



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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- 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.



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)

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## 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.)