

Gigabit Ethernet

Mini PCIe Module with/without POE+



VL-MPEe-E6

Actual Size!

Overview

The 'E6' module is an extremely small and rugged Gigabit Ethernet add-on interface that is available with or without support for Power-Over-Ethernet (POE+). Fully contained on a single Mini PCIe module, it does not require an additional daughter cards for magnetic isolation or POE injection circuitry. It provides a simple, clean, rugged way to add an Ethernet interface to most embedded computer systems.

The E6 optionally includes Power Over Ethernet Support (POE+). This ensures that a wide variety of devices, including cameras and wireless access points, can be powered over the Ethernet connection.

The E6 includes IEEE 1588/802.1AS Precision Time Protocol support. This enables precision time-synchronization between network nodes

The E6 is designed and tested for full industrial temperature (-40° to +85°C) operation and meets MIL-STD-202H specifications for shock and vibration. It uses a latching connector to address cable detachment issues in hostile environments.

VersaLogic's 10+ year product life support programs ensure long-term availability. This avoids expensive upgrades and migrations that come from short, disposable lifecycle products.

Highlights

- **Gigabit Ethernet with optional Power over Ethernet**
Powers Type 1 (POE) and Type 2 (POE+) devices
- **On-board magnetically coupled isolation and POE injection**
No need for off-board magnetics or daughter cards
- **IEEE 1588/802.1AS Precision Time Synchronization**
Synchronize time with other network nodes

Specifications

General	
Board Size	Mini PCIe standard (full size): 30 x 50.95 x 14.4 mm (1.18 x 2.01 x 0.57")
Weight	9.4 grams (.33 oz.)
Power Requirements	3.3V @ 0.7 W (supplied from the Mini PCIe socket)
Manufacturing Standards	IPC-A-610 Class 2
Regulatory Compliance	RoHS (EU 2015/863), Conflict Minerals compliant.
Mini PCIe Signal Type	PCI Express

Environmental	
Operating Temperature	-40° to +85°C
Storage Temperature	-40° to +85°C
Vibration, Sinusoidal Sweep †	MIL-STD-202H method MIL-STD-202-204, Condition A: 2g
Vibration, Random †	MIL-STD-202H method MIL-STD-202-214, Condition A: 5.35g rms
Mechanical Shock †	MIL-STD-202H method MIL-STD-202-213, Condition G: 20g half-sine

Device I/O	
Ethernet ‡	One autodetect 10BaseT/100BaseTX/1000BaseT port Latching connector.
Synchronization	IEEE 1588/802.1AS Precision Time Protocol
Power Over Ethernet	IEEE 802.3at-2009 Types 1 (POE) and 2 (POE+). MPEe-E6E-P only.
Network Boot Option	Yes

Software	
Operating Systems	Compatible with Windows, Linux, and Android.

† MIL-STD-202H shock and vibrate 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 VersaLogic Sales 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.

Modify a Module to Your Exact Requirements

COTS modifications are available in quantities as low as 100 pieces. Options include conformal coating, application-specific testing, BOM revision locks, special labeling, and more.

Ordering Information

Model	Function	Operating Temp.
VL-MPEe-E6E	1 Gigabit Ethernet Mini PCIe Module	-40° to +85°C
VL-MPEe-E6E-P	1 Gigabit Ethernet Mini PCIe Module with POE+	-40° to +85°C

Accessories

Part Number	Description
Cables	
VL-CBR-1605	12" 16-pin Clik-Mate to 1 RJ-45, RoHS (for use with VL-MPEe-E6E)
VL-CBR-1606	12" 16-pin Clik-Mate to 1 RJ-45 w/ POE, RoHS (for use with VL-MPEe-E6E-P)
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

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-E4E	Gigabit Ethernet Over Fiber Module.	PCIe
VL-MPEe-E5E	Dual Channel Gigabit Ethernet Adapter.	PCIe
VL-MPEe-U2E	Four Serial ports. Twelve GPIO lines.	PCIe
VL-MPEe-V5E	Video Display Adapter. VGA and LVDS Interfaces.	PCIe
VL-MPEe-FW1	1394 Firewire Module, Industrial Temp.	PCIe
VL-MPEs-F1Exx	mSATA drive (4/16/32 GB).	SATA
VL-MPEs-S3E	SATA adapter.	SATA
VL-MPEu-G2E	GPS receiver.	USB
VL-MPEu-G3E	Advanced GPS receiver.	USB
VL-MPEu-C1E	Dual Channel CAN Bus Module	USB

Call VersaLogic Sales at (503) 747-2261 for more information!



Mini PCIe Modules