

P13 - PC-MIP 48-bit TTL I/O Interface



- 32 TTL inputs/outputs
- 48mA drivers
- Active terminators
- Same line interface as SCSI
- Fast 16-bit host access

The P13 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 P13 TTL I/O PC-MIP is used for fast and trouble-

free transmission of binary signals.

It is organized in six 8-bit groups, where each group can be programmed as an input or output. Every group has line termination resistors, which can also be activated by software. A trigger line allows simultaneous acquisition of the inputs of several groups at a specific point of time. All port lines are ESD-protected but not optically isolated.

Technical Data

Input/Output

- 48-bit TTL I/O
- 6 groups, alternatively input or output
- Active terminators can be activated for each group
- Output low current (VOL max. 0.55V): min. 64mA
- Output high current (VOH min. 2.0V): min. -15mA
- Input high current: max. 100µA
- Input low current: max. -100µA
- Input voltage: min. -0.5V, max. 6V

PCI Characteristics

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

Peripheral Connections

- Via front panel on a shielded 36-pin half-pitch D-Sub receptacle connector
 - Only Type II models
 - 28-bit I/O, incl. trigger functionality
- Via J3/carrier board (rear I/O)
 - Type I and Type II models
 - Full 48-bit I/O functionality

Electrical Specifications

- Supply voltage/power consumption:
 - +5V (4.85V..5.25V), 1.1A
 - +3.3V (3.0V..3.6V), 68mA
- MTBF: 334,000h @ 50°C

Mechanical Specifications

- Dimensions: PC-MIP Type I/II conforming to PC-MIP specification
- Weight:
 - Type I module: 24g
 - Type II module: 34g

Environmental Specifications

- Temperature range (operation):
 - 0..+60°C or -40..+85°C
 - 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

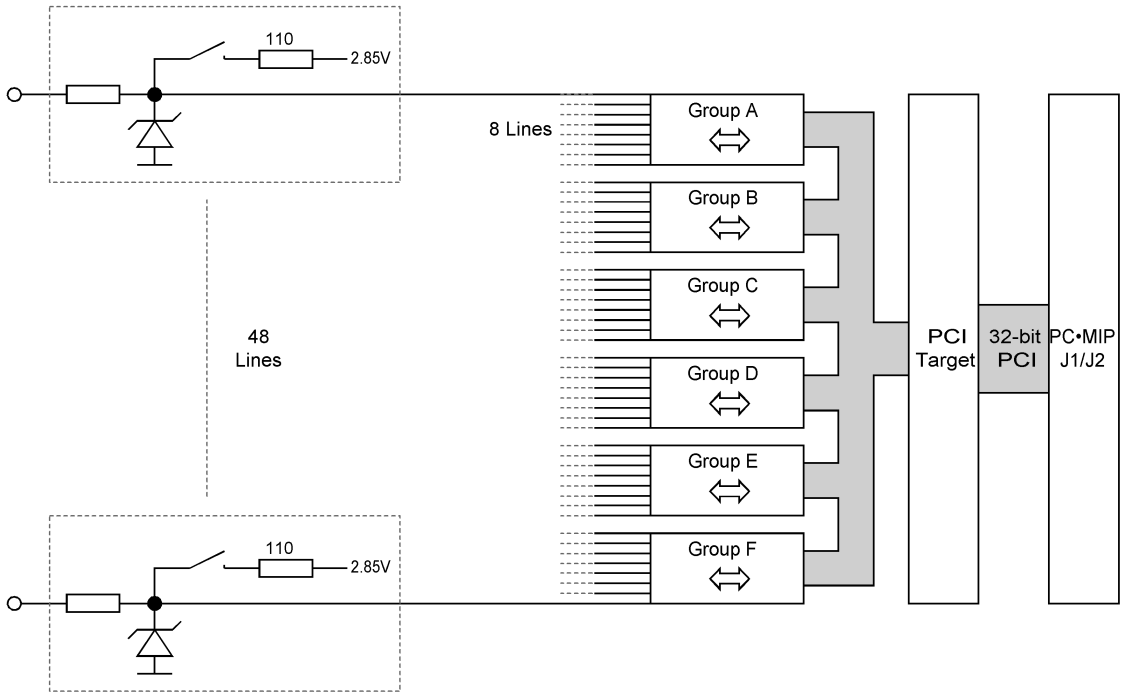
EMC

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

Software Support

- MEN Driver Interface System (MDIS for Windows, Linux, VxWorks, QNX, RTX, OS-9)

Diagram



Related Products

Standard Hardware

15P013-00	P13, PC-MIP Type I (no front I/O), 48-bit TTL I/O
15P013-02	P13, PC-MIP Type I (no front I/O), 48-bit TTL I/O, -40..+85°C
15P013-03	P13, PC-MIP Type II (front I/O), 48-bit TTL I/O
15P013-04	P13, PC-MIP Type II (front I/O), 48-bit TTL I/O, -40..+85°C

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

Accessories

05P013-01	PC-MIP cable, 4m, two 36-pin half-pitch D-Sub plugs/housings
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Software

13P013-06	MDIS4/2004 low-level driver sources for P13
13P013-70	MDIS4/2004 Windows® NT4/W2K driver for P13

To use MDIS4 low-level drivers, you also need one of the MDIS4 system packages available for Windows®, Linux, VxWorks®, QNX®, RTX or OS-9 (MDIS4 = MEN Driver Interface System).

Documentation

20P000-00	PC-MIP draft specification Rev. 0.92b
20P013-00	P13 user manual
21APPN001	Application Note: MDIS4 under LabWindows®/CVI

For the most up-to-date ordering information and direct links to other data sheets and downloads, see the P13 online data sheet under www.men.de. --> [Click here!](#)

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