PMC Modules

PMC520
Octal Serial 232 Communication

These modules provide eight asynchronous serial communication ports from a single PMC carrier slot. Software-configuration helps you quickly set baud rates, character-sizes, stop bits, and parity. Signal support for RTS/CTS handshaking is also included.

For more efficient data processing, each serial port is equipped with 64-character FIFO buffers on the transmit and receive lines.

The data ports generate individually controlled transmit, receive, line status, and data set interrupts. A global interrupt source register provides interrupt status indication for all eight channels to speed up interrupt parsing.

Features

- Eight RS232E ports
- 64-byte transmit FIFO buffers
- 64-byte receive FIFO buffers
- Programmable baud rate (up to 120Kbps)
- Individual handshake lines (RTS, CTS) on each channel
- Line-break and false start-bit detection
- Industry-standard software-compatible 16C550 configuration registers

Benefits

- High-density design lowers per-port costs and saves PMC carrier card slots for other functions.
- 64-byte FIFO buffers minimize CPU interaction for improved system performance.
- Each serial channel provides handshake support to simplify interfacing with modems.

Specifications

**RS232E Serial Ports**

Configuration: Independent, non-isolated serial ports with a common single return connection and configured as a DTE device.

Data rate: Programmable up to 120K bits/second using internal baud rate generator.

Max. cable length: 15 meters (50 feet) typical, limited to a cable capacitive load of 2500pF.

Character size: 5 to 8 bits, software-programmable.

Parity: Odd, even, or no parity; software-programmable.

Stop bits: 1, 1-1/2, or 2 bits; software-programmable.

Data register buffers: Double buffered or 64-byte FIFO buffered, mode selectable.

Interrupts: Receiver line status (overrun, parity, framing error, or break interrupt); received data available (FIFO level reached) or character time-out; transmitter (FIFO level reached); or modem status (CTS).

**Environmental**

Operating temperature: 0 to 70°C (PMC520-64) or -40 to 85°C (PMC520-64E).

Storage temperature: -55 to 125°C.

Relative humidity: 5 to 95% non-condensing.

Power: +5V (±5%), consult factory for current specifications.


**PMC Compliance**

Conforms to PCI Local Bus Specification, Revision 2.3 and CMC/PMC Specification, P1386.1.

4K Memory Space Required: One Base Address Register.

Signaling: 3.3V and 5V compliant.

Ordering Information

**PMC Modules**

- PMC520: Eight RS232E serial ports, front I/O connector
- PMC520E: Same as PMC520 plus extended temperature range.
- PMC520R: Same as PMC520 except with rear I/O connector
- PMC520RE: Same as PMC520R plus extended temperature range

**Customized PMC Modules**

† 5085-x: Modified PMC520 with user-specified crystal/baud rate.
† Specify x as crystal frequency when ordering. Minimum quantity per order is two units.

**Software**

(see software documentation for details)

- PMCSW-API-VXW: VxWorks® software support package
- PCISW-API-QNX: QNX® software support package
- PCISW-API-WIN: Windows® DLL software support
- PCISW-LINUX: Linux™ support (website download only)

**Accessories**

(see accessories documentation for details)

- 5025-288: Termination panel, SCSI-3 connector, 68 screw terminals
- 5028-432: Cable, shielded, SCSI-3 connector both ends

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