

P16 – Dual 100Base-T Ethernet PC-MIP®

- **Dual 10/100Base-T Fast Ethernet**
- **Dual Intel® 82559 Controller**
- **Dual RJ45 connector**
- **Full duplex**
- **Electrical isolation**
- **-40 to +85°C screened versions**

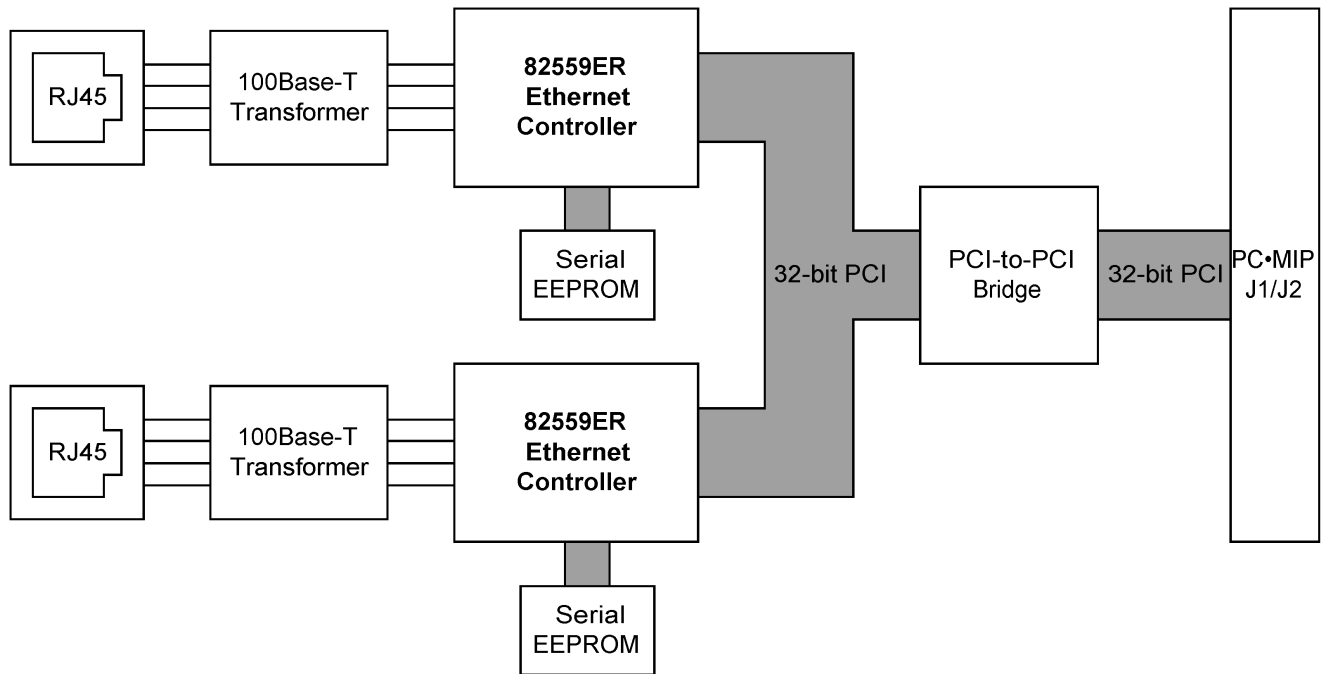


The mezzanine module P16 provides dual Ethernet functionality with a 1000 V isolation for telecom applications (e. g. routers) as well as for industrial applications (e. g. second Ethernet as fieldbus). The P16 features two Intel® 82559 Ethernet controllers, supporting 10/100Base-T via two RJ45 connectors at the front panel. The PC-MIP® offers full-duplex support.

The MAC address is stored in an onboard serial EEPROM.

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, 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.

Diagram



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 (derived from MIL-HDBK-217F)
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. 10m³/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/11ms ■ Bump: 10g/16ms ■ Vibration (sinusoidal): 2g/10..150Hz ■ Conformal coating on request
Safety	■ PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers
EMC	■ Tested according to EN 55022 (radio disturbance), IEC1000-4-2 (ESD) and IEC1000-4-4 (burst)
Software Support	■ Drivers from Intel® for many operating systems ■ Drivers already implemented in VxWorks®, Linux, QNX®, OS-9® ■ For more information on supported operating system versions and drivers see Downloads.

Configuration & Options

Standard Configurations

Article No.	Channels	Operation Temperature	Remark
15P016-00	2	0..+60°C	
15P016-01	2	-40..+85°C	
15P016-02	2	0..+60°C	2 LEDs at front

Options

Channels	■ 2
Operation Temperature	■ 0..+60°C ■ -40..+85°C

Ordering Information

Standard P16 Models	15P016-00	Dual fast 100Base-T Ethernet, 0..+60°C
	15P016-01	Dual fast 100Base-T Ethernet, -40..+85°C screened
	15P016-02	Dual fast 100Base-T Ethernet, 2 LEDs at front, 0..+60°C

Software: Miscellaneous For a comprehensive driver package supporting the 82559ER controller, please refer to www.intel.com.

For operating systems not mentioned here [contact MEN sales](#).

Documentation	Compare Chart mezzanine functions on PMC/XMC and PC-MIP® » Download	
	20P000-00	PC-MIP® Draft Specification Rev. 0.92b
	20P016-00	P16 User Manual

Contact Information

Germany

MEN Mikro Elektronik GmbH
Neuwieder Straße 3-7
90411 Nuremberg
Phone +49-911-99 33 5-0
Fax +49-911-99 33 5-901

info@men.de
www.men.de

France

MEN Mikro Elektronik SA
18, rue René Cassin
ZA de la Châtelaine
74240 Gaillard
Phone +33 (0) 450-955-312
Fax +33 (0) 450-955-211

info@men-france.fr
www.men-france.fr

USA

MEN Micro, Inc.
24 North Main Street
Ambler, PA 19002
Phone (215) 542-9575
Fax (215) 542-9577

sales@menmicro.com
www.menmicro.com

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