













Datasheet

Diamond Systems

DS-MPE-CAN2L

PCIe MiniCardI/O Expansion Module with Dual CANbus Ports



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DS-MPE-CAN2L



PCIe MiniCard I/O Expansion Module with Dual CANbus Ports



Description

The DS-MPE-CAN2L is a rugged, low cost dual port CAN 2.0 PCIe MiniCard module that is ideal for CAN expansion in embedded and OEM applications.

The module implements a CAN protocol bus controller that performs serial communications according to the CAN 2.0A and CAN 2.0B specifications. The protocol uses a multi-master bus configuration for the transfer of frames between nodes of the network and manages error handling with no burden on the host processor. Error analysis features enabling diagnostics, system maintenance, and system optimization. A listen-only mode enables CAN bus traffic analysis and automatic bitrate detection.

The DS-MPE-CAN2L product comes with the dual port PCIe MiniCard CAN module, two 6981182 can cables, and a mounting hardware kit.

Rugged Design

Extended temperature capability $(-40^{\circ}C \text{ to } +85^{\circ}C)$ enables the board to operate in environments with extreme temperature swings, such as vehicles or outdoor installations. In addition, the board may be customconfigured with 0-ohm resistors in place of jumper blocks for increased ruggedness in high-vibration environments.

- 2 CAN 2.0B ports
- 1Mbps maximum data rate
- 10 receive buffers for improved performance
- 10 transmit buffers plus 1 high priority transmit buffer
- 10 programmable acceptance filters
- Supports 11-bit and 29-bit identifiers
- 500V port-to-port and input-to-output isolation
- Driver supports dual-independent and dual-redundant modes
- Jumper selectable line termination and bias
- Latching connectors for increased ruggedness
- Support for Windows 7, XP, and Linux 2.6.xx
- PCIe MiniCard full size form factor (50.95 x 30mm)
- Operating temperature of -40°C to +85°C

Specifications	
Number of Ports	2 CAN 2.0B ports
Data Rate	1Mbps
Receive Buffers	10
Transmit buffers	1 high priority 10 standard priority
Acceptance Filters	10 programmable, 29-bit
Identifiers	Supports 11-bit and 29-bit
Modes	Dual-independent Dual-redundant
Isolation	500V port-to-port & input-to-output
Power input	+3.3VDC ±5%
Power consumption	0.462W @ 3.3V
Software drivers	Windows 7, XP Linux 2.6.12, 2.6.27, 2.6.31, 2.6.32
Operating temperature	-40°C to +85°C
Operating humidity	5% to 95% non-condensing
Form Factor	PCIe MiniCard full size
MTBF	1,583,210 hours at 20°C
Dimensions	50.95mm x 30mm (2" x 1.18")
Weight	8.5g (0.3oz)
RoHS	Compliant

Ordering Information	
DS-MPE-CAN2L	Dual CAN 2.0 PCIe MiniCard Module with cable kit
6981182	CANbus 2.0 cable



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