

IP500 Serial 232 Communication

These modules provide asynchronous serial and parallel communication interfaces for your system. Software-configuration helps you quickly set baud rates, character-sizes, stop bits, and parity. Full signal support for modem control is also included.

For more efficient data processing, each serial port is equipped with 16-character FIFO buffers on the transmit and receive lines.

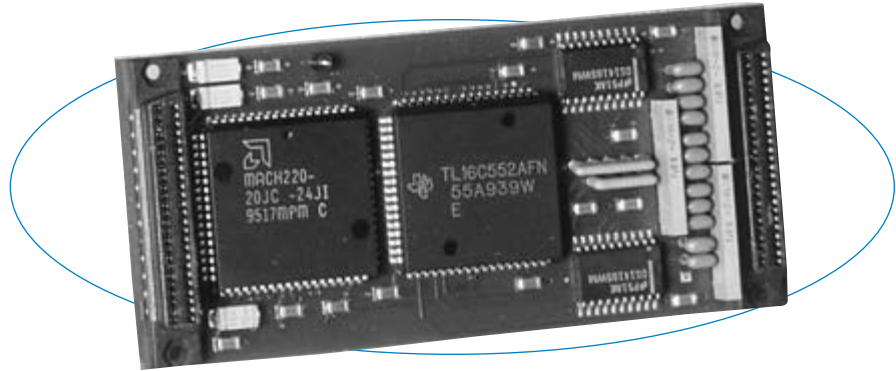
The data ports generate individually controlled transmit, receive, line status, and data set interrupts. Since unique interrupt vectors may be assigned to each port, it is easy for you to identify and locate the interrupt source. Also, a priority shifting scheme prevents continuous interrupts from one port from blocking interrupts from another.

Features

- Four RS232E serial ports
- 16-byte FIFO buffers
- Interrupts with unique vectors for each port
- Programmable baud rate (up to 128Kbps) (Consult factory for custom rates up to 512Kbps)
- Individual modem control signals on each channel
- Handshake lines (RTS, CTS, DTR, DSR, DCD, RI)
- Line-break and false start-bit detection
- Industry-standard 16C550 family UART includes software-compatible 16C450 mode

Benefits

- 16-byte FIFO buffers minimize CPU interaction for improved system performance.
- Each serial channel provides full handshake support to simplify interfacing with modems.



The IP500 provides four 232 communication ports with FIFO buffers for reliable data transfer across serial communication lines.

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 128K bits/second using internal baud rate generator. Consult factory for custom baud rates up to 512K baud.

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: 16-byte receive FIFO buffer and 16-byte transmit FIFO buffer.

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

IP Compliance (ANSI/VITA 4)

Meets IP specifications per ANSI/VITA 4-1995.

IP data transfer cycle types supported:
Input/output (IOSel*), ID read (IDSel*), Interrupt select (INTSel*).

Access times (8MHz clock):

ID PROM read: 1 wait state (375nS cycle).

Channel register read/write: 2 wait states (500nS cycle).

Interrupt select cycle: 2 wait states.

Environmental

Operating temperature: 0 to 70°C.

Storage temperature: -55 to 125°C.

Relative humidity: 5 to 95% non-condensing.

Power:

+5V (±5%): 300mA maximum.

±12V (±5%) from P1: 75mA maximum.

MTBF: Consult factory.

Ordering Information

Industry Pack Modules IP500

Four RS232E serial ports.

For Industry Pack Carrier Cards, see Page 5.

Customized Industry Pack Modules †4860-x

Modified IP500 with user-specified crystal/baud rate.

† Specify x = crystal frequency when ordering.

Minimum quantity per order is two units.

For Industry Pack Carrier Cards, see Page 5.

Software (see Page 81)

IPSW-API-VXW

VxWorks® software support package

IPSW-API-QNX

QNX® software support package

IPSW-ATX-PCI

ActiveX®/OLE Controls 2.0 software package

For accessories information, see Page 87.