VL-EPHs-P1

SUMIT-micro™ Mini PCIe Adapter



- PCIe Mini Card socket
- Full industrial temperature operation
- MIL-STD-202G shock/vibe

Highlights

PCIe Mini Card Socket
Supports Wi-Fi modems, GPS receivers, 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.

SUMIT-micro Form Factor
Small footprint board expands any SUMIT™-based system.

Overview

The VL-EPHs-P1 expansion module provides Mini PCIe socket expansion for any SUMIT-based embedded system. With a small footprint, simplified interface, and extensive ruggedization, the cost-effective VL-EPHs-P1 provides versatile PCI Express® Mini Card expansion for small form factor embedded systems.

As with all VersaLogic products, the VL-EPHs-P1 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-EPHs-P1 provides a durable embedded computer solution with an excellent cost of ownership. The VL-EPHs-P1 is fully RoHS compliant.

Details

The VL-EPHs-P1 expansion module is a 90 mm x 32 mm (3.54" x 1.26") SUMIT-micro format card that utilizes the PCIe and USB lanes of the SUMIT-A connector to provide a Mini PCIe socket for embedded system expansion. The card mounts to the top of the SUMIT stack and is secured via two mounting holes using standard hardware standoffs.

The versatile PCIe Mini Card socket accommodates plug-in Wi-Fi modems, GPS receivers, MIL-STD-1553, solid-state storage, and other plug-in devices. The VL-EPHs-P1 is compatible with full-sized Mini PCIe cards and supports both USB and PCIe connectivity. Half-sized Mini PCIe cards can be supported by special order. Four on-board LEDs provide Activity status for the Mini Card socket.

Designed for full industrial temperature (-40° to +85°C) operation, the rugged VL-EPHs-P1 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.

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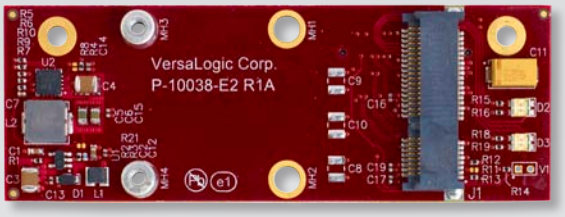
SUMIT-micro Mini PCIe Adapter



VL-EPHs-P1E (Top)

Ordering Information

Model	Mini PCIe Sockets	Operating Temp.	Stackable Bus
VL-EPHs-P1E	1	-40° to +85°C	SUMIT

Accessories

Part Number	Description
Cables	
VL-CBR-0201	Wi-Fi antenna interface cable
Mini PCIe Cards	
VL-WD10-CBN	802.11g/n Wi-Fi transceiver module
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

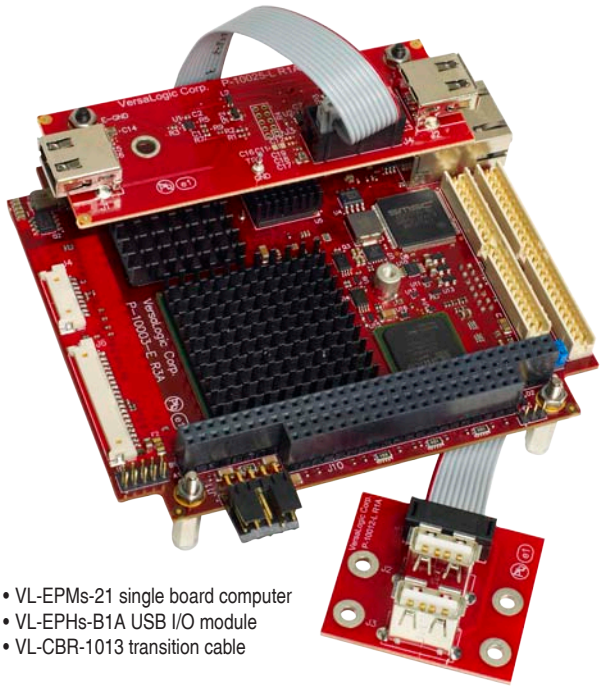
SUMIT Resources		
Form Factor: SUMIT-micro		
	SUMIT-A	**SUMIT-B**
PCIe x1	1	
PCIe x4		
USB	1	
ExpressCard	–	
LPC	–	
SPI/µWire	–	
SMBus/I²C	–	
+12V	–	
+5V	✓	
+5V$_{sb}$	–	
+3.3V	–	

SPECIFICATIONS

General	Board Size	SUMIT-micro: 32 mm x 90 mm (1.26" x 3.54")	
	Power Requirements (+5V)*	With PCIe Wi-Fi (Idle)	With PCIe Wi-Fi (Max.)
		1.25W	1.65W
	Stackable Bus	SUMIT (top of stack only)	
	RoHS	RoHS (2002/95/CE) compliant	
Environmental	Operating Temperature	-40° to +85°C	
	Storage Temperature	-40° to +85°C	
	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	
Mini PCIe Socket	General	Mini PCIe socket supports Wi-Fi modems, GPS receivers, MIL-STD-1553, non-volatile flash data storage, and other plug-in modules	
	Compatibility	Compatible with full- and half-sized Mini PCIe cards. Supports USB and PCIe signaling. PCIe 1.1 transfer rate of 2.5 GT/s max.	
	Status Indicators	On-board LEDs indicate card status for 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.*

Specifications are subject to change without notification. PCI Express is a registered trademark of the PCI-SIG. SUMIT is a trademark of the SFF-SIG. SUMIT-micro is a trademark of VersaLogic Corp. All other trademarks are the property of their respective owners.



- VL-EPMs-21 single board computer
- VL-EPHs-B1A USB I/O module
- VL-CBR-1013 transition cable

05/29/12