishi Electric promotes and strengthens initiatives to reduce risks in the security of its products and services. We will implement security measures in accordance with our FA Security Guidelines at each layer (human layer, physical layer, network layer, device layer) and achieve manufacturing at factories with a safe and reassuring security environment.

\* FA Security Guidelines are guidelines that summarize content to help customers understand security initiatives for our FA products and recommendations related to using our FA products.



<https://www.MitsubishiElectric.com/fa/business/psirt/>

### Reference

- (1) CC-Link Association CC-Link IE TSN Security Guidelines  
<https://www.cc-link.org/en/cclink/security/>
- (2) Edgexcross Consortium Security Guidelines  
<https://www.edgexcross.org/en/data-download/#security>

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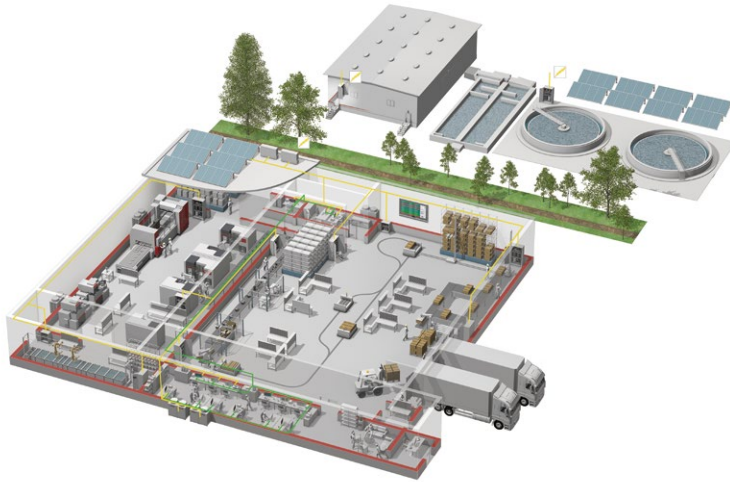
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# YOUR SOLUTION PARTNER



Mitsubishi Electric offers a wide range of automation equipment from PLCs and HMIs to CNC and EDM machines.

## A NAME TO TRUST

Since its beginnings in 1870, some 45 companies use the Mitsubishi name, covering a spectrum of finance, commerce and industry.

The Mitsubishi brand name is recognized around the world as a symbol of premium quality.

Mitsubishi Electric Corporation, established in 1921, is active in space development, transportation, semi-conductors, energy systems, communications and information processing, audio visual equipment and home electronics, building and energy management and automation systems, and has 183 factories, laboratories and offices worldwide in over 140 countries.

This is why you can rely on Mitsubishi Electric automation solution - because we know first hand about the need for reliable, efficient, easy-to-use automation and control in our own factories.

As one of the world's leading companies with a global turnover of over 4 trillion Yen (over \$40 billion), employing over 146,000 people, Mitsubishi Electric has the resource and the commitment to deliver the ultimate in service and support as well as the best products.



Low-voltage Power Distribution Products



Transformers, Med-voltage Distribution Products



Power Monitoring and Energy Saving Products



Power (UPS) and Environmental Products



Compact and Modular Controllers



Servos, Motors and Inverters



Visualization: HMIs



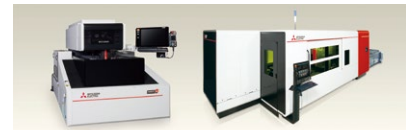
Edge Computing Products



Numerical Control (NC)



Collaborative and Industrial Robots

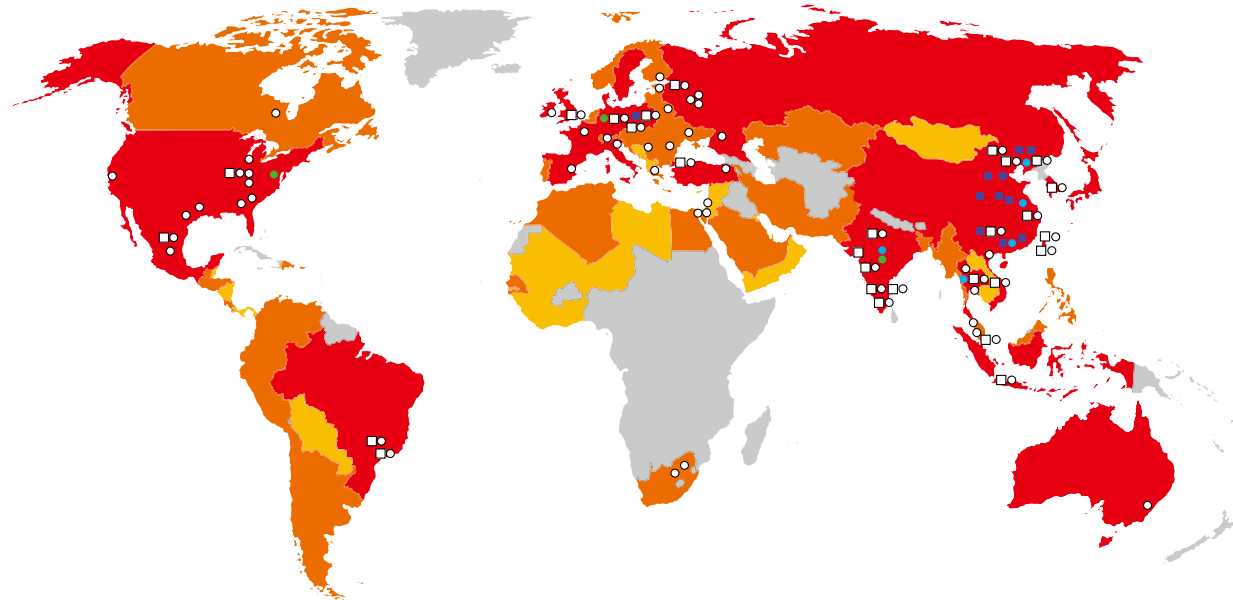


Processing machines: EDM, Lasers

\* Not all products are available in all countries.



# Global Partner. Local Friend.



- Sales office
- FA center
- FA center satellite
- Production center
- R&D center

Note: This is a map of our global sales and support coverage. It does not reflect any national borders.

- A region where there are direct Mitsubishi Electric FA offices (main/local and satellite).
- A region covered by primary sales partners (distributors) who have local sales offices.
- A region covered by our extended sales network which may or may not have local offices.

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	Singapore	MITSUBISHI ELECTRIC ASIA PTE. LTD. 307, Alexandra Road, Mitsubishi Electric Building, Singapore 159943	Tel : +65-6473-2308 Fax : +65-6476-7439
Mexico	MITSUBISHI ELECTRIC AUTOMATION, INC. Mexico Branch Mariano Escobedo #69, Col. Zona Industrial, Tlalnepanitla Edo. C.P.54030, Mexico	Tel : +52-55-3067-7511	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 Fax : +66-2682-6020
Brazil	MITSUBISHI ELECTRIC DO BRASIL COMÉRCIO E SERVIÇOS LTDA. Avenida Adelino Cardana, 293, 21 andar, Bethaville, Barueri SP, Brazil	Tel : +55-11-4689-3000 Fax : +55-11-4689-3016	Vietnam	MITSUBISHI ELECTRIC VIETNAM COMPANY LIMITED Hanoi Branch 6-Floor, Detech Tower, 8 Ton That Thuyet Street, My Dinh 2 Ward, Nam Tu Liem District, Hanoi, Vietnam	Tel : +84-4-3937-8075 Fax : +84-4-3937-8076
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