MESA

MESA ELECTRONICS   4I60 ETHERNET INTERFACE

FEATURES

- ■ **32 bit PCI Ethernet interface**
- ■ **100/10BaseT + AUI + 10Base2**
- ■ **Uses DEC 21143 LAN chip**
- ■ **Efficient bus mastering mode**
- ■ **Autonegotiation of media types**
- ■ **Boot ROM socket**
- ■ **External BNC transceiver option**
- ■ **Low power - all CMOS**
- ■ **2 year warranty**
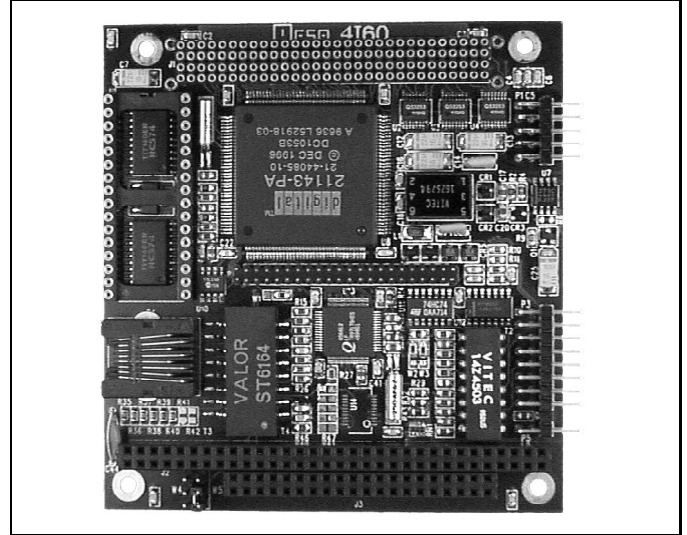
The 4I60 is a high performance PCI 100BaseT Ethernet card in a PC/104-PLUS form factor. PC/104-PLUS is a new embedded system card format that adds a stackable PCI connector to the PC/104 standard.

The 4I60 is a bus mastering PCI Ethernet card using the Digital Semiconductor 21143 Ethernet chip. The bus mastering architecture of the 21143 minimizes CPU involvement in packet transmission and reception. The large receive and transmit FIFOs permit efficient operation even with high system latencies.

The 21143 chip was chosen for its high performance, advanced feature set, and wide range of available drivers.

The 4I60 supports full autonegotiation for automatic selection of all twisted media types. Full duplex operation is supported on 100BaseT and 10BaseT modes.

The 4I60 is a universal type PC/104-PLUS card and will work with 3.3V and 5V bus systems. Only 5V power is required by the 4I60 (+12V is used only for the AUI connector)

Unused circuitry is powered down when not needed, including the on card DC-DC converter. The 100BaseT interface of the PHY is powered down when using 10BaseT.

All options are software selectable except the PCI slot number. A MII compatible connector is available for use with other media types. A socket for a 32 pin boot ROM of up to 256K bytes is provided. 5V flash ROMs, can be used, simplifying software upgrades.

Various 4I60 options are available including a lower cost and lower power 10BaseT only model. A low cost external panel mount transceiver option is available for 10Base2 (BNC) operation.

AUI CONNECTOR: All 4I60 models have an AUI interface available for external transceivers. The AUI connector uses system +12V. A PTC device is used to limit overload current in +12V line.

MII CONNECTOR: A MII compatible 40/44 pin connector is available for external high speed transceivers.

REMOTE BNC TRANSCEIVER: A panel mount BNC (10Base2) transceiver is available as an 4I60 option (MAU). This transceiver connects to the 4I60's AUI connector and gets its isolated power from the 4I60's DC-DC converter. The transceiver can be mounted up to one foot away from the 4I60 card. The remote transceiver is only 1.5" by 1.5" square.

BOOT PROM: The 4I60 has a socket that can accommodate 16K through 256K EPROMS or 5V flash EEPROMS.

INTERRUPTS: Interrupt selection is routed to PCI INTA,B,C,D depending on PCI slot selection.

POWER: The 4I60 requires only +5V power for operation. If an external transceiver is connected to the AUI port, +12 system power must be available.

AUTONEGOTIATION: The 4I60 supports autonegotiation of twisted media types to automatically select the best media type that the far end supports.

4I60 SPECIFICATIONS:

	Min	Max	Units	Notes
POWER REQUIREMENTS:				
Supply voltage	4.5	5.5	V	
4I60 Supply current	----	350	mA	BNC Transceiver off
4I60 Supply current	----	400	mA	BNC Transceiver on
4I60-10 Supply current	----	100	mA	BNC Transceiver off
4I60-10 Supply current	----	250	mA	BNC Transceiver on
ENVIRONMENTAL:				
Temperature range -C version		0	+70	$^{\circ}$C
Temperature range -I version		-40	+85	$^{\circ}$C

ORDERING INFORMATION:

4I60	4I60 with support for 100BaseT - 10BaseT - AUI
4I60-10	4I60 with 10BaseT and AUI only
MAU	10Base2 (BNC) option

Add -I to specify industrial temperature range