

# P16 - PC-MIP Dual 100Base-T Ethernet



- Dual 10/100Base-T Fast Ethernet
- Dual Intel® 82559 Controller
- Dual RJ45 connector
- Full duplex
- Electrical isolation

The P16 is based on the PC-MIP ANSI mezzanine standard. It can be used as an I/O extension in any type of bus system, i.e. CPCI, PXI, VME or on any type of stand-alone SBC. Appropriate PC-MIP carrier cards in 3U, 6U and other formats are available from MEN or other manufacturers. Comparable with the larger foot print PMC mezzanine cards, PC-MIP boards also support PCI bus.

The P16 provides dual Ethernet functionality with a

1000V isolation for telecom applications (e. g. routers) as well as for industrial applications (e. g. second Ethernet as fieldbus).

The P16 features two Intel® 82559 Ethernet controllers, supporting 10/100Base-T via two RJ45 connectors at the front panel. The PC-MIP offers full-duplex support. The MAC address is stored in an onboard serial EEPROM.

## Technical Data

### Ethernet Interface

- Two 10/100Base-T interfaces
- Two 82559ER controllers
- Full duplex support
- Media Access Control (MAC) address stored in onboard serial EEPROM

### PCI Characteristics

- 32-bit PCI, complying with PCI Local Bus Specification, Rev. 2.1
- Target and initiator

### Peripheral Connection

- Via front panel on two standard 8-pin RJ45 receptacle connectors

### Electrical Specifications

- Isolation voltage: 1kV RMS (0..1000m above sea level)
- Supply voltage/power consumption:
  - +3.3V (3.0V..3.6V), 300mA typ., 450mA max.
- MTBF: 490,000h @ 50°C

### Mechanical Specifications

- Dimensions: PC-MIP Type II conforming to PC-MIP Standard
- Weight: 30g

### Environmental Specifications

- Temperature range (operation):
  - 0..+60°C
  - Industrial temperature range on request
- Airflow: min. 10m<sup>3</sup>/h
- Temperature range (storage): -40..+85°C
- Relative humidity (operation): max. 95% non-condensing
- Relative humidity (storage): max. 95% non-condensing
- Altitude: -300m to + 3,000m
- Shock: 15g/0.33ms, 6g/6ms
- Vibration: 1g/5..2,000Hz

### Safety

- PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers

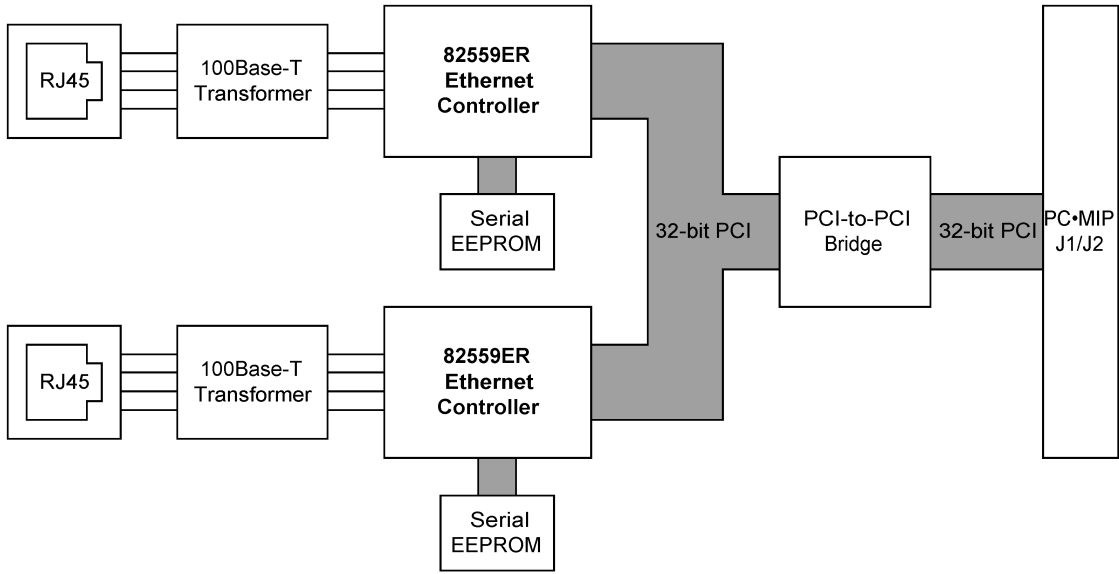
### EMC

- Tested according to EN 55022 / 1999-05 (radio disturbance) and EN 55024 / 1999-05 (immunity) with regard to CE conformity

### Software Support

- Drivers from Intel® for many operating systems
- Drivers already implemented in VxWorks, Linux, QNX, OS-9

### Diagram



## Related Products

### Standard Hardware

15P016-00	P16, PC-MIP Type II (with front I/O), dual fast 100Base-T Ethernet, 0..+60°C
15P016-01	P16, PC-MIP Type II (with front I/O), dual fast 100Base-T Ethernet, -40..+85°C
15P016-02	P16, PC-MIP Type II (with front I/O), dual fast 100Base-T Ethernet, 0..+60°C, 2 LEDs at front

Please refer to our PC-MIP and PMC compare chart for a selection of mezzanine functions.

### Software

For a comprehensive driver package supporting the 82559ER controller, please refer to [www.intel.com](http://www.intel.com).

### Documentation

20P000-00	PC-MIP draft specification Rev. 0.92b
20P016-00	P16 user manual

*For the most up-to-date ordering information and direct links to other data sheets and downloads, see the P16 online data sheet under [www.men.de](http://www.men.de). --> [Click here!](#)*

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