

# **VL-EPHs-P1**

**SUMIT-micro™ Mini PCle Adapter** 



- PCle 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 PCle 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 PCl 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 PCle and USB lanes of the SUMIT-A connector to provide a Mini PCle 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.









## **VL-EPHs-P1**

SUMIT-micro Mini PCle 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**

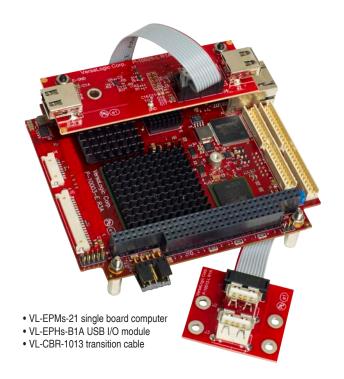
Part Number	Description			
Cables				
VL-CBR-0201	Wi-Fi antenna interface cable			
Mini PCle Cards				
VL-WD10-CBN	802.11g/n Wi-Fi transceiver module			
Hardware				
VL-HDW-105	0.6" standoff package (metric thread)			
VL-HDW-106	0.6" standoff package (English thread)			
VL-HDW-107	Mini PCle card hardware 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/I <sup>2</sup> C	-				
+12V	-				
+5V	✓				
+5V <sub>sb</sub>	-				
+3.3V	-				

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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 PCle 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 PCle cards. Supports USB and PCle signaling. PCle 1.1 transfer rate of 2.5 GT/s max.			
	Status Indicators	On-board LEDs indicate	card status for socket		

<sup>\*</sup> 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 PCle card in use.

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02/15/13