



► Dual Gigabit Ethernet PCI Adapter

The Dual Gigabit Ethernet PCI Adapter provides dual 10/100/1000 Mbps Ethernet communications links on either copper or fibre media.

The adapter is available in air-cooled versions : commercial and ruggedised.

Architecture

The Dual Gigabit Ethernet PCI Adapter uses a custom intelligent ASIC for the control of the Gigabit Ethernet MACs (Media Access Controllers) thereby removing protocol processing overhead from the host processor, thus providing for higher net data throughput.

The ASIC incorporates Virtual Cable Tester (VCT) technology for advanced cable diagnostics. VCT enables the system to pinpoint the location of cabling issues down to a meter or less, reducing network installation and support costs.

Features

- Automatic MDI/MDIX crossover at all speeds.
- High data transmission rate.
- A state-of-the-art ASIC enables the adapter to support the PCI-bus, ensuring 32-bit and 64-bit compatibility and maximum performance, while reducing CPU utilisation.
- The dual link adapter provides redundant Gigabit Ethernet links for high reliability.
- Hardware Redundant Link Management manages unattended and automatic failure recovery of downed links.
- Compliant to IEEE 802.3 (Ethernet), IEEE 802.3u (Fast Ethernet) and IEEE 802.3ab (Gigabit Ethernet).

Applications

- Distributed real-time applications in harsh environments
- High-speed sensor integration
- High-performance multimedia applications
- Distributed digital voice and video applications

Availability in Other Formfactors

The Dual Gigabit Ethernet PCI Adapters are also available in the PMC and PC104 Plus formfactors.

In the PMC formfactor, they are available in conduction-cooled (-40 C to +85 C) and air-cooled versions : ruggedised (-40 C to +85 C), industrial (-15 C to +75 C) and commercial (0 C to +55 C).

In the PC104 Plus formfactor, they are available in air-cooled versions : ruggedised (-40 C to +85 C), industrial (-15 C to +75 C) and commercial (0 C to +55 C).



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Dual Gigabit Ethernet PCI Adapter Specifications

Bus Interface	64-bit, 66 MHz PCI-bus (32-bit, 33 MHz compatible) Electrically and Mechanically complies to PCI Rev. 2.1
Number Interfaces	2 x 10/100/1000Base-T copper or fibre, full duplex or half duplex support
LAN Controller	Custom ASIC
I/O Addresses	Automatic assigned to the slot by PCI Rev. 2.1 Plug-and-Play
Interrupts	User-programmable interrupts
DMA	Automatic depending on PCI slot (bus master)
Power Requirement	Universal Card (+3,3 V and +5 V compatible) 650 mA @ 5 V
MTBF	Figures according to MIL-HDBK-217F, Parts Stress Method : Ground, Mobile $T_j = 65\text{ C}$ $T_a = 45\text{ C}$ 25 000 hrs Naval, Sheltered $T_j = 60\text{ C}$ $T_a = 40\text{ C}$ 35 000 hrs Airborne, Inhabited Cargo $T_j = 75\text{ C}$ $T_a = 55\text{ C}$ 25 000 hrs
Software Drivers	Various software drivers offered including for VxWorks, Linux, Solaris, Windows 2000, Windows XP and Windows 2003 operating systems as standard; others are costed options.
Protocols	<ul style="list-style-type: none"> • MAC • IP • TCP/IP • UDP/IP
Supporting Tools	Sample driver usage software (C/C++ source code)
Standard Compliance	<ul style="list-style-type: none"> • IEEE 802.3 (Ethernet), IEEE 802.3u (Fast Ethernet) and IEEE 802.3ab (Gigabit Ethernet) • Compliant to IEEE 802.3x (flow control support) • IEEE 802.1p support (QoS)

Environmental Specifications

	Commercial	Ruggedised
Temperature		
- Operating	0 C to +55 C	-15 C to +75 C
- Storage	-40 C to +85 C	-50 C to +85 C
Humidity	0% - 90%	0% - 95%
Shock	N/A	30 g peak for 11 ms
Vibration		
- Sine	2 g (peak) 10 Hz to 100 Hz	10 g (peak) 5 Hz to 2 kHz
- Random	0,04 g ² /Hz at 15 Hz to 2 kHz	0,1 g ² /Hz at 15 Hz to 2 kHz