



- Dual Mini PCIe sockets
- Full industrial temperature operation
- MIL-STD-202G shock/vibe

Highlights

Mini PCIe Sockets

Two Mini PCIe sockets support A/D convertors, Ethernet, Wi-Fi modems, MIL-STD-1553, solid-state storage, and other plug-in devices.

Industrial Temperature

-40° to +85°C operation for harsh environments.

MIL-STD-202G

Qualified for high shock/vibration environments.

PC/104 Form Factor

Rugged industry-standard form factor.

Overview

The VL-EPMx-P2 expansion module provides dual Mini PCIe socket expansion for any PC/104-Plus or PCI-104 embedded system. With a small footprint and industrial temperature operation, the VL-EPMx-P2 provides versatile PCI Express® Mini Card expansion for small form factor embedded systems.

As with all VersaLogic products, the VL-EPMx-P2 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-EPMx-P2 provides a durable embedded computer solution with an excellent cost of ownership. The VL-EPMx-P2 is fully RoHS compliant.

Details

Based on PC/104 standards, the VL-EPM-P2 supports PCI and ISA stackable expansion buses on an industry-standard 90 mm x 96 mm (3.55" x 3.78") expansion module. The VL-EPM-P2 supports PCI stackable expansion. Using a reverse PCI to PCI Express bridge, the VL-EPMx-P2 provides off-the-shelf PC/104-Plus and PCI-104 systems with full access to high-speed Mini PCIe devices.

The two on-board Mini PCIe sockets accommodate plug-in modules such as A/D convertors, Ethernet, Wi-Fi modems, MIL-STD-1553, solid-state storage, and other devices. The VL-EPMx-P2 is compatible with full-sized Mini PCIe cards. Half-sized Mini PCIe cards can be supported by special order. Four on-board LEDs provide Activity status for each Mini PCIe socket.

Designed for full industrial temperature (-40° to +85°C) operation, the rugged VL-EPMx-P2 meets MIL-STD-202G specifications for mechanical shock and vibration for use in harsh environments.

Product customization is available, even in low OEM quantities. Customization options include conformal coating, revision locks, custom labeling, customized testing and screening, etc.

Ordering Information

Model	Mini PCIe Sockets	Operating Temp.	Stackable Bus
VL-EPM-P2E	2	-40° to +85°C	PCI, ISA
VL-EPMp-P2E*	2	-40° to +85°C	PCI

* Special Order Product – Contact VersaLogic Sales for minimum order quantities and lead time.

Accessories

Part Number	Description
Hardware	
VL-HDW-105	0.6" standoff package (metric thread)
VL-HDW-106	0.6" standoff package (English thread)
VL-HDW-107	Mini PCIe card hardware kit (metric thread)
Miscellaneous	
VL-CBR-ANT-01	802.11n Wi-Fi antenna
VL-HDW-203	PC/104 extractor tool (metal)

Expansion Modules

Part Number	Description	Form Factor
Network		
VL-MPEe-W2E	Wi-Fi 802.11 a/b/g/n	Mini PCIe
VL-MPEe-E3E	Gigabit Ethernet adapter	Mini PCIe
Serial I/O		
VL-MPEe-U2E	Quad serial plus twelve GPIOs	Mini PCIe
Analog & Digital I/O		
VL-MPEe-A1E	Analog input (12-bit resolution)	Mini PCIe
VL-MPEe-A2E	Analog input (16-bit resolution)	Mini PCIe
Video		
VL-MPEe-V5E	VGA and LVDS Interface	Mini PCIe

SPECIFICATIONS

General	Board Size	PC/104 standard: 90 mm x 96 mm (3.55" x 3.78")	
	Power Requirements (+5V)†	With PCIe Wi-Fi (Idle)	With PCIe Wi-Fi (Max.)
		4.55W	4.71W
	Stackable Bus	VL-EPM-P2	PC/104-Plus: PCI Bus, ISA Bus (pass-through only)
Environmental		VL-EPMp-P2	PCI-104: PCI Bus
	RoHS	Compliant	
	Operating Temperature	-40° to +85°C	
	Storage Temperature	-40° to +85°C	
Mini PCIe Socket	Airflow Requirements	None (free air within operating temperature range)	
	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 minutes per axis	
	Vibration, Random	MIL-STD-202G, Method 214A, Condition A: 5.35g rms, 5 minutes per axis	
	Mechanical Shock	MIL-STD-202G, Method 213B, Condition G: 20g half-sine, 11 ms duration per axis	
	General	Two Mini PCIe sockets support A/D converters, Ethernet, Wi-Fi modems, MIL-STD-1553, non-volatile flash data storage, and other plug-in modules	
	Compatibility	Compatible with full- and half-sized Mini PCIe cards. Supports standard PCIe signaling. USB and SATA signaling not supported.	
	Status Indicators	On-board LEDs indicate card status for each socket	

† Power specifications represent typical power draw at +25°C with +5V supply running Windows XP with an Intel 5300 Wi-Fi Link card. Maximum power is measured during file transfer over Wi-Fi. Results will vary depending upon Mini PCIe card in use.

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