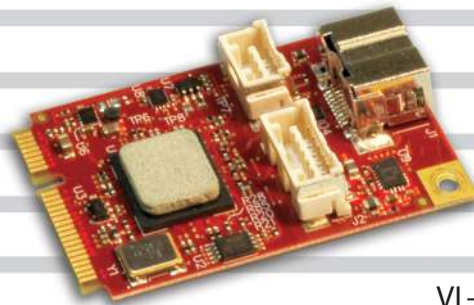


FireWire Expansion

Mini PCIe Module



VL-MPEe-FW1

Actual Size!

Overview

The VL-MPEe-FW1 is an extremely small and rugged FireWire module based on the industry-standard Mini PCIe module format. This Mini PCIe module provides an easy and economical way to add FireWire 1394b to an embedded computing solution. This module supports one FireWire 800 (1394b) and one FireWire 400 (1394a) channel operating at extended temperature.

This I/O board is compatible with a variety of popular x86 operating systems including Windows, Windows Embedded, and Linux.

As with all VersaLogic products, the VL-MPEe-FW1 is designed to support OEM applications where high reliability and long-term availability are required. From application design-in support, to its 5+ year production life guarantee, the VL-MPEe-FW1 provides a durable I/O expansion with an excellent cost of ownership.

Highlights

- **2-channels of 1394 FireWire**
6-pin connector FireWire 400 latching.
9-pin connector FireWire 800 right angle.
- **Mini PCIe Module Format**
Small and flexible.
- **Standard Operating Systems Drivers (Windows, Linux)**
Typically no additional software drivers needed.
- **Industrial Temperature**
-40° to +85°C operation for harsh environments.
- **PCIe Signaling**
Compatible with Mini PCIe sockets.
- **MIL-STD-202G**
Qualified for high shock / vibration environments.
- **5+ Year production life guarantee**

Specifications

| General | |
|--------------------------------|--|
| Board Size | Mini PCIe module (full size): 30 mm x 50.95 mm x 6.39 mm |
| Power Requirements | 3.3V ±5% @ 0.8W Typical (supplied by the Mini PCIe socket) |
| Manufacturing Standards | IPC-A-610 Class 2 |
| Regulatory Compliance | RoHS |
| Mini PCIe Signal Type | PCI Express Base Specification, Rev 1.1 |

| Environmental | |
|--------------------------------------|--|
| Operating Temperature | -40° to +85°C Derate -1.1°C per 305m (1,000 ft.) above 2,300m (7,500 ft.).* The ambient air surrounding the MPEe-FW1 must be at or below +85°C. |
| Storage Temperature | -40° to +85°C |
| Altitude | Operating * To 4,570m (15,000 ft.) Storage To 12,000m (40,000 ft.) |
| Thermal Shock | 5°C/min. over operating temperature |
| Humidity | Less than 95%, noncondensing |
| Vibration, Sinusoidal Sweep † | MIL-STD-202G, Method 204, Modified Condition A: 2g constant acceleration from 5 to 500 Hz, 20 min. per axis. |
| Vibration, Random † | MIL-STD-202G, Method 214A, Condition A: 5.35g rms, 5 min. per axis. |
| Mechanical Shock † | MIL-STD-202G, Method 213B, Condition G: 20g half-sine, 11 msec. duration per axis. |

| Device I/O | |
|------------------------------|--|
| Firewire Interface | 1-channel of FireWire 400 (1394a) 1-channel of FireWire 800 (1394b) |
| Firewire Connectors # | One standard 9-pin right angle Firewire 800 connector One 6-pin positive latching 1.5mm pitch connector |
| Aux Power 12V | One 4-pin positive latching 1.5mm pitch connector |

| Software | |
|------------------|--|
| Drivers ‡ | Compatible with most x86 operating systems including Windows, Windows Embedded, and Linux. |

‡ Win 7 driver needed to run both ports concurrently - available on VersaLogic.com.
 # ESD Clamp and Live-Insertion Detect on both ports, turns cable power off during a hot-plug error condition.
 * For extended altitude information contact VersaLogic Sales Dept.
 † MIL-STD-202G shock and vibrate levels are used to illustrate the ruggedness of this product in general. Testing to higher levels and/or different types of shock or vibration methods can be accommodated per the specific requirements of the application. Contact a VersaLogic Sales Engineer for further information.
 Specifications are subject to change without notification. PCI Express is a registered trademark of the PCI-SIG. All other trademarks are the property of their respective owners.

Ordering Information

| Model | Function | Operating Temp. |
|--------------|----------------------|-----------------|
| VL-MPEe-FW1E | 1394 FireWire Module | -40° to +85°C |

Accessories

| Part Number | Description |
|--|--|
| PC/104 Mini PCIe Carrier Adapters | |
| VL-EPM-P2E | PC/104-Plus to Dual mini PCIe socket adapter |
| VL-EPMp-P2E | PCI-104 to Dual mini PCIe socket adapter |
| Cables | |
| VL-CBR-0602 | 6-pin Latching to 6-pin Firewire 400 Cable, 1.5 m |
| VL-CBR-0403 | 4-pin 12V Power Cable, 12" |
| Hardware | |
| VL-HDW-108 | Mini PCIe module hold-down screws (10) for use with 2.5 mm standoffs |
| VL-HDW-110 | Mini PCIe module hold-down screws (10) for use with 2.0 mm standoffs |

Other VersaLogic Mini PCIe Modules

| Model | Function | Signaling |
|---------------|---|-----------|
| VL-MPEe-A1E | Analog input (12-bit resolution) | PCIe |
| VL-MPEe-A2E | Analog input (16-bit resolution) | PCIe |
| VL-MPEe-E3E | Gigabit Ethernet adapter | PCIe |
| VL-MPEe-U2E | Four Serial ports. Twelve GPIO lines | PCIe |
| VL-MPEe-V5E | Video Display Adapter. VGA and LVDS Interfaces. | PCIe |
| VL-MPEs-F1Exx | mSATA drive (4/16/32 GB) | SATA |
| VL-MPEs-S3E | SATA adapter | SATA |
| VL-MPEu-G2E | GPS receiver | USB |

Call VersaLogic Sales at (503) 747-2261 for more information!



Mini PCIe Modules

Tailor a Module to Your Exact Requirements

Product customization is available, even in low quantities. Options include conformal coating, application-specific testing, BOM revision locks, special labeling, and more.