



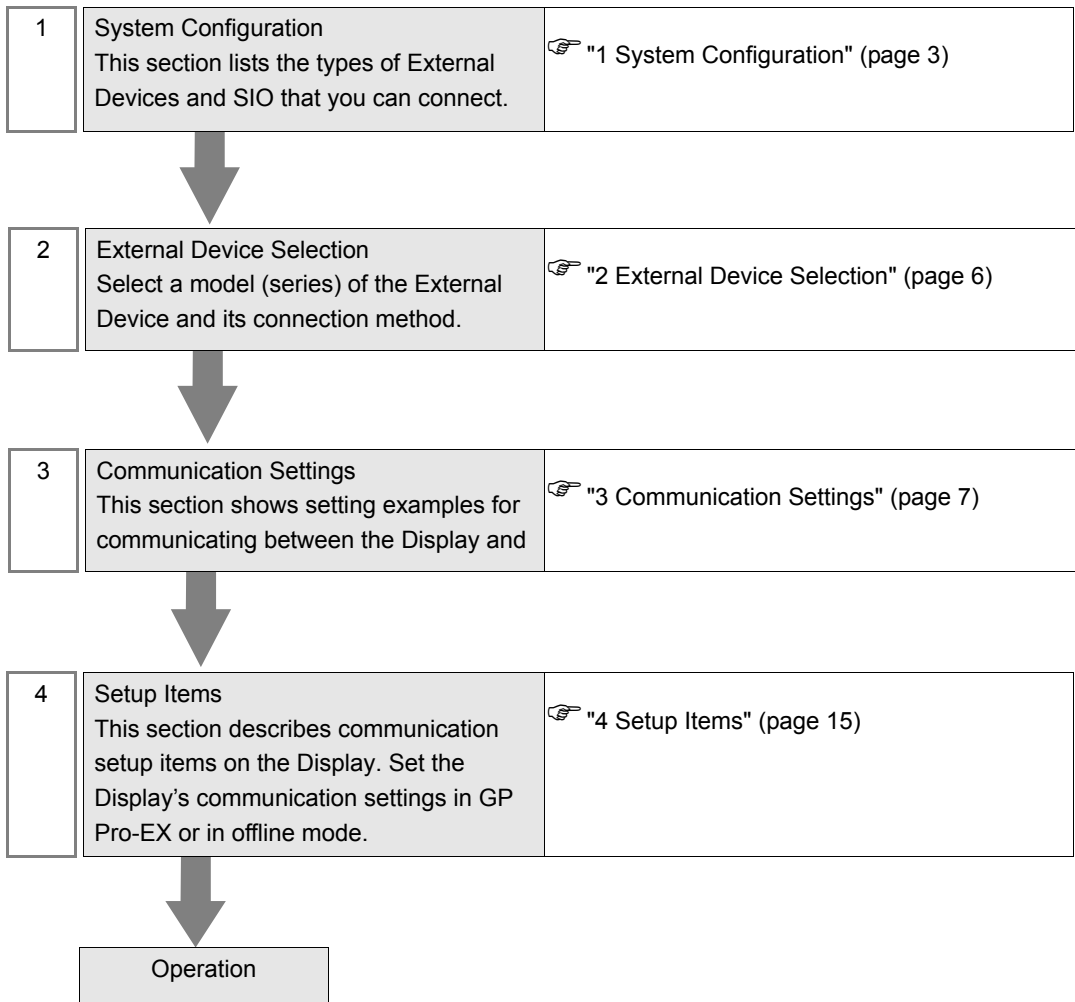
MEWTOCOL7-COM Ethernet Driver

| | | |
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Introduction

This manual describes how to connect the Display and the External Device (target PLC).

In this manual, the connection procedure will be described in the sections identified below:



1 System Configuration

The system configuration in the case when the External Device of Panasonic Industrial Devices SUNX and the Display are connected is shown.

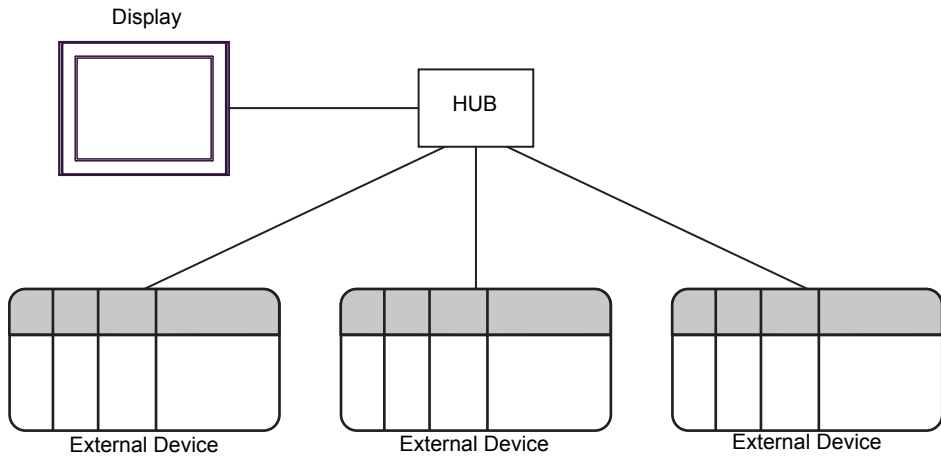
| Series | CPU | Link I/F | SIO Type | Setting Example |
|--------|--|-----------------|----------------|-----------------------------------|
| FP7 | AFP7CPS41E AFP7CPS31E AFP7CPS41ES AFP7CPS31ES | Built-In ET-LAN | Ethernet (UDP) | "3.1 Setting Example 1" (page 7) |
| | | | Ethernet (TCP) | "3.2 Setting Example 2" (page 9) |
| | | AFP7CCET1 | Ethernet (UDP) | "3.3 Setting Example 3" (page 11) |
| | | | Ethernet (TCP) | "3.4 Setting Example 4" (page 13) |
| | AFP7CPS31 AFP7CPS21 AFP7CPS31S | AFP7CCET1 | Ethernet (UDP) | "3.3 Setting Example 3" (page 11) |
| | | | Ethernet (TCP) | "3.4 Setting Example 4" (page 13) |

■ Connection Configuration

- 1:1 Connection



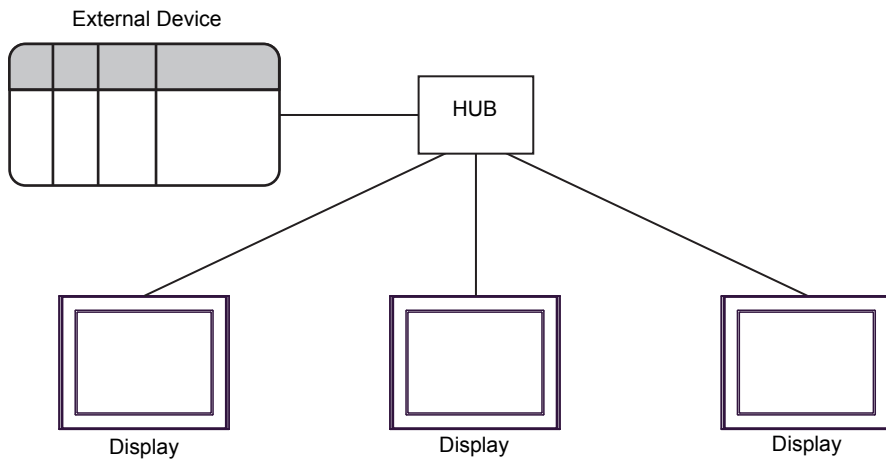
- 1:n Connection



NOTE

- The maximum number of connected External Device for one Display is 32 over UDP, or 16 over TCP.

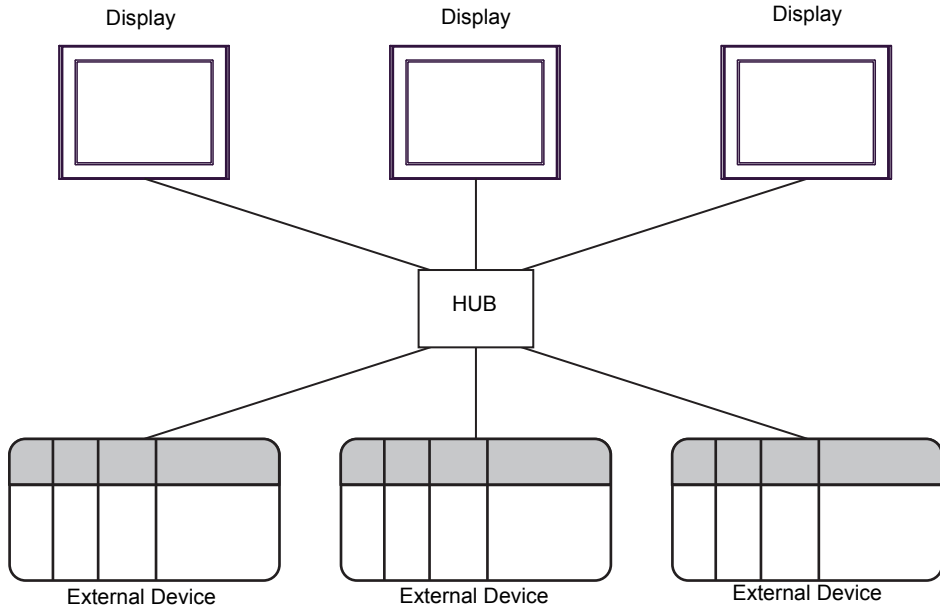
- n:1 Connection



NOTE

- The maximum number of connected Displays via the built-in ET-LAN for one External Device is 16, which includes the CPU unit's serial and USB connections. The maximum number of connected Displays via AFP7CCET1 for one External Device is 4.

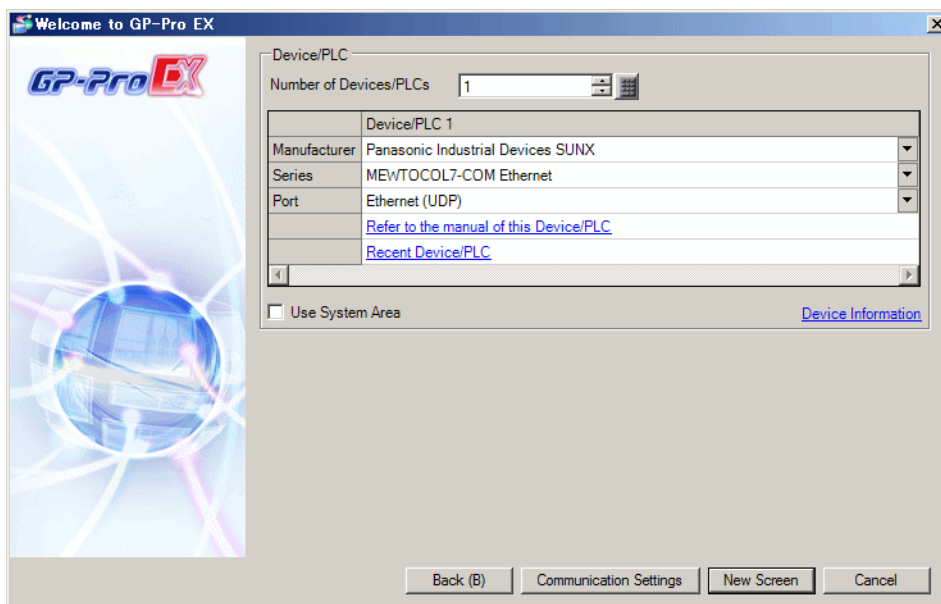
- n:m Connection

**NOTE**

- The maximum number of connected Displays via the built-in ET-LAN for one External Device is 16, which includes the CPU unit's serial and USB connections. The maximum number of connected Displays via AFP7CCET1 for one External Device is 4.
- The maximum number of connected External Devices for one Display is 32 over UDP, or 16 over TCP.

2 External Device Selection

Select the External Device to be connected to the Display.



| Setup Items | Setup Description |
|----------------------------|---|
| Number of Devices/ PLCs | Enter an integer from 1 to 4 to define the number of Devices/PLCs to connect to the display. |
| Manufacturer | Select the manufacturer of the External Device to connect. Select "Panasonic Industrial Devices SUNX". |
| Series | Select the External Device model (series) and the connection method. Select "MEWTOCOL7-COM Ethernet". In System configuration, make sure the External Device you are connecting is supported by "MEWTOCOL7-COM Ethernet". ☞ "1 System Configuration" (page 3) |
| Port | Select the Display port to be connected to the External Device. |
| Use System Area | Check this option to synchronize the system data area of the Display and the device (memory) of the External Device. When synchronized, you can use the External Device's ladder program to switch the display or display the window on the Display. Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)" This feature can also be set in GP-Pro EX or in the Display's offline mode. Cf. GP-Pro EX Reference Manual "System Settings [Display Unit] - [System Area] Settings Guide" Cf. Maintenance/Troubleshooting Guide "Main Unit - System Area Settings" |

3 Communication Settings

This section provides examples of communication settings recommended by Pro-face for the Display and the External Device.

3.1 Setting Example 1

■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings].

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

■ External Device Settings

Use the programming software (FPWIN GR7S) to set up communication settings on the External Device.

For details on communication settings, please refer to the manual of the External Device.

- 1 Select the [Create a New Project] option and click [OK].
- 2 From [Select PLC Type], select the [FP7] option and click [OK].
- 3 In the project tree, double-click [FP7 configuration].
- 4 From the [Selection of function] window, select the [Built-in ET-LAN] option and click [OK].
- 5 From the [Built-in ET-LAN] window, click [Basic communications information].
- 6 Set the [Home IP address (IPv4)] property to "192.168.1.5".
- 7 From the [Built-in ET-LAN] window, click [User connection information settings].
- 8 Define the External Device setup items with the following values.

| Setup Item | Setting description |
|-----------------------------------|------------------------------------|
| Connection to use specification | Use |
| Connection type | UDP/IP |
| Open type (server/client) | Server connection(any destination) |
| Open type(automatic/manual) | Open automatically. |
| Operating mode setting | MEWTOCOL-7 |
| Home port number | 60001 |
| Unused connection disconnect time | 0 |
| Destination setting method | Specify by IP address (IPv4). |
| Destination IP address/name | 192.168.1.1 |
| Destination port number | 1024 |

- 9 Click [OK].

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.


3.2 Setting Example 2

■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

■ External Device Settings

Use the programming software (FPWIN GR7S) to set up communication settings on the External Device.

For details on communication settings, please refer to the manual of the External Device.

- 1 Select the [Create a New Project] option and click [OK].
- 2 From [Select PLC Type], select the [FP7] option and click [OK].
- 3 In the project tree, double-click [FP7 configuration].
- 4 From the [Selection of function] window, select the [Built-in ET-LAN] option and click [OK].
- 5 From the [Built-in ET-LAN] window, click [Basic communications information].
- 6 Set the [Home IP address (IPv4)] property to "192.168.1.5".
- 7 From the [Built-in ET-LAN] window, click [User connection information settings].
- 8 Define the External Device setup items with the following values.

| Setup Item | Setting description |
|-----------------------------------|------------------------------------|
| Connection to use specification | Use |
| Connection type | TCP/IP |
| Open type (server/client) | Server connection(any destination) |
| Open type(automatic/manual) | Open automatically. |
| Operating mode setting | MEWTOCOL-7 |
| Home port number | 60001 |
| Unused connection disconnect time | 0 |

- 9 Click [OK].

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.


3.3 Setting Example 3

■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

■ External Device Settings

Use the configuration software (ConfiguratorWD) to set up communication settings on the External Device.

For details on communication settings, please refer to the manual of the External Device.

- 1 Start up the configuration software.
- 2 From the [Option] menu, select [Select the IP of PC] to display the [Setting IP Address] window.
- 3 Select the [Specify the IP address of PC] option, and click [OK].
- 4 From the [Search] menu, select the [Search BroadCast] option.
The connected External Device will appear.
- 5 Click the External Device to set up its IP address, and from the [Edit] menu select the [Setting IP Address] command.
- 6 Select the [Use this IP Address] option.
- 7 Set the IP Address to "192.168.1.5", and click [OK].
- 8 From the [Edit] menu, select [Communication Setting] to display the [Communication Setting] window.
- 9 Set the items to the following values, and click [OK].

| Setup Item | Setting description |
|--------------------|---------------------|
| Protocol Mode | UDP |
| Action Mode | Server Mode |
| Communication Mode | MEWTOCOL |
| Source Port No. | 60001 |
| Timeout | 15 |

- 10 Click [OK].

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.


3.4 Setting Example 4

■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device address in the [Individual Device Settings] dialog box.
- You need to set IP address on the Display in the offline mode of the Display.

■ External Device Settings

Use the configuration software (ConfiguratorWD) to set up communication settings on the External Device.

For details on communication settings, please refer to the manual of the External Device.

- 1 Start up the configuration software.
- 2 From the [Option] menu, select [Select the IP of PC] to display the [Setting IP Address] window.
- 3 Select the [Specify the IP address of PC] option, and click [OK].
- 4 From the [Search] menu, select the [Search BroadCast] option.
The connected External Device will appear.
- 5 Click the External Device to set up its IP address, and from the [Edit] menu select the [Setting IP Address] command.
- 6 Select the [Use this IP Address] option.
- 7 Set the IP Address to "192.168.1.5", and click [OK].
- 8 From the [Edit] menu, select [Communication Setting] to display the [Communication Setting] window.
- 9 Set the items to the following values, and click [OK].

| Setup Item | Setting description |
|--------------------|---------------------|
| Protocol Mode | TCP |
| Action Mode | Server Mode |
| Communication Mode | MEWTOCOL |
| Source Port No. | 60001 |
| Timeout | 15 |

- 10 Click [OK].

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.

4 Setup Items

Set up the Display's communication settings in GP-Pro EX or in the Display's offline mode.

The setting of each parameter must match that of the External Device.

☞ "3 Communication Settings" (page 7)

NOTE • Set the Display's IP address in offline mode.

Cf. Maintenance/Troubleshooting Guide "Ethernet Settings"

4.1 Setup Items in GP-Pro EX

■ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1

Summary [Change Device/PLC](#)

Manufacturer Panasonic Industrial Devices SUNI Series MEWTOCOL7-COM Ethernet Port Ethernet (TCP)

Text Data Mode 5 [Change](#)

Communication Settings

Port No. 1024 Auto

Timeout 5 (sec)

Retry 0

Wait To Send 0 (ms) [Default](#)

Device-Specific Settings

Allowable Number of Devices/PLCs 16 [Add Device](#)

| No. | Device Name | Settings | Add Indirect Device |
|-----|-------------|--|---------------------|
| 1 | PLC1 | IP Address=192.168.001.005, Port No.=60001, Enable | + |

| Setup Items | Setup Description |
|--------------|---|
| Port No. | Enter a port number of the External Device, using 0 to 65535. Check into [Auto], and a port number is set automatically. NOTE • [Auto] option is available to set only when you select "Ethernet (TCP)" in [Connecting Method]. |
| Timeout | Use an integer from 1 to 127 to enter the time (s) for which Display waits for the response from External Device. |
| Retry | In case of no response from the External Device, use an integer from 0 to 255 to enter how many times the Display retransmits the command. |
| Wait To Send | Use an integer from 0 to 255 to enter standby time (ms) for the Display from receiving packets to transmitting next commands. |

NOTE

- Refer to the GP-Pro EX Reference Manual for Indirect Device.

Cf. GP-Pro EX Reference Manual "Changing the Device/PLC at Runtime (Indirect Device)"

- If communication is interrupted during TCP communication, reconnecting communication will take some time.

The following tables show the amount of time required from interruption to reconnection. A communication error (RHxx065) displays until connection is re-established. The communication error does not appear if the time it takes for the Display to return to RUN mode exceeds the time it takes to re-establish communication.

As the amount of time required to reconnect depends on the Display port settings, we recommend using [Auto] with WinGP, and "Set value" with a display other than WinGP.

Using WinGP

| Operation | Display's port is [Set value] | Display's port is [Auto] |
|--------------------|-------------------------------|--------------------------|
| Enter offline mode | 2 minutes ^{*1} | Immediate recovery |
| Reset | 2 minutes ^{*1} | Immediate recovery |
| Restart WinGP | 2 minutes ^{*1} | Immediate recovery |


*1 Differs depending on the Windows [Time_Wait] setting. (Default: 120 seconds)

Using a display other than WinGP

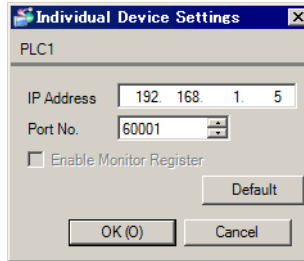
| Operation | Display's port is [Set value] | Display's port is [Auto] |
|--------------------|-------------------------------|--------------------------|
| Enter offline mode | Immediate recovery | Immediate recovery |
| Reset | Immediate recovery | 1 minute ^{*1} |
| Restart power | Immediate recovery | 1 minute ^{*1} |

*1 Differs depending on the External Device [Unused connection disconnect time] setting. (Default: 60 seconds)

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



| Setup Items | Setup Description |
|-------------------------|--|
| IP Address | Set IP address of the External Device. NOTE • Check with a network administrator about IP address. Do not set the duplicate IP address. |
| Port No. | Use an integer from 0 to 65535 to enter the port No. (Decimal) of the External Device. |
| Enable Monitor Register | Displays the Monitor Register setting. This property is unavailable with this driver. |

4.2 Setup Items in Offline Mode

NOTE

- Refer to the Maintenance/Troubleshooting guide for information on how to enter offline mode or about the operation.

Cf. Maintenance/Troubleshooting Guide "Offline Mode"

- In offline mode, the number of settings you can view on one screen varies depending on the Display in use. Please refer to the Reference Manual for more details.

◆ Communication Settings

To display the setting screen, touch [Device/PLC Settings] from [Peripheral Settings] in offline mode. Touch the External Device you want to set from the list that appears.

| Comm. | Device | | | |
|------------------------|---|--|-------|------------------------|
| MEWTOCOL7-COM Ethernet | | | [UDP] | Page 1/1 |
| Port No. | <input checked="" type="radio"/> Fixed <input type="radio"/> Auto | | | |
| | | | 1024 | ▼ ▲ |
| Timeout(s) | | | 5 | ▼ ▲ |
| Retry | | | 2 | ▼ ▲ |
| Wait To Send(ms) | | | 0 | ▼ ▲ |
| | Exit | | Back | 2015/09/07 11:03:07 |

| Setup Items | Setup Description |
|--------------|---|
| Port No. | Enter a port number of the Display. Select either "Fixed" or "Auto". Enter a port number of the Display with "0-65535", when select "Fixed". Assign automatically without affecting the input value, when select "Auto". |
| Timeout | Use an integer from 1 to 127 to enter the time (s) for which Display waits for the response from External Device. |
| Retry | In case of no response from the External Device, use an integer from 0 to 255 to enter how many times the display retransmits the command. |
| Wait To Send | Use an integer from 0 to 255 to enter standby time (ms) for the Display from receiving packets to transmitting next commands. |

NOTE

- If communication is interrupted during TCP communication, reconnecting communication will take some time.

The following tables show the amount of time required from interruption to reconnection. A communication error (RHxx065) displays until connection is re-established. The communication error does not appear if the time it takes for the Display to return to RUN mode exceeds the time it takes to re-establish communication.

As the amount of time required to reconnect depends on the Display port settings, we recommend using [Auto] with WinGP, and [Fixed] with a display other than WinGP.

Using WinGP

| Operation | Display's port is [Fixed] | Display's port is [Auto] |
|--------------------|---------------------------|--------------------------|
| Enter offline mode | 2 minutes ^{*1} | Immediate recovery |
| Reset | 2 minutes ^{*1} | Immediate recovery |
| Restart WinGP | 2 minutes ^{*1} | Immediate recovery |

*1 Differs depending on the Windows [Time_Wait] setting. (Default: 120 seconds)

Using a display other than WinGP

| Operation | Display's port is [Fixed] | Display's port is [Auto] |
|--------------------|---------------------------|--------------------------|
| Enter offline mode | Immediate recovery | Immediate recovery |
| Reset | Immediate recovery | 1 minute ^{*1} |
| Restart power | Immediate recovery | 1 minute ^{*1} |

*1 Differs depending on the External Device [Unused connection disconnect time] setting. (Default: 60 seconds)

◆ Device Setting

To display the setting screen, touch [Device/PLC Settings] from [Peripheral Settings]. Touch the External Device you want to set from the displayed list, and touch [Device].

| Comm. | Device | | | |
|-------------------------|--------|-------------|----------|------------------------|
| MEWTOCOL7-COM Ethernet | | [UDP] | Page 1/1 | |
| Device/PLC Name | | [PLC1] | | |
| IP Address | | 192 168 1 5 | | |
| Port No. | | 60001 ▼ ▲ | | |
| Enable Monitor Register | | No | | |
| Exit | | Back | | 2015/09/07 11:03:12 |

| Setup Items | Setup Description |
|-------------------------|--|
| Device/PLC Name | Select the External Device to set. Device/PLC name is the title of the External Device set with GP-Pro EX. (Initial value [PLC1]) |
| IP Address | Set IP address of the External Device. NOTE • Check with a network administrator about IP address. Do not set the duplicate IP address. |
| Port No. | Use an integer from 0 to 65535 to enter the port No. (Decimal) of the External Device. |
| Enable Monitor Register | Displays the Monitor Register setting. This property is unavailable with this driver. |

5 Supported Devices

The following table shows the range of supported device addresses. Please note that the actual supported range of the devices varies depending on the External Device to be used. Please check the actual range in the manual of your External Device.

 : This address can be specified as system data area.

| Device | Bit Address | Word Address | 32 bits | Remarks |
|--------------------------------|-------------------------|---------------------|---------|---------|
| External input relay | X00000 - X0511F | WX0000 - WX0511 | L/H | *1 |
| External output relay | Y00000 - Y0511F | WY0000 - WY0511 | | *1 |
| Internal relay | R00000 - R02047F | WR0000 - WR2047 | | *1 |
| Link relay | L00000 - L1023F | WL0000 - WL1023 | | *1 |
| System relay | SR00000 - SR0223F | WS0000 - WS0223 | | *2 |
| Timer(Contact) | T00000 - T04095 | - | | *1 *2 |
| Counter(Contact) | C00000 - C01023 | - | | *1 *2 |
| Pulse relay | P00000 - P0255F | - | | *1 *2 |
| Error alarm relay | E00000 - E04095 | - | | *1 *2 |
| Direct input | IN00000 - IN0062F | WI0000 - WI0062 | | *2 *3 |
| Direct output | OT00000 - OT0062F | WO0000 - WO0062 | | *3 |
| Data register | DT000000.0 - DT999423.F | DT000000 - DT999423 | | *1 |
| Link register | LD00000.0 - LD16383.F | LD00000 - LD16383 | | *1 |
| Unit Memory | UM00000.0 - UM7FFFF.F | UM00000 - UM7FFFF | | *3 *5 |
| System data | - | SD00000 - SD00255 | | *2 |
| Timer set value register | - | TS00000 - TS04095 | | *1 *4 |
| Timer elapsed value register | - | TE00000 - TE04095 | | *1 *4 |
| Counter set value register | - | CS00000 - CS01023 | | *1 *4 |
| Counter elapsed value register | - | CE00000 - CE01023 | | *1 *4 |
| Index register | - | I0000 - I000E | *4 *5 | |

*1 You can use these devices as a global device and local device. If used as a local device, configure a program block number. Please enter the program block number of the program with the local device.

Example:

X000 (Global external input device, address 000)

023_X000 (Local external input device, Program block 23, address 000)

*2 Write disabled

*3 You need to set the slot number for these devices. You can use these devices without the program block number.


Example:

S16:IN000 (Direct input device, Slot number 16, address 000)

*4 32-bit device

*5 Hexadecimal address

NOTE

- You can only set the Read Area Size for the system area available to use in the External Device. Please refer to the GP Pro-EX Reference Manual for Read Area Size.
Cf. GP Pro-EX Reference Manual "LS Area (Direct Access Method Area)"
 - Refer to the precautions on manual notation for icons in the table.
 "Manual Symbols and Terminology"
-

6 Device Code and Address Code

Use device code and address code when you select "Device Type & Address" for the address type in data displays.

■ Global Devices

| Device | Device Name | Device Code (HEX) | Address Code |
|--------------------------------|-------------|-------------------|--------------|
| External input relay | X / WX | 0080 | Word Address |
| External output relay | Y / WY | 0081 | Word Address |
| Internal relay | R / WR | 0082 | Word Address |
| Link relay | L / WL | 0084 | Word Address |
| System relay | SR / WS | 0089 | Word Address |
| Data register | DT | 0000 | Word Address |
| Link register | LD | 0002 | Word Address |
| System data | SD | 0004 | Word Address |
| Timer set value register | TS | 0064 | Word Address |
| Timer elapsed value register | TE | 0065 | Word Address |
| Counter set value register | CS | 0062 | Word Address |
| Counter elapsed value register | CE | 0063 | Word Address |
| Index register | I | 0005 | Word Address |

■ Unit / Local Devices

| Device | Device Name | Device Code (HEX) | Address Code |
|-----------------------|-------------|-------------------|--|
| External input relay | _X / _WX | 0090 | (Program No. × 0x10000) + Word Address |
| External output relay | _Y / _WY | 0091 | (Program No. × 0x10000) + Word Address |
| Internal relay | _R / _WR | 0092 | (Program No. × 0x10000) + Word Address |
| Link relay | _L / _WL | 0094 | (Program No. × 0x10000) + Word Address |
| Direct input | IN / WI | 0097 | (Unit No. × 0x10000) + Word Address |
| Direct output | OT / WO | 0098 | (Unit No. × 0x10000) + Word Address |
| Data register | _DT | 0014 | (Program No. × 0x10000) + Word Address |
| Link register | _LD | 0012 | (Program No. × 0x10000) + Word Address |

| Device | Device Name | Device Code (HEX) | Address Code |
|--------------------------------|-------------|-------------------|--|
| Unit Memory | UM | 0013 | (Unit No. × 0x10000) + Word Address |
| Timer set value register | _TS | 0074 | (Program No. × 0x10000) + Word Address |
| Timer elapsed value register | _TE | 0075 | (Program No. × 0x10000) + Word Address |
| Counter set value register | _CS | 0072 | (Program No. × 0x10000) + Word Address |
| Counter elapsed value register | _CE | 0073 | (Program No. × 0x10000) + Word Address |

7 Error Messages

Error messages are displayed on the Display screen as follows: "No.: Device Name: Error Message (Error Occurrence Area)". Each description is shown below.

| Item | Description |
|-----------------------|---|
| No. | Error No. |
| Device Name | Name of the External Device where error occurs. Device name is a title of the External Device set with GP-Pro EX. (Initial value [PLC1]) |
| Error Message | Displays messages related to the error which occurs. |
| Error Occurrence Area | Displays IP address or device address of the External Device where error occurs, or error codes received from the External Device. <div style="border: 1px solid black; padding: 2px; margin-top: 5px;"> NOTE <ul style="list-style-type: none"> IP address is displayed such as "IP address(Decimal): MAC address(Hex)". Device address is displayed such as "Address: Device address". Received error codes are displayed such as "Decimal[Hex]". </div> |

Display Examples of Error Messages

"RHAA035: PLC1: Error has been responded for device write command (Error Code: 2 [02H])"

- NOTE**

 - Refer to your External Device manual for details on received error codes.
 - Refer to "Display-related errors" in "Maintenance/Troubleshooting Guide" for details on the error messages common to the driver.

■ Error Code Unique to External Device

| Error Code (HEX) | Description |
|------------------|--|
| 41 | Format error Received command in the wrong format. |
| 42 | NOT support error Received an unsupported command. |
| 60 | Parameter error Specified parameter contents do not exist, or cannot be used. |
| 61 | Data error There is an error in the contact, data area, data number, size, range, or format. |
| 62 | Registration over error Exceeded the registration limit, or operation run without any registrations. |
| 63 | PC mode error Invalid command executed in RUN mode. |
| 71 | Exclusive control error Executed a command that cannot be processed simultaneously with the command already in process. |

| Error Code (HEX) | Description |
|------------------|--|
| 80 | Guarantee data abnormality error CRC code indicates an error. |
| 91 | Expansion slave unit missing error Specified a slot number without an expansion slave unit installed. |