P3N1-E312-01ENZ0

Be sure to read this.

GW1500
Getting Started Guide

Thank you very much for purchasing the GW1500 (hereinafter abbreviated as the device).

The device is a gateway device that is used with the FUJITSU Managed Infrastructure Service FENICS II M2M service. The device cannot be used for any other purposes.

This manual explains points of which you should be aware before using the device and methods for installing and setting the device.

Be sure to read this manual before using the device.

September, 2014 First edition

FUJITSU

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Structure and Usage of This Manual

The following explains items you should know to help you use this manual efficiently.

Manual System

The following manuals are provided with the device.

Read them to match your purpose.

Manual Name	Contents
"Getting Started Guide" (This manual)	Explains items you should know before using this device and methods for installing and setting this device. Read this first after opening the package.
"User's Manual" (Japanese only)	Explains this device's outline, functions, command specifications, and troubleshooting methods. Read this as necessary.

The PDF viewing software Adobe Reader is required for viewing the PDF manual.

Before using this device, thoroughly read the manual and operate the device properly. Also, be sure to keep the manual safe.

Audience and Prerequisite Knowledge

This manual is intended for those who will utilize this device and complete installation and adjustment of settings. The following knowledge is required for using this manual:

- Basic knowledge and operation method of the operating system in your environment
- Basic knowledge related to the network

Structure of This Manual

The following indicates this manual's structure:

- Chapter 1 Overview

  Describes the contents of the packaging, the names and functions of each section, and options for this device.

- Chapter 2 Device Installation

  Describes the process and conditions for installing this device.
- Chapter 3 Device Settings

  Describes the method for setting this device.

Marks Used in This Manual

The marks used in this manual indicate the following contents.

Indicates things that you should be careful of and things that you must not do. Be sure to read them.

Describes additional information related to this device.
Read this as necessary.

Indicates warnings related to product liability act (PL). Be sure to obey these when using this device.

Indicates cautionary information related to product liability act (PL). Be sure to obey these when using this device.

Product Name Abbreviations

The product names used in this manual are abbreviated as follows.

Product Name	Abbreviation in This Manual
Microsoft® Windows® 7 Home Premium operating system (English version)	Windows 7
Microsoft® Windows® 7 Professional operating system (English version)	

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Other company names or product names described in this manual are trademarks and/or registered trademarks of each company.

The ® and ™ symbols are not always indicated with system names or product names described in this manual.

Safety Precautions

Warning Signs

This manual contains important information about the safe use of this device.

To prevent injury to the user or others, and to prevent property damage, be sure that you understand the following safety precautions and symbols before using this device.

Symbol	Description
	△ indicates warning or cautions. Details are written inside or next to the symbol.
	○ indicates prohibited actions you must not perform. Details are written inside or next to the symbol.
	● indicates compulsory actions and instructions that must be followed. Details are written inside or next to the symbol.

Warning

Be sure to follow these instructions in order to use the device safely. This symbol indicates the possibility of a serious or fatal injury if the device is not used properly.

Warning List			
No Disassembly	Do not disassemble, dismantle, modify, or reproduce this device. Doing so may cause electrical shock, fire and/or device failure.	Do Not Wet	Do not insert or pull out the DC cord or AC adapter while your hands are wet. Doing so may cause electrical shock.
Do Not	Do not damage or process the DC cord or the AC adapter. Do not damage the DC cord cable or the AC adapter by placing objects on top, pulling, forcibly bending, twisting, or by heating them. Do not use cables that are bundled. Doing so may cause electrical shock or a fire. This applies to other cables.	Caution	Keep small parts (such as any removed screws) out of the reach of small children to prevent accidental ingestion. If any parts are swallowed, contact a doctor immediately.
No Foreign Materials Unplug	Do not insert or drop any foreign materials, such as metal or combustible material, into the device. Also, do not let any liquid, such as water, get into the device. In case any foreign materials or liquids get into the device, first unplug the DC cord or AC adapter from the outlet, and then contact an engineer or an approved engineer of our company. If you continue to use the device as it is, electrical shock, fire and/or device failure may occur.	Unplug	In case a problem occurs that causes heat, smoke, or unusual smell, immediately stop using the device. Quickly unplug the DC cord or AC adapter from the outlet. Next confirm that the problem, such as smoke, disappears, and then contact an engineer or an approved engineer of our company. If you continue to use the device as it is, electrical shock or fire may occur.
Do Not Touch	When lightning occurs nearby, do not touch the device, the DC cord or AC adapter, or any other cables. Doing so may cause electrical shock.	Do Not	Do not use voltage other than the indicated power voltage. Also, do not plug multiple cables into one outlet. Doing so may cause electrical shock or fire.
Do Not	Do not use the DC cord or AC adapter if the plug is damaged or it fits too loosely in the outlet. If you continue to use the device as it is, electrical shock or fire may occur.	Caution	Make sure that children do not play with the plastic bag used for packaging, putting it in their mouths or on their heads. Doing so may cause suffocation.

Warning List			
Do Not	Never insert anything into an interface connector except for a connector of the compliant circuit. Damage and/or device failure, or electrical shock may occur.	Do Not	Do not use a cleaning spray (includes flammable materials) for cleaning. Doing so may cause fire or device failure.

Caution

This symbol indicates the possibility of minor or moderate personal injury.
They also indicate improper usage may damage the device or instruments connected to the device.

Cautions	
Do Not Do not touch the device for a long time (one minute or longer) when the power is on. Doing so may cause low-temperature burns.	Do Not Do not stack the device. Doing so may drop components and cause injuries, damage, or device failures.
Do Not Do not place objects on the device or climb on top of the device to work. Doing so may damage the device and cause a failure, or it may injure the worker.	Do Not Do not use the device near equipment that creates a strong magnetic field, such as a microwave oven. Doing so may cause device failures.
Install this device indoors. Installing it outdoors may cause device failures.	Do Not Do not install the device in a location where there is direct sunlight, near a heater, or in a location with large amounts of humidity or dust. Doing so may cause electrical shock or a fire.
Do Not Do not install the device in an extremely hot or cold location, or in a location with severe temperature changes. Doing so may cause device failures. Keep the device within the specified operating temperature range.	Do Not Do not use the device in an environment with corrosive gas, such as in a chemical spray or a place touched by chemicals. Doing so may cause damage and device failures.
Do Not Do not install the device in an unstable location, such as a wobbly table or slanted location. Also, do not use in a location subject to strong shocks or vibrations. Doing so may drop components and cause injuries, damage, or device failures.	Ensure the area necessary for handling cables. Even when using the device next to others, provide a service area for each device as necessary. Not doing so may cause damage or failure in the cables.
When moving the device, be sure to stop the power supply by unplugging the DC cord or AC adapter from the outlet. Not doing so may cause failures.	If there is any dust attached to the metal section of the AC adapter or the surrounding area, wipe it off thoroughly with a dry cloth. If you continue to use the device as it is may cause fire.
Perform wiring correctly. If the wiring is not installed properly, communications will not perform correctly, and it may lead to a device failure.	Insert the AC adapter plug firmly into the outlet. If the plug is not inserted firmly enough, it may cause electrical shock, smoke, or fire.

Cautions	
Hold the plug when unplugging the AC adapter from the outlet. Not doing so may damage the plug, causing electrical shock or a fire.	Use the included DC cord or the optional AC adapter. Using other products may cause electrical shock, fire, and/or device failure.
Do Not Do not use the device near a radio or a television receiver. A radio or a television receiver may get interference.	Do Not While the device is in use, do not cover it or wrap it in a cloth. Doing so may cause heat to accumulate, resulting in a fire.

Cautions Related to Maintenance

- Never perform repairs by yourself. If this device malfunctions, contact one of our company's technicians or a technician approved by our company.
- Do not disassemble or modify this device by yourself. High voltage and high temperature parts are inside this device and it is dangerous to touch them.

Cautions for Use

- The period for which this device can be stably used is approximately five years, when it is used at a temperature in the range of guaranteed operation.
- Use the provided manual, device unit, and software at your own liability.
- Our company is not responsible or liable for any loss, including loss of data, caused by the use of this device. Furthermore, the scope of the warranty for damages of this device shall not exceed the amount of money paid for the purchase of this device under any circumstances. We ask for your understanding.
- Using the software provided in this device or the update software provided by our company for this device for any purpose other than to use in this device, or performing any modification or disassembly of this device, with the exception of that agreed upon in the content of "Licensing" in "FUJITSU Managed Infrastructure Service FENICS II M2M-GW Getting Started Guide (Japanese version)", is absolutely not permitted.

Green Products

This product is an environmentally-friendly "Green Product". It passed our company's strict environmental evaluation standards and has a low impact on the environment.

-Main features
-Compact size/fewer resources used
-A power-saving function
-High recycling rate

This mark indicates that this is a Green Product that complies with Fujitsu Limited's Green Product evaluation standards. For details of Fujitsu's environmental activities, see the following page (environmental activities) on Fujitsu's home page:

http://www.fujitsu.com/global/about/environment/

High Safety

This product has been designed and manufactured on the assumption that it will be used in office, personal, domestic, regular industrial, and general purpose applications. It has not been designed and manufactured for use in applications that pose a direct danger to life and health when a high degree of safety is required (referred to in this manual as "high-safety applications"), such as in the control of nuclear reactions at nuclear power facilities, automatic flight control of aircraft, air traffic control, operation control in mass-transport systems, medical equipment for sustaining life, and missile firing control in weapons systems, and when provisionally the safety in question is not ensured.

The user should use this product while providing measures for ensuring safety in such high-safety applications. If using it for a high safety application, consult with our company's sales department.

Voluntary Interference Control

This device is a Class B IT device. This device is intended to be used in a home environment. If this device is used near a radio or television receiver, it may cause interference.

Handle this device correctly in accordance with the "Getting Started Guide" and "User's Manual". VCCI-B

Pickup and Recycling for Used Business Products

Our "Business IT Product Recycling Service" collects, recycles, and effectively uses resources from our company's products that are disposed of by our corporate customers (for a fee).

For details about disposing of this product, refer to "FUJITSU Managed Infrastructure Service FENICS II M2M-GW Getting Started Guide (Japanese version)".

High Frequency Current Rating

This product complies with the high frequency current rating JIS C 61000-3-2.

Cautions for Handling

Be careful of the following items when handling this device.

- Manage and keep the configuration definition information for this device yourself after completing settings. If a malfunction occurs and our company performs the recovery, we will use the configuration definition information you have managed and kept. If you cannot provide this configuration definition information, the recovery may take some time. Back up this configuration definition information as appropriate and always manage and keep the latest version.
- This device is embedded with a circuit to protect against lightning and static electricity. Therefore, if lightning or static electricity enters the device, you may not be able to use some functions. In this case, turn off the device and on again to restore it to normal. If you cannot use some functions even after turning the power off and back on, or the power does not turn on, it is possible that the protective circuit was not able to fully protect the device and the device was damaged . In such a case, contact one of our company's technicians or technicians approved by our company.
- Never turn off the power or reset the device while the basic software is being updated. The device will not be able to start up if the power is turned off or the device is reset during an update.
- In the event this device fails and must be replaced with a repaired product, the basic software version of the repaired product may be different from the basic software version at the time of the failure. For a smooth recovery, we recommend making a note of the current basic software version.
  You can confirm the basic software version using the show version command.
- Before exporting the device or optional AC adapter (Inlet type) to Europe, you must attach to the device or optional AC adapter (Inlet type) the importer's label (for details, refer to "1.1.5 Device Base Surface" on page 17) that contains information on the legal entity of the importer or its agent.

Chapter 1 Overview

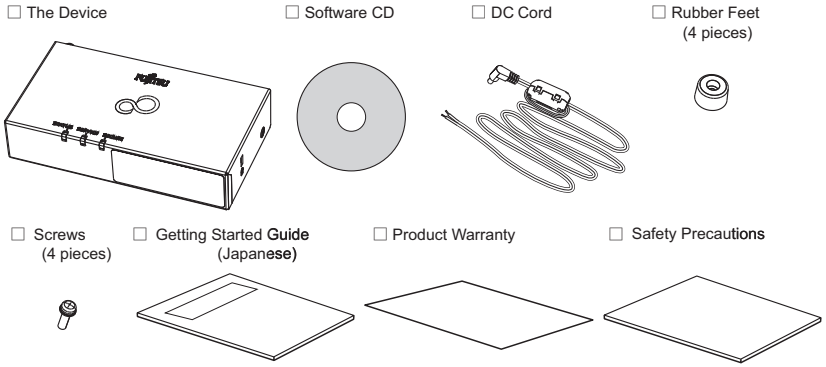
This chapter describes the contents of the package, parts name and functions, and options for the device.

1.1 Package Contents/Parts Name and Functions

Check the contents of the package before using the device.

1.1.1 Package Contents

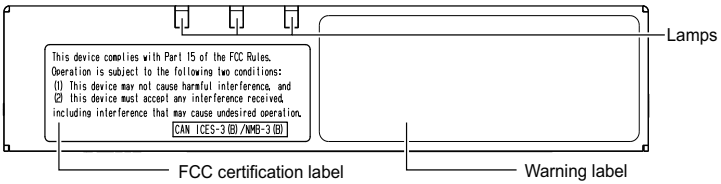
The following items are included with the device. Check that no parts are missing.



- Main unit — This device.
- Software CD — Includes a list of license agreements to use Open Source Software (OSS) installed on the device, the source code which is licensed under the GNU GENERAL PUBLIC LICENSE Version 2 or the GNU LESSER GENERAL PUBLIC LICENSE Version 2.1. It also includes third party copyrights, and the terms and conditions that are included with Java SE.
- DC cord — The cord for connecting the device to the power supply unit.
- Rubber feet (x4) — Rubber feet that are attached to the device when installing it on a tabletop.
- Screws (x4) — Screws to fasten the rubber feet.
- Getting Started Guide — This manual.

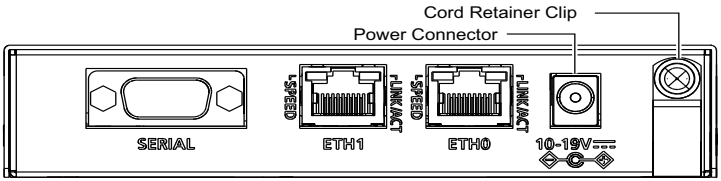
- Product Warranty — The warranty for this device.
- Safety Precautions — This manual contains important information about the safe use of the device.

1.1.2 Device Front View



- FCC certification label — Indicates a certification label for FCC/ICES-3.
- Warning label — Indicates precautions for using this device.
- Lamps — For details, refer to "1.1.4 Device Top View and Lamps" on page 15.

1.1.3 Device Rear View and Lamps

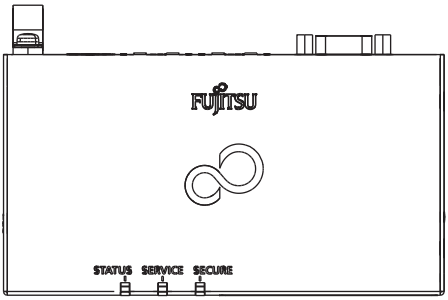


- SERIAL (RS-232C, D-sub 9 pins) — A port used to connect to the serial device. It operates as a DCE.
- ETH1 (10/100BASE-TX) — A port used to connect to the IP device. It operates as an MDI-X. Supports Auto MDI/MDI-X.
- ETH0 (10/100BASE-TX) — Used as a center-side port. It operates as an MDI. Supports Auto MDI/MDI-X.
- Power connector — Connects with the included DC cord or AC adapter (option).
- Cord retainer clip — Nylon clips to fasten the included DC cord or AC adapter (option) to the device.

Details on the lamps are shown below.

Lamp Name	Lamp Color	Status	Display Conditions
ETH1 LINK/ACT	-	Off	Indicates that the ETH1 port link is not established.
	Green	Blinking	Indicates that the ETH1 port link is communicating.
		On	Indicates that the ETH1 port link is established.
ETH1 SPEED	-	Off	Indicates that the communication speed is based on 10BASE-T.
	Green	On	Indicates that the communication speed is based on 100BASE-T.
ETH0 LINK/ACT	-	Off	Indicates that the ETH0 port link is not established.
	Green	Blinking	Indicates that the ETH0 port link is communicating.
		On	Indicates that the ETH0 port link is established.
ETH0 SPEED	-	Off	Indicates that the communication speed is based on 10BASE-T.
	Green	On	Indicates that the communication speed is based on 100BASE-T.

1.1.4 Device Top View and Lamps



- STATUS lamp — Device status can be checked (powered off/starting up/ operating normally).
- SERVICE lamp — Connection status with the center can be checked.
- SECURE lamp — SSL-VPN can be checked whether or not communication is established.

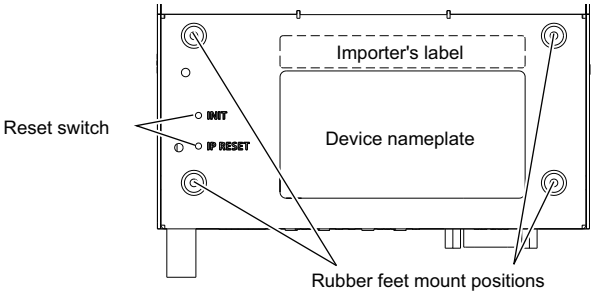
Details on the lamps are shown below.

Lamp Name	Lamp Color	Status	Display Conditions	Remarks
STATUS	-	Off	Indicates that the power is not turned on.	-
	Green	On	Indicates that the device is operating normally.	-
	Red	Blinking	Indicates that the device is being reset to the factory default settings.	Blinks simultaneously with the SERVICE lamp.
		On	Indicates that an error occurred in the device.	-
	Amber	On	Indicates the software status.	Check the system log for the status.
SERVICE	-	Off	Indicates that the device is not connected to the center.	-
	Green	Blinking	Indicates that the device is acquiring configuration definitions from the center.	-
		On	Indicates that the configuration definitions have been reflected.	-
	Red	Blinking	Indicates that the device is being reset to the factory default settings.	Blinks simultaneously with the STATUS lamp.
		On	Indicates that the IP address is being initialized.	-
SECURE	-	Off	Indicates that the SSL-VPN connection or private PPP connection is not established.	-
	Blue	Blinking	SSL-VPN connection or private PPP connection (download connection unavailable)	-
		On	SSL-VPN connection or private PPP connection (two-way communication available)	-

The STATUS lamp and the SERVICE lamp turn on to red or amber immediately after the device is activated, but this is not a malfunction. The STATUS lamp blinks green and then turned on. This indicates that the device is activated properly. If the STATUS lamp does not change to green after five minutes, there

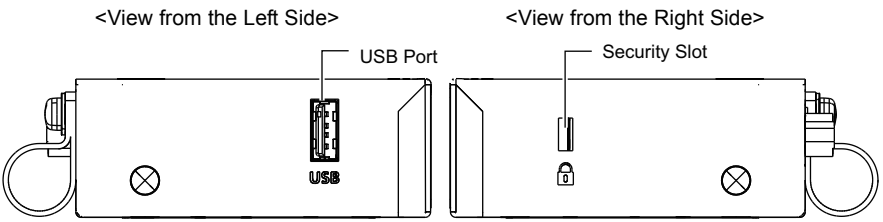
may be a device error. Please contact an engineer or an approved engineer of our company.

1.1.5 Device Base Surface



- Reset switch (INIT) — Press and hold (for approx. two seconds) to reset the device to the factory default settings (initial status).
- Reset switch (IP RESET) — Press and hold (for approx. two seconds) to initialize the device IP address.
- Rubber feet mount positions — Indicates the mount positions for the rubber feet when the device is installed on a table top. Mount them to the corners on the base surface of the device (four locations).
- Importer's label — A label that is required when you export the device to Europe. It is usually not attached. If you need it, contact your sales representative.
- Device nameplate — Contains information such as the device product ID, production date, serial number, MAC address (ETH0 port), the Technical Regulations Conformity Certification number, and the marks that you must obtain for certification in each country in order to use the device there.

1.1.6 Device Side View



- USB port (USB 2.0 standard)
  Used to connect the optional mobile adapter.
  Mobile adapters are used to enable the GSM or 3G wireless communication between the device and the center.
- Security slot (V1.2 compatible)
  Used to connect a commercially available anti-theft wire. The security slot supports the Kensington Microsaver security system.Purchase the following anti-theft cable. Other similar cables may not attach properly.
  Product name: Sanwa Supply - Notebook Computer Security Kit
  Product number: SL-38 (1705943)

1.2 Options

Options are listed below.

Attention!

- Be sure to use dedicated optional products.
- Before using an option, be sure to read the documents that are included with the option, such as the "User's Manual" or "Read This First".
- The magnet sheet (GW2HWMG01) and the mobile adapter mounting bracket (GW2HWMK02) cannot be used together.

No.	Product ID	Product Name	Remarks
1	GW2HWMG01	Magnet sheet	- 1 sheet - For details on the procedure to install this device with the magnet sheet, refer to " Using the Magnet Sheet" on page 28. * Cannot be used together with the mobile adapter mounting bracket (GW2HWMK02).

No.	Product ID	Product Name	Remarks
2	GW2HWMK01	Wall-mounting equipment	- 2 screws (Flat countersunk head screws) - For details on the procedure to install this device using the wall-mounting equipment, refer to " Using the Wall-Mounting Equipment" on page 30.
3	GW2HWMK02	Mobile adapter mounting bracket	- 4 screws (Flat countersunk head screws) - Effective in preventing the mobile adapter A from coming loose. - For details on the procedure to install this device using the mobile adapter mounting bracket, refer to "2.3 Connecting the Mobile Adapter" on page 32. * Cannot be used together with the magnet sheet (GW2HWMG01).
4	GW2HWAC01	AC adapter	- A-type (two pole parallel type) - Cable length: 1.8 m - For details on connecting the AC adapter, refer to "3.2 Turning the Device Power On" on page 35. - To use the AC adapter, you need an AC cord. - Purchase the AC cord separately according to the country where you will use the AC adapter and the plug type that is used in that country.
5	GW2HWAC02	AC adapter (Inlet type)	- For Japan and overseas - Cable length: 1.8 m - AC side connector type: Duplex zipcord type - DC side plug type: Right angle type, outer diameter: 5.5mm, inner diameter: 2.1mm - For details on connecting the AC adapter, refer to "3.2 Turning the Device Power On" on page 35.
6	GW2HWAC03	AC cord (North America)	- For the U.S. and Canada - Plug type: A-type (two pole parallel type) - Connector type: Duplex zipcord type - Cable length: 1.5m - Safety standards: UL and CSA

No.	Product ID	Product Name	Remarks
7	GW2HWAC04	AC cord (Europe A)	- For G.B., Ireland, Cyprus and Malta - Plug type: BF-type (two pole round type) - Connector type: Duplex zipcord type - Cable length: 1.8 m - Safety standard: ASTA
8	GW2HWAC05	AC cord (Europe B)	- For European countries other than "Europe A" countries - Plug type: C-type (two pole round type) - Connector type: Duplex zipcord type - Cable length: 1.8 m - Safety standards: CEBEC, KEMA, CEE, LICE, IMQ, VDE, DEMKO, SEV, OVE, - FIMKO, SEMKO, NEMKO and SEV
9	GW2HWAC06	AC cord (Japan)	- For Japan - Plug type: A-type (two pole parallel type) - Connector type: Duplex zipcord type - Cable length: 1.0m - Safety standard: PSE
10	FSPH000011	Mobile adapter A	Used for wireless mobile communication between the device and the center within a private network. For details on the procedure to connect the mobile adapter to the device, refer to "2.3 Connecting the Mobile Adapter" on page 32.
11	NB75801410	Instrument management 10 license	This license allows 10 additional instruments to be connected to the device.
12	NB75801420	Instrument management 50 license	This license allows 50 additional instruments to be connected to the device.
13	NB75801430	Instrument management 100 license	This license allows 100 additional instruments to be connected to the device.

- In the initial state, up to 10 instruments can be connected to the device. If you want to increase the number of connected instruments, you need to purchase an optional instrument management licenses. There are three types of instrument management licenses. You can combine them depending on the number of instrument as needed.
  20 instruments: Device license (10) + Instrument management 10 license
  60 instruments: Device license (10) + Instrument management 50 license
- Up to 110 instruments can be connected. Instrument information for the maximum of 110 can be monitored, but the number of instruments that can be simultaneously connected depends on the amount of communication with the center.

Chapter 2 Device Installation

This chapter describes the installation process and conditions for installing this device.

2.1 Checking the Installation Environment

Check the following points before installation:

- All package contents listed in "1.1.1 Package Contents" on page 13 in this manual are included with the device.
- The cable that is connected to each interface connector should be compatible with the connecting interfaces.

Warning

Never insert anything into an interface connector except for a connector of the compliant circuit. Damage and/or device failure, or electrical shock may occur.

Tips

For details on the package contents, refer to "1.1.1 Package Contents" on page 13.

2.1.1 Checking the Installation Conditions

Ensure the following environment to install the device.

Caution

Follow the conditional rules below to install the device. Using the device in an environment other than these conditions may cause failures.

Power Supply Conditions

Use the device under the following electrical conditions.

Item	Condition
Input voltage	DC 10 to 19 V
AC adapter (Option)	Input: AC 100 to 240 V Output: DC 12 V
Maximum Power Consumption	12 W
Inrush current	1.5 A or less (For DC input) 30 A or less (When using the AC adapter) 50 A or less (When using the AC adapter (Inlet type))
Ripple	240 mVp-p or less

* If the power input experiences an instantaneous interruption, this device restarts.

Absolute Maximum Ratings

The absolute maximum ratings are as follows.

Item	Condition
Input voltage	DC 20 V

Usage Environment

Use the device in the following environment.

Item	Condition	Remarks
Device category	Class III device	Circuits separated from dangerous voltage circuits using double insulation or reinforced insulation.

Temperature and Humidity Conditions

Conditions for temperature and humidity are as follows.

Item		Condition	Remarks
Temperature	Operating ambient temperature	-20°C to +55°C	0°C to 40°C when using the AC adapter (option)
	Storage ambient temperature	-30°C to +65°C	-20°C to 65°C for the AC adapter (option)
Humidity	Operating ambient humidity	15% to 85%	
	Storage ambient humidity	8% to 90%	

Installation Conditions

Use the device with the following installation conditions

Installation Configuration	Condition
Table-top installation	Attach the rubber feet (included) and the screws (included) to the device. * The device can only be placed horizontally (Placing it vertically is prohibited).
Wall-mounted installation	Install the device using either of the following methods: - Use the magnet sheet (option). - Use the wall-mounting equipment (option).

Tips

Be sure to use dedicated optional products.

For details on the options, refer to "1.2 Options" on page 18.

Checklist

Use the following checklist to confirm that the conditions are met.

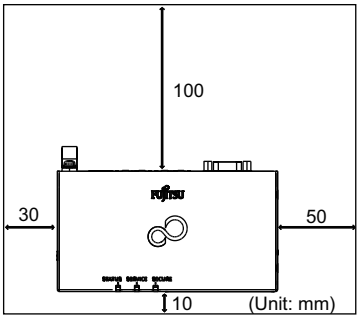
Contents to Check	Check Result
Nothing is placed on the device.	
The device is not placed vertically.	
The device is not installed in a location where there is direct sunlight, near a heater, or in a location with large amounts of humidity or dust.	
The device is not installed in an unstable location such as a location with excessive vibration or one that is slanted.	
I (the user) have read " Safety Precautions" on page 6 in this manual.	

2.1.2 Confirming the Area for Installation (and Maintenance)

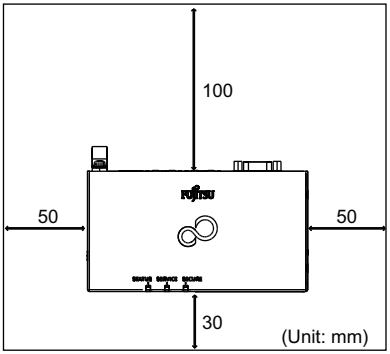
Ensure that you have enough area to perform installation or maintenance for the device as follows:

- Front: Ensure that there is enough area to allow you to confirm the status of the lamps and to install the device.
- Rear: Ensure that there is enough area to allow you to insert and remove connectors.

- **<Table-Top Installation> Without a Mobile Adapter**

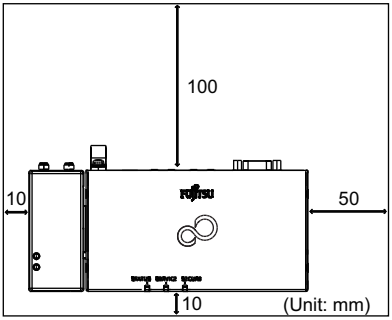


Installation Area

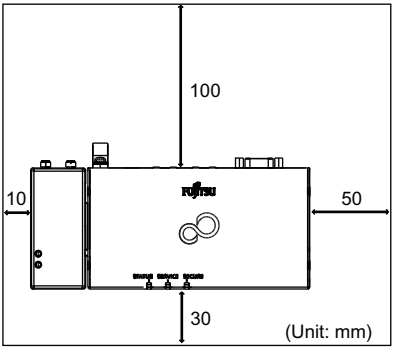


Maintenance Area

- **<Table-Top Installation> With a Mobile Adapter**

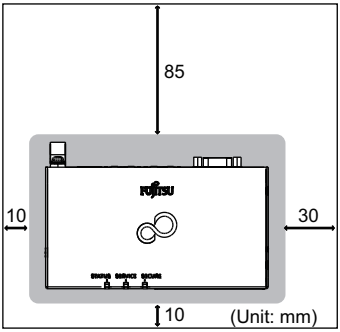


Installation Area

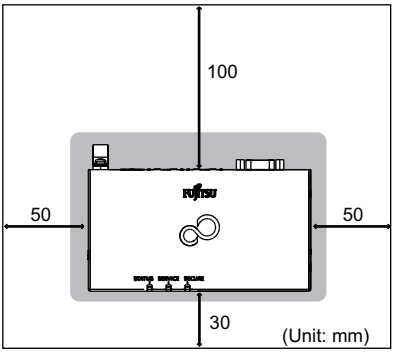


Maintenance Area

- **<Wall-Mounted Installation: When Using the Magnet Sheet>**

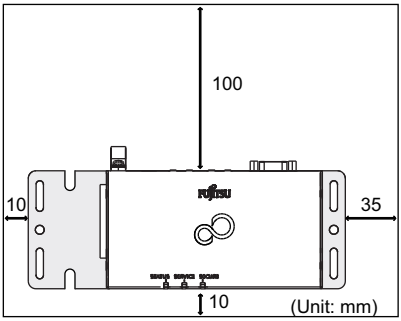


Installation Area

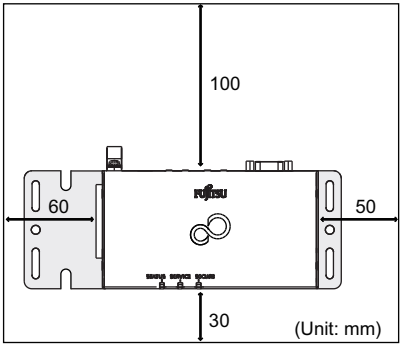


Maintenance Area

- **<Wall-Mounted Installation: When Using the Wall-Mounting Equipment> Without a Mobile Adapter**

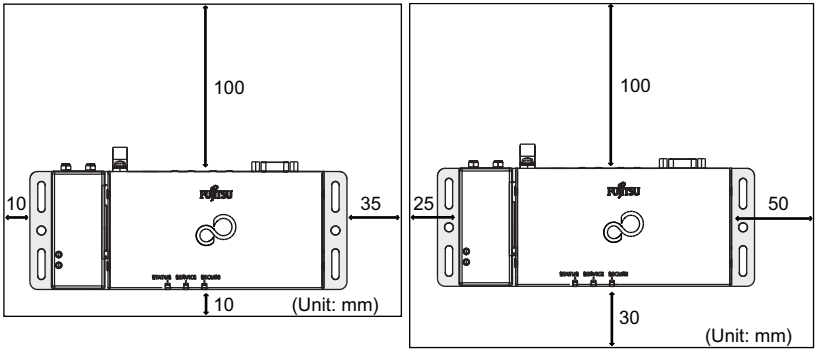


Installation Area



Maintenance Area

- **<Wall-Mounted Installation: When Using the Wall-Mounting Equipment> With a Mobile Adapter**



Installation Area Maintenance Area

2.2 Device Installation

The method for installing the device is described as follows.

Before installation, make sure that the device power is off and confirm the installation environment.

Tips
- When the power is off, the STATUS lamp on the front of the device is off.
- For details on the installation environment, refer to "2.1 Checking the Installation Environment" on page 21.

2.2.1 Installation Configuration

The device can be installed in the table-top or wall-mounted configurations.

2.2.2 Table-Top Installation

The device can be placed on a flat table.

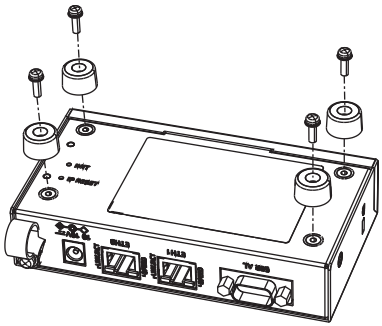
Prepare the rubber feet (x4) and screws (x4) that are included.

Caution

- Do not place the device vertically. Doing so may fall components and cause injuries, damage, or device failures.
- Do not install other devices on top of this device. The device may become hot, resulting in failures or affecting the life cycle of the device.

[Installation Procedure]

1. With base surface of the device facing up, place it on a flat place.
2. Attach the rubber feet to the corners of the device on the base surface.
3. Use the screws to fasten the rubber feet.



4. With the rubber feet attached, install the device on a flat table.

2.2.3 Wall-Mounted Installation

The device can be mounted on a flat wall.

The device can be mounted on a wall using the following two methods:

- Using the Magnet Sheet
- Using the Wall-Mounting Equipment

Using the Magnet Sheet

Mount the device on a wall as a single unit using a magnet sheet.

Use the GW2HWMG01 magnet sheet (option).

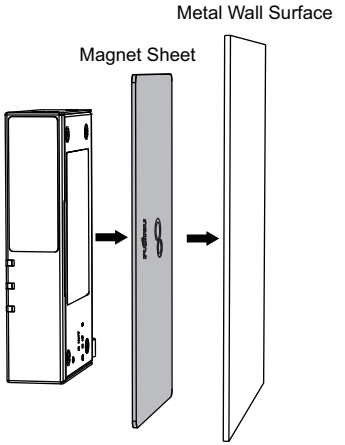
When using the magnet sheet, do not attach the rubber feet to the device.

[Installation Procedure]

1. Place the base surface of the device to the magnet sheet.

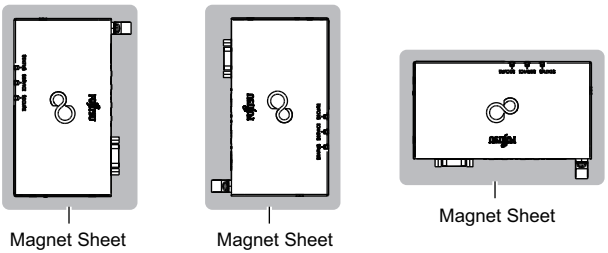
   Place the device facing its base surface to the side of the magnet sheet that does not have the Fujitsu logo engraved.

2. Install the device with the magnet sheet to a metal wall surface.

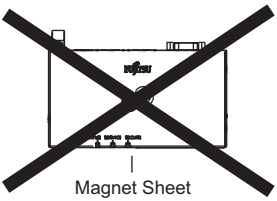


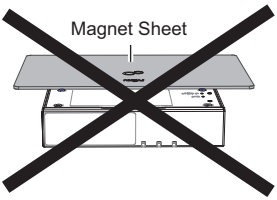
Install the device to the wall with any of the following orientations.

The upper side of the figure faces the ceiling, and the bottom side of the figure faces the floor.



Installing the device with its rear (ETH port side) facing towards the ceiling, or installing the device on the ceiling as illustrated below is prohibited.





Attention!

- Attach the magnet sheet to the base surface of the device before installing it on the wall.
- If a magnet sheet is used to install the device to a wall, be sure that the device is not installed above a height of 500 mm from the floor.
- After installing it on the wall, confirm that it is firmly installed to prevent it from falling.
- The magnet may not be strong enough depending on the conditions of the installation surface.
- Because the magnet sheet's magnetic force may become weak over time, check the strength periodically.
- Use one magnet sheet for one device.
- Do not put devices or media affected by magnetic forces near the magnet sheet.
- The magnet sheet has a very strong magnetic force. When attaching it, be careful not to get foreign materials or your fingers caught.
- Do not install it in a location where it may fall and hurt human body.
- Do not install it in a location with excessive vibrations or impacts, or an unstable location. Doing so may drop components and cause injuries or failures.
- Install cables firmly, so that the device does not fall due to the weight of the cables. Not installing cables firmly enough may cause injuries or device failure.
- Fasten the cables so that the LAN cable, DC cord, or AC adapter cord do not touch human bodies or chairs.

Using the Wall-Mounting Equipment

Mount the device on a wall as a single unit using the wall-mounting equipment.

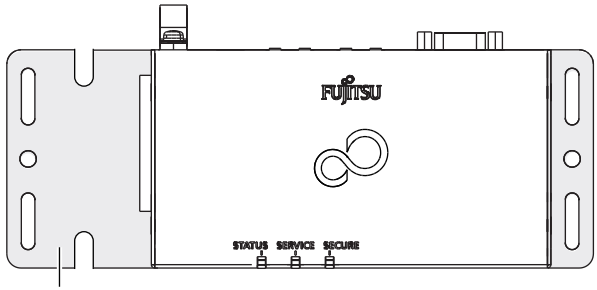
Use the GW2HWMK01 wall-mounting equipment (option).

When using the wall-mounting equipment, do not attach the rubber feet to the device.

[Installation Procedure]

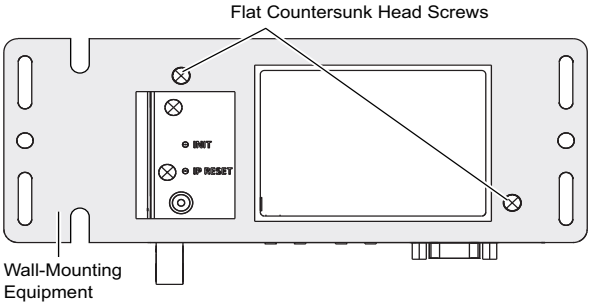
1. Place the base surface of the device to the wall-mounting equipment.

   <View from the Top>



2. Fasten the device to the wall-mounting equipment using two flat countersunk head screws from the bottom side of the equipment.

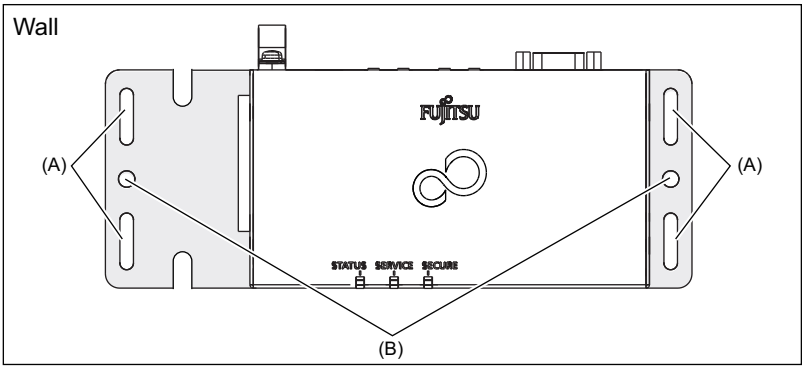
   <View from the Bottom>



3. Install the wall-mounting equipment with the device fastened to the wall.

   Install it to the wall by fastening four M4 screws for sections A and two M5 screws for sections B.

Screws are not included, so you have to prepare them.



Attention!

- After installing it on the wall, confirm that it is firmly installed to prevent it from falling.
- Do not install it in a location where it may fall and hurt human body.
- Do not install it in a location with excessive vibrations or impacts, or an unstable location. Doing so may cause injuries or device failure.
- Install cables firmly, so that the device does not fall due to the weight of the cables. Not installing cables firmly enough may cause injuries or device failure.
- Fasten the cables so that the LAN cable, DC cord, or AC adapter cord do not touch human bodies or chairs.
- For the orientation of the device when attaching it to a wall using the wall-mounting equipment, refer to " Using the Magnet Sheet" on page 28. When using the wall-mounting equipment, the device can be installed with its rear (ETH port side) facing towards the ceiling.

2.3 Connecting the Mobile Adapter

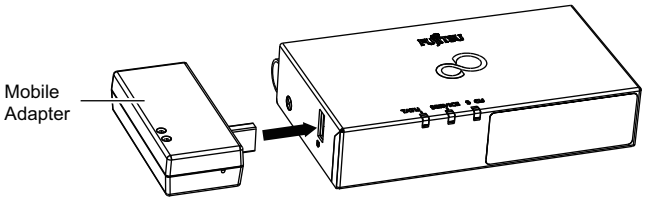
The following describes the procedure for connecting the optional mobile adapter to the device.

When installing, we recommend that you use the mobile adapter mounting bracket (option) to prevent the mobile adapter from coming off.

Tips Mobile adapters are used to enable the wireless GSM or 3G communication between the device and the center.

[Connection Procedure]

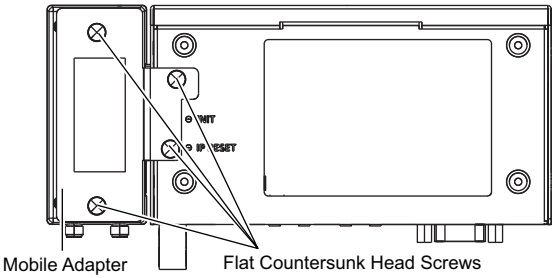
1. Connect the mobile adapter to the USB port on the left side of the device.



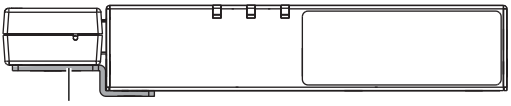
2. If you purchased the mobile adapter mounting bracket (option), attach it with the following procedure.

   Fasten the mobile adapter with the base surface of the device using four flat countersunk head screws.

   <View from the Bottom>



   <View from the Front>



3. Fasten the mobile adapter before installing the device.

Install the device with either of the following configurations.

- Table-top installation
- Wall-mounted installation (Using the wall-mounting equipment)

For details on the table-top installation, refer to "2.2.2 Table-Top Installation" on page 27. For details on the wall-mounted installation using the wall-mounting equipment, refer to " Using the Wall-Mounting Equipment" on page 30.

- When using the wall-mounting equipment, do not attach the rubber feet to the device.
- When using the mobile adapter mounting bracket, the device cannot be installed to the wall using a magnet sheet.

Chapter 3 Device Settings

This chapter describes the method for setting this device.

Configure the device with the following procedure:

(1) Connecting the Device to the Setup Computer

(2) Turning the Device Power On

(3) Setting the IP Address of the Setup Computer

(4) Logging in to the Device

(5) Settings for the Device

3.1 Connecting the Device to the Setup Computer

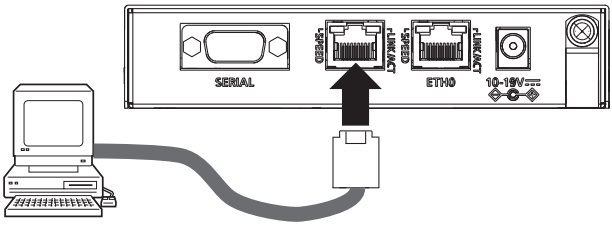
Connect the device to the setup computer with a LAN cable.

- A LAN cable (RJ45) is not included with the device. For details about the LAN cable, contact your sales representative.
- Connect the LAN cable while the device power is off.
- Static electricity may develop in the LAN cable (twisted pair cable) depending on your usage environment. When a twisted pair cable with static electricity is connected to the device, it may cause the device or the device connection port to malfunction or to break.
  Use a static electricity removal tool to discharge the static electricity, or ground the twisted pair cable just before connecting to the device.
  Note that if you leave the cable disconnected for a long time after discharging the static electricity, the discharge effect will be lost.

[Operation Procedure]

1. Insert one end of the LAN cable into the LAN port of the setup computer.
2. Insert the other end of the LAN cable into the ETH1 port of the device.

<View from the Rear>



Tips

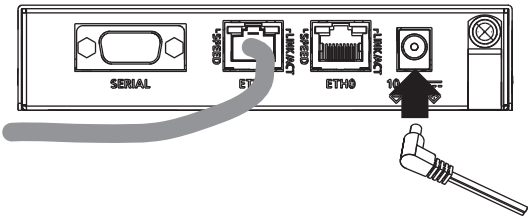
The device LAN port supports the Auto-Negotiation function. By enabling the Auto-Negotiation function for the connected computer, the connection is automatically established at the maximum supported speed (a maximum of 100 Mbps in full duplex mode).

3.2 Turning the Device Power On

Power on the device after connecting the device to the setup computer.

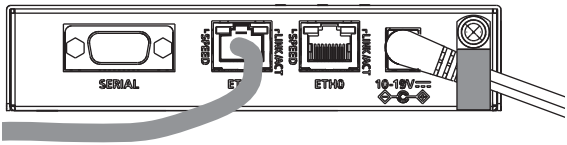
[Operation Procedure]

1. Insert the plug of the included DC cord into the power connector on the rear of the device. Or insert the plug of the AC adapter (option).

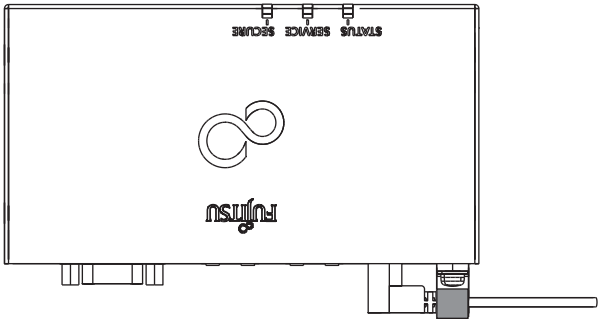


2. To prevent the DC cord or AC adapter from being pulled out, fasten it through the nylon clip.

<View from the Rear>



<View from the Top>



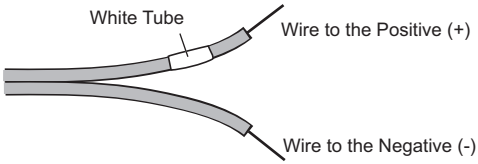
Warning

If external tension is applied to the DC cord or AC adapter, the wire may break or a contact failure may occur, resulting in electrical shock or fire.

3. Wire the end of the DC cord (the side without a plug) to suit the power supply environment. When using the AC adapter (option), connect the plug to the outlet.

Attention!

When wiring the DC cord, be careful with the positive (+) and negative (-) wires. The positive (+) wire is wrapped in a white tube.



Caution

- Make sure that the flow of electricity from the power supply unit has stopped before connecting the DC cord. Not doing so may cause electrical shock.
- Make sure that a circuit breaker (a certified product that complies with the safety standards below for your country) has been installed between the device and the output of the external power supply unit before supplying power using the DC cord.
  Europe: IEC60947-2
  North America: UL489, CSA C22.2 No.5.1
  Japan: JIS C8201-2 (Low-voltage switchgear and controlgear)
  Other countries: safety standard for each country that is equivalent to IEC60947-2

Maximum rated currents for circuit breaker: 3A
Be sure to use a circuit breaker that shuts down both poles at the same time.

- Be sure to select circuit breakers and shutdown devices that function correctly with the device specifications in the list of "Power Supply Conditions" in "2.1.1 Checking the Installation Conditions" on page 21.

4. Check that the device is powered on.

   Shortly after the power is turned on, the STATUS lamp on top of the device blinks green, which indicates that the device is starting up. When the device starts up normally, the STATUS lamp lights up green.

   If the STATUS lamp lights up red, there is a failure in the device.

   For the meanings of each lamp, refer to "1.1.4 Device Top View and Lamps" on page 15.

3.3 Setting the IP Address of the Setup Computer

Set the IP address of the setup computer.

The following is an example using Windows 7.

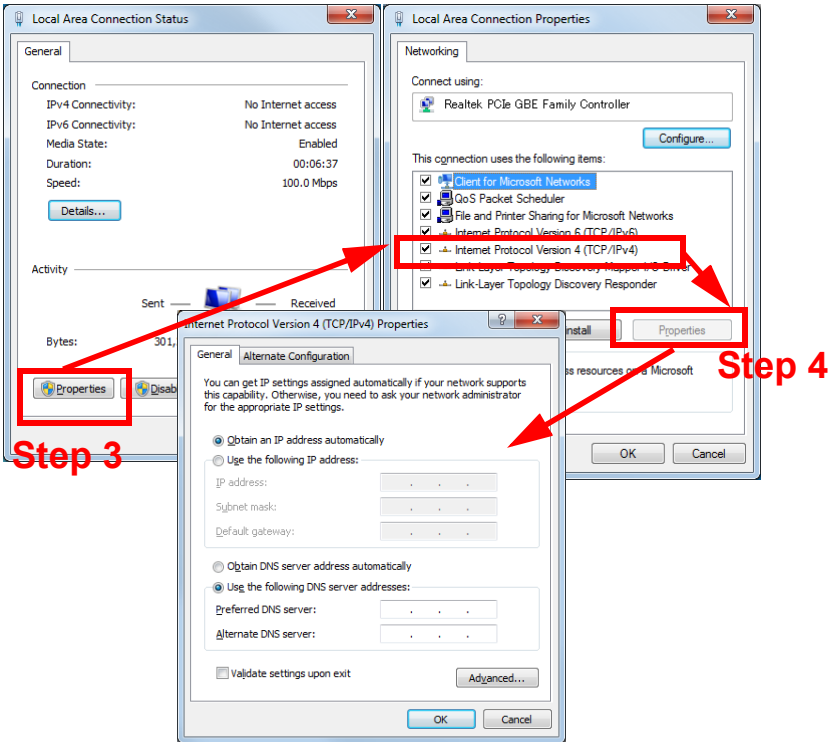
[Operation Procedure]

1. Open [Control Panel].
2. Select [Network and Internet] > [Network and Sharing Center] > [Local Area Connection].

   The [Local Area Connection Status] dialog box is displayed.
3. Click the [Properties] button.

   The [Local Area Connection Properties] dialog box is displayed.
4. Select [Internet Protocol Version 4 (TCP/IPv4)], and then click the [Properties] button.

The [Internet Protocol Version 4 (TCP/IPv4) Properties] dialog box is displayed.



5. Specify the IP address for the setup computer.

   Select [Use the following IP address] and specify an IP address and subnet mask on the same network as the device.

   The default IP address of the device is "192.168.1.1" and the subnet mask is "255.255.255.0".

6. Click the [OK] button several times until the displayed dialog boxes are closed.

Tips

After setting the IP address for the setup computer, execute the ping command and check the network connection.

The following shows an example of when the device IP address is "192.168.1.1".

```
c:\>ping 192.168.1.1
Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1:   bytes=32 time=XXms TTL=127
Reply from 192.168.1.1:   bytes=32 time=XXms TTL=127
Reply from 192.168.1.1:   bytes=32 time=XXms TTL=127
Reply from 192.168.1.1:   bytes=32 time=XXms TTL=127

Ping statistics for 192.168.1.1:
  Packets:   Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
  Minimum = XXms, Maximum = XXms, Average = Xms

c:\>
```

3.4 Logging in to the Device

Log in to the device using ssh (secure shell).

To log in using ssh, you need a separate ssh client software.

- For this device, use an ssh client software that supports ssh protocol version 2.
- When you enter the password, ssh disconnects if there is no input for two minutes.
- After you are logged in using ssh, ssh is disconnected if there is no input for 15 minutes (default value).
  You can change the time from the login until the automatic logout using the sshinfo autologout command.

[Operation Procedure]

1. Connect to the device using ssh.

   The display may vary slightly depending on the ssh client software used. Specify the device IP address as the target host. The default IP address of the device is "192.168.1.1". The port number is fixed to "50022".

   Specify "SSH2" for the ssh version.

2. Enter the user name and the password.

   Enter "admin" for the user name. Enter "m2msgw!admin" for the password (default value).

3. Press the [Enter] key to log in to the device.

   Immediately after login, the device is in operation management mode.

3.5 Settings for the Device

After logging in to the device, set the following information to the device. Use commands to perform settings.

- Setting the Date and Time for the Device
- Setting Device Specific Information (ID/Password)
- Setting the License Information (Only when you have an instrument management license contract)
- Setting the Device IP Address
- Setting Information for the Instruments Connected to the Device

For details on the settings when using a mobile adapter (option), refer to the "User's Manual".

3.5.1 Setting the Date and Time for the Device

Before operating the device, set the date and time for the device.

To set date and time, use the date command (operation management command).

In the first regular communication with the center, the date and time is sent from the center and is synchronized. Therefore, setting the date and time using the date command is not required.

If the device is powered off, the date and time information is lost.

[Setting Procedure]

1. Execute the date command to set the current time.

   The following shows an example of setting the time to "12:30:00 Dec 1, 2013".

```
# date 2013/12/01.12:30:00
```

3.5.2 Setting Device Specific Information (ID/ Password)

Set device specific information using the following commands:

- Setting the ID for the device (sgw id command)
- Setting the password for the device (sgw password command)

[Setting Procedure]

1. Execute the configure command to move to the configuration definition mode.

```
# configure
```

2. Execute the sgw id command and set the device ID (FENICS-ID).

```
# configure
(config)#
(config)# sgw id xxxx
```

3. Execute the sgw password command and set the password for the device FENICS-ID.

```
(config)# sgw password yyyy
```

Tips Set the ID and password that are specified for the FENICS II M2M service. This is used in verifying communication with the center (initial communication, periodic communication, FTP, SSL-VPN connection).

3.5.3 Setting the License Information

Tips This is necessary only when you purchase an optional instrument management license. If you do not purchase an instrument management license, proceed to "3.5.4 Setting the Device IP Address" on page 42.

In the initial state, up to 10 instruments can be connected to the device. If you want to increase the number of connected instrument, purchase of an optional instrument management license is required. There are three types of instrument management licenses.

Instrument management 10 license: 10 additional instruments can be connected to the device.

Instrument management 50 license: 50 additional instruments can be connected to the device.

Instrument management 100 license: 100 additional instruments can be connected to the device.

[Setting Procedure]

1. Execute the instrument license key command to set the license information.

   For the command option, enter the license key (16 alphanumeric characters). If you have purchased multiple instrument management licenses, perform this operation on each license. The license key is written on the "License Agreement" for the instrument management license.

   The following is an example of entering the license key. Enter the correct license key in the underlined section.

   ```
   (config)# instrument license key xxxxxxxxxxxxxxx
   ```

   Tips A "License Agreement" is necessary to restore the configuration definition information, such as to replace a device due to a device failure. Keep it in a safe place.

2. Confirm that the license information is applied correctly.

   Use the show instrument license command.

   The following shows an example where, in addition to the initial 10 instruments, the customer purchased a "Instrument management 10 license" (20 instruments can be connected in total).

   ```
   # show instrument license
   registered license key:
    xxxxxxxxxxxxxxx license   : 10
   assigned          license          count          : 20
   remaining         license          count          : 18
   registered        instrument       count          : 2
   #
   ```

3.5.4 Setting the Device IP Address

Change the device IP address as necessary to suit your network environment.

[Setting Procedure]

1. Execute the lan ip address command to set the device IP address.

   Command input format:

   lan [<number>] ip address [<count>] <address>/<mask> <broadcast>

   ```
   (config)# lan 2 ip address 1 192.168.1.1/24 0
   ```

   Tips You can use the default IP address. If you change the device IP address, change the IP address of the setup computer as well.

3.5.5 Setting Information for the Instruments Connected to the Device

Set the information of the instruments that are connected to the device as shown below.

You need to set the information for each instrument that is connected.

Use the following commands to set the information. The commands can be executed in any order:

- instrument register id command (Set the user id for the instrument)
- instrument register info command (Set the instrument specific information)
- instrument register connect-type command (Set whether to perform ping monitoring for the instrument)
- instrument register monitoring-info command (Set the information for the instrument to be monitored)

[Setting Procedure]

1. Execute the instrument register id command to set the user id for the instrument.

   Command input format: instrument register <number> id <id>

   For <number>, specify the instrument definition number (decimal number from 1 to 110). For <id>, specify the instrument user ID (15 or less alphanumeric characters).

   ```
   (config)# instrument register 1 id dev001
   ```

   An ID must be set for each instrument that is connected to the device. Either of the following procedures can be used:

   - After executing step 1 (ID setting) for each instrument that is connected, execute step 2 to 4 in the same way.
   - Execute step 1 to 4 as a set for one instrument, and repeat for each remaining instrument.

2. Execute the instrument register info command and set the instrument specific information.

   Command input format: instrument register <number> info <info>

   For <number>, specify the instrument definition number (decimal number from 1 to 110). For <info>, specify the instrument specific information using 39 or less ASCII character strings. For details on the ASCII character strings that can be specified, refer to the "User's Manual".

   ```
   (config)# instrument register 1 info FAX-01
   ```

3. Execute the instrument register connect-type command to set whether or not to perform a ping monitoring for the instruments.

   Command input format: instrument register <number> connect-type <type>

For <number>, specify the instrument definition number (decimal number from 1 to 110). For <type>, specify whether or not to perform a ping monitoring for the instruments that are connected. If the connected instruments support ICMP (ping monitoring), specify "1". If they do not support ICMP (not ping monitoring), specify "0".

```
(config)# instrument register 1 connect-type 1
```

4. Execute the instrument register monitoring-info command to set the information for the monitored instrument.

   Command input format: instrument register <number> monitoring-info <address>

   For <number>, specify the instrument definition number (decimal number from 1 to 110). For <address>, specify the instrument IP address.

```
(config)# instrument register 1 monitoring-info  192.xx.xx.xx
```

5. Execute the save command.

   The settings are saved in "startup-config" (startup configuration information).

   The settings will not be saved if you do not execute the save command.

   For types and the flow of configuration definition information, refer to the "User's Manual".

6. Execute the commit command.

   If many instruments are connected to the device, you can also use a CSV file to set the information efficiently. If you are using a CSV file to set the information for instruments that are connected, contact an engineer of our company.

   This completes the minimum setup for this device.

3.5.6 Operation after Setup

Backup of the Device Configuration Definition Information and Instrument Management License Information

Once all of the device settings have been completed, create a backup file for the current device configuration definition information and instrument management license information.

If a device failure occurs, this backup file will be necessary for our company to perform a recovery.

For details on the backup procedure, refer to "Saving Files" in the "User's Manual".

If the backup file for the configuration definition information and instrument management license information does not exist, the recovery may take some time.

Storing the License Agreement (for Instrument Management License)

If you purchased an optional instrument management license, make sure that you keep the License Agreement in a safe place. It is necessary to restore the configuration definition information, such as when replacing a device due to a device failure.

Confirming the Base Software Version

If a device failure occurs and must be replaced with a repaired product, the basic software version of the repaired product may be different from the basic software version at the time of the failure. For a smooth recovery, we recommend making a note of the current basic software version.

You can confirm the basic software version using the show version command.

For details on the show version command, refer to "- show version" in the "User's Manual".

Connecting with the Center

After the device settings are complete, connect the device with the center (M2M service infrastructure).

The two methods of connecting the device with the center are as follows:

- SSL-VPN connection via the Internet
- GSM or 3G wireless communication connection (option)

For details on the connection methods, refer to the "User's Manual".

Setting Relay Rules and Filter Rules

To enable the notification of the device information that is set in "3.5.5 Setting Information for the Instruments Connected to the Device" on page 43 via the device, or to enable access from the center to the instruments that are connected to the device, it is necessary to set the relay rules and the filter rules. Create the relay rules and filter rules as a CSV file.

For details, refer to the "User's Manual".

Clearing the Setup Contents

If the device is set incorrectly or trouble occurs, you can use either of the following methods to return the device to the factory default settings.

- Pressing and holding the INIT switch on the base surface of the device
- Executing the reset clear command

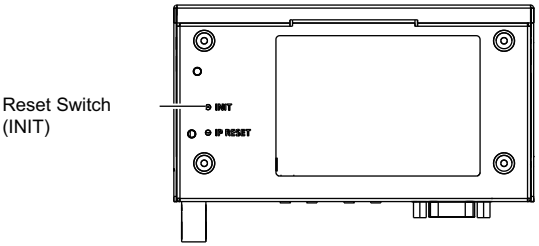
Attention!

If the device is returned to the factory default settings, all of the contents set up until that point will be lost. We recommend that you save the configuration definition information.
For details on saving configuration definition information, refer to the "User's Manual".

- Pressing and holding the INIT switch on the base surface of the device

  You can reset the device settings to the factory default by pressing and holding the INIT switch on the base surface of the device (for about two seconds).

  <View from the Rear>



- Executing the reset clear command

  You can reset the device settings to the factory default by executing the reset clear command.

```
# reset clear
```

FCC Compliance Statement

FCC WARNING:
Changes or modifications not expressy approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

GW1500 Getting Started Guide

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