VERSALOGIC CORPORATION

Wi-Fi

Mini PCIe Module



- Extremely small half-size Mini PCIe module format
- Standard encryption and authentication protocols
- Industrial temp. (-40º to +85ºC) operation
- MIL-STD-202G shock/vibe

Highlights

Mini PCIe Module Format
Small and flexible.

Network Support
Wireless networking supports Wi-Fi 802.11 a/b/g/n.

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

MIL-STD-202G
Qualified for high shock/vibration environments.

RoHS

Overview

The VL-MPEe-W2 is an extremely small and rugged Wi-Fi module based on the industry-standard Mini PCIe module half-size format. Unlike typical I/O expansion boards, Mini PCIe allows additional I/O functions to be added to a system with almost no increase in overall system/package size. Mini PCIe modules provide a simple, economical, and standardized way to add I/O functions to embedded computer products.

Details

In a very small package, this Wi-Fi board enables high speed wireless networking.

This Wi-Fi module delivers premium Wi-Fi performance. This dual-stream (2x2), dual-band, 802.11 a/b/g/n Wi-Fi product with Wi-Fi Direct combines faster speeds (up to 300 Mbps), greater range, and more reliability. Intel® Wireless Display enables display output over a simple wireless connection. Intel® My Wi-Fi Dashboard enables data sharing directly with other Wi-Fi devices without WLAN or hotspot access. Supports Intel® vPro Technology, Intel® Active Management Technology, and Intel® PROSet/Wireless Enterprise Software for enterprise Wi-Fi client manageability, improved security, and streamlined deployment.

This rugged product is designed and tested for full industrial temperature operation (-40º to +85ºC). It also meets MIL-STD-202G specifications for shock and vibration, making it at home in harsh environments.

This Wi-Fi board is compatible with a variety of popular x86 operating systems including Windows, Windows Embedded, and Linux.

The module utilizes PCIe signaling and can be used in any system that supports PCIe signaling at the Mini PCIe socket.

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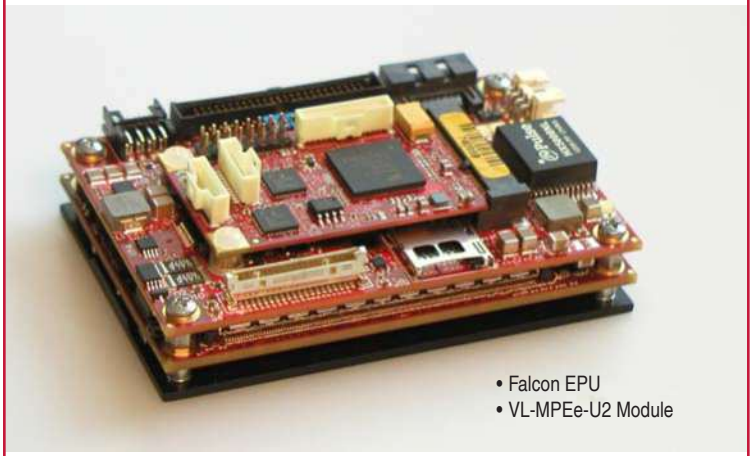
Mini PCIe Module

Ordering Information

Model	Function	Operating Temp.
VL-MPEe-W2E	Wi-Fi 802.11 a/b/g/n	-40° to +85°C

Accessories

Part Number	Description
Cables	
VL-CBR-0201	12" Wi-Fi antenna adapter cable
VL-CBR-ANT01	Wi-Fi (802.11n) antenna
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
VL-HDW-111	Half-sized hardware kit. Half- to full-sized metal adapter and screws (2).



- Falcon EPU
- VL-MPEe-U2 Module

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	Quad serial plus twelve GPIOs	PCIe
VL-MPEs-F1E	mSATA drive (4/16/32 GB)	SATA
VL-MPEs-S3E	SATA adapter	SATA
VL-MPEu-G2E	GPS receiver	USB
VL-MPEu-K1E	Encrypted solid-state drive (8/32 GB)	USB

Specifications

General	Board Size	Mini PCIe module (half size): 30 mm x 26.8 mm x 4.31 mm	
	Power Requirements	3.3V @ 0.83W (supplied from the Mini PCIe socket)	
	Regulatory Compliance	RoHS	
	Mini PCIe Signal Type	PCIe	
Environmental	Operating Temperature	-40° to +85°C	
	Storage Temperature	-40° to +85°C	
	Altitude *	Operating	To 15,000 ft. (4,570m)
		Storage	To 40,000 ft. (12,000m)
	Cooling	None (fanless)	
	Airflow Requirements	None (free air)	
	Thermal Shock	5°C/min. over operating temperature	
	Humidity	Less than 90%, 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	Wi-Fi Certification	802.11a, 802.11b, 802.11g, 802.11n, WMM, WPA, WPA2, and WPS Wi-Fi Direct for peer-to-peer device connections	
	IEEE WLAN Standard	IEEE 802.11 a/b/g/n, 802.11d, 802.11e, 802.11i, 802.11h	
	Roaming	Supports seamless roaming between respective access points (802.11b, 802.11g, 802.11a/b/g, and 802.11a/b/g/n)	
	Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP, MS-CHAPv2	
	Encryption	64-bit and 128-bit WEP, AES-CCMP, TKIP	
	Compliance	PCI, CISP, FIPS, FISMA	
Software	Operating Systems	Compatible with most x86 operating systems including Windows, Windows Embedded, and Linux	

* *Extended altitude specifications available upon request*

† *MIL-STD-202G shock and vibe 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.

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