



NATIONAL INSTRUMENTS FOUNDATION Fieldbus Interface Device Installation Guide

[Home](#) » [NATIONAL INSTRUMENTS](#) » NATIONAL INSTRUMENTS FOUNDATION Fieldbus Interface Device Installation Guide 

Contents

- [1 NATIONAL INSTRUMENTS FOUNDATION Fieldbus Interface Device](#)
- [2 Product Installation](#)
- [3 Installing the Software](#)
- [4 Installing the Hardware](#)
- [5 Documents / Resources](#)
 - [5.1 References](#)
- [6 Related Posts](#)



NATIONAL INSTRUMENTS FOUNDATION Fieldbus Interface Device



This guide contains installation and configuration instructions for the PCI-FBUS, PCMCIA-FBUS, USB-8486, and the FBUS-HSE/H1 linking device on Windows.

Notes: Install the NI-FBUS software before you install the hardware.

The PCI-FBUS-2 is a Foundation Fieldbus hardware device that comes with NI-FBUS software for Windows. This installation guide provides instructions on how to install and configure the PCI-FBUS, PCMCIA-FBUS, USB-8486, and FBUS-HSE/H1 linking device.

Product Installation

Installing the Software

Before installing the hardware, you need to install the NI-FBUS software by following these steps:

1. Log in as Administrator or as a user with Administrator privileges.
2. Insert the NI-FBUS Software for Windows CD into the CD-ROM drive. If the installer does not launch automatically, navigate to the CD using Windows Explorer and launch the autorun.exe file from the CD.
3. The interactive setup program guides you through the necessary steps to install the NI-FBUS software. You may go back and change values where appropriate by clicking Back. You can exit the setup where appropriate by clicking Cancel.
4. Power down your computer when the setup is complete.

Install Your PCI-FBUS Card

Before removing the card from the package, touch the antistatic plastic package to a metal part of the system chassis to discharge electrostatic energy, which can damage several components on the PCI-FBUS card. Follow these steps to install the PCI-FBUS card:

1. Shut down and power off the computer. Keep the computer plugged in so that it remains grounded while you install the PCI-FBUS card.
2. Remove the top cover or access port of the I/O channel.
3. Remove the expansion slot cover on the back panel of the computer.
4. Insert the PCI-FBUS card into any unused PCI slot with the Fieldbus connector protruding from the opening on the back panel. Make sure all pins are inserted an equal depth into the connector. Although it might be a tight fit, do not force the card into place.

Install Your PCMCIA-FBUS Card

The PCMCIA-FBUS card can be installed by following these steps:

1. Shut down and power off the computer. Keep the computer plugged in so that it remains grounded while you install the PCMCIA-FBUS card.
2. Insert the PCMCIA-FBUS card into the PCMCIA slot on your computer.

Install Your USB-8486

The USB-8486 can be installed by following these steps:

1. Insert the USB-8486 into an available USB port on your computer.

Install Your FBUS-HSE/H1 LD

The FBUS-HSE/H1 LD can be installed by following these steps:

1. Shut down and power off the computer. Keep the computer plugged in so that it remains grounded while you install the FBUS-HSE/H1 LD.
2. Connect the FBUS-HSE/H1 LD to your computer using a standard serial or parallel port cable.

After installing the hardware, you can configure it as per your requirements. We hope this guide helps you successfully install and configure your PCI-FBUS-2 device. If you have any questions or concerns, please refer to the user manual or contact our customer support.

Installing the Software

Complete the following steps to install the NI-FBUS software.

Caution: If you are reinstalling the NI-FBUS software over a previous version, write down your card configuration and any port configuration parameters you changed from their defaults. Reinstalling the software may cause you to lose any existing card and port configuration information.

1. Log in as Administrator or as a user that has Administrator privileges.

2. Insert the NI-FBUS Software for Windows CD into the CD-ROM drive.
 - If the installer does not launch automatically, navigate to the CD using Windows Explorer and launch the autorun.exe file from the CD.
3. The interactive setup program guides you through the necessary steps to install the NI-FBUS software. You may go back and change values where appropriate by clicking Back. You can exit the setup where appropriate by clicking Cancel.
4. Power down your computer when the setup is complete.
5. Continue to the Installing the Hardware section to configure and install your hardware.

Installing the Hardware

This section describes how to install your PCI-FBUS, PCMCIA-FBUS, USB-8486, and FBUS-HSE/H1 linking device.

Note: Here, the term PCI-FBUS represents PCI-FBUS/2; the term PCMCIA-FBUS represents PCMCIA-FBUS, PCMCIA-FBUS/2, PCMCIA-FBUS Series 2, and PCMCIA-FBUS/2 Series 2.

Install Your PCI-FBUS Card

Caution: Before you remove the card from the package, touch the antistatic plastic package to a metal part of the system chassis to discharge electrostatic energy, which can damage several components on the PCI-FBUS card.

To install the PCI-FBUS card, complete the following steps

1. Shut down and power off the computer. Keep the computer plugged in so that it remains grounded while you install the PCI-FBUS card.
2. Remove the top cover or access port of the I/O channel.
3. Remove the expansion slot cover on the back panel of the computer.

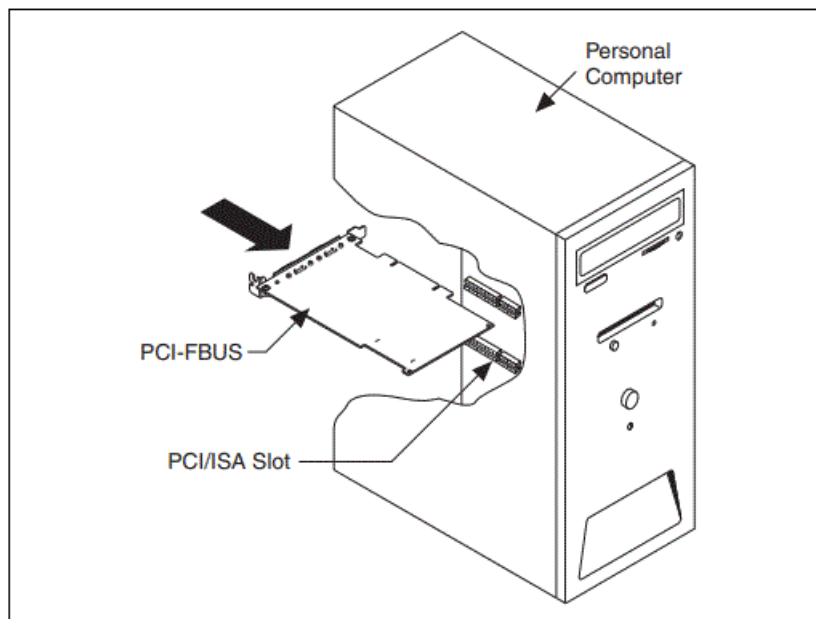


Figure 1. Installing the PCI-FBUS Card

4. As shown in Figure 1, insert the PCI-FBUS card into any unused PCI slot with the Fieldbus connector protruding from the opening on the back panel. Make sure all pins are inserted an equal depth into the connector. Although it might be a tight fit, do not force the card into place.

5. Screw the mounting bracket of the PCI-FBUS card to the back panel rail of the computer.
6. Keep the top cover or access port off until you have verified that the hardware resources do not conflict.
7. Power on the computer.
8. Launch the Interface Configuration Utility. Find the PCI-FBUS card and right-click to enable.
9. Close the Interface Configuration Utility and start the NI-FBUS Communications Manager or NI-FBUS Configurator.

Install Your PCMCIA-FBUS Card

Caution: Before you remove the card from the package, touch the antistatic plastic package to a metal part of the system chassis to discharge electrostatic energy, which can damage several components on the PCMCIA-FBUS card.

To install the PCMCIA-FBUS card, complete the following steps

1. Power on the computer and allow the operating system to boot.

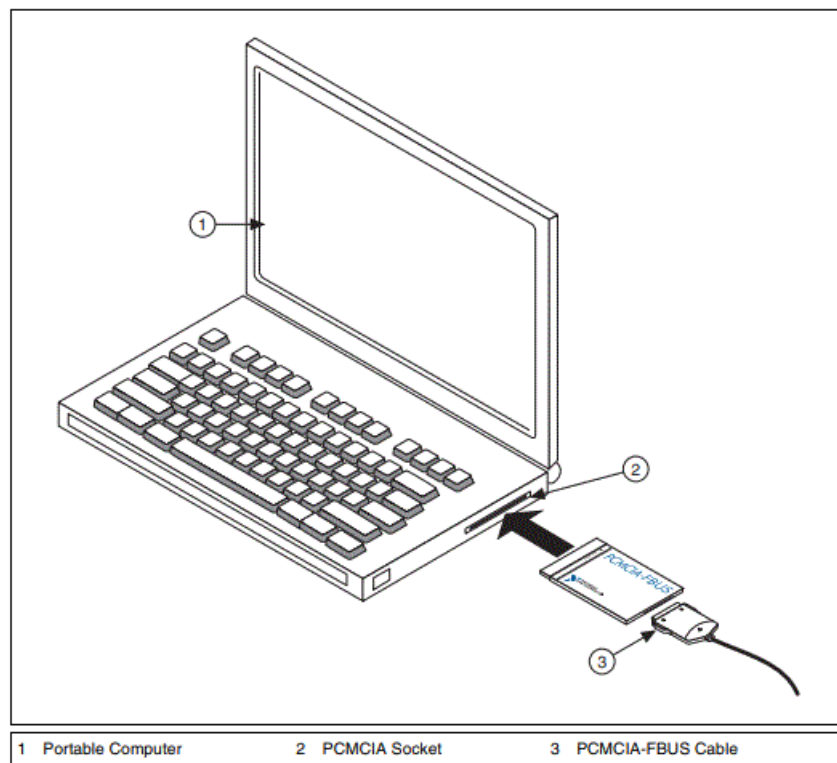


Figure 2. Inserting the PCMCIA-FBUS Card

2. Insert the card into a free PCMCIA (or Cardbus) socket. The card has no jumpers or switches to set. Figure 2 shows how to insert the PCMCIA-FBUS and how to connect the PCMCIA-FBUS cable and connector to the PCMCIA-FBUS card. However, the PCMCIA-FBUS/2 cable has two connectors. Refer to Chapter 3, Connector and Cabling, of the NI-FBUS Hardware and Software User Manual, for more information about these two connectors.
3. Connect the PCMCIA-FBUS to the Fieldbus network.
 - Your kit contains a PCMCIA-FBUS cable. Refer to Chapter 3, Connector and Cabling, of the NI-FBUS Hardware and Software User Manual, if you need a longer cable than the PCMCIA-FBUS cable provided.

Install Your USB-8486

Caution: Operate the USB-8486 only as described in the operating instructions. Do not unplug the USB-8486

when the NI-FBUS software is running.

To install the USB-8486, complete the following steps

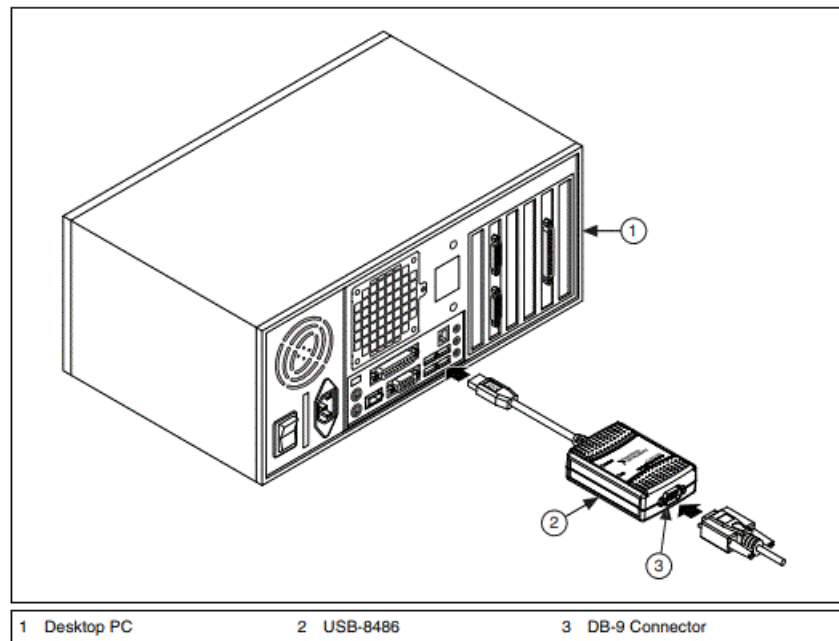


Figure 3. Connecting the USB-8486 to a Desktop PC

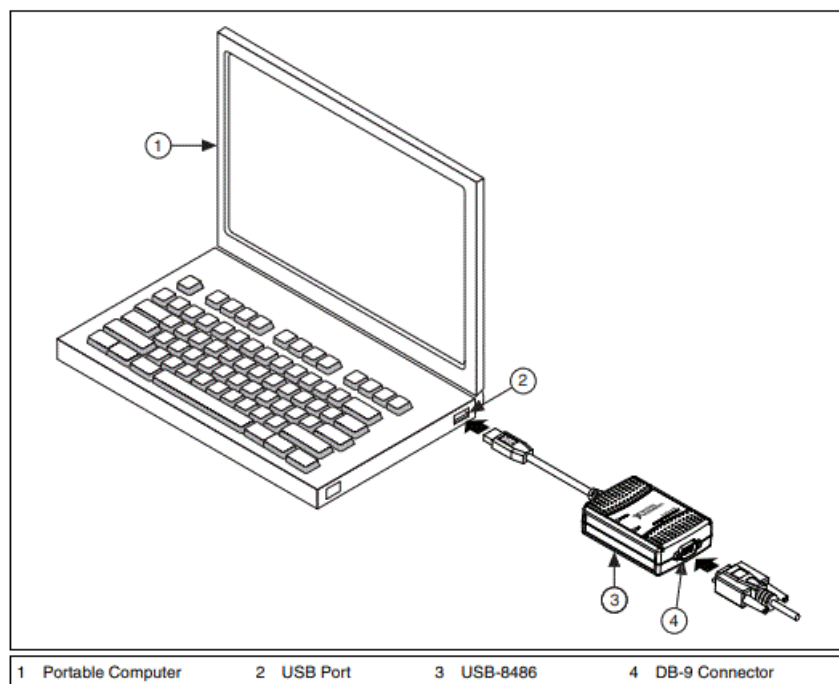


Figure 4. Inserting the USB-8486

1. Power on the computer and allow the operating system to boot.
2. Insert the USB-8486 into a free USB port, as shown in Figure 3 and Figure 4.
3. Connect the USB-8486 to the Fieldbus network. Refer to the NI-FBUS Hardware and Software User Manual for more information about the connectors.
4. Launch the Interface Configuration Utility.
5. Right-click the USB-8486 to enable if it is disabled.
6. Close the Interface Configuration Utility and start the NI-FBUS Communications Manager or NI-FBUS Configurator.

Install Your FBUS-HSE/H1 LD

The FBUS-HSE/H1 LD has a simple rail clip for reliable mounting onto a standard 35 mm DIN rail. To install the FBUS-HSE/H1 LD, complete the following steps.

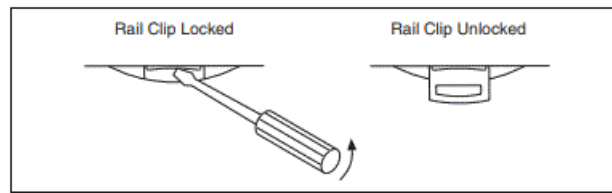


Figure 5. DIN Rail Clip

1. Use a flathead screwdriver to open the DIN rail clip to the unlocked position, as shown in Figure 5.

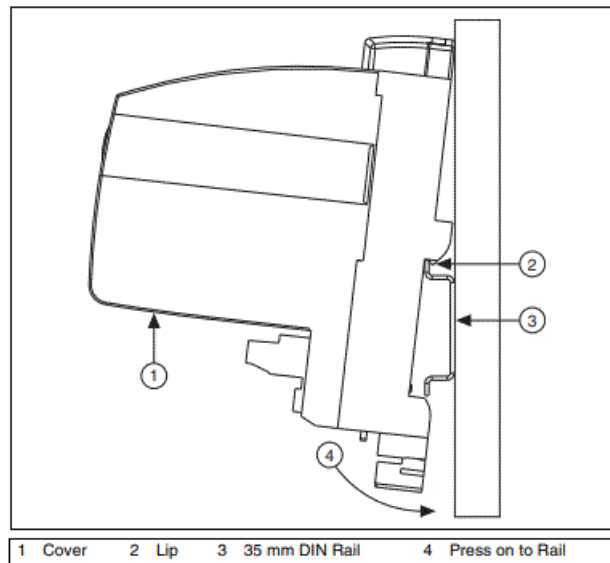


Figure 6. Mounting the FBUS-HSE/H1 LD on a DIN Rail

2. Hook the lip on the rear of the FBUS-HSE/H1 LD onto the top of a 35 mm DIN rail and press the FBUS-HSE/H1 LD down onto the DIN rail, as shown in Figure 6.
3. Slide the FBUS-HSE/H1 LD to the desired position along the DIN rail. After the FBUS-HSE/H1 LD is in position, lock it to the DIN rail by pushing the rail clip to the locked position, as shown in Figure 5.
4. Connect the RJ-45 Ethernet port of the FBUS-HSE/H1 LD to an Ethernet hub using a standard Category 5 Ethernet cable.
 - **Note:** Do not use a cable longer than 100 m. If you are using a 10 Mbps Ethernet, National Instruments recommends using a Category 5 shielded twisted-pair Ethernet cable.

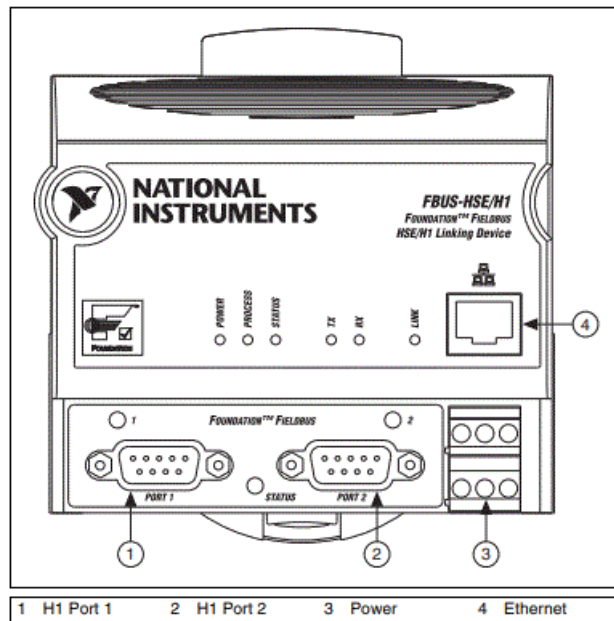


Figure 7. Connectors on the FBUS-HSE/H1 LD

5. Figure 7 shows the power, H1, and Ethernet connectors on the FBUS-HSE/H1 LD.
6. Use the Fieldbus cable with 9-pin female D-sub connector to connect the H1 ports of FBUS-HSE/H1 LD to a Fieldbus network.

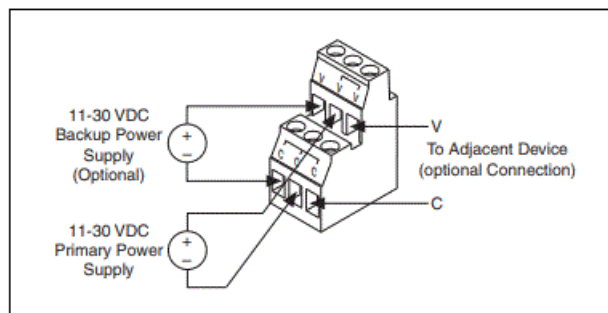



Figure 8. FBUS-HSE/H1 Power Connector Pinout

7. Connect the primary 11–30 VDC power supply to the center V and C pair with the positive and negative wires on your power cable in the V and C terminals, respectively. You can connect an optional backup power supply to the left V and C pair. The power connector is a 6-pin screw terminal power connector whose pinout is shown in Figure 8.
8. Power on your FBUS-HSE/H1 LD. At power-up, the FBUS-HSE/H1 LD runs a set of power-on self tests (POST) that take several seconds, and the green POWER LED is lit. For more information about reading the POST status, refer to the LED Indicators section of Appendix B, Troubleshooting and Common Questions, of the NI-FBUS Hardware and Software User Manual.

Note: If you are using the third-party HSE/H1 linking device, refer to the related user manual or reference materials to install the hardware.

LabVIEW, National Instruments, NI, ni.com, the National Instruments corporate logo, and the Eagle logo are trademarks of National Instruments Corporation. Refer to the Trademark Information at ni.com/trademarks for other National Instruments trademarks. Other product and company names mentioned herein are trademarks or trade names of their respective companies. For patents covering National Instruments products/technology, refer to the appropriate location: Help»Patents in your software, the patents.txt file on your media, or the National Instruments Patent Notice at ni.com/patents.

Documents / Resources

	<p>NATIONAL INSTRUMENTS FOUNDATION Fieldbus Interface Device [pdf] Installation Guide PCI-FBUS-2, PCMCIA-FBUS, USB-8486, FBUS-HSE-H1, FOUNDATION Fieldbus Interface Device, FOUNDATION, FOUNDATION Interface Device, Fieldbus Interface Device, Interface Device</p>
---	---

References

-  [Engineer Ambitiously - NI](#)
-  [National Instruments Patents - NI](#)
-  [NI Trademarks and Logo Guidelines - NI](#)
-  [PCI-FBUS/2 National Instruments Fieldbus Interface Device | Apex Waves](#)

Manuals+.