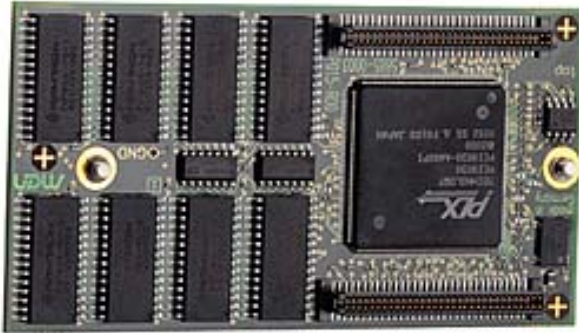


P15 - PC-MIP Non-volatile SRAM



- **FRAM technology**
- **No batteries required**
- **256KB or 512KB**
- **PC-MIP Type I**

The P15 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 P15 can be used to store non-volatile data. The memory is implemented in FRAM technology

(Ferroelectric Random Access Memory). FRAMs are proprietary high-performance semiconductors that retain information even when power is lost. For this technology no batteries are required - and maintenance problems are solved. Access times are the same as for standard static SRAM, so there is no delay at write access as for EEPROM or Flash. The number of write cycles is also nearly unlimited (10 billion read/writes).

Technical Data

Memory

- 256KB or 512KB FRAM
- Four memory banks with 512KB
- Two memory banks with 256KB
- Access time: 70ns
- Cycle time: 130ns

PCI Characteristics

- 32-bit/33-MHz PCI, complying with PCI Local Bus Specification, Rev. 2.1
- Target

Peripheral Connection

- No peripheral connections

Electrical Specifications

- Supply voltage/power consumption:
 - +5V (4.85V..5.25V), 22.5mA typ.
 - +3.3V (3.0V..3.6V), 86.3mA typ.
- MTBF: tbd. @ 50°C

Mechanical Specifications

- Dimensions: PC-MIP Type I conforming to PC-MIP Standard, without J3
- Weight: 34g

Environmental Specifications

- Temperature range (operation):
 - -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

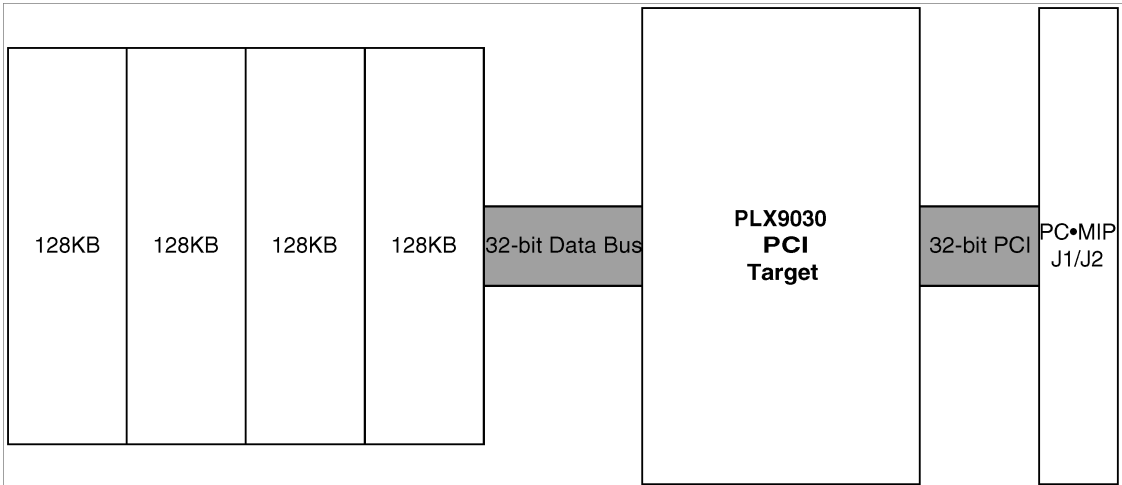
EMC

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

Software Support

- Driver support for Linux, VxWorks, OS-9

Diagram



Related Products

Standard Hardware

15P015-00	P15, PC-MIP Type I (no front I/O), no rear I/O, non-volatile FRAM 512KB, -40..+85°C
15P015-01	P15, PC-MIP Type I (no front I/O), no rear I/O, non-volatile FRAM 256KB, -40..+85°C

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

Documentation

20P000-00	PC-MIP draft specification Rev. 0.92b
20P015-00	P15 user manual

For the most up-to-date ordering information and direct links to other data sheets and downloads, see the P15 online data sheet under www.men.de. --> [Click here!](#)

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