

## Installation Instructions

### Model PAD-4-FDT

Firmware Diagnostic Tool Kit

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#### INTRODUCTION

The Model PAD-4-FDT from Siemens Industry, Inc., is a firmware update and diagnostic analysis tool kit for the PAD-4 Distributed Power Module NAC Expander.

**Model PAD-4 LUA is required for the tool kit operation. PAD-4 LUA is a USB Serial Port Cable Adaptor.**

The PAD-4-FDT provides the following firmware update support:

- Indicates the firmware revision currently installed in a unit
- Provides a means of choosing which revision of firmware should be uploaded (if several versions are available)
- Indicates when communication with the unit is established
- Indicates when firmware uploading is in process (and/or erasing the old firmware)
- Indicates when firmware uploading is complete

The PAD-4-FDT supports the following diagnostic analysis:

- Reading DC Supply
- Reading battery voltage
- Reading charger current
- Reading fault indications on circuits (opens, grounds and shorts), including which circuit is affected
- Reading the DIP switch settings
- Retrieving and viewing the last 10 fault conditions

#### System Requirements

The PAD-4-FDT supports the following Operating Systems:

- Windows® XP (x86) with Service Pack 3 - all editions except Starter Edition
- Windows® Vista (x86 and x64) with Service Pack 2 - all editions except Starter Edition
- Windows® 7 (x86 and x64)

The PAD-4-FDT PC Hardware requirements are as follows:

- 1.6 GHz or faster processor
- 1024 MB RAM (1.5 GB if running on a virtual machine)
- 3 GB of available hard-disk space
- 5400 RPM hard-disk drive
- DirectX 9-capable video card running at 1024x768 or higher display resolution

The System Hardware requirements are as follows:

- USB Serial Port Cable Adaptor, PAD-4 LUA, P/N S54389-C1-A1
- PAD-4 Main Board and Power Supply

## INSTALLATION

The installation of the PAD-4-FDT begins by installing the USB Serial Port Cable Adaptor driver onto a computer with a Windows<sup>®</sup> Operating System.

1. Go to your authorized Siemens website, [www.TechSup.net/tslogin.asp](http://www.TechSup.net/tslogin.asp) or [www.USA.Siemens.com/FirePartners](http://www.USA.Siemens.com/FirePartners), and download the following files to the laptop:
  - a. CDM20828\_setup.exe (Driver provided by FTDI Chip Limited)
  - b. PAD4\_02\_xx\_xxxx.txt
  - c. PAD4FDT.exe
2. Double click on the CDM20828\_setup.exe file to install the driver.
3. Plug the USB Adaptor into a USB port of the laptop computer (Refer to Figure 1).
4. Go to PC Start Menu> Settings>Control Panel>System>Hardware>Device Manager>Ports. Listed is the USB Serial Port. Write down the COM port number for future reference.
5. Connect the 6-position plug of the PAD-4 LUA into the Service Port (P2) of the PAD-4 main board EXACTLY as shown in Figure 1. Also, place shorting plug J1 on position 1-2 as indicated in Figure 1.

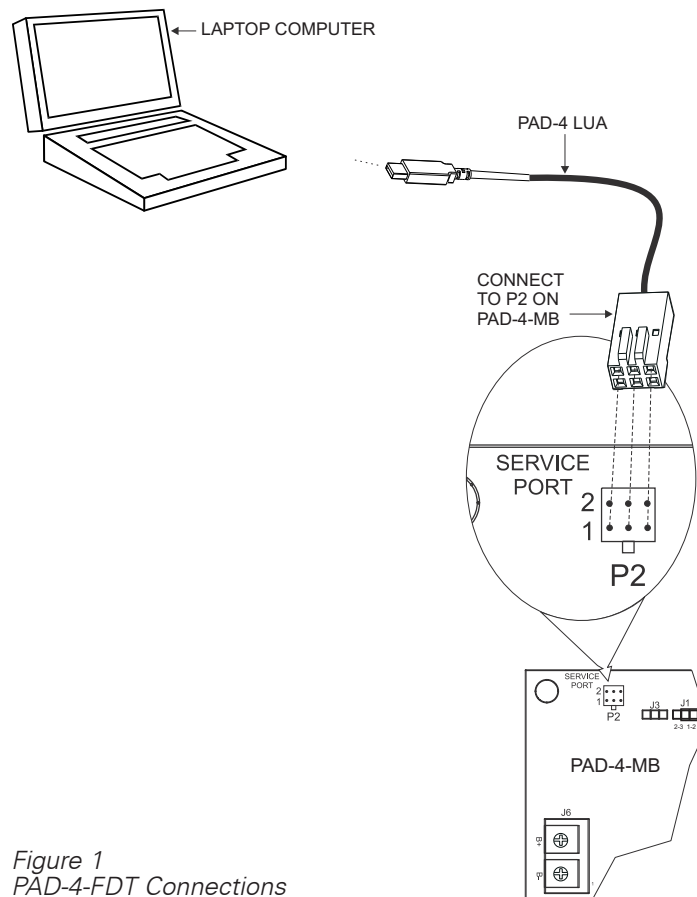


Figure 1  
PAD-4-FDT Connections



The 6-position plug is not keyed and if incorrectly inserted into P2 there may be damage to the PAD-4-MB (main board) and to the adapter as well.

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#### RUN PAD-4 APPLICATION

Double click on the PAD4FDT.exe file to start the firmware update and diagnostic analysis tool kit. The GUI interface is self explanatory. A few items of special attention are listed below.

**COM Port Menu** You must connect the tool to the board before using any of its features. To connect, select the COM port number that was assigned to the USB Serial Port Cable Adaptor.

**FW Update Menu** The FW Update feature involves uploading the new code in PAD4\_02\_xx\_xxxx.txt to the PAD-4-MB. To avoid the consequences of failure, users need to be aware of the program's following behaviors, though user action is not required under normal operation.

1. Micro-processor flash erasing — Prior to upload, a portion of the flash memory is erased.
2. Uploading — The uploading process takes a few minutes and cannot be interrupted. Otherwise a partially-loaded file will not function and the board might need to be sent back to the manufacturer for a total reset.
3. After the FW upload is completed, move jumper J1 back in position 2-3 as indicated in Figure 1.

**Diagnostics Menu** You can read the PAD-4 board parameters using the Diagnostics menu.



The "Test Commands" feature is for factory use only.



After using this tool, press reset button to set the board to normal mode. Busy LED should turn off after reset.

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