

P11 - PC-MIP Quad RS422/485 UART



- **Four asynchronous channels**
- **Full-duplex**
- **128 bytes FIFO per transmitter/receiver per channel**

The P11 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 P11 is a high-performance quadruple UART with RS422/485 interface. Each 16C950 UART channel has 128-deep transmit and receive FIFOs, with readable levels

and user-defined thresholds. All UARTs are capable of delivering up to 15Mbps asynchronous data throughput simultaneously, and are software-compatible with commonly used 16C450, 550, 650 and 750 UARTs. The UARTs support Big Endian byte-lane conversion, 5, 6, 7, 8 and 9 bit data framing and Infra-red (IrDA) receiver and transmitter.

The P11 is supplied with a RS422/485 line interface at the front and via the carrier board connector. It supports 4-wire full duplex transmission.

Technical Data

UART

- 4 16C950 high-performance UARTs
 - Full software compatibility with 16C550 UARTs
 - Configured with I/O or memory base address
 - 8 128-byte FIFOs
 - Data rates
 - UART controller supports up to 15Mbps
 - Physical interface supports up to 10Mbps
 - Full duplex/half duplex interface
- OS-9
 - Linux (on request)

PCI Characteristics

- 32-bit PCI, complying with PCI Local Bus Specification, Rev. 2.2
- Target

Peripheral Connections

- Via front panel on a shielded 26-pin half-pitch D-Sub receptacle connector
- Via J3/carrier board

Electrical Specifications

- Supply voltages/power consumption:
 - +5V (4.85V..5.25V), 130mA
 - +3.3V (3.15V..3.6V), 40mA
- MTBF: 190,000h @ 50°C

Mechanical Specifications

- Dimensions: PC-MIP Type II conforming to PC-MIP specification
- Weight: 28g

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/0.33ms, 6g/6ms
- Vibration: 1g/5..2,000Hz

Safety

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

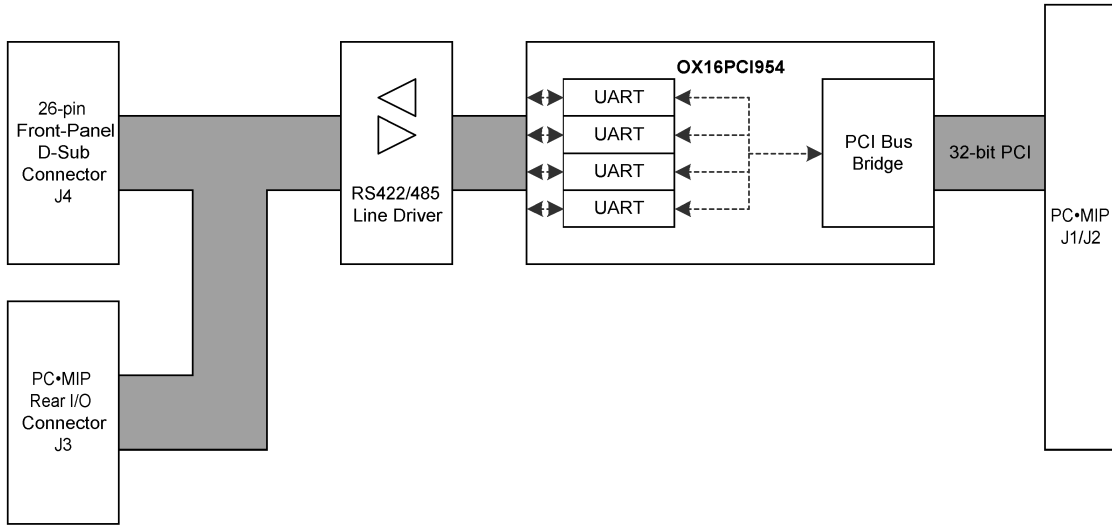
EMC

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

Software Support

- WindowsNT
- VxWorks

Diagram



Related Products

Standard Hardware

15P011-00	P11, PC-MIP Type II (front I/O), quad RS422/485 UART, 16450-compatible, with 128-byte FIFO
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Please refer to our PC-MIP and PMC compare chart for a selection of mezzanine functions.

Accessories

05P002-00	PC-MIP cable, 2m, with 26-pin half-pitch 26-pin D-Sub plug/housing to pig tail
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Software

13P010-01	SCF driver for P10/P11 M-Module, OS-9(PPC), PowerPC object code
13P010-60	VxWorks® driver for P10/P11
13P010-70	Windows®NT: UART driver for P10/P11/AD45

Documentation

20P000-00	PC-MIP draft specification Rev. 0.92b
20P011-00	P11 user manual
21APPN008	Application Note: Using P10/P11/AD45 under Linux

For the most up-to-date ordering information and direct links to other data sheets and downloads, see the P11 online data sheet under www.men.de. --> [Click here!](#)

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