VL-EPM-E2

PC/104-*Plus* Ethernet Module



- Dual 10/100 Ethernet
- Extended temp. operation
- Ruggedized version
- MIL-STD-202G shock / vibe
- Activity indicators
- RoHS compliant

Highlights

PC/104-*Plus* Form Factor
Industry standard form factor stacks with compatible CPUs and expansion modules.

Network Support
Two on-board 10/100 Ethernet ports.

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

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

Activity Indicators
On-board status LEDs with support for external indicators.

Overview

The VL-EPM-E2 is an embedded PC/104-*Plus* format expansion module featuring high-performance networking capabilities. With two autodetect 10BaseT / 100BaseTX Ethernet ports, industrial temperature operation, and extensive ruggedization, the VL-EPM-E2 is an ideal expansion solution for embedded applications in harsh industrial, energy, defense/aerospace, medical, and robotics environments.

Like all VersaLogic products, the VL-EPM-E2 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-EPM-E2 provides a durable embedded computer solution with an excellent cost of ownership. The VL-EPM-E2 is manufactured and tested to the highest quality standards and is fully RoHS compliant. Customization is available, even in low OEM quantities.

Details

The VL-EPM-E2 is based on the industry standard PC/104-*Plus* form factor, which provides for simplified plug-in expansion with other PC/104-*Plus* SBC and expansion modules.

The VL-EPM-E2 is available with one or two on-board 10/100 Ethernet ports. The Ethernet controller features auto-negotiation for simplified configuration and each Ethernet port is independently configurable as a separate subnet. The board is available with either standard RJ45 output connectors, or with latching header connectors for high shock or vibration environments. On-board LEDs provide Link/Activity and Speed status for each Ethernet port with an additional header for external LED support.

The VL-EPM-E2 is designed and tested for operation over the full industrial temperature range (-40° to +85°C) and meets MIL-STD-202G specifications for mechanical shock and vibration.

Software drivers are available for a wide variety of operating systems to provide a complete high-performance networking solution.

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VL-EPM-E2

PC/104-*Plus* Ethernet Module



VL-EPM-E2B (Top)

Ordering Information

Model	Ethernet Ports	Connector(s)
VL-EPM-E2A	1	RJ45
VL-EPM-E2B	2	RJ45
VL-EPM-E2D	2	Latching header

Accessories

Part Number	Description
VL-CBR-0804	Latching Ethernet adapter cable
VL-HDW-105	0.6" standoff package (metric thread)
VL-HDW-106	0.6" standoff package (English thread)
VL-HDW-203	PC/104 board extractor tool (metal)

SPECIFICATIONS

General	Board Size	PC/104-*Plus* standard: 90 mm x 96 mm (3.55" x 3.78")
	Power Requirements *	+5V @ 0.52A (2.6W) max.
	System Reset	Reset via PCI interface
	Stackable Bus	PC/104-*Plus*: PCI, ISA (pass-through)
	Manufacturing Standards	IPC-A-610 Class 2 compliant
	RoHS	Compliant
Environmental	Operating Temperature †	-40° to +85°C
	Storage Temperature	-40° to +85°C
	Airflow Requirements	Free air from -40° to +85°C
	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
Network Interface	Controller	Micrel KSZ8841-PMQLI
	Ethernet ‡	Up to two autodetect 10BaseT / 100BaseTX ports
	Configuration	EEPROM (1K) for each Ethernet interface (MAC address, default configuration). Each port independently configurable as separate subnet.
	Activity Indicators	On-board Link/Activity and Speed LED for each Ethernet port. Header for external LEDs.
Software	Operating Systems	Compatible with most x86 operating systems, including Windows, Windows Embedded, Linux, VxWorks, and QNX

** Power specifications represent operation at +25°C with +5V supply running Windows XP with Ethernet*
‡ TVS protected (enhanced ESD protection)
† Derate -1.1°C per 305m (1,000 ft.) above 2,300m (7,500 ft.)

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