

Flexible x1 PCI Express to MiniPCI Adapter

Hardware Manual

September 10, 2011

Revision 0.1

Contents

1	About this Document.....	4
1.1	Purpose.....	4
1.2	Feedback	4
1.3	Revision History	4
2	General Description.....	5
2.1	Introduction	5
3	Requirements/Features.....	7
3.1	Power Source	7
3.2	Software.....	7
4	Hardware Description.....	8
4.1	Board Layout.....	8
4.2	LEDs	9
4.3	Connectors.....	10
5	Installation	11
5.1	Hardware	11
5.2	Software.....	11
6	Operation Modes.....	12
7	Ordering Information	13
7.1	Standard package.....	13
7.2	Ordering options	13
8	Appendix A: Limited warranty.....	14

Figures

Figure 1: x1 PCI Express Host board 6
Figure 2: MiniPCI Adapter board..... 6
Figure 3: x1 PCI Express Host board layout 8
Figure 4: MiniPCI Adapter board layout 9

Tables

Table 1: LEDs on the MiniPCI adapter board 9
Table 2: x1 PCI Express Host board connectors 10
Table 3: MiniPCI Adapter board connectors 10

1 About this Document

1.1 Purpose

This document describes Hardware installation, features, specification and operation for AMFELTEC Flexible x1PCI 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

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

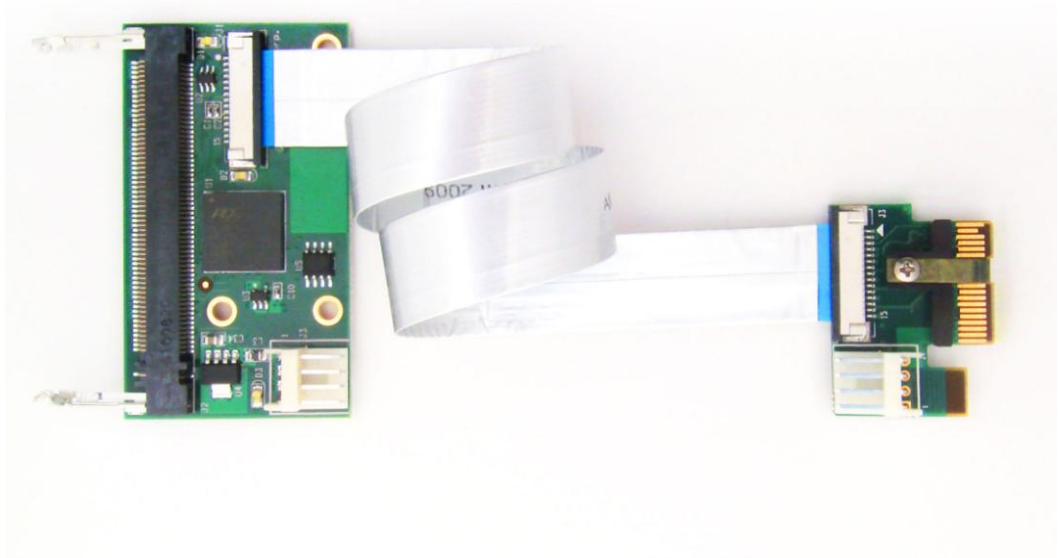
1.3 Revision History

Rev. No.	Description	Rev. Date
1.0	Initial Release.	September 10, 2011

2 General Description

2.1 Introduction

Flexible x1 PCI Express to MiniPCI Adapter (Adapter) is designed to convert x1 PCI Express bus into MiniPCI bus and extend it. Adapter allows connecting standard MiniPCI add-in board to any motherboard PCI Express connector.



It includes x1 PCI Express Host board (Figure 1) and MiniPCI Adapter board (Figure 2). The x1 PCI Express Host board has to be plugged into an upstream PCI Express motherboard connector. MiniPCI Adapter connects to the main x1 PCI 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 board can be positioned away from the motherboard PCI 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.

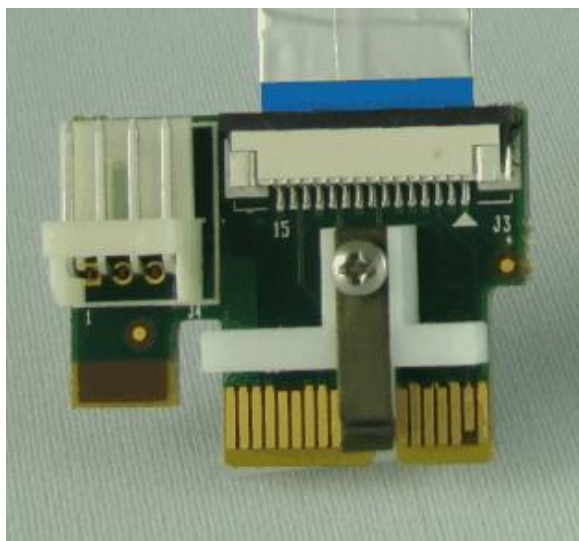


Figure 1: x1 PCI Express Host board

The Adapter functions right out of the box, no additional software needs to be installed. The MiniPCI Adapter board has LED for displaying connection status between Host and Adapter boards.

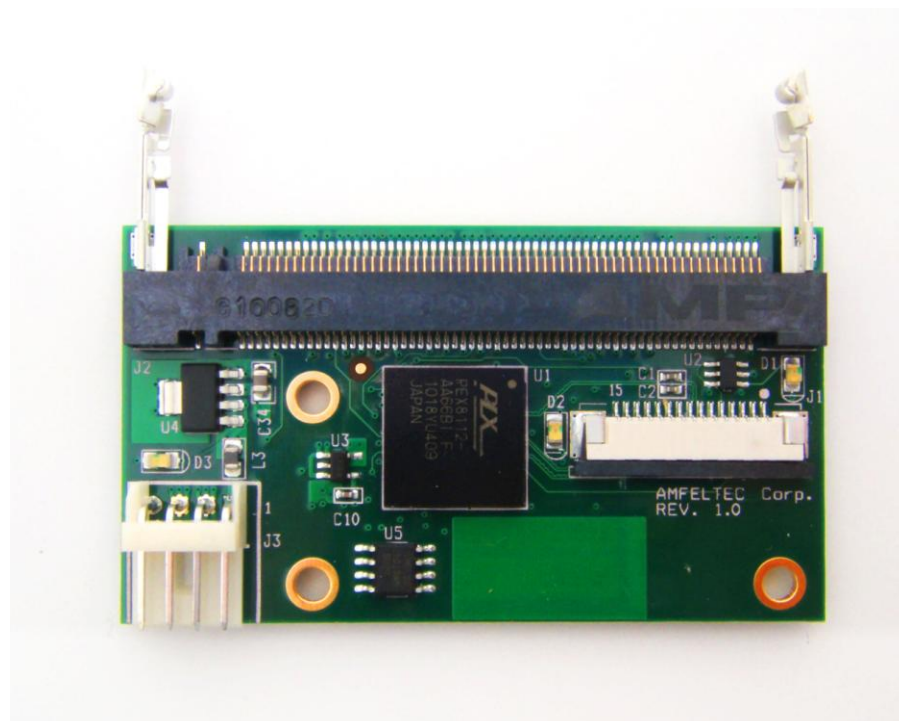


Figure 2: MiniPCI Adapter board

3 Requirements/Features

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 x1 PCI Express to MiniPCI Adapter.

4 Hardware Description

4.1 Board Layout

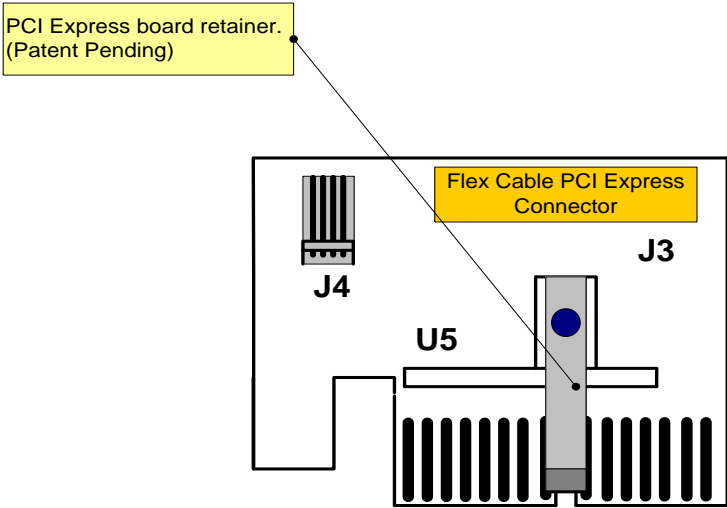


Figure 3: x1 PCI Express Host board layout

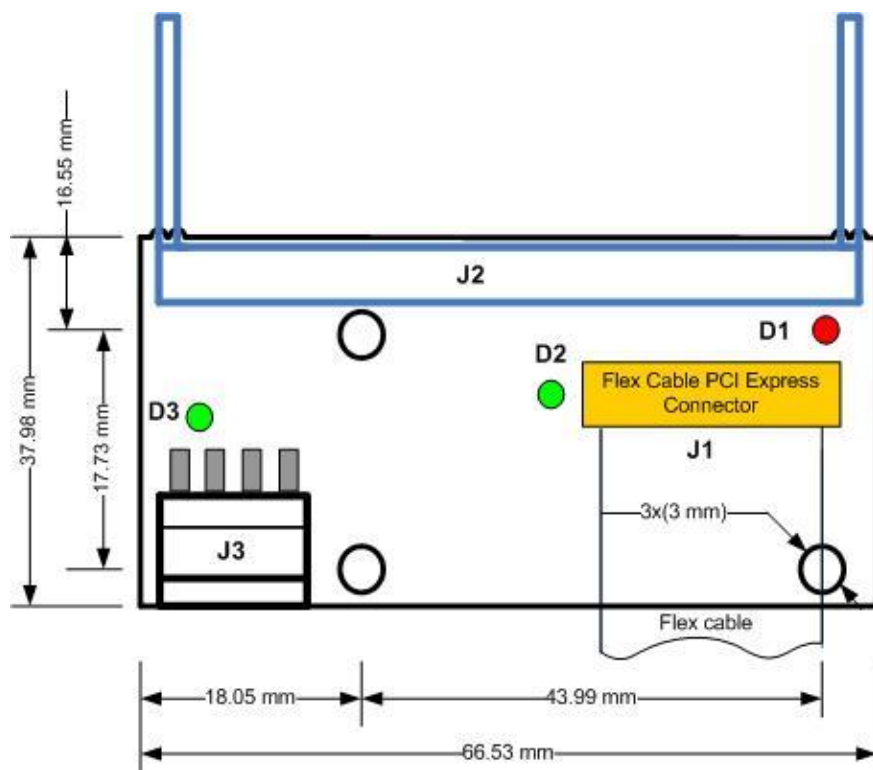


Figure 4: MiniPCI Adapter board layout

4.2 LEDs

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 1: LEDs on the MiniPCI adapter board

4.3 Connectors

RefDes	Type	Usage
U5	Upstream x1 PCI Express connector	Connection to the upstream PCI Express bus on the motherboard
J4	Power connector	Optional
J3	PCI Express Flex Cable connector	Connects via Flex PCI Express Cable to the MiniPCI Adapter boards.

Table 2: x1 PCI 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 124-pin MiniPCI add-in board.

Table 3: MiniPCI Adapter board connectors

5 Installation

5.1 Hardware

Following steps provide the exact sequence need to be followed in order to properly install the Flexible x1 PCI 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 PCI Express Host board and on the MiniPCI Adapter board.
- Install the Host board into the motherboard PCI 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.

5.2 Software

Flexible x1 PCI Express to MiniPCI Adapter doesn't require any software/device driver for normal operation.

6 Operation Modes

7 Ordering Information

7.1 Standard package

Standard package include the following components:

- x1 PCI Express Host Board
- MiniPCI Adapter board with Flat PCI Express cable
- User manual

7.2 Ordering options

SKU-067-01: x1 PCI Express to MiniPCI Adapter

8 Appendix A: Limited warranty

AMFELTEC Corporation does not warrant that the operation of the hardware, software or firmware products will be uninterrupted or error free. AMFELTEC products are not intended to be used as critical components in life support systems, aircraft, military systems or other systems whose failure to perform can reasonably be expected to cause significant injury to humans. AMFELTEC expressly disclaims liability for loss of profits and other consequential damages caused by the failure of any product which would cause interruption of work or loss of profits, such as shipboard or military attachment.

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