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.
**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**: Compliant

**Environmental**

- **Operating Temperature**: -40° to +85°C
- **Storage Temperature**: -40° to +85°C
- **Airflow Requirements**: Free air from -40° to +85°C
- **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-PMQL
- **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

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* 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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