OMRON

GD Series
Wave Inspire HUB

Operation Manual

Introduction

This manual contains information that is necessary to use Wave Inspire HUB.
Please read this manual and make sure you understand the functionality and performance of the product before use. Keep this manual in a safe place where it will be available for reference during operation.

- All trademarks or registered trademarks mentioned in this material belong to their respective companies.

Intended Audience

This manual is intended for the following personnel, who must also have knowledge of electrical systems (an electrical engineer or the equivalent).

- Personnel in charge of introducing FA systems.
- Personnel in charge of designing FA systems.
- Personnel in charge of installing and maintaining FA systems.
- Personnel in charge of managing FA systems and facilities.
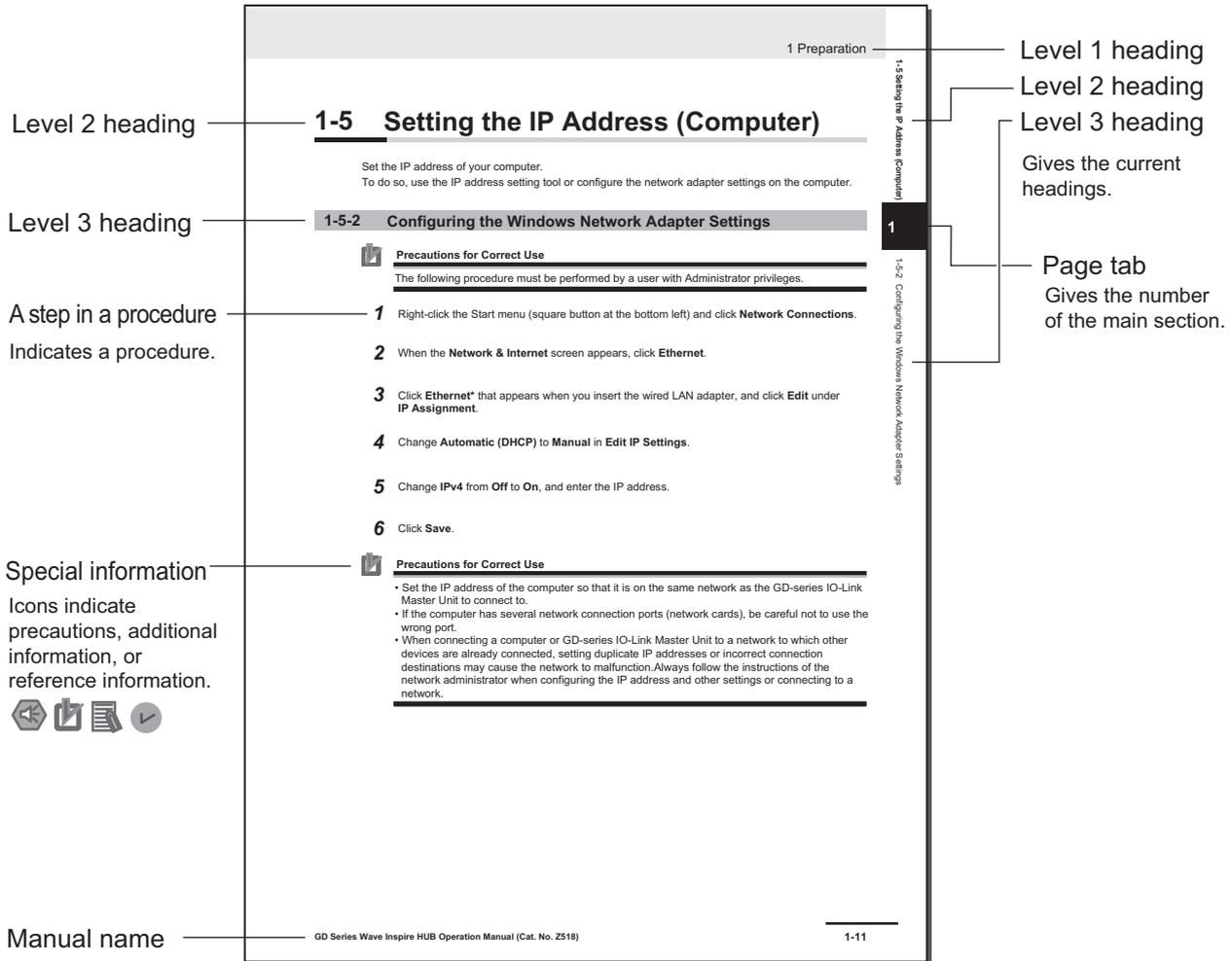
Applicable Products

This manual covers the following product.

- GD Series Wave Inspire HUB
- GD-series IO-Link Master Unit
  - GD-ILM□□□-MLP
  - GD-ILM□□□-CLI

Manual Structure

Page Structure

The following page structure is used in this manual.

Level 2 heading

Level 3 heading

A step in a procedure
Indicates a procedure.

Special information
Icons indicate precautions, additional information, or reference information.

Manual name

Level 1 heading

Level 2 heading

Level 3 heading
Gives the current headings.

Page tab
Gives the number of the main section.

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1 Preparation

1-5   Setting the IP Address (Computer)

Set the IP address of your computer.
To do so, use the IP address setting tool or configure the network adapter settings on the computer.

1-5-2   Configuring the Windows Network Adapter Settings

Precautions for Correct Use

The following procedure must be performed by a user with Administrator privileges.

1 Right-click the Start menu (square button at the bottom left) and click **Network Connections**.

2 When the **Network & Internet** screen appears, click **Ethernet**.

3 Click **Ethernet*** that appears when you insert the wired LAN adapter, and click **Edit** under **IP Assignment**.

4 Change **Automatic (DHCP)** to **Manual** in **Edit IP Settings**.

5 Change **IPv4** from **Off** to **On**, and enter the IP address.

6 Click **Save**.

Precautions for Correct Use

• Set the IP address of the computer so that it is on the same network as the GD-series IO-Link Master Unit to connect to.
• If the computer has several network connection ports (network cards), be careful not to use the wrong port.
• When connecting a computer or GD-series IO-Link Master Unit to a network to which other devices are already connected, setting duplicate IP addresses or incorrect connection destinations may cause the network to malfunction. Always follow the instructions of the network administrator when configuring the IP address and other settings or connecting to a network.

GD Series Wave Inspire HUB Operation Manual (Cat. No. Z518)   1-11

This illustration is provided only as a sample. It may not literally appear in this manual.

Special Information

Special information in this manual is classified as follows:

Important

This summarizes particularly important points about its performance, including the things to be observed during operation and the advice on usage.

Additional Information

Additional information to read as required.
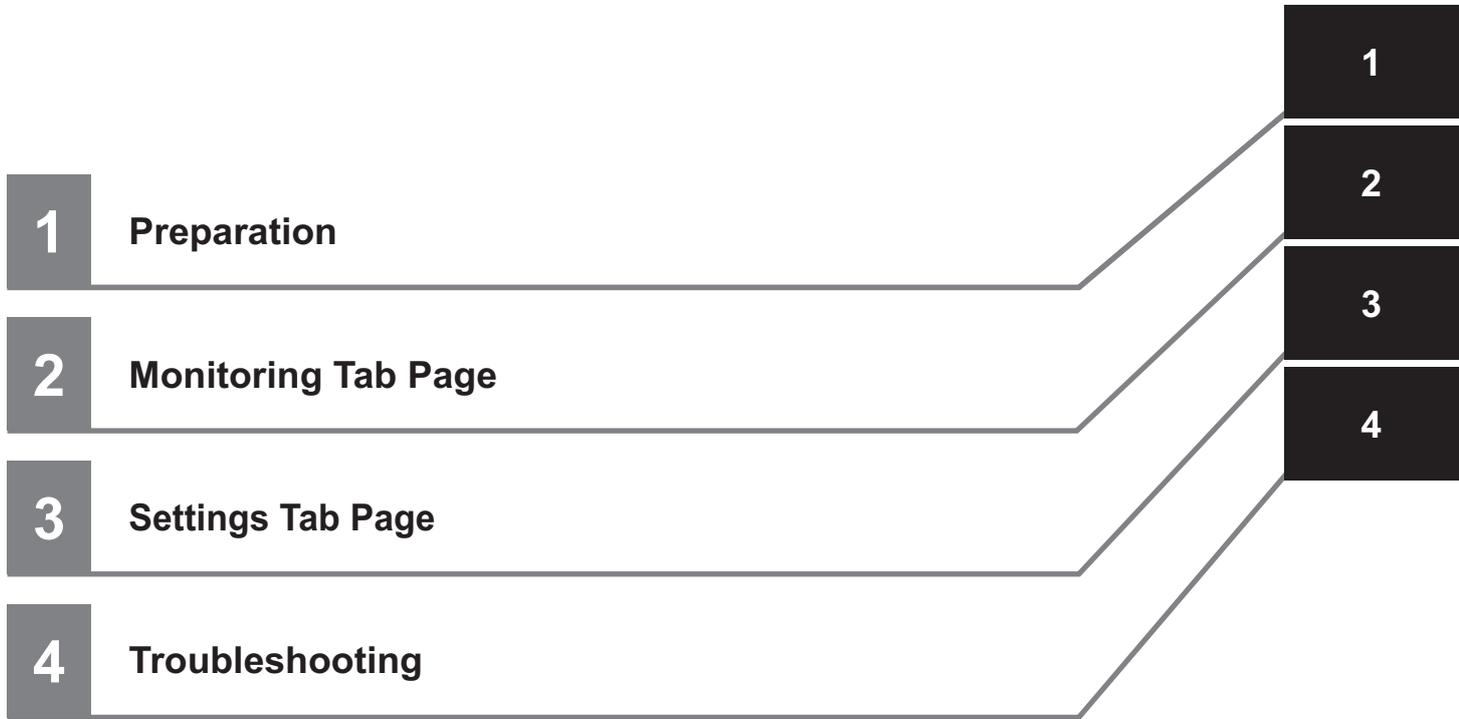This information is provided to increase understanding or make operation easier.

Version Information

Information on differences in specifications and functionality for products with different unit versions and for different versions of the Support Software is given.

Precaution on Terminology

- In this manual, "download" refers to transferring data from the Support Software to a physical device and "upload" refers to transferring data from a physical device to the Support Software.

Sections in this Manual

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Section 3 Settings Tab Page

Section 4 Troubleshooting

Terms and Conditions Agreement

Warranty, Limitations of Liability

Warranties

● **Exclusive Warranty**

Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied.

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NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

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Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may

be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

Errors and Omissions

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It shall be the users sole responsibility to determine and use adequate measures and checkpoints to satisfy the users particular requirements for (i) antivirus protection, (ii) data input and output, (iii) maintaining a means for reconstruction of lost data, (iv) preventing Omron Products and/or software installed thereon from being infected with computer viruses and (v) protecting Omron Products from unauthorized access.

Safety Precautions

Definition of Precautionary Information

The following notation is used in this manual to provide precautions required to ensure safe usage of GD Series Wave Inspire HUB.
The safety precautions that are provided are extremely important to safety. Be sure to follow these precautions.

⚠ WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. Additionally, there may be severe property damage.

Symbols

The ● symbol indicates operations that you must do.
The specific operation is shown in the ● and explained in text.
This example shows a general precaution for something that you must do.

Warnings

⚠ WARNING

Virus protection
Install and maintain the latest commercially available antivirus software on computers connected to control systems.

Prevention of unauthorized access
To prevent unauthorized access to OMRON products, implement the following measures.
• Introduction of physical controls that allow only authorized users to access control systems and equipment
• Prevention of access from untrusted devices by minimizing network connections to control systems and equipment
• Separation from IT networks through introduction of firewalls (blocking unused communications ports, restricting communications hosts)
• Use of virtual private networks (VPNs) when remote access to control systems and equipment is necessary
• Introduction of multi-factor authentication for remote access to control systems and equipment
• Use and frequent change of strong passwords
• Preliminary virus scanning for use of external storage devices such as USB memory sticks in control systems and equipment

Protection of I/O data

Confirm the validity of backup, range check, etc. in case of unintended modification of I/O data to control systems and equipment.

- Data range check
- Validation and preparation of backup and restore processes in case of data tampering or errors
- Safety design such as emergency stop and fallback operation in anticipation of data tampering and errors

Restoration of lost data

Periodically back up and maintain setting data as a measure against data loss.

When an intranet environment is used via a global address, connecting to an unauthorized terminal or server, such as SCADA or HMI, may result in network security issues such as spoofing or tampering. Take adequate measures on your own, such as restricting access to terminals, using terminals with secure functions, and locking the installation area.

When building an intranet, communications problems may occur due to cable disconnection or unauthorized network equipment.
Take adequate measures to restrict physical access to network equipment, for example, by locking the installation area.

Equipment with SD Memory Card functionality poses a security risk that a third party may remove or illegally unmount removable media to illegally acquire, tamper with, or replace files and data contained in them.
Take adequate measures on your own to restrict physical access to the Controller, for example, by locking the installation area, controlling entry to the room, or taking appropriate control measures for the removable media.

Security Measures for Wave Inspire HUB

- To prevent computer viruses, install antivirus software on a computer where you use this software.
  Make sure to keep the antivirus software updated.
- Keep your computer's OS updated to avoid security risks caused by a vulnerability in the OS.
  Make sure that the user name and password for the OS or this software are properly set and managed to prevent unauthorized use by others.
- Always use the highest version of this software to add new features, increase operability, and enhance security.
- Set up a firewall (e.g., disabling unused communication ports, limiting communication hosts, etc.) on a network for a control system and devices to separate them from other IT networks.
- Use a virtual private network (VPN) for remote access to a control system and devices from this software.

Precautions for Correct Use

When changing settings, please check safety by stopping the device, etc.

Related Manuals

The following table shows related manuals. Use these manuals for reference.

Manual name	Cat. No.	Model	Description
GD Series IO-Link Master Unit (Multi-Network Compatible) User's Manual Common Edition	Z512	GD-ILM☐☐☐-MLP	Describes the common functionality and performance as well as operation of this product.
GD Series IO-Link Master Unit (CC-Link IE Field/TSN Compatible) User's Manual	Z513	GD-ILM☐☐☐-CLI	Describes the common functionality and performance as well as operation of this product.
GD Series IO-Link Master Unit (Multi-Network Compatible) User's Manual EtherNet/IP Edition	Z514	GD-ILM☐☐☐-MLP	Describes the information that you need when using *EtherNet/IP* as the field network.
GD Series IO-Link Master Unit (Multi-Network Compatible) User's Manual Ethernet & Modbus/TCP Edition	Z516	GD-ILM☐☐☐-MLP	Describes the information that you need when using *Ethernet & Modbus/TCP* as the field network.
GD Series IO-Link Master Unit (Multi-Network Compatible) User's Manual CC-Link IE Field Basic Edition	Z517	GD-ILM☐☐☐-MLP	Describes the information that you need when using *CC-Link IE Field Basic* as the field network.

Revision History

A manual revision code appears as a suffix to the catalog number on the front and back covers of the manual.

Cat. No. | Z518-E1-02

Revision code

Revision code	Date	Revised content
01	February 2026	Original production
02	March 2026	Corrected mistakes.

1

Preparation

1-1 Overview of the Support Software

Wave Inspire HUB (hereinafter also referred to as the Support Software) allows you to configure communication settings for GD-series IO-Link Master Units. It also enables bulk sending of settings to IO-Link devices connected to GD-series IO-Link Master Units and easy viewing of measured values and judgment results on your computer monitor.

Wave Inspire HUB is available for download from the OMRON website.
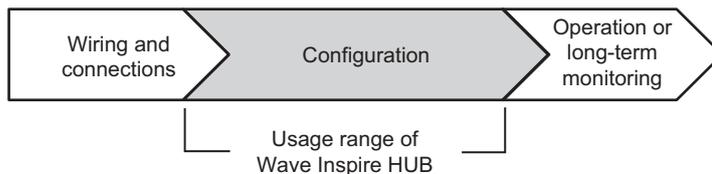http://www.fa.omron.co.jp/

> **Additional Information**
>
> You can also connect the Support Software to OMRON ZP-L Laser Displacement Sensors.

● Usage Range of Wave Inspire HUB

Wave Inspire HUB is software that allows you to view measurement data for each port (device) and use it to support its configuration.

1-2 Operating Environment

Use this support software in the following operating environment.

● Hardware Environment
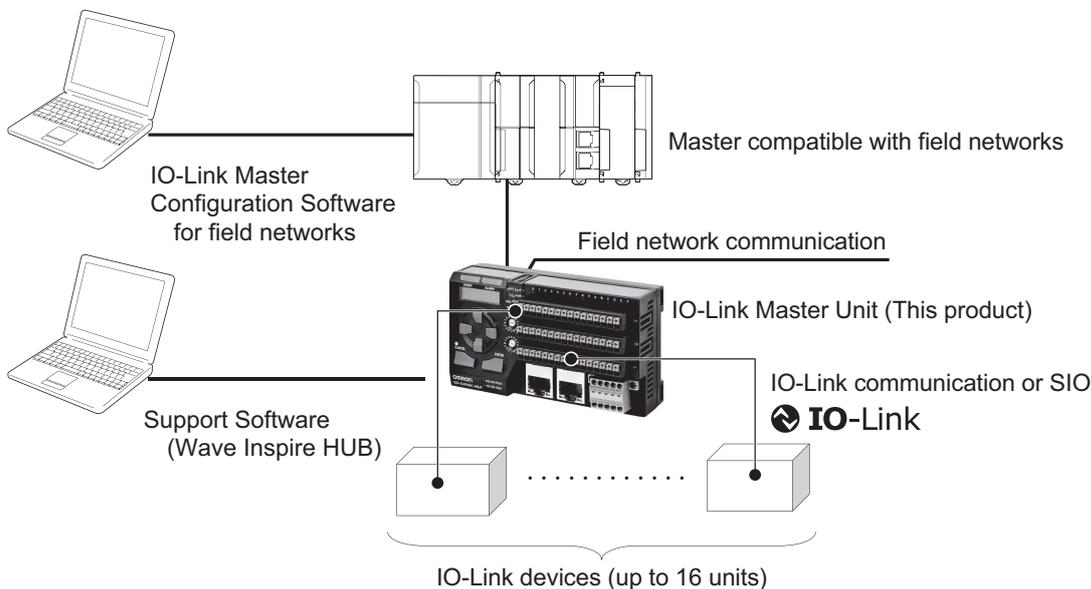
Item	Description
Monitor resolution	1,920 × 1,080 or higher
Processor	Intel$^®$ Core™ i5-6200U CPU 2.30 GHz or higher
Memory	4 GB or more
Interface	Ethernet (1000BASE-T)
Storage capacity	10 GB or more

● Software Environment

Item	Description
OS	Windows 11 (64-bit)
Runtime environment	.NET8

1-3　System Configuration

The standard system configuration is shown below.

IO-Link Master Configuration Software for field networks

Master compatible with field networks

Field network communication

IO-Link Master Unit (This product)

IO-Link communication or SIO

IO-Link

Support Software (Wave Inspire HUB)

IO-Link devices (up to 16 units)

Note GD-ILM□□□-CLI IO-Link Master Units cannot connect to the Support Software when *M2. Network type* is set to *CC-Link IE Field*.

● **IO-Link Standards Supported by the Support Software**

IO-Link 1.1

● **IO-Link Devices Guaranteed to Operate with the Support Software**

Product category	Product name	Applicable models
Photoelectric sensor	E3AS-HF Photoelectric Sensor	E3AS-HF6000SMT E3AS-HF6000DMT
	E3AS-HL Photoelectric Sensor	E3AS-HL□□D E3AS-HL□□T
	E3AS-F/E3AS-L Photoelectric Sensor	E3AS-F□□D E3AS-F□□T E3AS-L□□D E3AS-L□□T
	IO-Link Photoelectric Sensor	E3Z-□-IL□ E3Z-□-IL□-UL
	IO-Link Color Mark Photoelectric Sensor	E3S-DCP21-IL□
Proximity sensor	E2E/E2EQ NEXT Series Proximity Sensor	E2E(Q)-X□B1D□ E2E(Q)-X□B1T□ E2E(Q)-X□B3D□
	E2EW Series Proximity Sensor	E2EW-X□B1D□ E2EW-X□B1T□ E2EW-X□B3D□ E2EW-X□B3T□
	IO-Link Proximity Sensor	E2E-□-IL□ E2EQ-□-IL□

Product category	Product name	Applicable models
Flow sensor	IoT Liquid Flow Sensor	E8FC-25SD/25ST E8FC-25D/25T/25
Pressure sensor	IoT Liquid Pressure Sensor	E8PC-010SD/010ST/100SD/100ST/ 400SD/400ST/010SD-E/010ST-E/100SD- E/100ST-E/400SD-E/400ST-E E8PC-010D/010T/010/100D/100T/ 100/400D/400T/400/010D-E/010T-E/010- E/100D-E/100T-E/100-E/400D-E/400T-E/ 400-E
Safety sensor	Intelligent Tap (for F3SG-SR/PG Safety Light Curtain/Multi-beam Safety Sensor)	F39-SGIT-IL3
Signal converter	IO-Link AD Converter	K3CV
Environmental-resistive remote terminal	NXR Series	NXR-□D166C-IL2
Laser displacement sensor	IO-LINK Communication Amplifier Unit for Laser Displacement Sensor	ZP-L39□□-IL3
Fiber Sensor	Smart Fiber Amplifier	E3NX-FA□□-IL□
Photoelectric sensor	Photoelectric Sensor with Separate Digital Amplifier (Laser-type)	E3C-LDA□□N-IL□

Additional Information

IO-Link devices other than the above can also be connected, although their operation is not guaranteed.

1-4   Installation and Uninstallation

Installation

The Support Software is available for download from the Products page of the OMRON website.

Execute the downloaded executable file (exe file) to start the installer. Then, install the Support Software according to the installer's instructions. Refer to *1-5-1 Using the IP Address Setting Tool* on page 1-7 for how to set the IP address of the computer at the time of installation.

The program files for Wave Inspire HUB are installed in the following folder:
C:\Program Files\OMRON\Wave Inspire HUB

Precautions for Correct Use

To install the Support Software, log in as a user with Administrator privileges.

Uninstallation

To uninstall the Support Software, log in as a user with Administrator privileges.
To remove the Support Software, uninstall it from the Windows Control Panel.

Folder Structure

Installing the Support Software automatically creates the following folders.
The folder structure is shown below, along with a description of each folder.

```
C:\OMRON\Application\Wave Inspire Hub      : Application data
 ─IODD                                     : IODD files added by the Support Software are stored.
    ─OMRON Corporation                     : IODD files for OMRON devices are stored.
    ─(Vendor)                              : Folders are created by vendor name.
 ─Projects                                 : This is the default location for saving project files.
C:\OMRON\Data\Wave Inspire Hub             : User data
 ─Logs                                     : Operation logs and error logs are saved.
     ─Wave Inspire GD
     ─Wave Inspire Hub
     ─Wave Inspire ZP
```
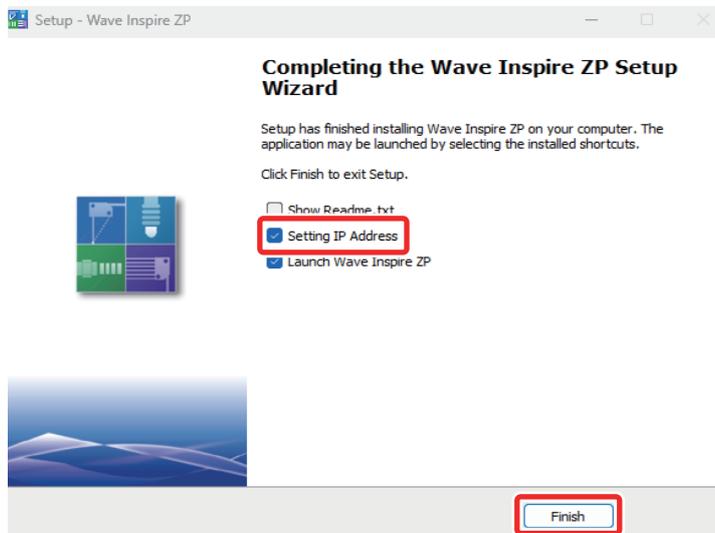
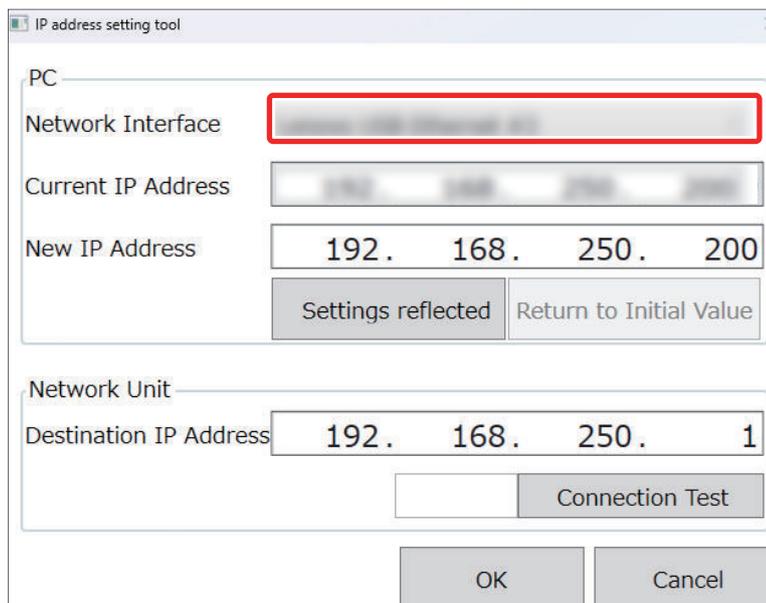# 1-5 Setting the IP Address (Computer)

Set the IP address of your computer.

To do so, use the IP address setting tool or configure the network adapter settings on the computer.
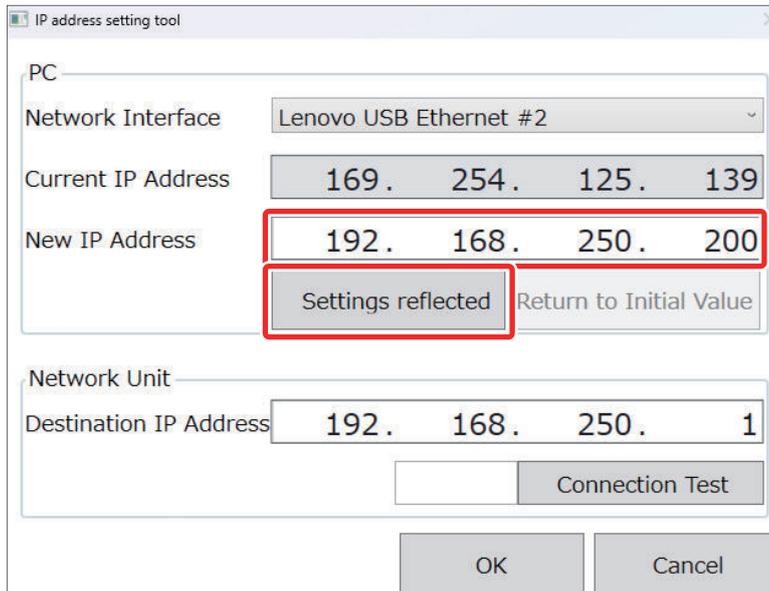
1-5-1 Using the IP Address Setting Tool

1 In the Completing Setup page of the installer, select the *Setting IP Address* check box and click the **Finish** button.

2 The IP address setting tool starts up. Specify the device name of your Ethernet adapter in **Network Interface**.
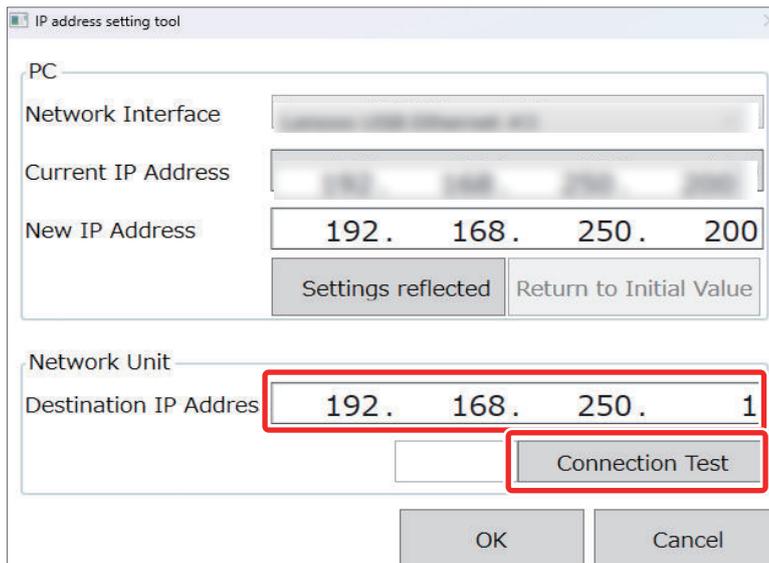
3 Enter the IP address of the computer and click the **Settings reflected** button.

4 To confirm that the Communication Unit is connected, enter the IP address of the Communication Unit (default: 192.168.250.1), and click the **Connection Test** button.

5 When the Communication Unit is successfully connected, the **OK** button appears.

6 After completing the IP address setting, click the **OK** button to exit the IP address setting tool.

● **How to Exit the Tool without Reflecting the Changed IP Address Setting**

To cancel the changed IP address setting and exit the Support Software with the IP address used at the startup, click the **Cancel** button.
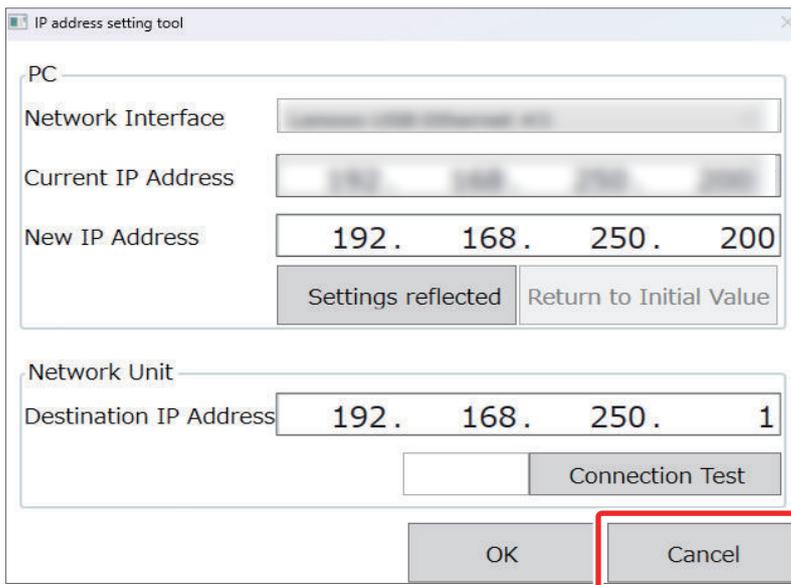
● **How to Revert to the Initial IP Address Setting**

To revert the changed IP address to the IP address used when the tool was started, click the **Return to Initial Value** button.
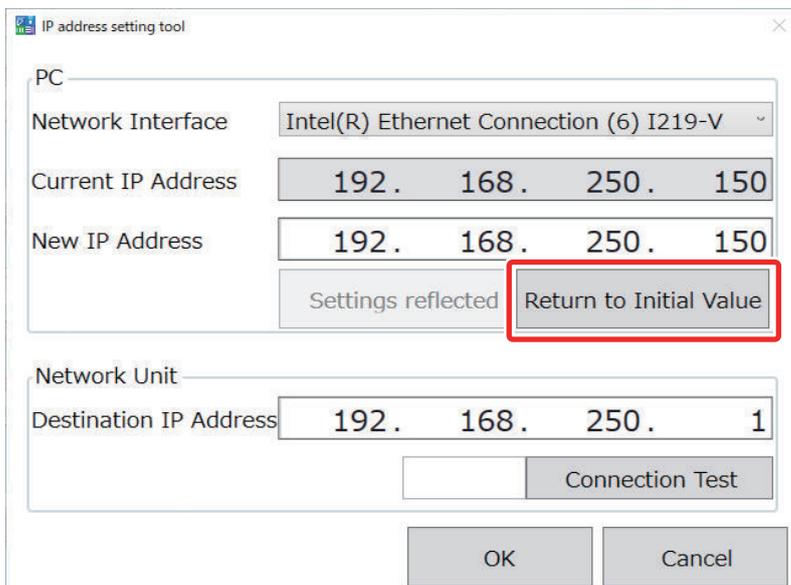
● **How to Use the IP Address Setting Tool After Installation**

You can use the IP address setting tool (IPAddressSetupZP) to set the IP address of your computer.

The tool is located at the following path:

C:\Program Files\OMRON\Wave Inspire HUB\IPAddressSetupZP\IPAddressSetupZP.exe

Double-click the above executable file to start the tool.

1-5-2 Configuring the Windows Network Adapter Settings

Precautions for Correct Use

The following procedure must be performed by a user with Administrator privileges.

1 Right-click the Start menu (square button at the bottom left) and click **Network Connections**.

2 When the **Network & Internet** screen appears, click **Ethernet**.

3 Click **Ethernet*** that appears when you insert the wired LAN adapter, and click **Edit** under **IP Assignment**.

4 Change **Automatic (DHCP)** to **Manual** in **Edit IP Settings**.

5 Change **IPv4** from **Off** to **On**, and enter the IP address.

6 Click **Save**.

Precautions for Correct Use

- Set the IP address of the computer so that it is on the same network as the GD-series IO-Link Master Unit to connect to.
- If the computer has several network connection ports (network cards), be careful not to use incorrect ports.
- When connecting a computer or GD-series IO-Link Master Unit to a network to which other devices are already connected, setting duplicate IP addresses or incorrect connection destinations may cause the network to malfunction.
  Always follow the instructions of the network administrator when configuring the IP address and other settings or connecting to a network.

1-6 Setting the IP Address (IO-Link Master Unit)

1-6-1 GD-ILM□□□-MLP

When the first three octets of the network IP address are *192.168.250.*, set the last digit of the Master Unit's IP address using the rotary switches on the front panel before turning ON the power supply.

Last digit of the Master Unit's IP address (n of 192.168.250.n)
Rotary switches for setup

Set the value for the last digit of the IP address.

The value of the upper rotary switch is multiplied by 16 and added to the value of the lower rotary switch.
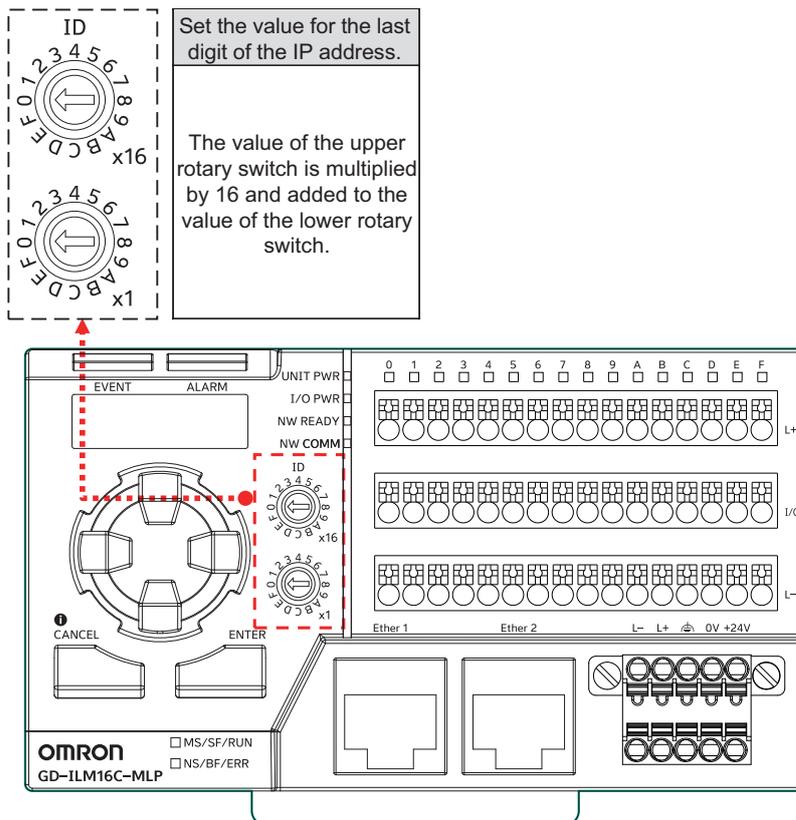
Note The figure shows GD-ILM16C-MLP. The same applies to GD-ILM□□□-MLP and GD-ILM□□□-CLI.

When the first three octets of the IP address are not *192.168.250.*, set the Master Unit parameter *M82. IP address* via front panel operation. After setting or changing the IP address, restart the Master Unit to reflect the new setting.

The setting method differs depending on the field network type.
Refer to the communication edition of the manual for the master corresponding to the type of your field network.

1-6-2 GD-ILM□□□-CLI

1 Network type setting

Set the Master Unit parameter *M2. Network type* to *CC-Link IE TSN* via front panel operation.

Precautions for Correct Use

When this parameter is set to CC-Link IE Field, the IO-Link Master Unit cannot connect to the Support Software.

2 IP address setting (Station number setting)

When the first three octets of the network IP address are *192.168.3.*, set the last digit of the Master Unit's IP address using the front rotary switch and restart the Master Unit.

When the first three octets of the IP address are not *192.168.3.*, set the IP address as follows: Set the Master Unit parameter *M82. IP address* via front panel operation. After setting or changing the IP address, restart the Master Unit to reflect the new setting.

1-7   Startup and Connection

1 Start Wave Inspire HUB.

Click *Omron Wave Inspire HUB* from the Windows program list.

- Language setting
  To change the language, select a language from the drop-down menu at the bottom left of the window. You can select *Japanese* or *English*.
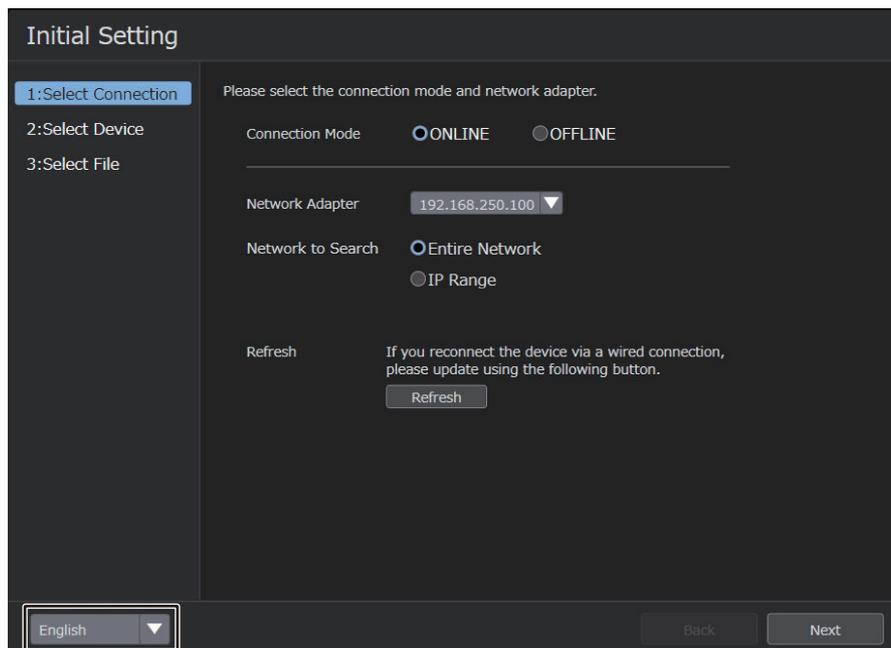
2 *1: Selecting Connection Mode*

ONLINE: Use this mode when you connect to the actual device to perform settings or monitoring.

OFFLINE: Use this mode when you create or edit project files without connecting to the actual device.

1. Select ONLINE or OFFLINE mode.

Initial Setting

1:Selecting Connect

2:Select Device

3:Select File

Please select the connection mode and network adapter.

Connection Mode   ○ ONLINE   ○ OFFLINE

Network Adapter   192.168.3.123 ▼

Network to Search   ○ Entire Network
                     ○ IP Range
                        START 192.168.3. [1]
                        STOP   192.168.3. [20]

Refresh   If you reconnect the device via a wired connection, please update using the following button.
           [Refresh]

*1

English ▼   Back   Next

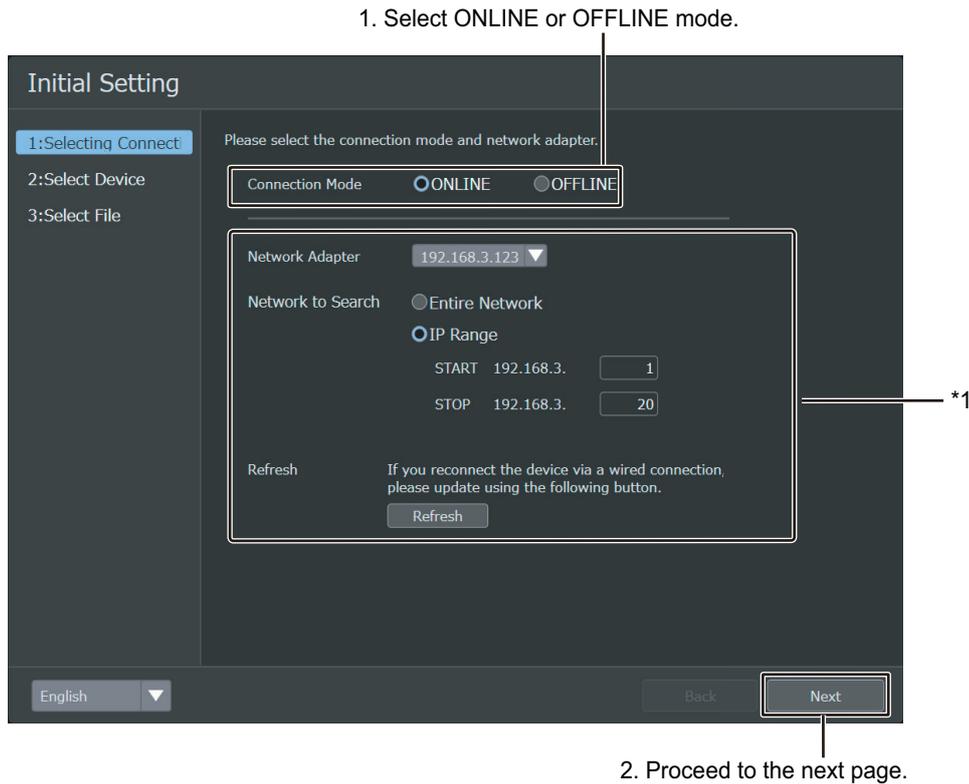2. Proceed to the next page.

*1. When ONLINE mode is selected
    You will search on the next page for the master connected to the network you select here. Select the network adapter to use from the drop-down menu.

a) Refreshing the connection
    If you have reconnected the device with a cable, click [Refresh] to search for the network adapter again.
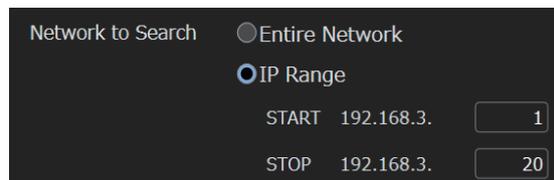
b) Limiting the network to search
    • When **Entire Network** is selected
      Based on the IP address set for the network adapter, the network will be searched within the range *from 1 to 254* for the fourth octet.
    • When **IP Range** is selected
      You can limit the network range to search as desired.
      Based on the IP address of the network adapter, specify the START and STOP values for the fourth octet. Then, the IP addresses within the specified range will be searched.

Network to Search   ○ Entire Network
                     ○ IP Range
                        START 192.168.3. [1]
                        STOP   192.168.3. [20]

List of functions available when the Support Software is online or offline

○: Available, ×: Not available

Function name	Details	Description	ON-LINE	OFF-LINE
Monitoring	Monitoring	Displays measured values acquired from the device in real time.	○	×
	Label	Sets an arbitrary name for each port.	○	×

Function name	Details	Description	ON-LINE	OFF-LINE
Settings	Changing/Saving project files	Edits and saves the configuration and settings for the master or device.	○	○
	Getting settings from the actual device	Gets the master or device settings for each port from the actual device.	○	×
	Transferring settings to the actual device	Transfers the master or device settings for each port to the actual device.	○	×
	Getting all settings from the actual device	Reads all master or device settings from the actual device.	○	×
	Transferring all settings to the actual device	Transfers all master or device settings to the actual device.	○	×
	Copying settings	Copies settings between ports.	○	○
	Displaying setting differences	Displays the differences in settings between the actual device and the project.	○	×
Other functions	Importing and exporting	Import and export master settings and device settings in XML format.	○	○
	Outputting the address comment table in CSV format	Output the details of communication data between the IO-Link Master Unit and the PLC in CSV format.	○	○
	Outputting all settings in CSV format	Outputs master settings and device settings in CSV format.	○	○

The following step is applicable when *ONLINE* is selected. If you selected *OFFLINE*, proceed to 4.*3 Select File*.

3 *2: Select Device*

Select the device to connect.

Search target devices: GD, ZP-EIP

1. Search the network for devices to display in the device list.

2. Select the device to connect.

Initial Setting

1:Select Connection
2:Select Device
3:Select File

Search for the device and select the unit to connect to.

Search

GD ▼

	IP Address	Type name
	192.168.250.1	GD-ILM16E-MLP

English ▼

Back   Next

3. Proceed to the next page.

Device filter
When there are many devices you can connect, filter them using the drop-down menu.

4 *3: Select File*

Configure the project file settings.

Create Project: Select this option to create a new project.

Select an Existing Project: Select this option to open an existing project.

- Create Project

1. Enter the project name. You can enter up to 100 characters.

Initial Setting

1:Selecting Connecti
2:Select Device
3:Select File

Create a new project file or select an existing file.

How to Create   ○ Create Project   ○ Select an Existing Project

File   Project Name

New Project

Project Folder Location

C:¥OMRON¥Application¥Wave Inspire Hub¥P   ...

☑ Use default location

English ▼   Back   Open

2. Create the file.

Additional Information

- How to specify the project folder location
  To create a project file in a location other than the default storage location, clear the *Use default location* check box and click the Project Folder Location input field. This allows you to select any desired storage location.

- Select an Existing Project
  Select the project file.

Initial Setting

1:Selecting Connecti
2:Select Device
3:Select File

Create a new project file or select an existing file.

How to Create   ○ Create Project   ⦿ Select an Existing Project

File   Project Folder Location

C:¥OMRON¥Application¥Wave Inspire Hub¥Project

English ▼   Back   Open
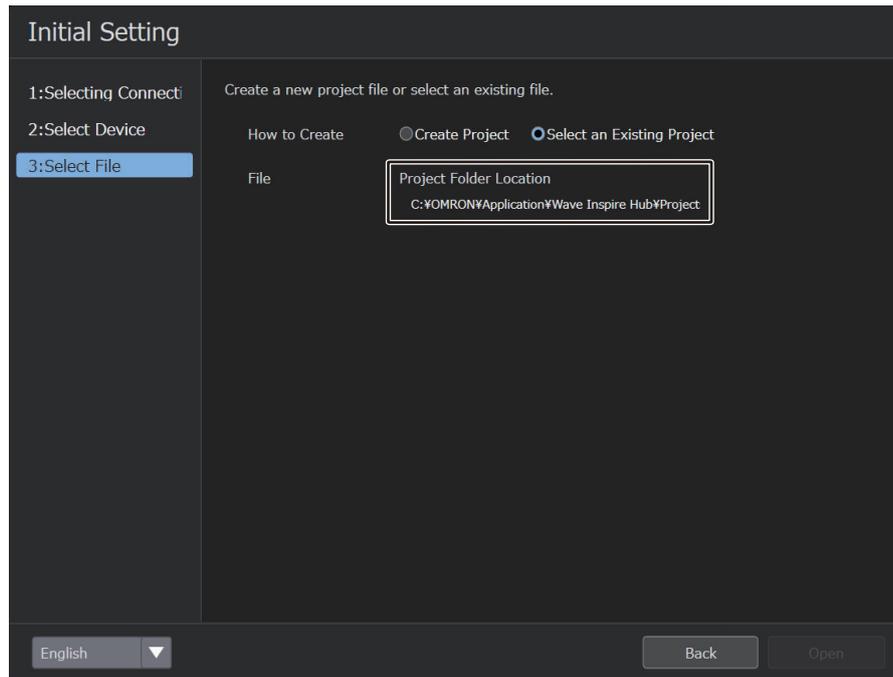
You can only open the project file for the device you selected in *Select Device*.

		Project file	
		GD-ILM16□-MLP	GD-ILM16□-CLI
Select Device	**GD-ILM16□-MLP**	○	×
	GD-ILM16□-CLI	×	○

○: Available, ×: Not available

5 Bulk configuration of ports

The following dialog box allows you to configure the I/O function settings (*M10. I/O setting*) for all ports on the master at once when creating a new project.
This dialog box appears only when the following conditions are met.
- All port settings for the actual master are *Unused* when a new project is created online.
- A new project is created offline.
- All port settings for the project file are *Unused* when an existing project is opened online.

You can select one of the following settings in the Bulk Select drop-down menu.
IO-Link, pnp input, npn input, PNP output, NPN output, Unused

Select port settings for all ports at once.

I/O setting

Set the mode for each port.

Bulk Select [IO-Link ▼]   [Apply]

port 0	[Unused ▼]	port 8	[Unused ▼]
port 1	[Unused ▼]	port 9	[Unused ▼]
port 2	[Unused ▼]	port A	[Unused ▼]
port 3	[Unused ▼]	port B	[Unused ▼]
port 4	[Unused ▼]	port C	[Unused ▼]
port 5	[Unused ▼]	port D	[Unused ▼]
port 6	[Unused ▼]	port E	[Unused ▼]
port 7	[Unused ▼]	port F	[Unused ▼]

Select port settings for each port individually.

[OK]

Reflect port settings on all ports at once. The settings will be sent to the master when online.

6 The IODD files for the IO-Link device used by the project will be downloaded automatically. (This applies only if there are missing files.)

Precautions for Correct Use

- It may take several minutes before the Settings or Monitoring tab page is displayed, depending on the number of files to download and the Internet connection environment.
- The download will not occur when the computer is not connected to the Internet.
- You cannot download IODD files for devices that are not registered in the IODD Finder, such as third-party devices.

You can also load IODD files you obtained manually at a later time. (Refer to *3-9 IODD Settings* on page 3-21.)

7 The **Settings or Monitoring** tab page is displayed.
Online: The Monitoring tab page appears.
Offline: The Settings tab page is displayed.

2

Monitoring Tab Page

The Monitoring tab page allows you to monitor the process data list for the device connected to each port on the master. (This tab page is not displayed when offline.)
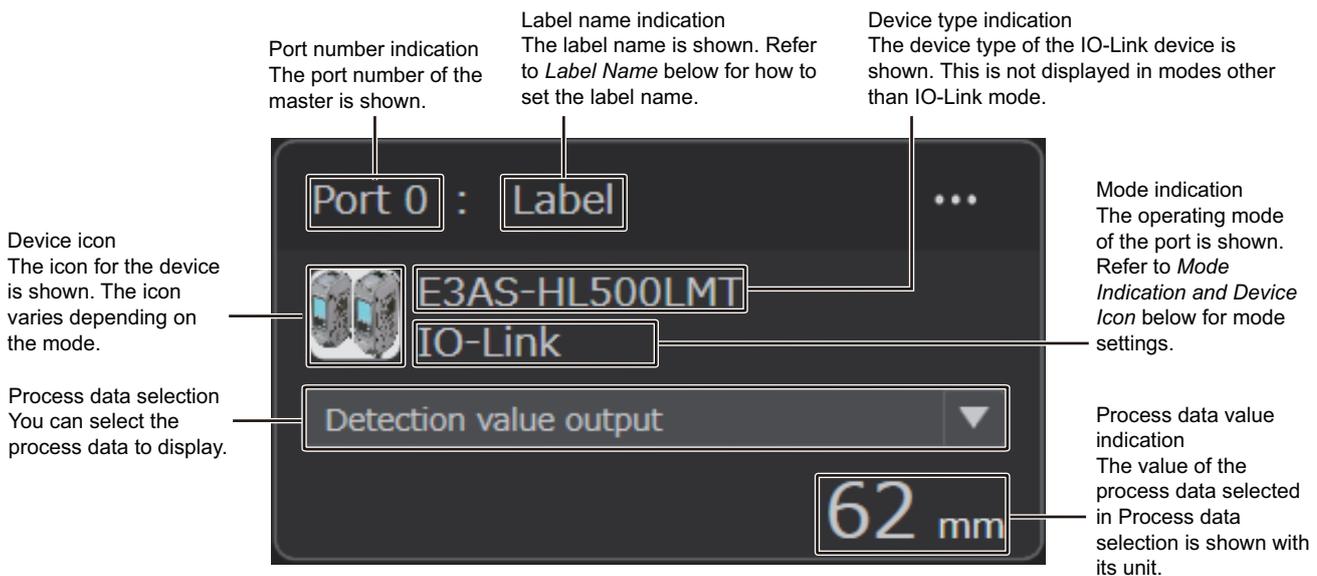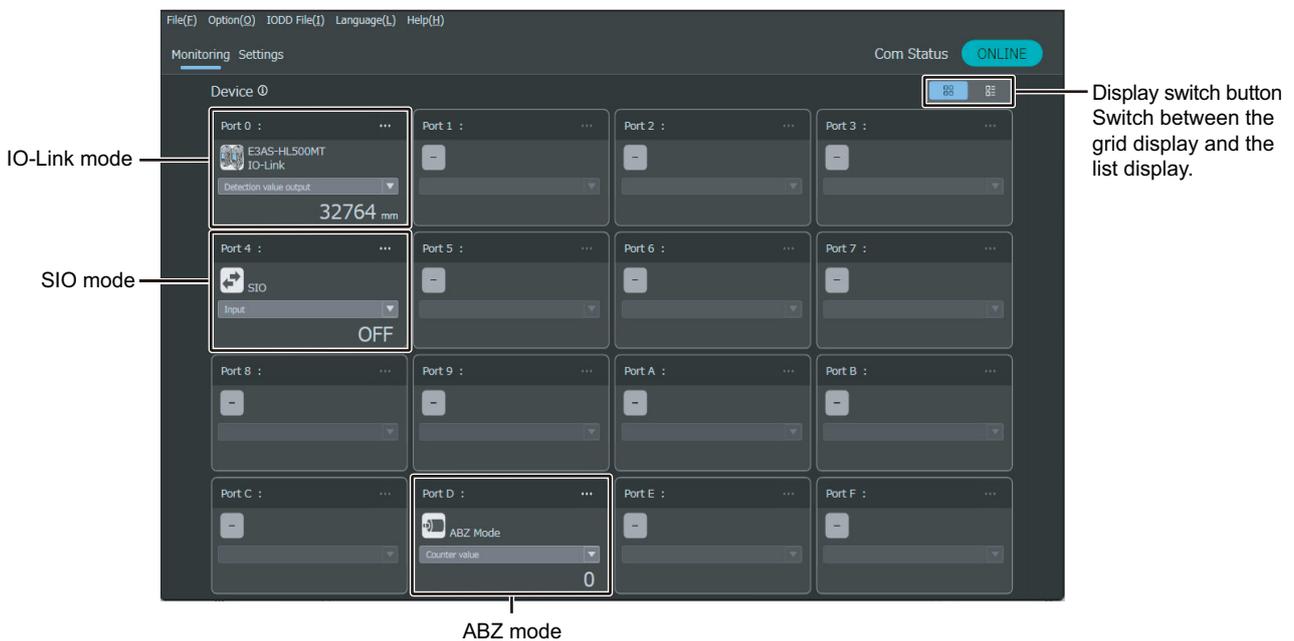
2-1   Grid Display

2-1-1   Grid Display

- The grid display allows you to view process data for all 16 ports at a glance.
- You can view one process data item per device.
- You can select the process data to view.
- By default, the process data at the beginning of the index list is displayed.
- This display also allows you to check if an error or warning has occurred on each port. Refer to *4-1 Error Messages* on page 4-2 for details.
  In the event of an error or warning, process data will not be displayed.

IO-Link mode

SIO mode

Display switch button
Switch between the grid display and the list display.

ABZ mode

Port number indication
The port number of the master is shown.

Label name indication
The label name is shown. Refer to *Label Name* below for how to set the label name.

Device type indication
The device type of the IO-Link device is shown. This is not displayed in modes other than IO-Link mode.

Device icon
The icon for the device is shown. The icon varies depending on the mode.

Process data selection
You can select the process data to display.

Mode indication
The operating mode of the port is shown. Refer to *Mode Indication and Device Icon* below for mode settings.

Process data value indication
The value of the process data selected in Process data selection is shown with its unit.

2-1-2 Mode Indication and Device Icon

- The mode for each port is determined by the Master Unit parameters *M10. I/O setting* and *M18. Pulse Input*.
- The mode indication and device icon are displayed based on the mode.
- You can change the settings for each port on the Port Settings display on the Settings tab page.

Additional Information

Refer to the manual for the master listed in *Related Manuals* on page 14 for details on the settings.

M10. I/O setting	M18. Pulse input	Mode indication	Device icon
IO-Link		IO-Link mode	Device image
npn input	None	SIO mode	
	Single	SINGLE mode	
	High response	HIFREQ mode	
	Frequency	FREQ mode	
	AB	AB mode	
	ABZ	ABZ mode	
pnp input	None	SIO mode	
	Single	SINGLE mode	
	High response	HIFREQ mode	
	Frequency	FREQ mode	
	AB	AB mode	
	ABZ	ABZ mode	
NPN output		No indication	
PNP output			
Unused			

2-1-3 Label Name

This function allows you to set any name for each port.
- The label name is linked to the port, not the device. (This means that the label name does not move even if the device is reconnected to a different port.)
- You can enter label names of up to 24 characters.

There are the following two ways to edit label names.
a. Editing from the Bulk Label Editing dialog box
b. Editing from the Settings tab page

a. Editing from the Bulk Label Editing dialog box

Click ⬛ ··· on the grid display, list display, or detailed display of the Monitoring tab page. In the menu that appears, select *Bulk Label Editing* to display the dialog box.

Port Label List

Port Number	Device	Label Name
0		example 1
1	–	
2	–	
3	–	
4		label1
5	–	
6	–	
7	–	
8	–	

Apply   Close

> 📓 **Additional Information**
>
> You can copy and paste label names from a text file into the label list using keyboard shortcuts Ctrl+C and Ctrl+V.

b. Editing from the Settings tab page

On the Settings tab page, click *Advanced* under Device Setting.

You can edit the label name on the Advanced Settings display for each device.

Advanced Settings ⓘ > Port 0

Label	Vendor Name / IO-Link Device Type	
	OMRON Corporation / E3AS-HL500MT	Select a Format

2-2 List Display

● **List Display**

- The List display allows you to view up to four process data items simultaneously per device.
- You can view process data for up to 16 devices by scrolling the display.
- The displayed content is the same as on the Grid display.

Process data selection
You can select the
process data to display.

Display switch button
Switch between the grid
display and the list display.
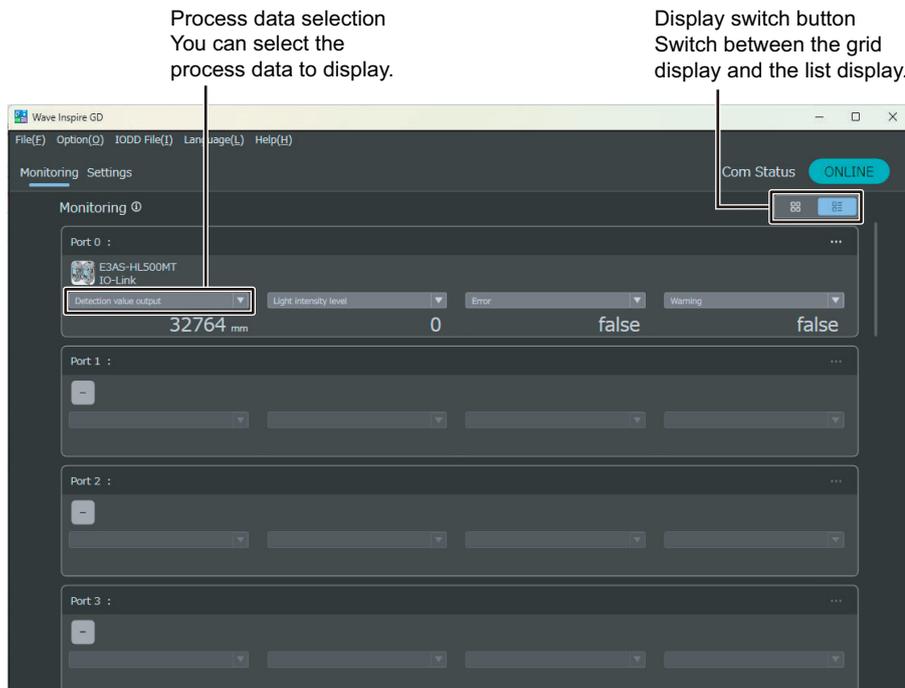
You can view process data for all 16 devices by scrolling the display.

2-3   Detailed Display

Click a port on the grid display or list display to display the detailed display, where you can view all process data.

For ports with the device icon shown as ![-], however, you cannot display the detailed display.

Device icon
The symbol for the device is displayed. The displayed icon varies depending on the mode. (Refer to *Mode Indication and Device Icon* above.)

Port number indication
The port number of the master is shown.

Label name indication
The label name is shown. Refer to *Label Name* above for how to set the label name.

Mode indication
The operating mode of the port is shown. (Refer to *Mode Indication and Device Icon* above.)

Device type indication
The device type of the IO-Link device is shown. This is not displayed in modes other than IO-Link mode.

Process data list
A list of process data is displayed. When there are many data items, you can view all data by scrolling.

Port 0 :	Label

Device Name   E3AS-HL500LMT
Operation Mode IO-Link
Process Data List
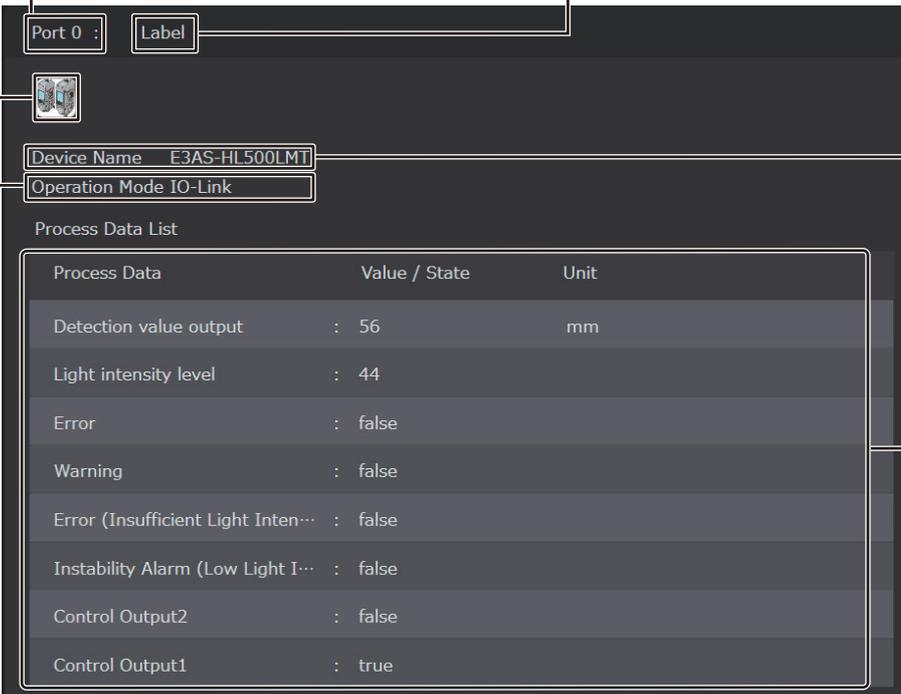
| Process Data	Value / State	Unit
Detection value output	: 56	mm
Light intensity level	: 44	
Error	: false	
Warning	: false	
Error (Insufficient Light Inten…	: false	
Instability Alarm (Low Light I…	: false	
Control Output2	: false	
Control Output1	: true	

You can display the detailed display as follows.

a. Displaying from the grid display
    Click inside the frame of each port to display the detailed display.
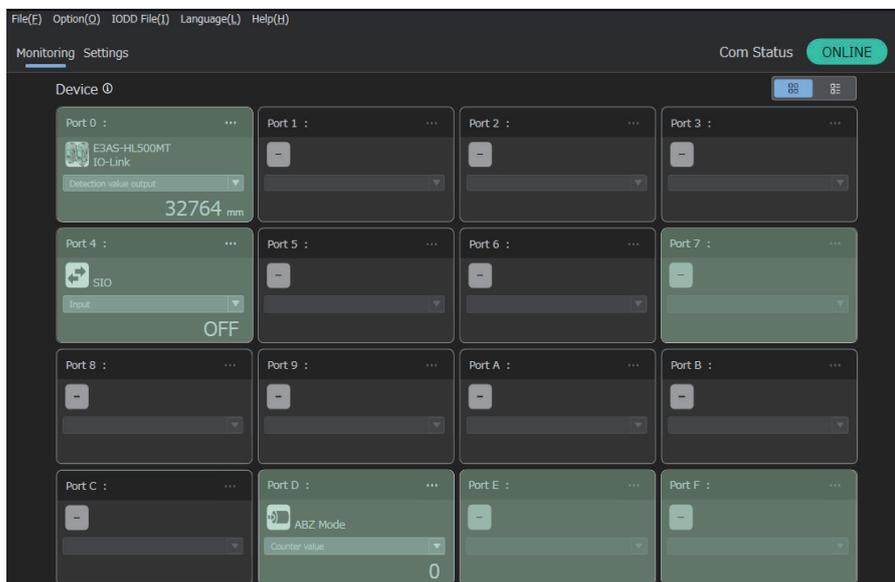
b. Displaying from the list display

Click inside the frame of each port to display the detailed display.
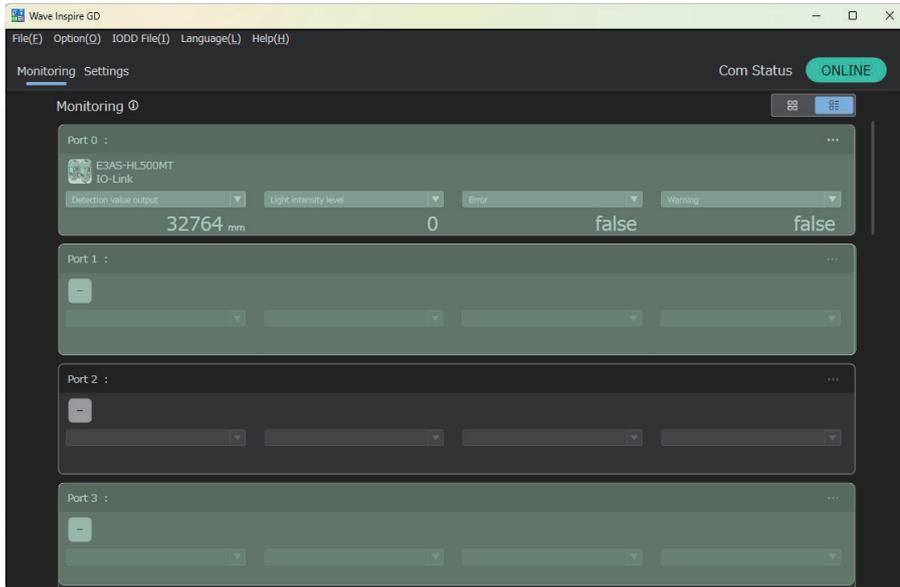
c. Displaying from the **Edit** button

Click ⋯ on the grid display or list display. In the menu that appears, select *Edit* to display the detailed display.

2-4   Menu Bar

You can execute various functions from the menu bar. Refer to the table below for details.

Menu bar
Configure overall
settings and execute
functions of the Support
Software.
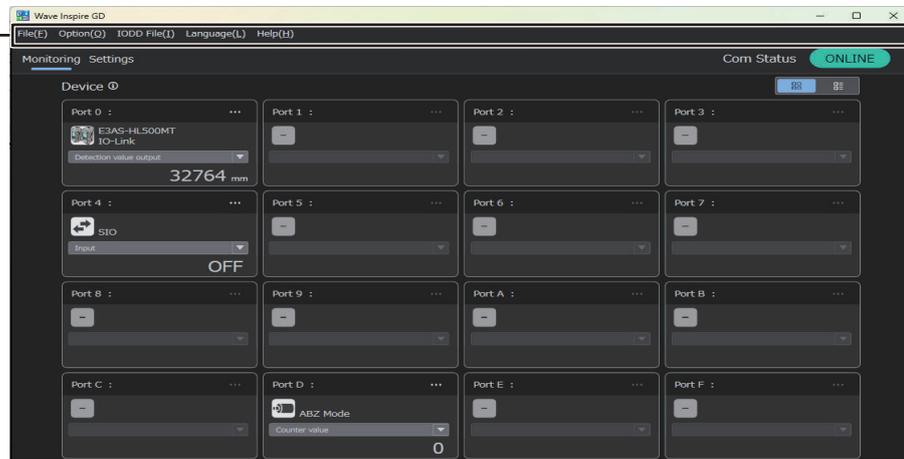
Functions that can be executed from the menu bar

Menu	Submenu	Function
File(F)	Save Project(S)	Saves settings to the project file.
	Save As Project(A)	Creates a new project file and saves the settings to it.
	Output address comment table in CSV format(P)	Outputs a list of addresses and comments on the data to be sent to the PLC in CSV format.
	Output all settings in CSV format(L)	Outputs all settings for the IO-Link Master Unit and IO-Link device in CSV format.
	Quit(Q)	Exits the Support Software.
Options(O)	Capture Screen(C)	Saves a screenshot of the display.
	Transfer all settings to the device(E)	Transfers all settings from the project file to the actual device.
	Get all settings from the device (I)	Gets all settings from the actual device.
IODD File(I)	IODD Settings(I)	Allows you to add or delete IODD files. Refer to *3-9 IODD Settings* on page 3-21 for details.
Language(L)	日本語(J)	Sets the display language to Japanese.
	English(E)	Sets the display language to English.
Help(H)	Operation Manual(O)	Displays the operation manual for the Support Software (this manual).
	IO-Link Master Unit Manual(I)	Displays the manual for the GD-series IO-Link Master Unit.
	Version(V)	Displays the version and license information for the Support Software.

Precautions for Correct Use

When using the Support Software online, complete the initial setup before executing the following functions.
Refer to *3-2 Initial Display* on page 3-3 for the initial setup procedure.
- Outputting the address comment table in CSV format
- Outputting all settings in CSV format

Outputting settings in CSV format without loading them first will result in missing information in the output.

2-4-1 Outputting the Address Comment Table in CSV Format

- You can output comments for address names used in field network communication with PLCs, etc., in CSV format.
- This function is available both online and offline.

Precautions for Correct Use

This function outputs the settings saved in the project file. If the displayed content on the display does not match the output content, save the project and then use the function.

Operating Procedure

1 Select **Output address comment table in CSV format(P)** from the **File(F)** menu.

2 In the **Select File** dialog box, enter any name and click the **Save** button.

Output Format

The entire address comment table consists of header information, bit address information, and word address information.
Details of these parts are described below.

- Header information: Basic information such as field network settings and individual port settings is output.

Project name

Master information

Port information

ProjectName	New Project									
IO-Link Master	GD-ILM16E-MLP									
IP Address	192.168.3.1									
Network Type	CC-Link IE Field Basic									
PortNo.	DeviceType	IOFunc	Endian	VendorName	DeviceName	Label	PDInSize[byte]	PDOutSize[byte]	PdInputWordCount[word]	PdOutputWordCount[word]
Port0	IO_Link_Device	IO_Link_Device	Little endian	OMRON Corporation	E3AS-F1000IMT		4	0	2	2
Port1										
Port2										
Port3										
Port4										
Port5										
Port6										
Port7										
Port8										
Port9										
PortA										
PortB										
PortC										
PortD										
PortE										
PortF										
PDIn DataSizeSum[byte]	12									
PDOut DataSizeSum[byte]	12									

Process data information

Below is a detailed explanation of each column for port information.

Item	Description	Remarks
PortNo.	The port number of each port is output.	
DeviceType	The mode for each port is output. (Reference: *2-1-2 Mode Indication and Device Icon* on page 2-3)	
IOFunc	The content of *M10. I/O setting* for each port is output.	
Endian	The content of *M43. Process data LSB/MSB* for each port is output.	**Note** Except when the Master Unit parameter *M2. Network type* is set to *Ethernet & Modbus/TCP*
VenderName	The vendor name of the IO-Link device is output.	
DeviceName	The device name of the IO-Link device is output.	
Label	The label name is output. (Reference: *2-1-3 Label Name* on page 2-3)	
PDInSize	The input data size defined in the IODD file is output.	
PDOutSize	The output data size defined in the IODD file is output.	
PDInputWordCount	The data size set in *M40. Process input data words allocation* for each port is output.	**Note** Except when the Master Unit parameter *M2. Network type* is set to *Ethernet & Modbus/TCP*
PDOutputWordCount	The data size set in *M41. Process output data words allocation* for each port is output.	**Note** Except when the Master Unit parameter *M2. Network type* is set to *Ethernet & Modbus/TCP*

- Bit address information: Comments are output in bit units.
  Note The output content is based on the data sizes defined in PDInputWordCount and PDOutputWordCount.

Input/Output data   Byte address position
Bit address position   Data type   Bit offset

Bit format list view

In/Out	ByteAddr	BitAddr	Comment	Type	BitOffset	BitLength
In	0	0	Header_DigitalInput_Port0	Boolean		1
In	0	1	Header_DigitalInput_Port1	Boolean		1
In	0	2	Header_DigitalInput_Port2	Boolean		1
In	0	3	Header_DigitalInput_Port3	Boolean		1
In	0	4	Header_DigitalInput_Port4	Boolean		1
In	0	5	Header_DigitalInput_Port5	Boolean		1
In	0	6	Header_DigitalInput_Port6	Boolean		1
In	0	7	Header_DigitalInput_Port7	Boolean		1
In	1	0	Header_DigitalInput_Port8	Boolean		1
In	1	1	Header_DigitalInput_Port9	Boolean		1
In	1	2	Header_DigitalInput_PortA	Boolean		1

Comment   Bit length

Master information comments are displayed in a
fixed format (Header_Comment).
Comments for each process data item are
output as the port number and IODD description
(Port□_Comment).

⋮

In	4	0	Port0_Output1	BooleanT	0	1
In	4	1	Port0_Output2	BooleanT	1	1
In	4	2	Reserve		0	0
In	4	3	Port0_Detection instability alarm	BooleanT	3	1
In	4	4	Port0_Insufficient incident light level error	BooleanT	4	1
In	4	5	Port0_Distance error	BooleanT	5	1
In	4	6	Port0_Warning	BooleanT	6	1
In	4	7	Port0_Error	BooleanT	7	1
In	5	0	Port0_Monitor output 2 (Incident light level)	UIntegerT	8	8
In	5	1	Port0_Monitor output 2 (Incident light level)	UIntegerT	8	8
In	5	2	Port0_Monitor output 2 (Incident light level)	UIntegerT	8	8
In	5	3	Port0_Monitor output 2 (Incident light level)	UIntegerT	8	8
In	5	4	Port0_Monitor output 2 (Incident light level)	UIntegerT	8	8
In	5	5	Port0_Monitor output 2 (Incident light level)	UIntegerT	8	8
In	5	6	Port0_Monitor output 2 (Incident light level)	UIntegerT	8	8
In	5	7	Port0_Monitor output 2 (Incident light level)	UIntegerT	8	8

- Word address information: Comments are output in word units.
  Note The comment for the first bit is output.

Input/Output data   Word address   Comment   Word offset

Word format list view

In/Out	WordAddr	Comment	WordOffset	BitLength
In	0	Header_DigitalInput		
In	1	Header_Flag_EventInformation		
In	2	Port0_Output1	0	1
In	3	Port0_Monitor output 1 (Detection level)	1	16
In	4	Reserve	0	0
In	5	Reserve	0	0
Out	0	Header_DigitalOutput		
Out	1	Header_EventControl		
Out	2	Reserve	0	0
Out	3	Reserve	0	0
Out	4	Reserve	0	0
Out	5	Reserve	0	0

Bit length

2-4-2   Outputting All Settings in CSV Format

You can output all settings (basic settings, port settings, and detailed settings) to a CSV file.
Refer to *Section 3 Settings Tab Page* on page 3-1 for information on the settings.

Operating Procedure

1 Select **Output all settings in CSV format(L)** from the **File(F)** menu.

2 In the **Select File** dialog box, enter any name and click the **Save** button.

Output Format

- The settings are output in the order of basic settings, port settings, and advanced settings.
- The port settings and advanced settings are output in order from Port 0 to Port F.

● Output Format for Basic Settings

Master information

Master Setting		
Master Product Name	GD-ILM16E-MLP	
Serial Number	2525573013L	
M1	IO-Link master parameters reset	No
M2	Network type	EtherNet/IP
M4	Display brightness	7
M5	Language	English
M6	Time zone -UTC-	0 h
M8	User tag name of this IO-Link master unit	*
M9	I/O batch setting	No
M42	Process data words auto allocation	No

Settings

- •
- • The list of target items continues below.
- •

● Output Format for Port Settings

Port number

Port Setting	0	
M10	I/O setting	IO-Link
M11	Input filter time	None
M12	Input hold time	None
M13	IO-Link and network error handling	Clear
M16	Bit assignment of Process input data	0
M17	Input port to output	None
M18	Pulse input	None
M19	Input inversion	No
M21	I/O synchronization	0
M22	Lowest frequency	27.2Hz

Settings

- •
- • The list of target items continues below.
- •

● **Output Format for Advanced Settings**

Port number

Label

Settings

Device Setting	0
Label	Label
Device Access Locks-Parameter Write Access	FALSE
Device Access Locks-Data Storage	FALSE
Vendor Name	OMRON Corporation
Vendor Text	OMRON Corporation
Product Name	E3AS-HL500LMT
Product ID	E3AS-HL500LMT-M1TJ 0.3M
Product Text	CMOS Laser sensor

●
●   The list of target items continues below.
●

2-4 Menu Bar

2

2-4-2 Outputting All Settings in CSV Format

3

Settings Tab Page

This section describes the functions of the Settings tab page.

3-1　Basic Functions

The Settings tab page allows you to perform the following operations.
- Viewing the settings on the actual device (Update button)
- Receiving settings from the actual device to the project file (Receive button)
- Sending project settings to the actual device (Send button)
- Comparing the settings saved in the project file with those on the actual device (showing the setting difference icon)

Note In OFFLINE mode, you cannot view the settings on the actual device or send them to the actual device.

a. Master Setting
- Basic: Configure the basic settings for the IO-Link Master Unit.
- Port: Configure the port settings for each port on the IO-Link Master Unit.

b. Device Setting
- Advanced: Configure the device settings for each IO-Link device.

Precautions for Correct Use

You can configure device settings only when an IO-Link device is connected.
The settings are not displayed when the IODD file corresponding to the IO-Link device has not been added to the Support Software.

3-2　Initial Display

When you open the Settings tab page online for the first time, it displays a message prompting you to get device settings for all ports.

![icon] **Precautions for Correct Use**

This message does not appear when offline.

1　Click the **Settings** tab.

2　Click the **Getting device settings for all ports** button.
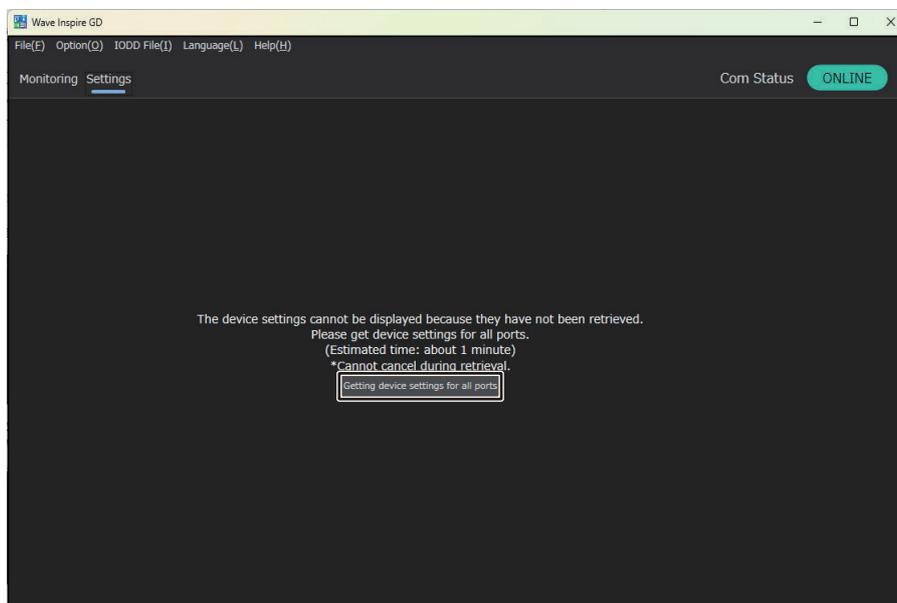
After the following message is displayed, the Basic Settings display appears.
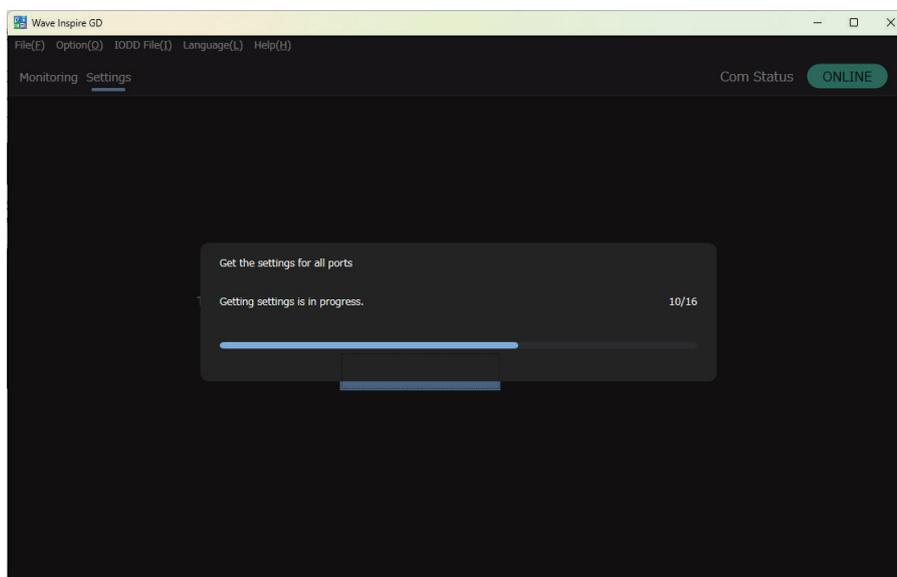
Precautions for Correct Use

It may take several minutes to load the display depending on the number of connected devices and the number of device settings.

3-3 Components of the Settings Tab Page

On the Settings tab page, you can configure three types of settings: *basic settings*, *port settings*, and *advanced settings*.

This section describes the common components displayed in all settings displays.

Precautions for Correct Use

The following functions are not available offline.
• Device Settings
• Receive
• Send
• Update
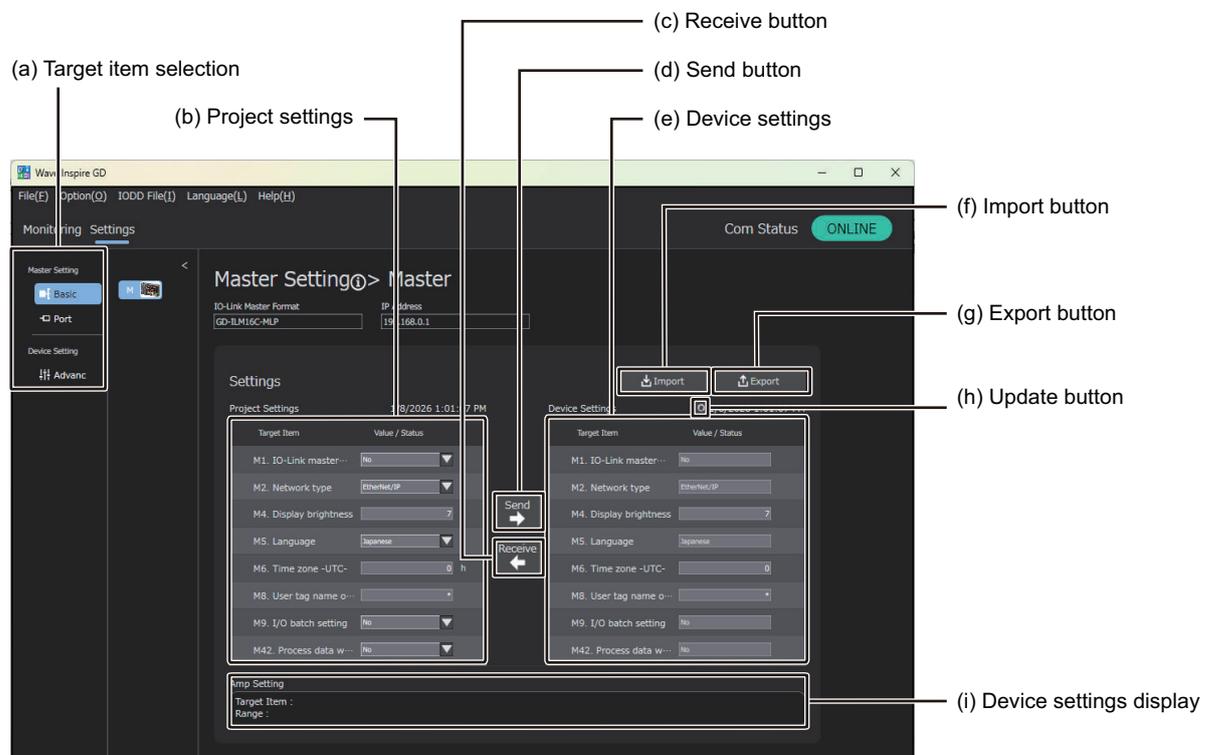
	Item	Description
(a)	Target item selection	Select the settings from Basic, Port, and Advanced.
(b)	Project settings	The settings configured in the project file are displayed. You can edit these settings if you want to change them.
(c)	Receive button	Click this button to reflect the settings displayed in Device Settings on the project settings. **Note** This item is not available offline.
(d)	Send button	Click this button to transfer the settings configured in the project file to the device. **Note** This item is not available offline.

Item		Description
(e)	Device settings	The settings received from the actual device are displayed, along with buttons to send vendor commands and system commands. **Note 1.** Changes made directly to the master or device are not reflected in real time on the display. Click the **Update** button to update the settings. **Note 2.** This item is not available offline. **Note 3.** You cannot edit these settings.
(f)	Import button	Click this button to load an export file and reflect its settings on the project settings.
(g)	Export button	Click this button to output the project settings to a file in XML format for each device.
(h)	Update button	Click this button to receive settings from the actual device and reflect them on the device settings. **Note** This item is not available offline.
(i)	Device settings display	The name and setting range for the selected target item are displayed.

● Overview of Configuration Management (Receive, Send, Update, and Save)

The figure below shows where settings are reflected when you execute *Send*, *Receive*, or *Update*.

- When you execute *Send*, update and receive processing occurs automatically after the settings are sent.
- Editing project settings on the display does not reflect them in the project file. To save your edits to the project file, execute **Save Project** or **Save As Project** from the **File** menu.
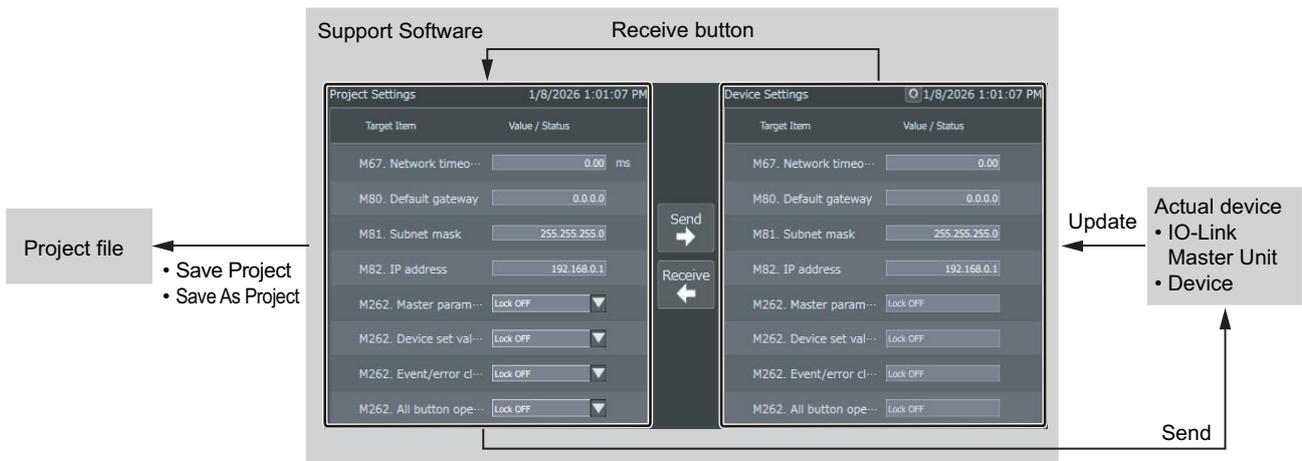
● Setting Difference Icon

When there is a difference between the project settings and the device settings, the setting difference icon (⚠) appears.
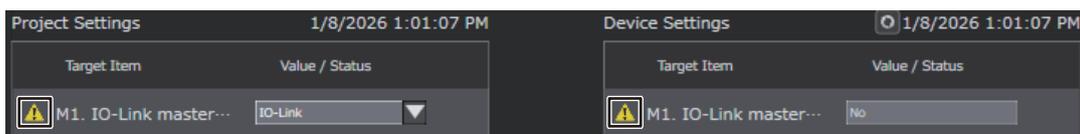
- When the Support Software is used offline, the setting difference icon does not appear.
- The setting difference icon disappears when the difference between the project settings and the device settings is resolved.

3-4 Basic Settings

Configure the basic settings for the IO-Link Master Unit.
- You can check the configurable values by scrolling through the displayed list.
- Configurable settings are described in *3-4-4 List of Basic Settings* on page 3-9.

3-4-1 Sending Settings

Send the master settings displayed in Project Settings.
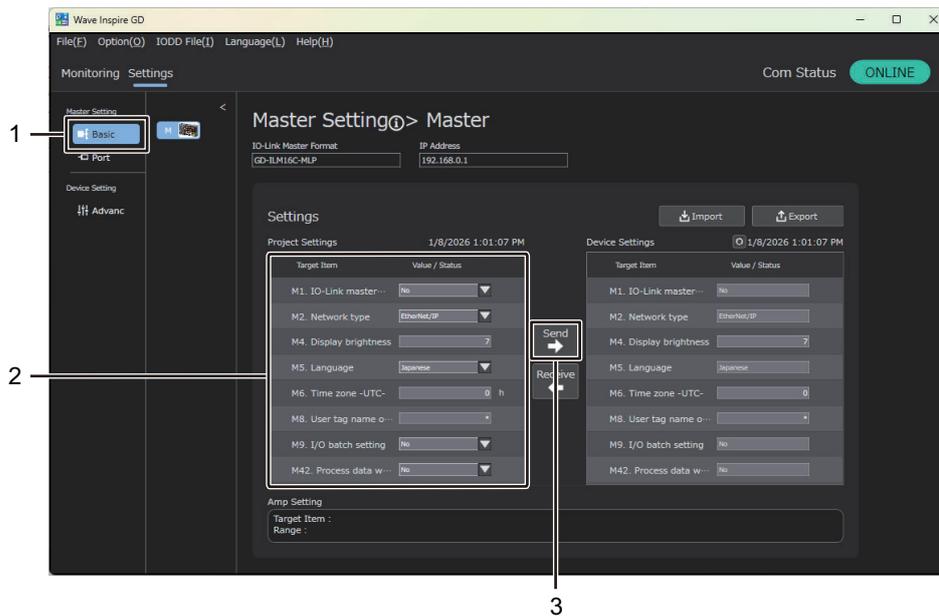
1 Click **Basic**.

2 Enter or select the settings to send in Project Settings.
You can change several items.

3 Click the **Send** button.
A **Confirmation** dialog box appears.

4 Click the **Yes** button.
Clicking the **No** button cancels the send.

3-4-2 Receiving Device Settings

Reflect the settings displayed in Device Settings on the project settings.
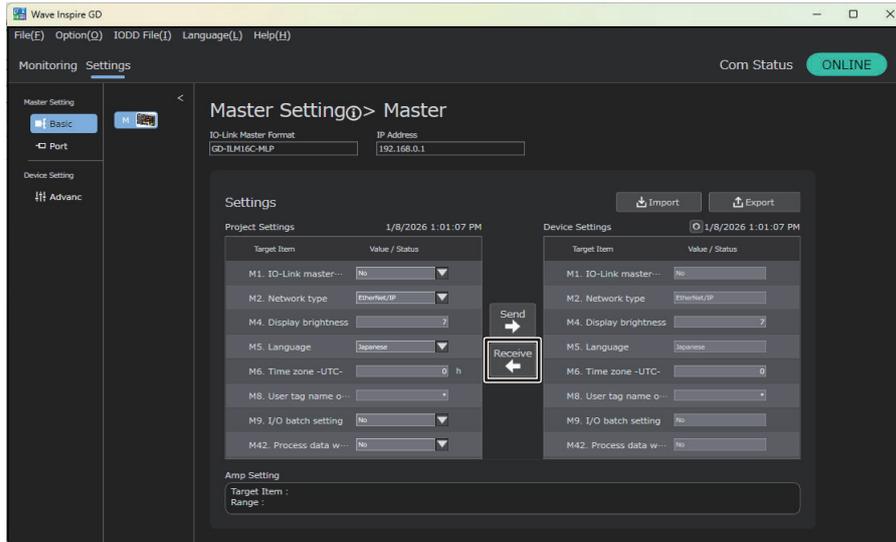
Precautions for Correct Use

Changes made to the settings on actual device settings by physical operation (such as pressing buttons on the device) are not reflected in real time on the displayed device settings. Click the **Update** button to reflect the changes.

3-4-3 Updating Device Settings

Receive the settings configured in the master and reflect them on the device settings.
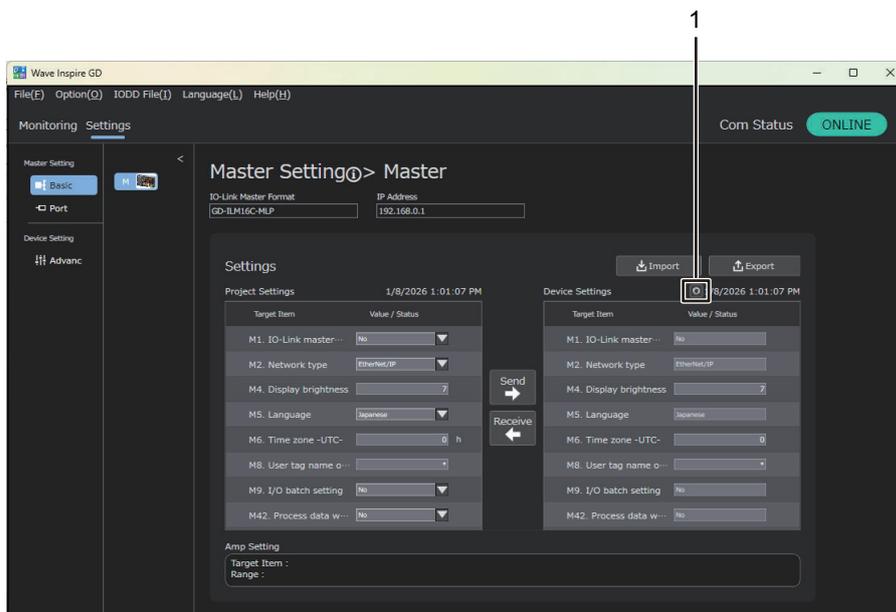
1 Click the **Update** button.

A **Confirmation** dialog box appears.

2 Click the **Yes** button.

Clicking the **No** button cancels the update.

3-4-4   List of Basic Settings

The Basic Settings display has the following target items for each master format.

Refer to the manual for the master for details on the settings listed below.

○: Configurable

	GD-ILM □□□-CLI	GD-ILM□ □□-MLP	Remarks
M1. IO-Link master parameters reset	○	○	It may take several tens of seconds to reflect the setting.
M2. Network type	○*1	○	It may take several tens of seconds to reflect the setting.
M4. Display brightness	○	○	Depending on the entered value, the setting in the Master Unit changes as follows. 1: 5% 7: 35% 20: 100%
M5. Language	○	○	
M6. Time zone -UTC-	○	○	
M8. User tag name of this IO-Link Master Unit	○	○	Maximum number of characters entered: 32 You can only enter ASCII standard characters.
M9. I/O batch setting	○	○	
M42. Process data words auto allocation	○	○	
M44. Timestamp	○	○	
M60. System program version of IO-Link Master Unit			
M61. Total operation hours of IO-Link Master Unit			
M62. Display drive time			
M63. I/O power supply voltage			
M64. Internal temperature			
M65. Network time			
M66. Network communication cycle			
M67. Network timeout time		○	Configurable only when M2. Network type is set to Ethernet & Modbus/TCP
M80. Default gateway		○	
M81. Subnet mask		○	
M82. IP address		○	To reflect the IP address in the main unit settings, restart this Master Unit.
M83. IE TSN Class setting	○		
M262. Master parameter write lock	○	○	
M262. Device set value write lock	○	○	
M262. Event/error clear operation lock	○	○	
M262. All button operation lock	○	○	

*1.   Changing the field network from CC-Link IE Field TSN to CC-Link IE Field disconnects the connection between the master and the Support Software.

3-5   Port Settings

Configure settings for each port on the master.

The Port Settings display allows you to verify values set for each port, and to send and receive settings.

> **Additional Information**
>
> The operations for *Send*, *Receive*, and *Update* are the same as in *3-4 Basic Settings* on page 3-7 (although the settings differ from those on the Basic Settings display).

3-5-1   Sending Settings

Send the master settings displayed in Project Settings.

1 Click **Port** under Master Setting.
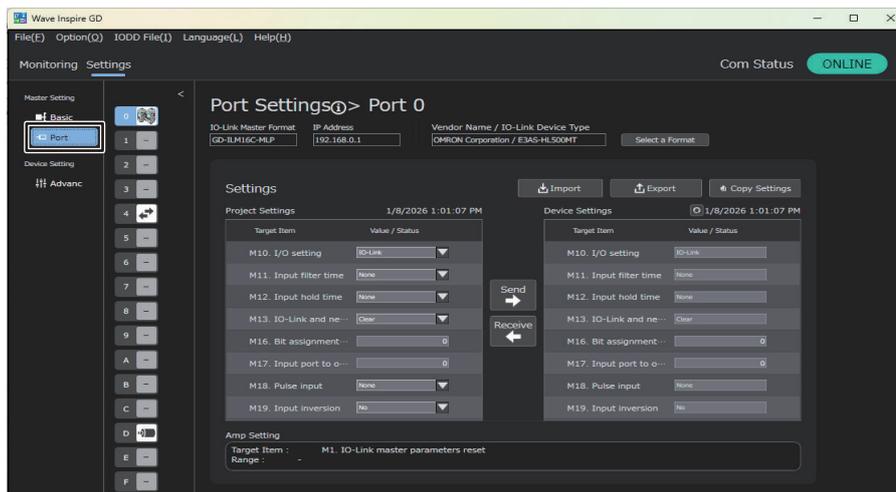
2 Select a port for which to change settings.
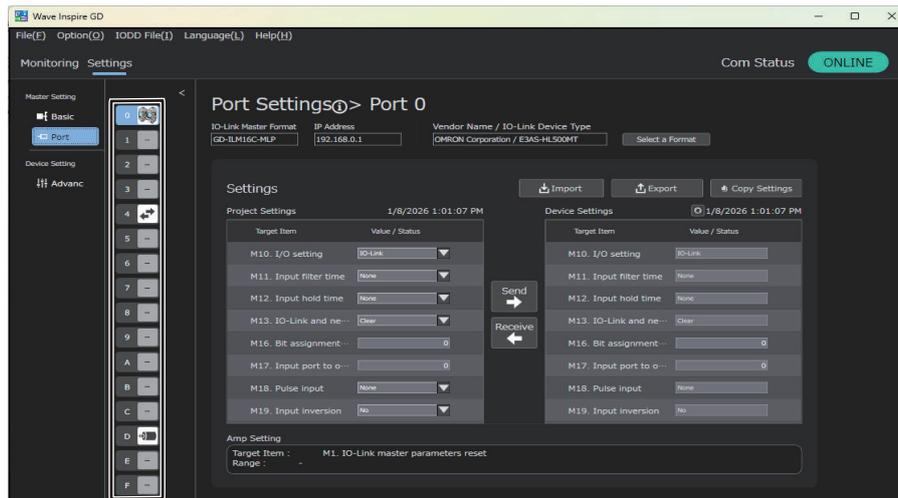
Select a port (device) for which to configure settings.

3 Enter or select the settings to send in Project Settings.

You can change several items.

4 Click the **Send** button.

A **Confirmation** dialog box appears.

5 Click the **Yes** button to send the settings to the master.

3-5-2 Receiving Device Settings

Reflect the settings displayed in Device Settings on the project settings.

📝 **Precautions for Correct Use**

Changes made to the settings on actual device settings by physical operation (such as pressing buttons on the device) are not reflected in real time on the displayed device settings. Click the **Update** button to reflect the changes.

3-5-3 Updating Device Settings

Receive the settings configured in the master and reflect them on the device settings.

1 Click the **Update** button.

A **Confirmation** dialog box appears.

2 Click the **Yes** button.

Clicking the **No** button cancels the update.

3-5-4 List of Port Settings

The Port Settings display displays the following target items for each master format.

Refer to the manual for the master for details on the settings listed below.

	Remarks
M10. I/O setting	
M11. Input filter time	
M12. Input hold time	
M13. IO-Link and network error handling	
M16. Bit assignment of Process input data	The meaning of the setting differs between 0 to 254 and 255. 255 indicates a *valid judgment*.
M17. Input port to output	
M18. Pulse input	
M19. Input inversion	
M21. I/O synchronization	A value from 0 to 1003 can be set. Refer to the manual for the master for information on setting a value.
M22. Lowest frequency	
M29. Device ID	Enter a hexadecimal value. Values from 0 to 9 and A to F can be entered.
M30. Device validation	
M31. Automatic device parameter backup	
M32. Device parameter backup/restoration	
M33. Conditions for applying IODD data	
M40. Process input data words allocation	
M41. Process output data words allocation	
M43. Process data LSB/MSB	
M51. IO-Link cycle time -Process value-	
M52. IO-Link transmission rate	
M53. IO-Link communication error	
M54. ISDU checksum error	
M55. IO-Link transmission rate error	
M56. IO-Link signal width error	
M57. IO-Link communication mode	
M58. Storage backup time	

3-6   Advanced Settings Display

Manage settings for the IO-Link device connected to the IO-Link Master Unit.

You can verify settings defined in the IODD file, and send and receive settings.

Precautions for Correct Use

- The parameter list is not available for ports other than those on the IO-Link device.
- Refer to the user manual for each device for the target items.

Additional Information

The operations for *Send*, *Receive*, and *Update* are the same as in *3-4 Basic Settings* on page 3-7 (although the settings differ from those on the Basic Settings display).

3-6-1   Sending IO-Link Device Settings

Send the device settings displayed in Project Settings.
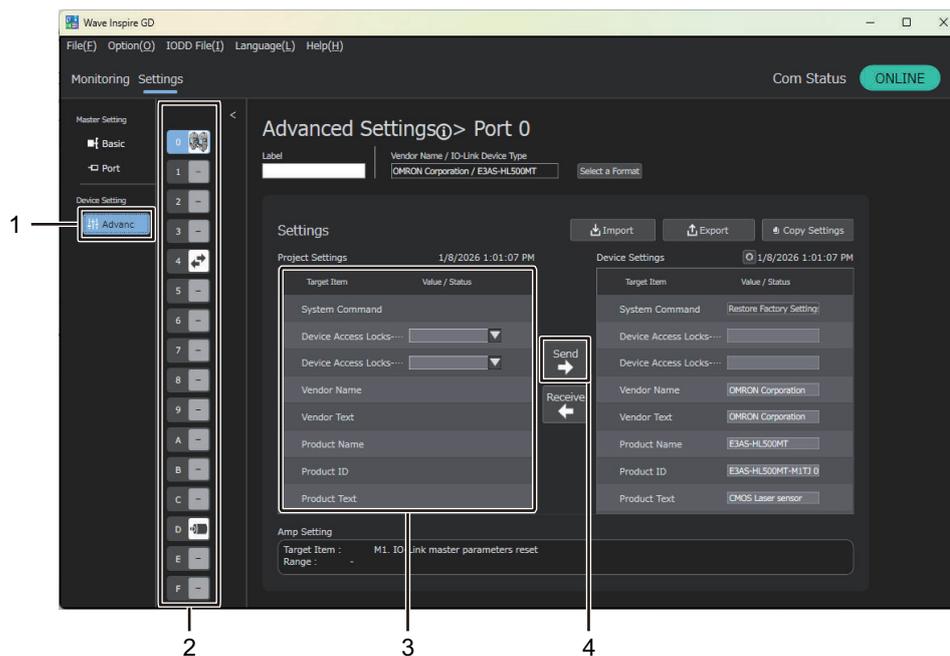
1 Click **Advanced** under Device Setting.

2 Select a port for which to change settings.

3 Enter or select the settings to send in Project Settings.
You can change several items.

4 Click the **Send** button.
A **Confirmation** dialog box appears.

5   Click the **Yes** button to send the settings to the master.

3-6-2   Receiving IO-Link Device Settings

Reflect the settings displayed in Device Settings on the project settings.

Precautions for Correct Use

Changes made to the settings on actual device settings by physical operation (such as pressing buttons on the device) are not reflected in real time on the displayed device settings. Click the **Update** button to reflect the changes.

3-6-3   Updating IO-Link Device Settings

Receive the settings configured in the device and reflect them on the device settings.

1   Click the **Update** button.
A **Confirmation** dialog box appears.

2   Click the **Yes** button.
Clicking the **No** button cancels the update.

3-7 Copying Settings

On the Port Settings or Advanced Settings display, you can copy settings to other ports within the project.

For the copy target, you can select one of the following three options.

- Port settings only
- Advanced settings only
- Port and Advanced settings only

Selecting *Advanced settings only* or *Port and Advanced settings only* for the copy target allows you to select only ports connected to devices of the same format[*1] as the copy target.

*1. This refers to IO-Link devices with the same vendor ID and device ID.

- When using the Support Software offline
  Copy the configured project settings to the destination project settings.

- When using the Support Software online
  Copy the configured project settings to the destination project settings.
  Then, send the settings to the actual device (IO-Link Master or IO-Link device).

● Copying Procedure

1 Click the **Advanced** button under Device Setting and select the port to use as the copy source.
You can use the same procedure to copy settings from the Port Settings display.

Note Do not select ports with the setting difference icon ⚠ as the copy source.
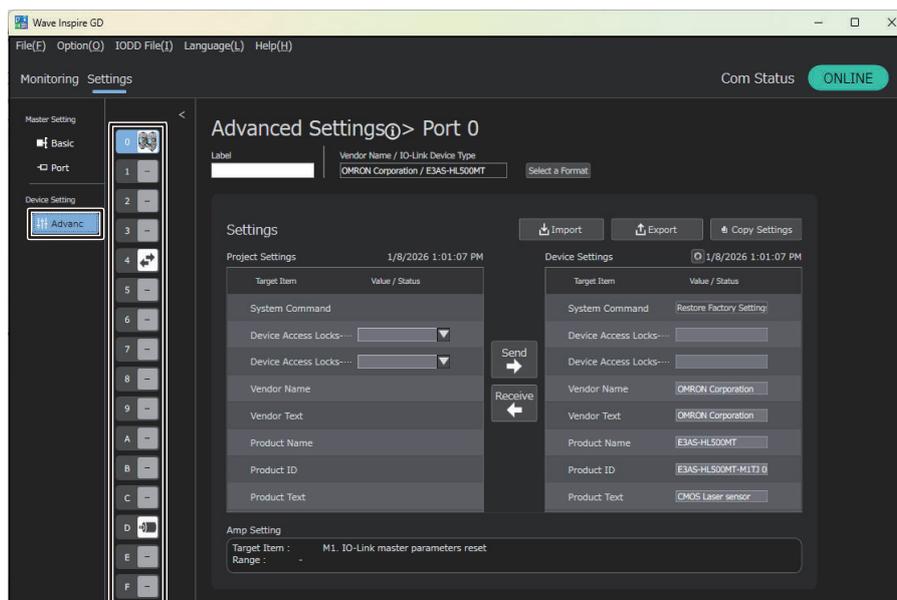
Select the copy source port.

2 Click the **Copy Settings** button.
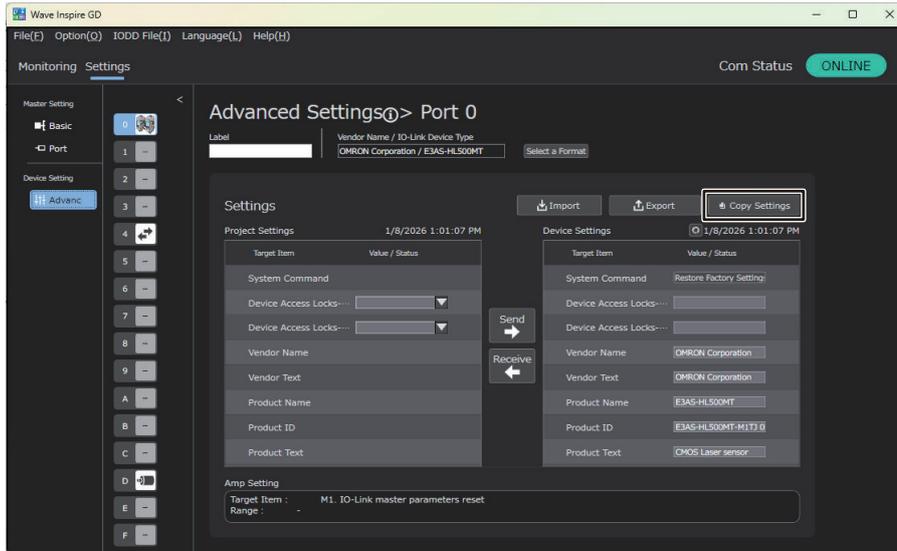
3 Select the copy target.
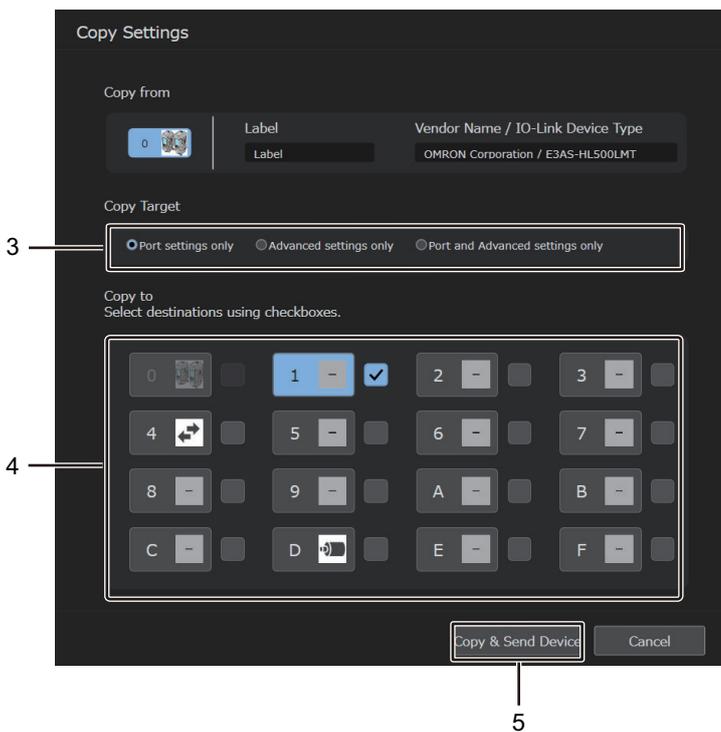
4 Select the destination.

Select the check box for the destination port. You can select more than one destination.

5 Click the **Copy & Send Device** button to execute the copy.

A confirmation dialog box appears.

6 Confirm the copy source and destination and click the **OK** button.
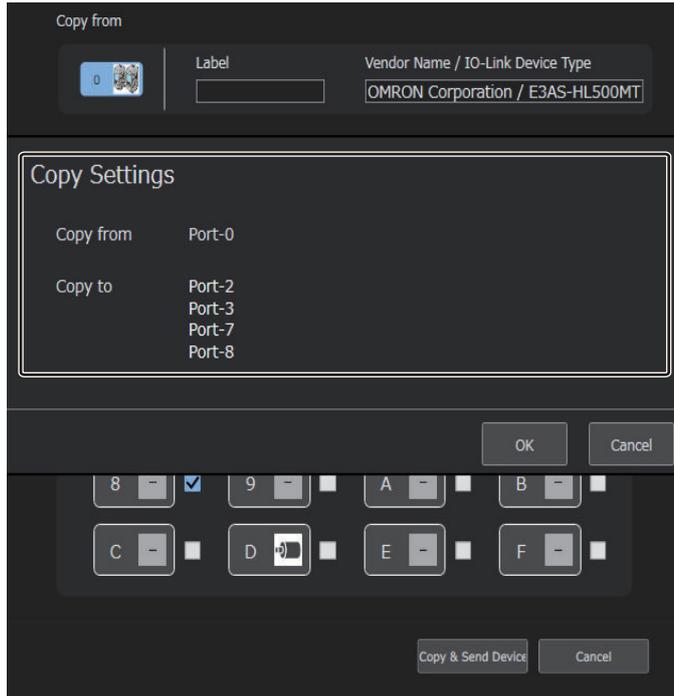
The copy is completed.
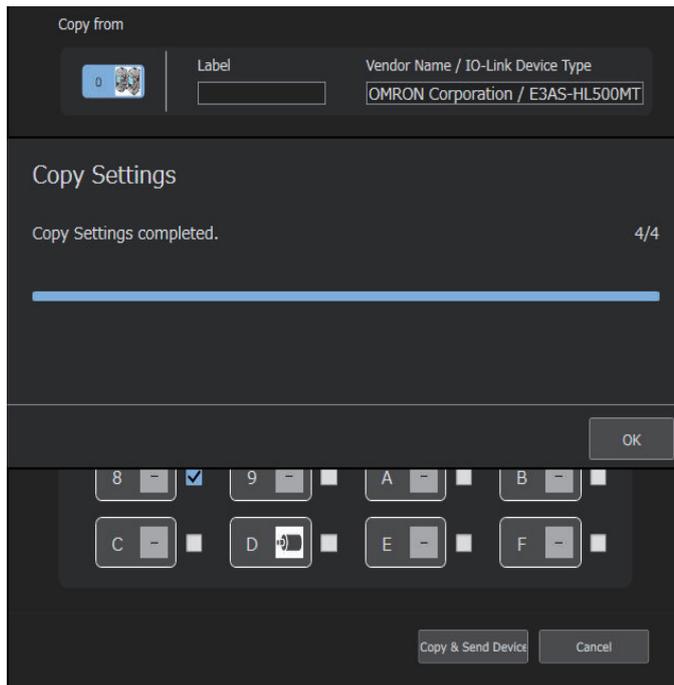
3-8   Export and Import

You can use the import and export functions to copy settings to another project file.

3-8-1   Export and Import Functions

● **Import**

Imports an XML-format file and reflects its contents on the project settings.

Precautions for Correct Use

- If the master format differs between the export file and the import destination, the settings cannot be imported.
- If the device type differs between the export file and the import destination, the advanced settings cannot be imported.

● **Export**

Outputs the project settings to a file in XML format.

Precautions for Correct Use

You can export advanced settings only when an IO-Link device is connected.

3-8-2   Export and Import Targets

The *Import* and *Export* buttons are shown on the Basic Settings display, Port Settings display, and Device Settings display.
The settings to be exported or imported differ depending on the display.

- Target Settings
  Basic Settings display: Basic settings for the master
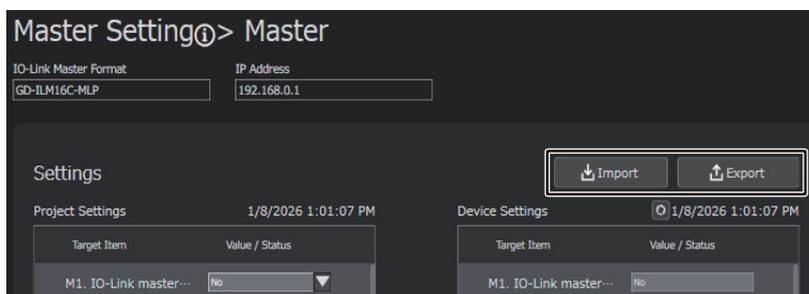
Port Settings display: Port settings for the displayed port
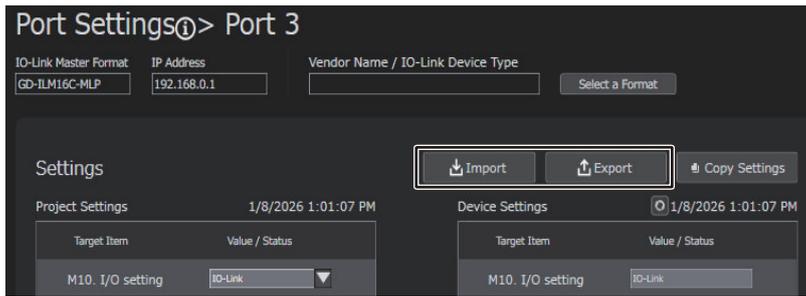
Advanced Settings display: Advanced settings for the displayed port
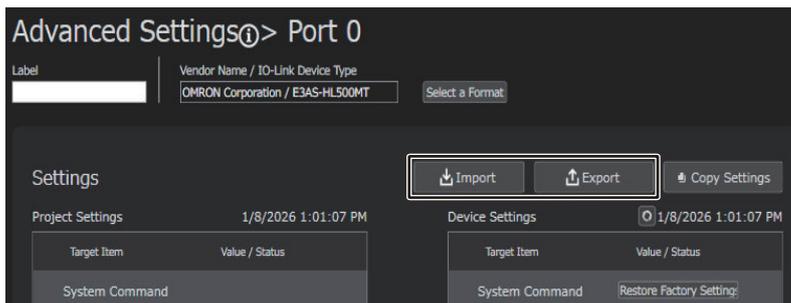
3-8-3   Export

1 Click the **Export** button.

2 Specify the project folder location, enter the file name, and click the **Save** button.
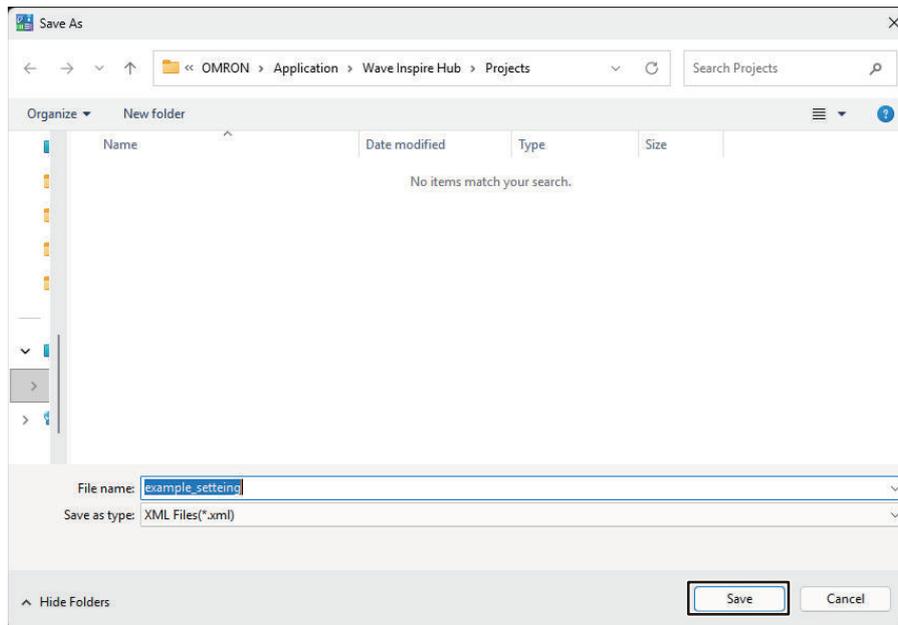
3-8-4   Import

1 Click the **Import** button.

2 Specify the project folder location, enter the file name, and click the **Open** button.

GD Series Wave Inspire HUB Operation Manual (Z518)
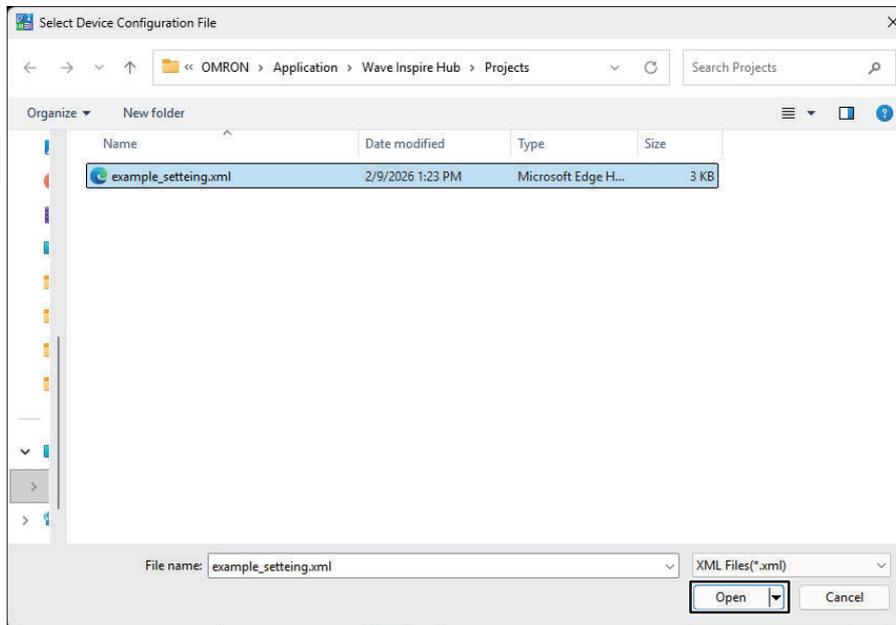
3-9   IODD Settings

This section describes the procedure for checking, adding, and deleting IODD files.

Precautions for Correct Use

This Support Software supports IODD revision 1.1 only.

3-9-1   Checking the IODD Files Added to This Support Software

1   Select **IODD File Setting(I)** from the **IODD File(I) menu**.
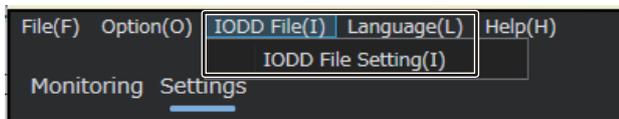
In the IODD File Setting dialog box, a list of existing IODD files is displayed.
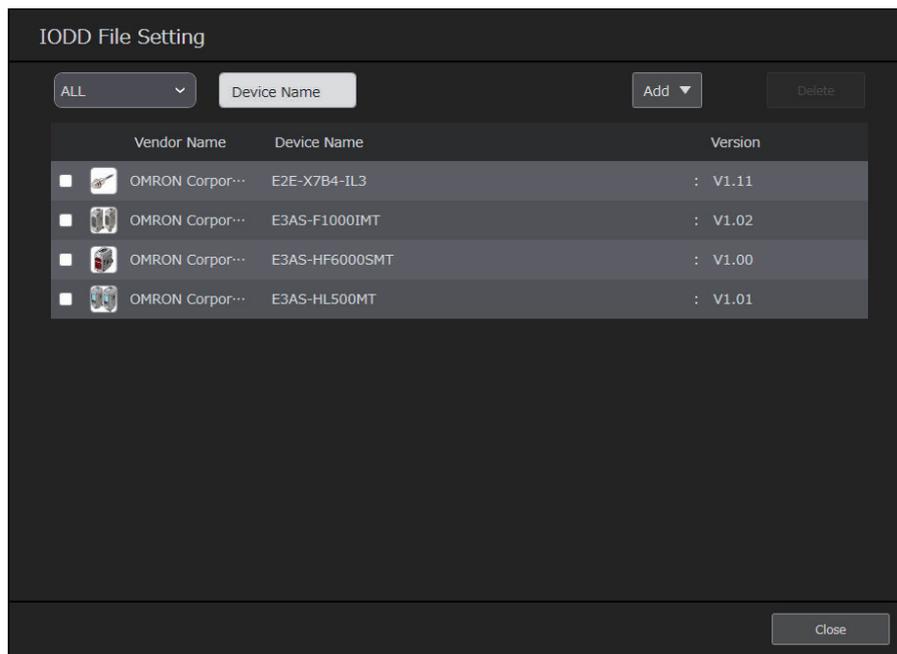
Additional Information

- If there are many IODD files, you can filter them by vendor name.

- If you want to check a specific IODD file, you can search for it by device name.

3-9-2   Adding IODD Files

There are two ways to add IODD files.

Method	Description
Add from quick search	Downloads IODD files listed in IODD Finder. (This requires an Internet connection.)
Add from a file	Allows you to add IODD files you have to the Support Software.

● Add from Quick Search

Precautions for Correct Use

This procedure requires an Internet connection.

1   Select **IODD File Setting(I)** from the **IODD File(I) menu**.

2   Click **Add** and select **Add from quick search**.
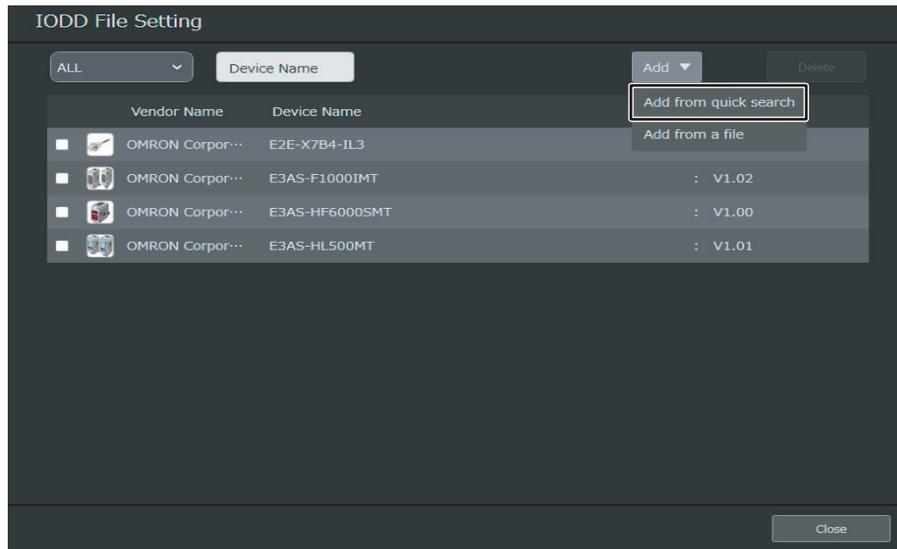
3 Enter the vendor name and device name, and then click **Search Execution**.

Precautions for Correct Use

This Support Software supports IODD revision 1.1 only. The IODD files displayed by Add from quick search are IODD revision 1.1 files only.
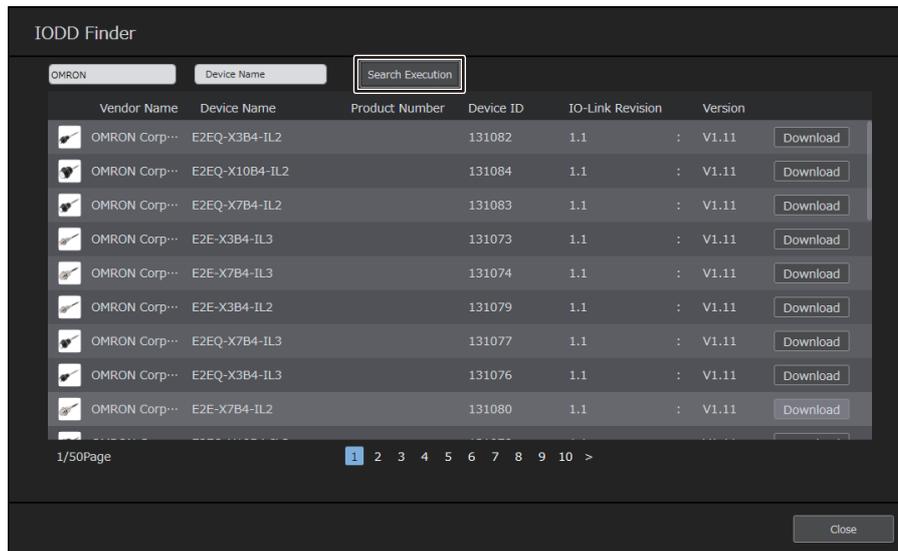
4 Click **Download**.
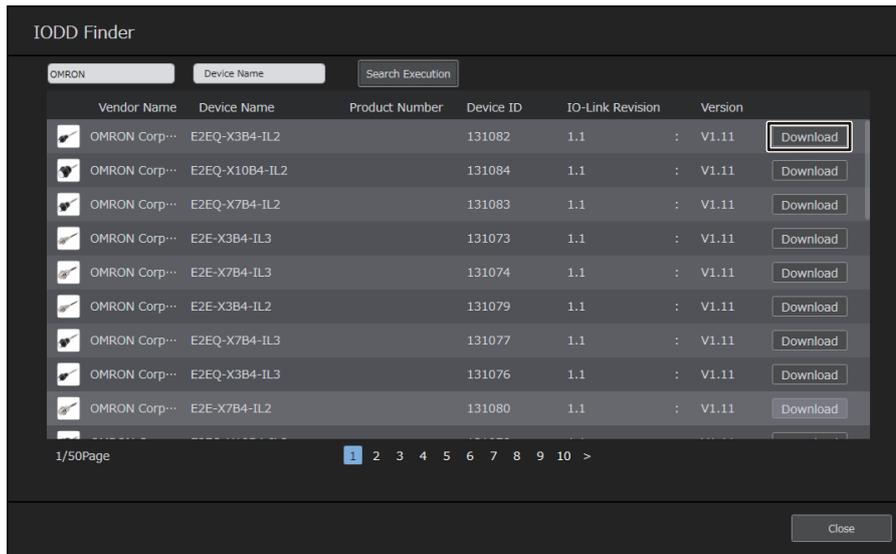
● **Add from a File**

> **Precautions for Correct Use**
>
> • Save the IODD files to add in advance on your local storage.
> • This Support Software supports IODD revision 1.1 only. Do not add IODD revision 1.0 files.
> • The Support Software can recognize only one IODD file per format. To add an IODD file of the same format, e.g., when adding an IODD file with a different version, first delete the old version IODD file from the Support Software and then add the new one. (Refer to *3-9-3 Deleting IODD Files* on page 3-25 for how to delete IODD files.)

1 Select **IODD File Setting(I)** from the **IODD File(I) menu**.

2 Click **Add** and select **Add from a file**.
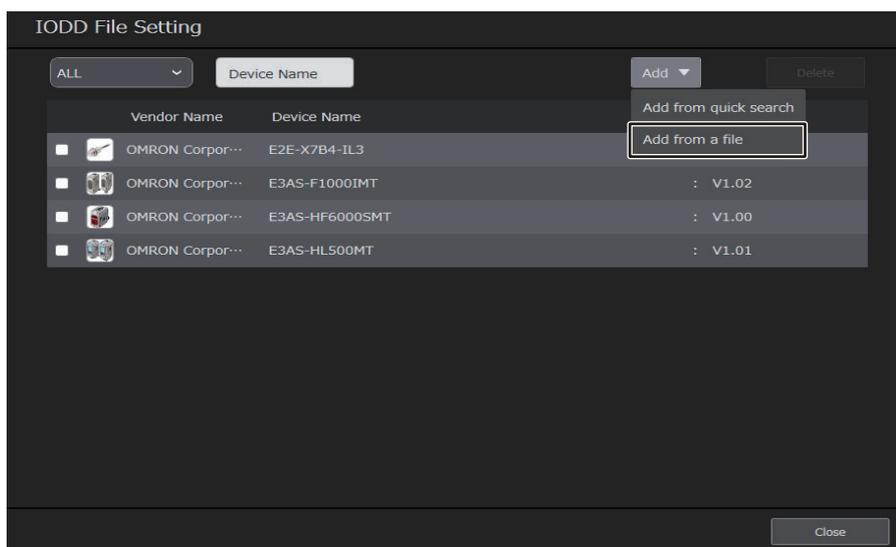
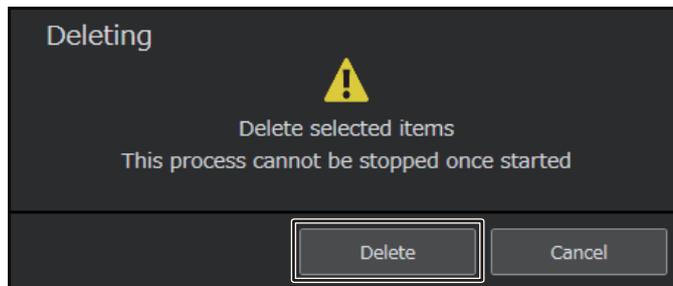**3** Select the file (IODD file) to add and click the **Open** button.

3-9-3   Deleting IODD Files

_1_   Select **IODD File Setting(I)** from the **IODD File(I) menu**.

_2_   Move the mouse over the row of the device to delete.

_3_   Click the trash can icon.
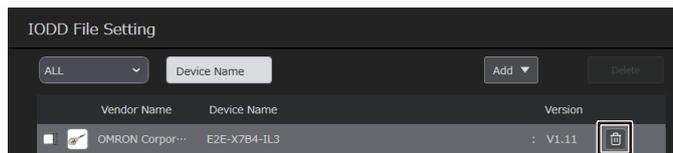
A confirmation dialog box appears.

_4_   Click **Delete**.

3-10 Using the Support Software Offline

You can create a project file offline and assign it to an IO-Link device.
Refer to *1-7 Startup and Connection* on page 1-14 for the startup procedure.

The following procedure describes steps after the Settings tab page is displayed offline, up to assigning an IODD file.

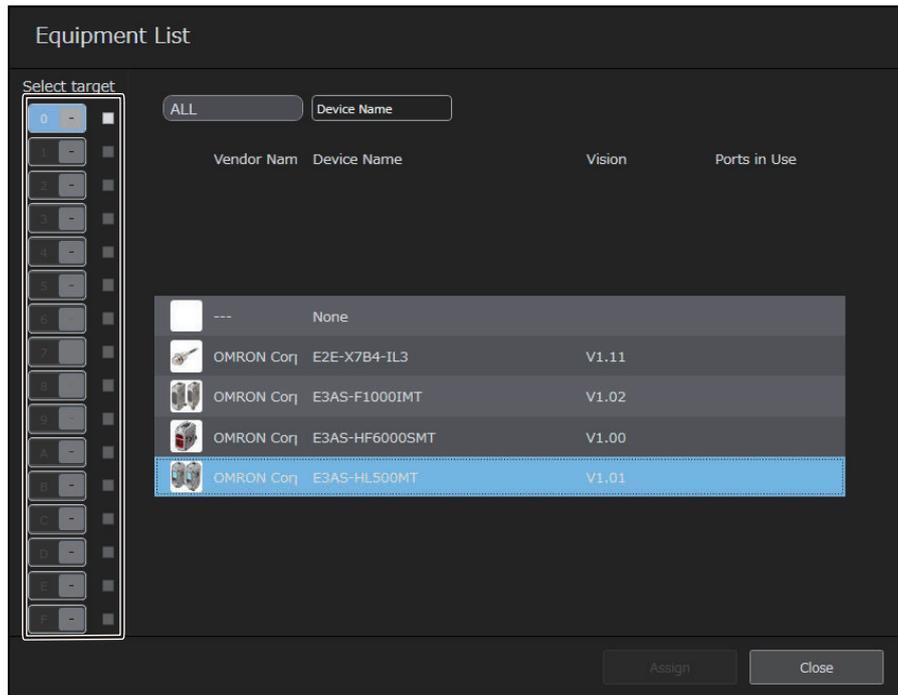Example: Assigning an OMRON E3AS-HL500LMT Photoelectric Sensor to Port 0

1 Open the Settings tab page.

2 On the **Port Settings** display, select Port 0 and set *M10. I/O setting* to *IO-Link*.
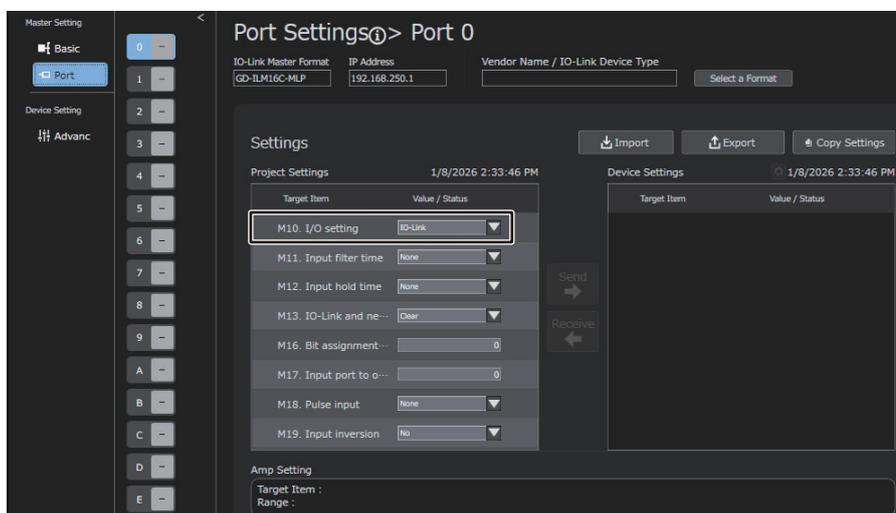
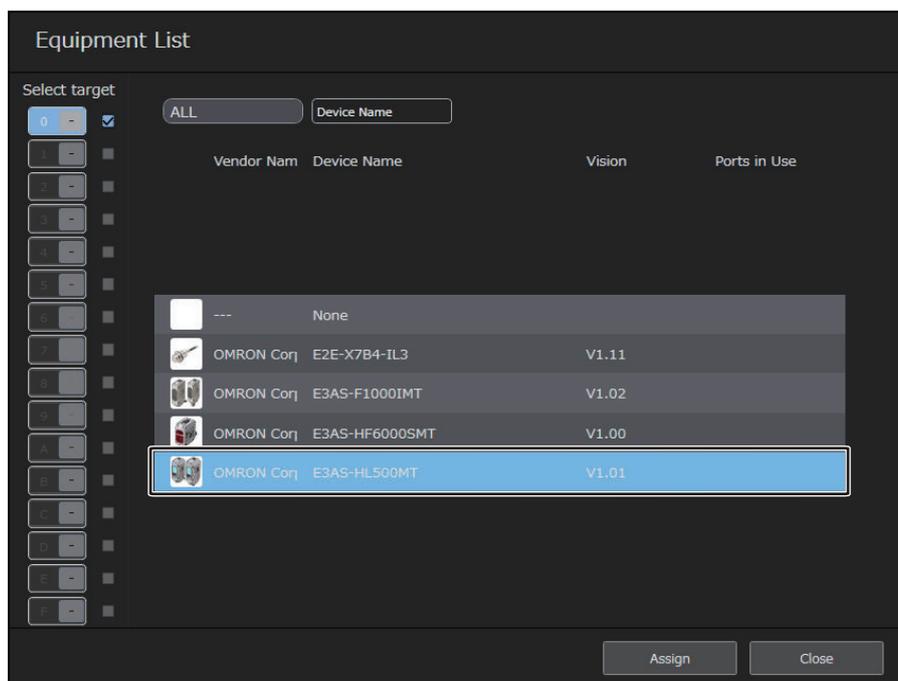**3** Click the **Select a Format** button.
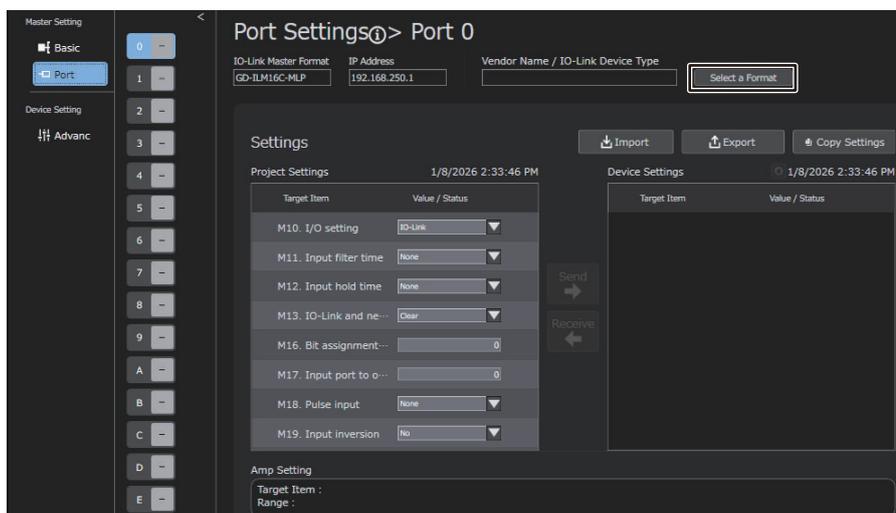
4 Select the target port.
In this example, select Port 0.

Precautions for Correct Use

You can select only ports whose *M10. I/O setting* is *IO-Link* as the target.
You can also select more than one target port.

5 Select the device to assign.

If the required IODD files are missing, add them according to *3-9 IODD Settings* on page 3-21.

6 Click **Assign**.

Equipment List

Select target

ALL | Device Name

	Vendor Nam	Device Name	Vision	Ports in Use
	---	None		
	OMRON Cor	E2E-X7B4-IL3	V1.11	
	OMRON Cor	E3AS-F1000IMT	V1.02	
	OMRON Cor	E3AS-HF6000SMT	V1.00	
	OMRON Cor	E3AS-HL500MT	V1.01	

Assign   Close

4

Troubleshooting

4

4-1 Error Messages

The Support Software displays two types of error messages.
- Warning/error messages on the Monitoring tab page
  Errors that primarily appear on the Monitoring tab page are port-specific errors. These include errors related to IODD file settings and IO-Link devices.
- Error messages on the toolbar
  Errors that appear on the toolbar. These include errors related to the IO-Link Master Unit and communication errors with the IO-Link Master Unit.

4-1-1 Warning/Error Messages on the Monitoring Tab Page

If a warning or error occurs, a warning/error message will appear on the grid display or list display on the Monitoring tab page.
This section describes how to clear the displayed warning/error message.

● List of Warning/Error Messages

Warning/Error	Description	Clearing method
⚠ **Device Not Set** [IO-Link Device Format] is not configured. Set the device format from [Advanced Settings].	Displayed in the following cases. • The Support Software does not have the IODD file for the connected IO-Link device. • The Support Software does not have the IODD file for the IO-Link device set in the project file.	Follow the steps below. 1. Add the IODD file. (Refer to *3-9 IODD Settings* on page 3-21.) 2. In **Select a Format**, assign the IODD file to the port.
⊗ **Device Disconnected** Device communication lost. Check the wiring between the IO-Link master and the device.	Displayed in the following cases. • An error occurred during communication between the IO-Link Master Unit and the IO-Link device.	Follow the steps below: 1. Check the wiring between the IO-Link device and the IO-Link Master Unit. 2. Restart the IO-Link Master Unit and then restart the Support Software.
⊗ **Device Mismatch** Device format does not match. Set the correct format in [Advanced Settings].	Displayed in the following cases. • The device type set in the project does not match the device type of the device actually connected to the master.	• To match the device type set in the project file Replace the device with one that matches the device type set in the project file and then restart the Support Software. • To match the device type of the actual device configuration On the Advanced Settings display, select the device type that matches the actual device from **Select a Format**.

Warning/Error	Description	Clearing method
⊗ **Device Error** An error occurred on the IO-Link device.Restart the IO-Link master and the tool.	Displayed in the following cases. • An error occurred in an IO-Link device.	Clear the error status of the IO-Link device and then restart the IO-Link Master Unit and the Support Software. Refer to the manual for the device for information on device errors.

4-1-2　Error Messages on the Toolbar

Communication errors with the master and errors in the master are displayed on the toolbar.

● Master Error

An error that occurs in the master will be displayed as Master Status on the toolbar.

Refer to the manual for the master for information on error codes and troubleshooting.

● Communication Error

If communication between the master and the Support Software is lost, a countdown of wait time (10 seconds) starts as shown below.

After the countdown ends, the **Reconnect** button appears.
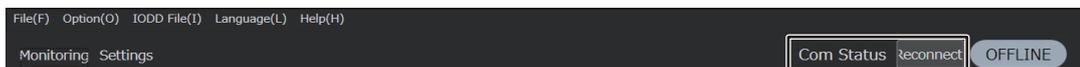
Check the network cable connection and click the **Reconnect** button.
If the connection is successful, the communication status will return to ONLINE. If the connection fails, the status remains *OFFLINE.*

4-2　Frequently Asked Questions

This section describes measures to be taken in the event of trouble.

Phase	Symptom	Possible cause	Countermeasure	Reference
Startup	Network adapter options are not displayed.	• The network adapter is not connected. • The network adapter is not recognized by the computer.	Check that the network adapter is connected correctly.	
		The network adapter was connected to and recognized by the computer after the Support Software was started.	Click the **Refresh** button on the Selecting Connection Mode page to refresh the connection.	
	I cannot set the IP address of the computer.		Use the IP address setting tool (IPAddressSetup).	*1-5 Setting the IP Address (Computer)* on page 1-7
	I searched for devices, but no devices are displayed.	The master is not turned ON.	Check that the master has started correctly.	
		Ethernet cables are not connected correctly.	Check that Ethernet cables are connected correctly.	
		Ethernet cables do not comply with the standard.	Check that all devices and cables in the communication path comply with 1000BASE-T (Gigabit Ethernet). Use 1000BASE-T compliant Ethernet cables. When the Master Unit parameter *M83. IE TSN Class setting* is not set to *Class A 100M*, you need a 1000BASE-T environment to connect devices.	
		The selected network adapter is incorrect. (When there are multiple network adapters on the computer)	Select the correct network adapter.	*1-7 Startup and Connection* on page 1-14
		The IP address settings are incorrect.	• Check the IP address of the computer. • Check the IP address setting on the master.	*1-6 Setting the IP Address (IO-Link Master Unit)* on page 1-12
		A duplicate IP address is set for the master. (When there are multiple masters)	Check the IP address setting on the master.	*1-6 Setting the IP Address (IO-Link Master Unit)* on page 1-12
		The search takes time because many devices are connected to the network.	On the Selecting Connection Mode page, limit the IP address range in Network to Search before executing the search.	*1-7 Startup and Connection* on page 1-14
		The master's communication settings are not supported by the Support Software.	When the Master Unit parameter *M2. Network type* is set to *CC-Link IE Field*, the master cannot connect to the Support Software. Disconnect the CC-Link IE Field communication between the master and the host PLC and connect the master to the Support Software. Change the network type via button operation on the master.	

Phase	Symptom	Possible cause	Countermeasure	Reference
IODD file addition	In the IODD File Setting dialog box, clicking Add and then selecting *Add from quick search* does not display the corresponding IODD file.	The Support Software is not connected to the Internet.	Connect the Support Software to the Internet. If your environment does not allow Internet connection, add the IODD file manually.	*3-9-2 Adding IODD Files* on page 3-22
		The corresponding IODD file is not displayed in IODD Finder. (The Support Software downloads IODD files via a web service called IODD Finder.)	Download the IODD file from the vendor's website, etc., and add it manually.	*3-9-2 Adding IODD Files* on page 3-22
		The IODD file revision is not 1.1.	This tool supports IODD revision 1.1 devices only.	
Settings tab page	There are settings that are not displayed on the Advanced Settings display.	They may be non-displayable items in the Support Software.	The Support Software does not display some parameters for monitoring purposes.	
	I sent settings from the Advanced Settings display, but some of them are not reflected on the actual device.	The displayed settings may include settings that are invalid or unused with the current device status.	Refer to the manual or documentation provided by the device vendor for the validity conditions and availability of each setting.	
Monitoring tab page	Connected IO-Link devices are not displayed.	The corresponding IODD files are not added to the Support Software.	Add the IODD files for the connected devices to the Support Software.	*3-9-2 Adding IODD Files* on page 3-22
		The Master Unit parameter *M10. I/O setting* is not set to *IO-Link*.	On the Port Settings display, set *M10. I/O setting* to *IO-Link*.	