

Flexible MiniPCI to MiniPCI Express Bus Adapter

Hardware Manual

June 01, 2011

Revision 1.1

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1 About this Document

1.1 Purpose

This document describes Hardware installation, features, specification and operation for AMFELTEC Flexible MiniPCI to MiniPCI Express Bus Adapter (SKU-054).

1.2 Feedback

AMFELTEC Corp. makes every effort to ensure that the information contained in this document is accurate and complete at time of release. Please contact AMFELTEC Corp. if you find any errors, inconsistency or have trouble understanding any part of this document.

To provide your feedback, please send an email to support@amfeltec.com

Your comments or corrections are greatly valued in our effort for excellence and continued improvement.

1.3 Revision History

Rev. No.	Description	Rev. Date
1.0	Initial Release.	March 10, 2011
1.1	Update hardware installation instructions	June 01, 2011

2 General Description

2.1 Introduction

Flexible MiniPCI to MiniPCI Express Bus Adapter (Adapter) (Figure 1) is designed to support expansion of modern motherboards that has no or limited numbers of MiniPCI Express connectors. Adapter converts the standard MiniPCI motherboard slot into MiniPCI Express slot.



Figure 1: Flexible MiniPCI to MiniPCI Express Adapter

It includes one MiniPCI Host Card (Figure 2) and MiniPCI Express Adapter board (Figure 3). The MiniPCI Host Card has to be plugged into an upstream 126-pin MiniPCI motherboard connector. MiniPCI Express Adapter board connects to the MiniPCI Host Card via 12" PCI Express Flex cable. The expansion MiniPCI express add-in board has to be plugged into the standard MiniPCI express connector on the MiniPCI Express Adapter board.

Because of the flexible nature of the connection (unlike traditional rigid risers), expansion MiniPCI Express add-in board can be positioned away from the MiniPCI connector on the motherboard inside a computer chassis.

MiniPCI Express Adapter board has two mounting holes allowing them to be securely fixed inside a computer chassis.



Figure 2: MiniPCI Host Card

The Adapter functions right out of the box, no additional software needs to be installed. The Mini PCI Host Card has LEDs for displaying downstream PCI express Link status as well as expansion MiniPCI express add-in board “PRESENT” status.



Figure 3: MiniPCI Express Adapter board

3 Requirements/Features

3.1 Power Source

The power for MiniPCI Express add-in board (3.3V and 1.5V) is supplied via MiniPCI Express connector. MiniPCI Express Adapter board has standard 4-pin “Floppy drive” power connector for getting 5V power from standard ATX power supply or 3.3V power from Mini PCI Host card.

3.2 Software

There is no software needed for normal operation.

4 Hardware Description

4.1 Board Layout

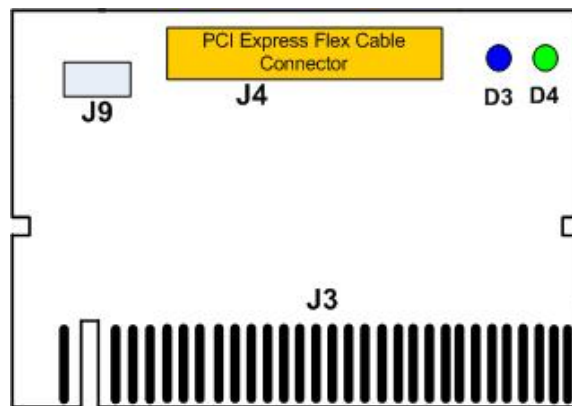


Figure 4: MiniPCI Host Card layout

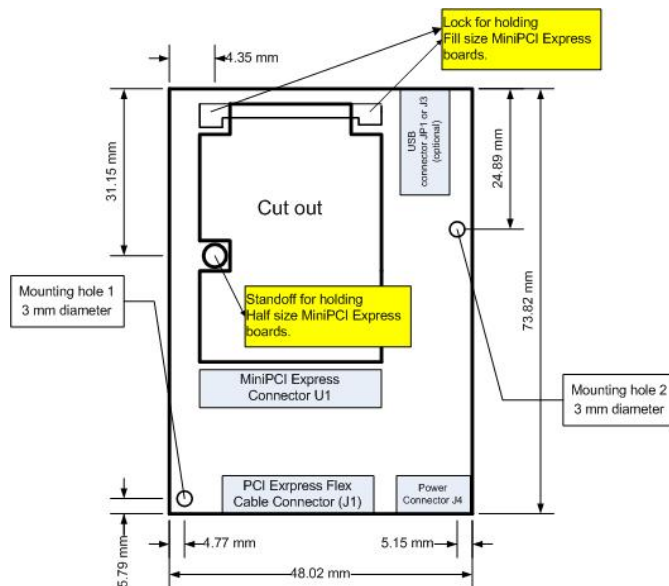


Figure 5: MiniPCI Express Adapter board layout

4.2 LEDs

Name	RefDes	Color	Usage
PRESENT	D3	Blue	“PRSNT” signal from MiniPCI Express Adapter board
LINK UP	D4	Green	PCI express link status between MiniPCI Express Adapter board and MiniPCI Host card

Table 1: MiniPCI Host Card LEDs

4.3 Connectors

RefDes	Type	Usage
J3	Upstream MiniPCI connector (124-pin)	Connection to the upstream MiniPCI bus on motherboard
J9	Power connector	Optional
J4	PCI Express Flex Cable connector	Connector via Flex PCI Express Cable to the MiniPCI Express Adapter board.

Table 2: MiniPCI Host Card connectors

RefDes	Type	Usage
J1	PCI Express Flex Cable connector	Connection via Flex PCI Express Cable to the MiniPCI Host Card.
J4	Standard ATX power connector (“floppy disk” type)	Incoming power for the expansion add-in MiniPCI Express board
JP1	10 pins 2 row 2.5mm Header	Connection to the USB interface of the MiniPCI Express add-in board (optional)
J3	USB type B standard connector	Connection to the USB interface of the MiniPCI Express add-in board (optional)
U1	Standard Mini PCI Express connector	Connection to the expansion add-in PCI boards (supports full and half size MiniPCI Express boards).

Table 3: MiniPCI Express Adapter board connectors

5 Installation

5.1 Hardware Installation

Following steps provide the exact sequence need to be followed in order to properly install the MiniPCI to MiniPCI Express Bus Adapter from AMFELTEC Corp.:

Warning: Before touching anything inside the computer or any components, be sure to discharge your body's static electricity by touching a grounded surface.

- Turn off host computer and unplug it from the wall outlet.
- Remove the chassis cover or side panel from host computer. Refer to the computer manual for instructions if you need them.
- If the unit is a tower unit, turn it over on its side to make access easier.
- Ground yourself to the PC case. Attach a grounding wrist strap (if available) to the computer's metal chassis and your wrist. **CAUTION:** If you choose not to use the grounding wrist strap, be sure to take adequate precautions to discharge static electricity from your body before touching any components.
- Insert PCI Express Flex Cable into the connectors on the MiniPCI Host card and on the MiniPCI Express Adapter.
- Install the host card into the motherboard MiniPCI slot.
- Place and retain MiniPCI Express Adapter inside the chassis.
- Connect power to the MiniPCI Express Adapter.
- Insert expansion add-in MiniPCI Express board into MiniPCI Express connector on MiniPCI Express Adapter. Do not let it touch any of the components on the motherboard or PCI Flex Adapter.
- Now, you can close computer cover and power-up the host computer.



BE SURE THAT GREEN LED D4 and BLUE LED D3 ARE ON!

(Downstream Link status and MiniPCI Express Adapter board PRESENT)

6 Ordering Information

6.1 Standard package

Standard package include the following components:

- MiniPCI Host Card
- MiniPCI Express Adapter board with Flex PCI Express cable
- User manual

7 Appendix A: Limited warranty

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