

# Network Adapter PMC

## Dual/Quad 82551ER 10/100-TX Ethernet Adapter

The Dual/Quad 10/100-TX Mb/s Ethernet Adapter provides up to four Ethernet connections over twisted pair media. Options are available for Front-Panel RJ45 accessibility, or Rear I/O accessibility via a VITA 36 PIM module.

The card is built around Intel 82551ER Ethernet controllers that provide an integrated media access controller (MAC) and physical layer (PHY) for operating at either 10 Mb/s or 100 Mb/s. The 82551ER provides full-duplex operation at both speeds.

For front panel I/O the module presents four RJ-45 connectors, one for each port, eliminating the need for cumbersome cable adapters. Transformer based electrical isolation is provided between the 82551ER and the I/O connectors.

For the front-panel accessible products, one Green/Yellow status LED is available for each port and is visible on the front panel. The LED will illuminate GREEN for 100 Mb/s operation, and YELLOW for 10 Mb/s

operation, and will illuminate upon sensing a valid link condition.

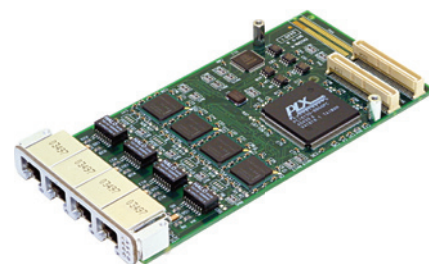
During operation, the LEDs will flicker OFF to indicate packet activity on the corresponding Ethernet port.

The connection to the 32-bit, 66 MHz PCI bus is through an PLX 6150B bridge. When host software properly configures the bridge, each 82551ER controller appears as if it were an independent controller on the primary side of the bridge.

Interrupt requests A, B, C, and D are posted on the PCI bus, using the standard PCI-to-PCI bridging conventions for routing interrupts from devices on the secondary side of a bridge.

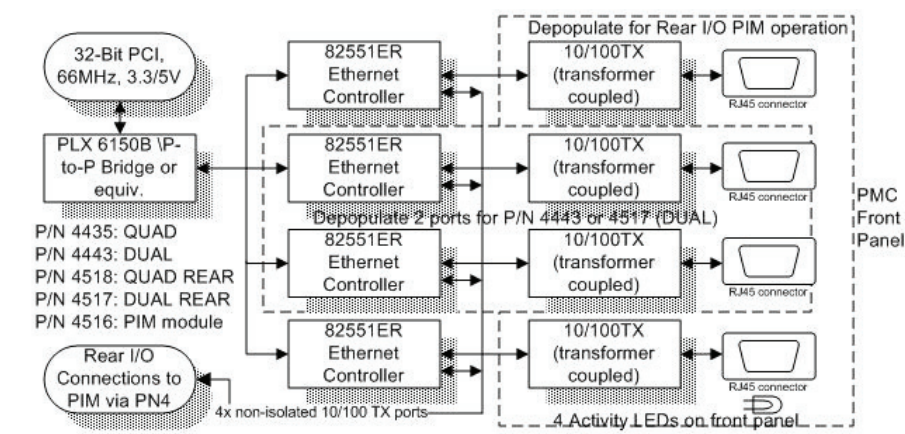
Each port is programmed with a unique 48-bit MAC address that is stored in EEPROMs on the board.

The fully populated board (P/N 4435) has all four Ethernet ports available at the PMC front panel. A depopulated version of the board (P/N 4443) is available that pro-

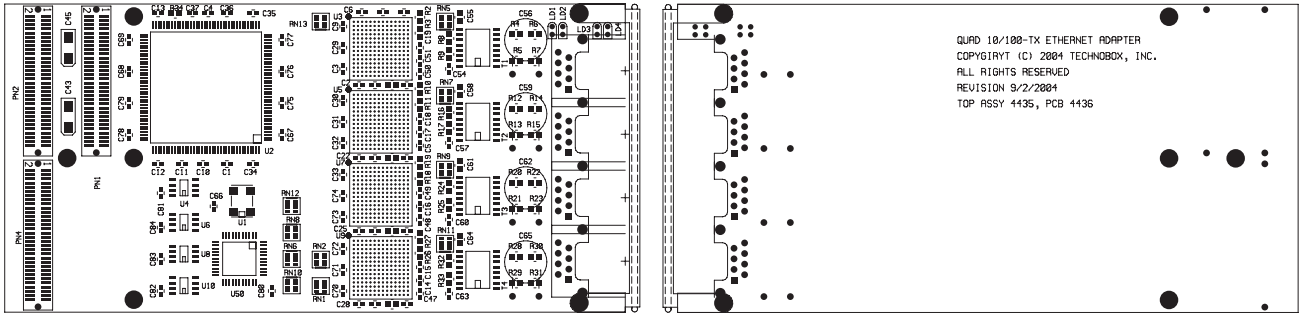


4435

- Provides Four 10/100 Ethernet Ports
- RJ-45 Front Panel I/O
- Design Features 82551ER Ethernet Controllers
- Full-duplex Operation at Both 10 Mb/s and 100 Mb/s
- 32-bit, 66 MHz PCI Bus Interface using PLX 6150B Bridge
- LEDs Indicate Link Speed, Condition, and Activity
- Population Options Available for Quad with Rear I/O and Dual Port Versions with Front or Rear I/O



**Technobox**



vides two Ethernet ports using a front panel machined with two RJ45 openings.

Other population options are available for supporting Ethernet access via the PMC's PN4 connector for

Rear I/O access. P/N 4518 supports four Ethernet ports, while P/N 4517 supports two Ethernet ports. A P/N 4516 VITA 36 "PIM" module is required to support transformer isolation to the Ethernet cables. These rear I/O PMCs have a blank

front panel. The PIM has the RJ45 connections as well as the four green/yellow status LEDs.

The Intel 82551ER is supported by many operating systems with built-in Ethernet support.

### Specifications

Temperature (Operating): 0° to 55° C  
 Temperature (Storage): -40° to +85° C  
 Altitude: Not specified or characterized (Typical similar equipment is at 15,000 ft.)  
 Humidity (Operating/Storage): 5% to 90% non-condensing  
 Vibration: Not specified or Characterized  
 MTBF: Available upon request  
 Typical Power Dissipation: TBD  
 Power Supplies Required: +3.3V  
 PCI Environment: 5 or 3.3 Volt, 32-bit, 66 MHz

### Ordering Information

4435 (Quad Ethernet with Front Panel I/O)  
 4443 (Dual Ethernet with Front Panel I/O)  
 4518 (Quad Ethernet with Rear I/O - use 4516 PIM)  
 4517 (Dual Ethernet with Rear I/O - use 4516 PIM)  
 4516 (PIM for use with 4517 and 4518)

