SIMATIC S7 MPI Direct Driver Pass-Through Function Guide
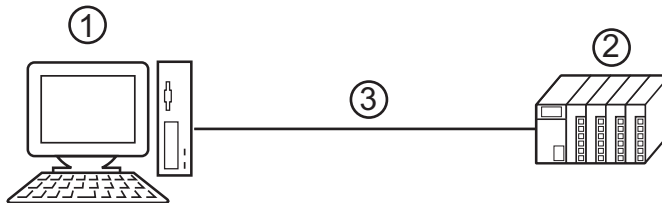
1 General Description

The description below explains the operation of the pass through function using the Siemens AG SIMATIC S7 MPI Direct Driver (hereinafter referred to as "MPI pass through function").

1.1 What is the MPI Pass Through Function?

When communicating with an External Device with ladder software made by Siemens AG, the MPI interface needs to be installed in a PC having ladder software.
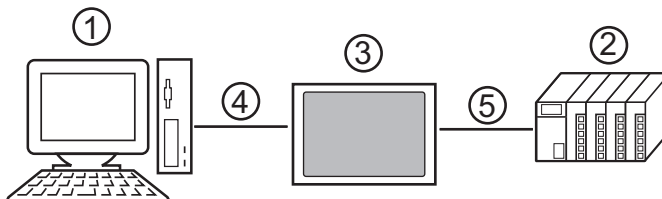
Example)

    1. PC with the ladder software installed.

    2. External Device to be communicated with.

    3. MPI network

A PC without an MIP interface can communicate with an External Device via the Display using the MPI pass through function.

In addition, since it goes through the Display, cable-reconnecting work can be omitted when changing External Device settings.
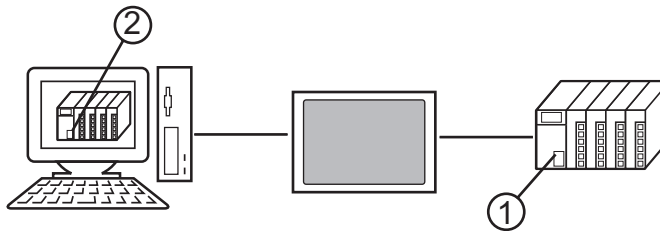
Example)

    1. PC with the ladder software installed.

    2. External Device to be communicated with.

    3. Relay Display between the PC and External Device.

    4. Communication using an USB Transfer Cable or Ethernet (UDP).

    5. MPI network (Siemens AG SIMATIC S7 MPI Direct Driver)

1.2　　　　Mechanism of the MPI Pass through Function

MPI pass through function is a mechanism for communication of ladder software with External Device by converting USB or Ethernet (UDP) communication to MPI network communication at the relay Display. Siemens AG SIMATIC S7 MPI Direct Driver is used for the Display to communicate using an MPI network. The MPI pass through function is provided as a plug-in for ladder software.

Example)

Installing the plug-in to ladder software enables operation of the External Device via a Display.

    1. External Device to be operated.

    2. Ladder software with plug-in installed.

The plug-in offers the functions listed below.

- Making an access path that goes through the Display.
- Mutual transformation between communication using USB or Ethernet (UDP) and communication using MPI network (Siemens AG SIMATIC S7MPI Direct Drive).

1.3　　　　Operation Environment

The following environment is required to use the pass through function.

Compatible OS

Microsoft® Windows® 2000 Professional (SP4 or later)

Microsoft® Windows® XP (SP2 or later)

Microsoft® Windows Vista®

Microsoft® Windows® 7

NOTE ┃ • 64-bit operating systems are not compatible.

Compatible ladder software

SIEMENS SIMATIC Software STEP7 Ver.5.1 or later

STEP7 - Micro/WIN Ver.4.0.1.10 or later

■ Precautions

• When it takes a long time for External Device to respond (e.g. writing to RAM), set the larger value to [Timeout] in [Communication settings] than the response time from External Device.

2 Install

Installation of the plug-in for MPI pass through function use.

IMPORTANT	• Install the Pass-Through Function under the administrative privileges. • Be sure to quit all application programs and close (disable) all resident programs, such as virus detection software. • If the dialog box, "User Account Control" is displayed, choose "Allow."

2.1 Install of MPI Pass Through Function

1 Start up the installer (AgpMpiLink.exe) of MPI pass through function. To do so, either start up AgpMpiLink.exe in the [\PassThrough] folder of the CD-ROM (Disk 2) of GP-Pro EX Version 2.1 or higher, or download AgpMpiLink.exe from the digital support site, "Otasuke Pro!" (http://www.pro-face.com/otasuke/) and start up it.

2 Install the plug-in by following the displayed dialog boxes.

3   Setting

The installed plug-ins are set and registered by the ladder software.

3.1   Registration of the MPI Pass Through Function Plug-in

3.1.1   When using SIEMENS SIMATIC Software STEP7:

1 Select [Set PG/PC Interface] from [Options] the ladder software menu to display [Set PG/PC Interface] dialog box.

2 Click [Select] from [Interface] to display [Install/Remove Interfaces] dialog box.

3 Select the "AGP MPI Link" module from [Selection] and click [Install].

4 Confirm "AGP MPI Link" is displayed on [Installed], and click [Close].

Then registration of the plug-in is finished. Continue to set the MPI pass through function plug-in.
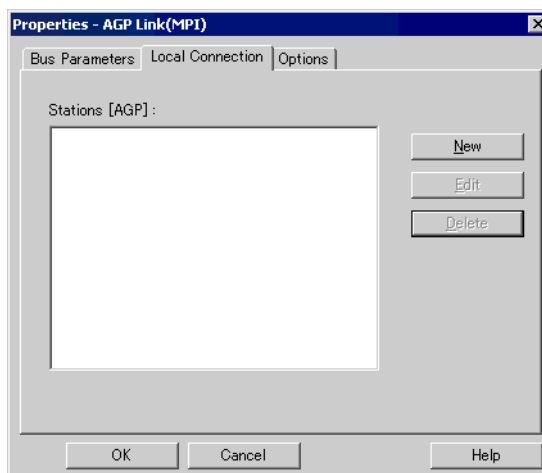
3.1.2   When using STEP7 - Micro/WIN:

1 Select [Component]-[Set PG/PC Interface] from [View] the ladder software menu to display [Set PG/PC Interface] dialog box.

2 Click [Select] from [Interface] to display [Install/Remove Interfaces] dialog box.

3 Select the "AGP MPI Link" module from [Selection] and click [Install].

4 Confirm "AGP MPI Link" is displayed on [Installed], and click [Close].

Then registration of the plug-in is finished. Continue to set the MPI pass through function plug-in.

3.2   Setting of the MPI Pass Through Function Plug-in

3.2.1   When using SIEMENS SIMATIC Software STEP7:

1 Select [Set PG/PC Interface] from [Options] the ladder software menu to display [Set PG/PC Interface] dialog box.

2 Select the "AGP MPI Link" from [Interface Parameter Assignment Used] and click [Properties].

[Properties - AGP Link(MPI)] dialog box is displayed.

3 Register the Display to relay communication at [Local Connection] tab. Click [New] to display setting dialog box. Setup items are as follows.

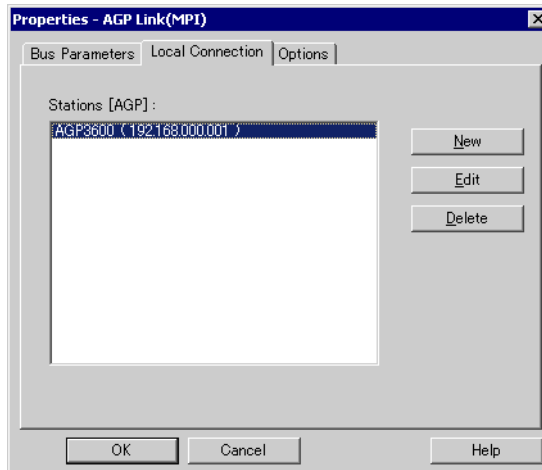| Setup Items	Setup Description
Connection Type	Select connection type between the ladder software and Display from UDP, USB (A to A) and USB (A to Mini B) . The details on the display of the connection type are as follows: • UDP: Connection with Ethernet cable • USB (A to A): Connection with USB Transfer Cable (CA3-USBCB-01) • USB (A to Mini B): Connection with USB Data Transfer Cable (USB A/Mini B 1.8m) (ZC9USCBMB1)
Address	When UDP is selected for [Connection Type], enter IP address of Display. By clicking [Search], Display on the network is searched, so the Display to be registered can be selected from the search results. When USB (A to A) or USB (A to Mini B) is selected for [Connection Type], IP address does not need to be set.
Name	Input name of the Display to be registered.

NOTE
• For editing the registered Display, select Display to be edited from [Stations [AGP]] and click [Edit]
• Displays can be searched by clicking [Search] of [Address] as shown in the figure below. If a Display cannot be searched, search can be done using a port number. Enter a port number into [Ethernet Port No.] of [settings] and click [Search].
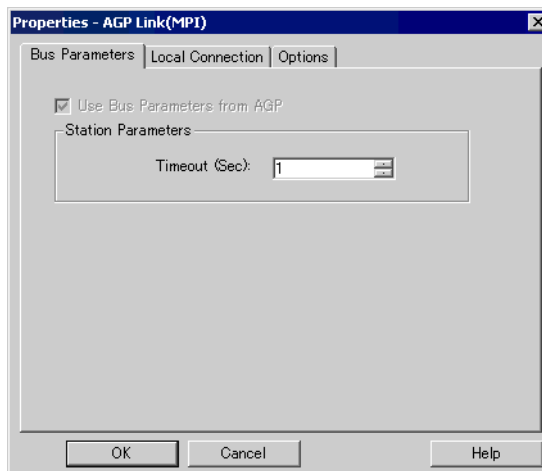
4 Enter setup items and click [OK]. Registered Display is indicated in [Stations [AGP]] of [Local Connection] tab.

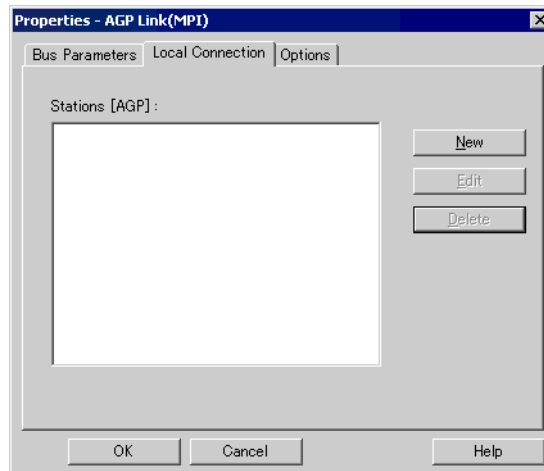5 Click [Bus Parameter] tab of [Properties - AGP Link(MPI)] dialog box to set time out.

6 Click [OK] and to close [Properties - AGP Link(MPI)] dialog box.

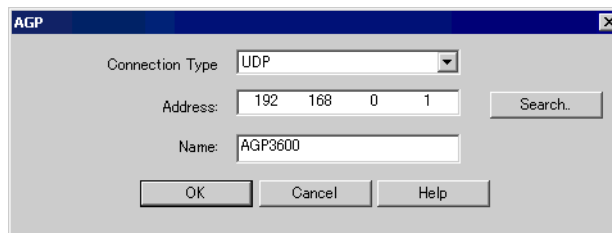Then the setting of MPI pass through function plug-in is finished.

NOTE • Plug-in version can be checked at [Options] tab of [Properties - AGP Link(MPI)] dialog box.

3.2.2   When using STEP7 - Micro/WIN:

1 Select [Component]-[Set PG/PC Interface] from [View] the ladder software menu to display [Set PG/PC Interface] dialog box.

2 Select the "AGP MPI Link" from [Interface Parameter Assignment Used] and click [Properties]. [Properties - AGP Link(MPI)] dialog box is displayed.
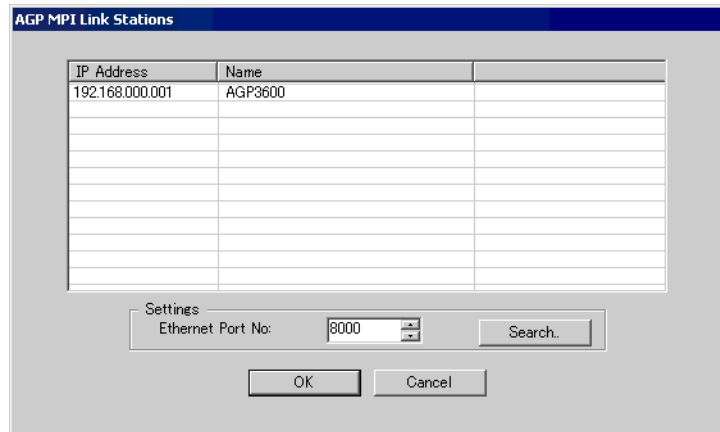

3 Register the Display to relay communication at [Local Connection] tab. Click [New] to display setting dialog box. Setup items are as follows.
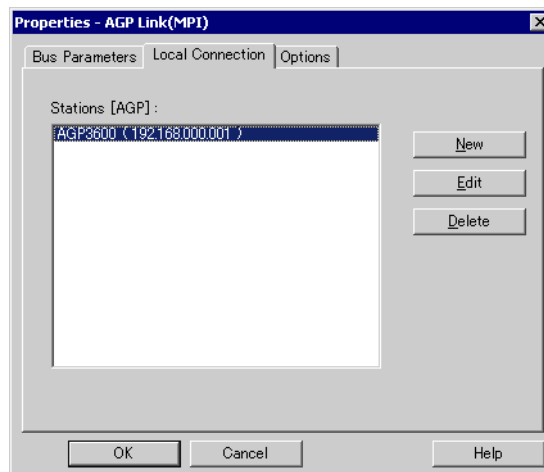

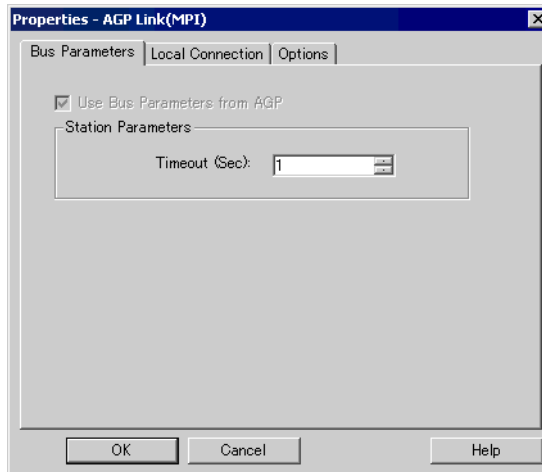| Setup Items	Setup Description
Connection Type	Select connection type between the ladder software and Display from UDP, USB (A to A) and USB (A to Mini B) . The details on the display of the connection type are as follows: • UDP: Connection with Ethernet cable • USB (A to A): Connection with USB Transfer Cable (CA3-USBCB-01) • USB (A to Mini B): Connection with USB Data Transfer Cable (USB A/Mini B 1.8m) (ZC9USCBMB1)
Address	When UDP is selected for [Connection Type], enter IP address of Display. By clicking [Search], Display on the network is searched, so the Display to be registered can be selected from the search results. When USB (A to A) or USB (A to Mini B) is selected for [Connection Type], IP address does not need to be set.
Name	Input name of the Display to be registered.

NOTE
- For editing the registered Display, select Display to be edited from [Stations [AGP]] and click [Edit]
- Displays can be searched by clicking [Search] of [Address] as shown in the figure below. If a Display cannot be searched, search can be done using a port number. Enter a port number into [Ethernet Port No.] of [settings] and click [Search].

4 Enter setup items and click [OK]. Registered Display is indicated in [Stations [AGP]] of [Local Connection] tab.

5 Click [Bus Parameter] tab of [Properties - AGP Link(MPI)] dialog box to set time out.

6 Click [OK] and to close [Properties - AGP Link(MPI)] dialog box.

Then the setting of MPI pass through function plug-in is finished.

NOTE • Plug-in version can be checked at [Options] tab of [Properties - AGP Link(MPI)] dialog box.

4   Appendix

4.1   Uninstall of MPI Pass Through Function

4.1.1   When the SIEMENS SIMATIC Software STEP7 is used:

1 Select [Set PG/PC Interface] from [Option] the ladder software menu to display [Set PG/PC Interface] dialog box.

2 Select [AGP MPI Link] from [Interface Parameter Assignment Used] and click [Delete].

3 Confirm that [AGP MPI Link] is not in [Interface Parameter Assignment Used] and end ladder software.

4 Start up [Control Panel] from [Start] menu of Windows and select [Add or Remove Programs] (for Windows XP), [Add/Remove Programs] (for Windows 2000) or [Uninstall a program](for Windows Vista).

5 Select [AgpMPIPassThrough] and click [Change/Remove] (for Windows XP/2000) or [Uninstall] (for Windows Vista).

6 Select [Remove] in displayed dialog box and click [Next].

4.1.2   When the STEP7 - Micro/WIN is used:

1 Select [Component]-[Set PG/PC Interface] from [View] the ladder software menu to display [Set PG/PC Interface] dialog box.

2 Select [AGP MPI Link] from [Interface Parameter Assignment Used] and click [Delete].

3 Confirm that [AGP MPI Link] is not in [Interface Parameter Assignment Used] and end ladder software.

4 Start up [Control Panel] from [Start] menu of Windows and select [Add or Remove Programs] (for Windows XP), [Add/Remove Programs] (for Windows 2000) or [Uninstall a program](for Windows Vista).

5 Select [AgpMPIPassThrough] and click [Change/Remove](for Windows XP/2000) or [Uninstall] (for Windows Vista).

6 Select [Remove] in displayed dialog box and click [Next].