

# Flexible MiniPCI Express to MiniPCI Adapter

## Hardware Manual

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September 10, 2011

Revision 0.1

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# 1 About this Document

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## 1.1 Purpose

This document describes Hardware installation, features, specification and operation for AMFELTEC Flexible MiniPCI Express to MiniPCI Adapter.

## 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](mailto: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.	September 10, 2011

## 2 General Description

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### 2.1 Introduction

Flexible MiniPCI Express to MiniPCI Adapter (Adapter) is designed to convert MiniPCI Express bus into MiniPCI bus and extend it. Adapter allows connecting standard MiniPCI add-in board to motherboard MiniPCI Express connector.



It includes MiniPCI Express Host board (Figure 1a, 1b) and MiniPCI Adapter board (Figure 2). The MiniPCI Express Host board has to be plugged into an upstream MiniPCI Express motherboard connector. MiniPCI adapter board connects to the main MiniPCI Express Host board via 12" Flat PCI Express cable. The expansion MiniPCI add-in board has to be plugged into the standard 124-pin MiniPCI connector on the MiniPCI Adapter board.

Because of the flexible nature of the connection, expansion MiniPCI add-in boards can be positioned away from the MiniPCI Express Host board, including around any obstacles inside a computer chassis. MiniPCI Adapter board has three mounting holes allowing them to be securely fixed inside a computer chassis.

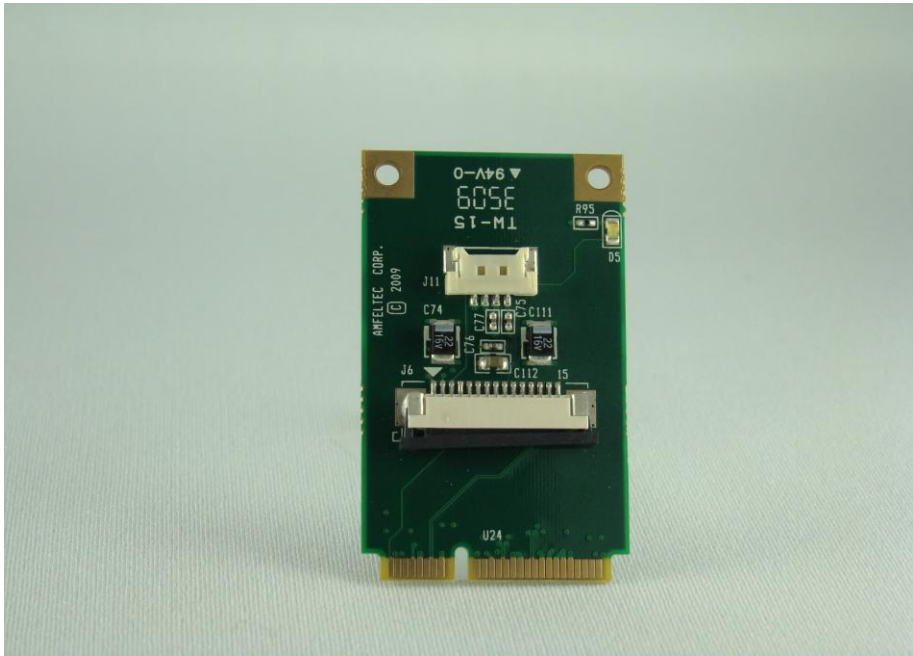


Figure 1a: MiniPCI Express Host board (full size)



Figure 2b: MiniPCI Express Host board (half size)

## General Description

The Adapter functions right out of the box, no additional software needs to be installed. The MiniPCI Express Host board has LED for displaying downstream MiniPCI Adapter board “PRESENT” status.

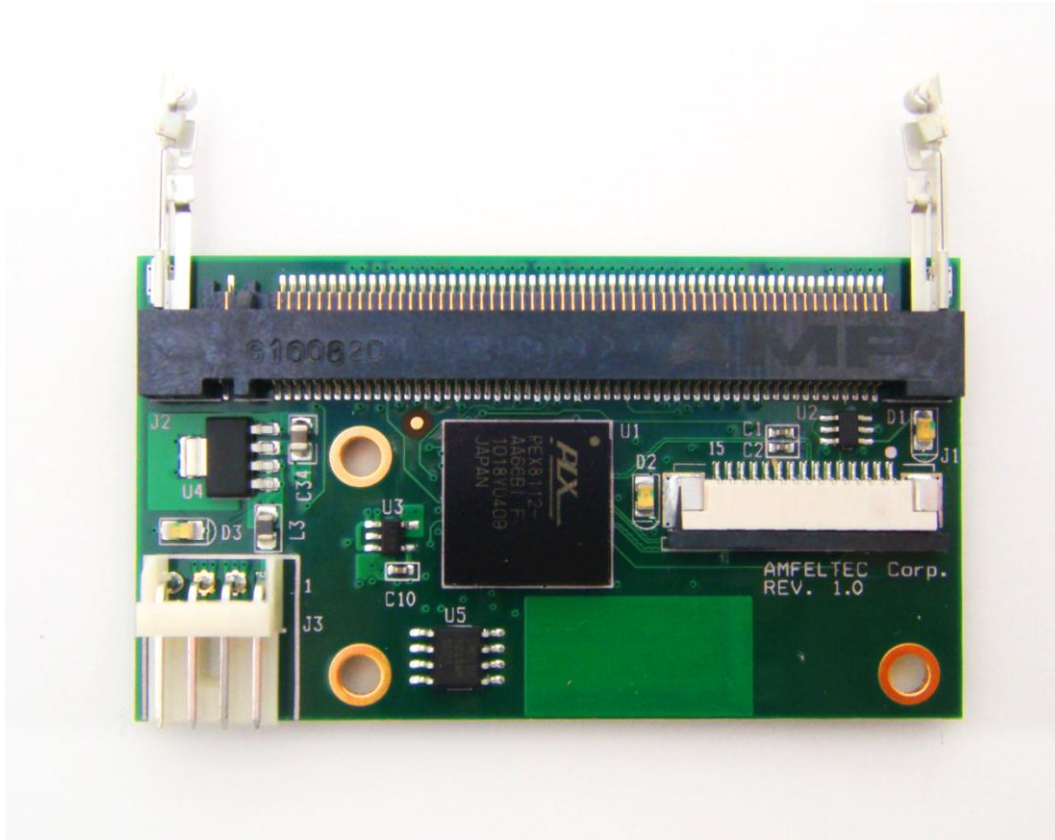


Figure 3: MiniPCI Adapter board



## **3 Requirements/Features**

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### **3.1 Power Source**

The power for the expansion MiniPCI add-in board is supplied from standard ATX power supply (“floppy disk” power connector (5V)) via MiniPCI adapter board.

### **3.2 Software**

There is no additional software needs for the MiniPCI express to MiniPCI Adapter.

## 4 Hardware Description

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### 4.1 Board Layout

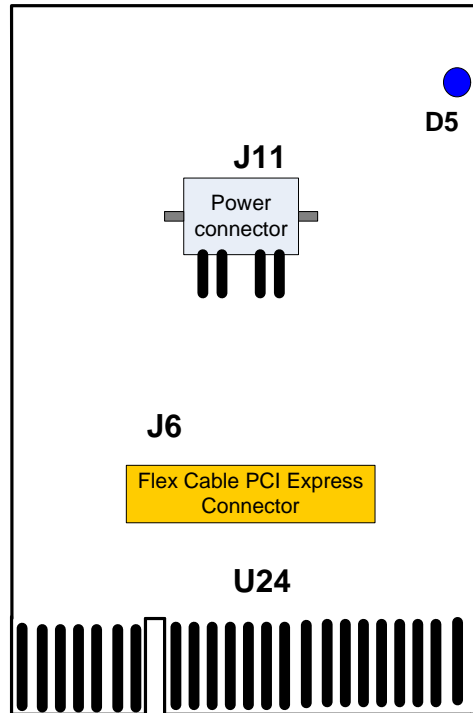


Figure 4: MiniPCI Express Host board layout (full size)

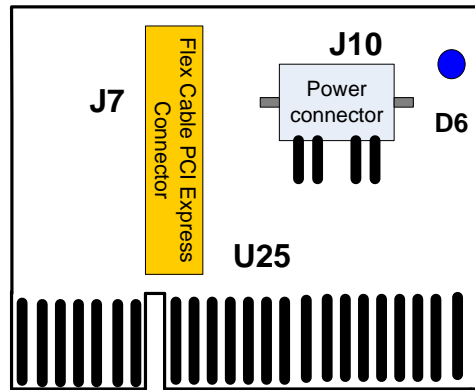


Figure 5: MiniPCI Express Host board layout (half size)

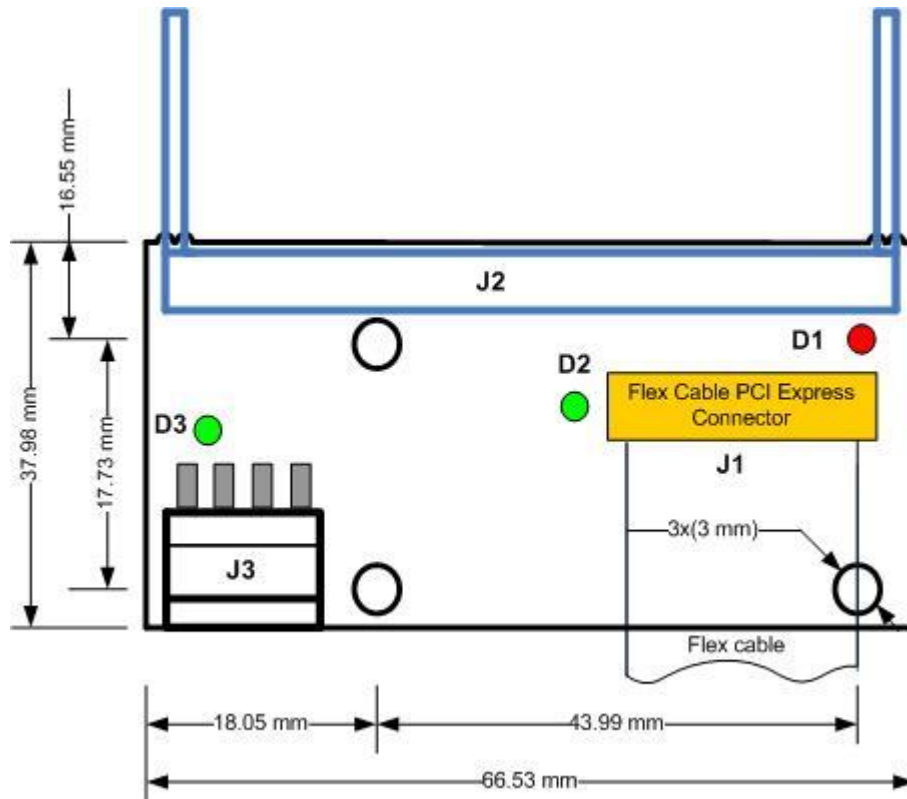


Figure 6: MiniPCI Adapter board layout

Figure 7: MiniPCI Adapter board layout

## 4.2 LEDs

Name	RefDes	Color	Usage
PRESENT	D5	Blue	“PRSNT” signal from expansion MiniPCI Adapter board. (in case Full size MiniPCI Express board)
PRESENT	D6	Blue	“PRSNT” signal from expansion MiniPCI Adapter board. (in case Half size Host MiniPCI express board)

Table 1: LEDs on the MiniPCI Express Host board (in case full and half size)

Name	RefDes	Color	Usage
Link Status	D2	Green	PCI Express Link status between motherboard and MiniPCI adapter board
RESET	D1	Red	PCI Express reset signal status
Power	D3	Green	Power status on the MiniPCI Adapter board

Table 2a: LEDs on the MiniPCI Adapter board

## 4.3 Connectors

RefDes	Type	Usage
U24	Upstream MiniPCI Express connector	Connection to the upstream MiniPCI Express bus on the motherboard (full size Interface board)
U25	Upstream MiniPCI Express connector	Connection to the upstream MiniPCI Express bus on the motherboard (half size Interface board)
J11	Power connector	Optional (3.3V only) (full size Interface board)
J10	Power connector	Optional (3.3V only) (half size Interface board)
J6	PCI Express Flex Cable connector	Connector via Flex PCI Express Cable to the MiniPCI Adapter board.(full size Host board)
J7	PCI Express Flex Cable connector	Connector via Flex PCI Express Cable to the MiniPCI Adapter board.(half size Host board)

Table 3: MiniPCI Express Host board connectors

RefDes	Type	Usage
J1	PCI Express Flex Cable connector	Connector via Flex PCI Express Cable to the MiniPCI Express Host board.
J3	“Floppy disk” male power connectors	Incoming 5V power from the standard ATX power supply or any external power supply.
J2	Downstream 124-pin standard MiniPCI female connector	Connection to the expansion MiniPCI add-in board.

Table 4: MiniPCI Adapter board connectors

## 5 Installation

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### 5.1 Hardware

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

- Turn OFF host computer before installation.
- Remove the chassis cover from host computer.
- Insert Flat PCI Express Cable to the connectors on the MiniPCI Express Host board and on the MiniPCI Adapter board.
- Install the Host board into the motherboard MiniPCI Express slot. Place and retain MiniPCI adapter board inside the chassis. Connect power for the MiniPCI adapter board.
- Plug-in expansion add-in boards into MiniPCI Adapter board.

Now, you can power-up the host computer.



**BE SURE THAT BLUE LEDs D5 or D6 ARE ON!**

### 5.2 Software

Flexible MiniPCI Express to MiniPCI Adapter doesn't require any software/device driver for normal operation.

## **6      Operation Modes**

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## 7 Ordering Information

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### 7.1 Standard package

Standard package include the following components:

- MiniPCI Express Host Board
- MiniPCI Adapter board with Flat PCI Express cable
- User manual

## **8 Appendix A: Limited warranty**

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