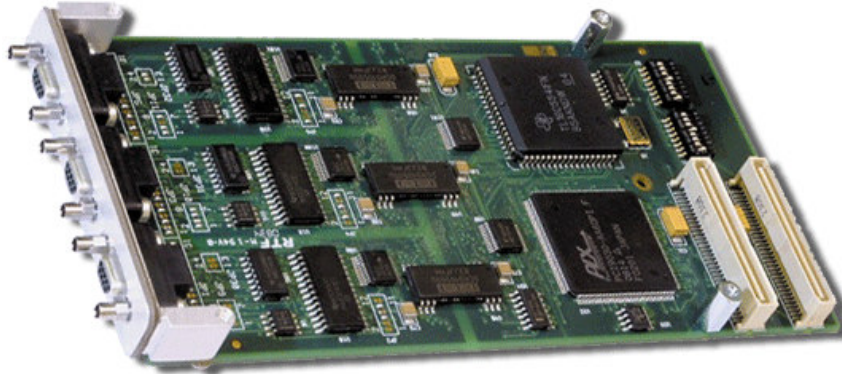


8075 - PMC Three-Port RS232/422/485 Asynchronous Communication Adapter



The three-port isolated Async Communications adapter is a cost-effective solution for providing additional RS232/RS422/RS485 based serial ports for a processor board or Single Board Computer.

- **Provides three front panel async serial ports (16550 UARTs)**
- **Each port configurable as RS232, RS422, or RS485**
- **Independent isolation for each port**
- **Micro D9 sub-miniature front panel connectors**
- **Selectable PCI interrupt configuration**
- **Optional cable assembly supports standard DB-9 interface**
- **RoHS-compliant, lead-free**

Each port is independently set-up to operate at either RS232 or RS422 levels. In the RS422 case, an additional option is provided to transmit data on the receive data line in an RS485 fashion. Please specify your port configuration when ordering.

When configured for RS232 mode, a port provides the full set of data and modem control lines -- RTS, CTS, TXD, RXD, DCD, DTR, DSR, and RI.

When configured for RS422 mode, a port provides TXD, RXD, CTS, and RTS, each operating at RS422 differential levels with uni-directional drive.

The RS485 mode supports both 2-wire and 4-wire RS485 connections. In 2-wire mode, a single differential RS422 driven pair carries transmit or receive data in a half-duplex fashion.

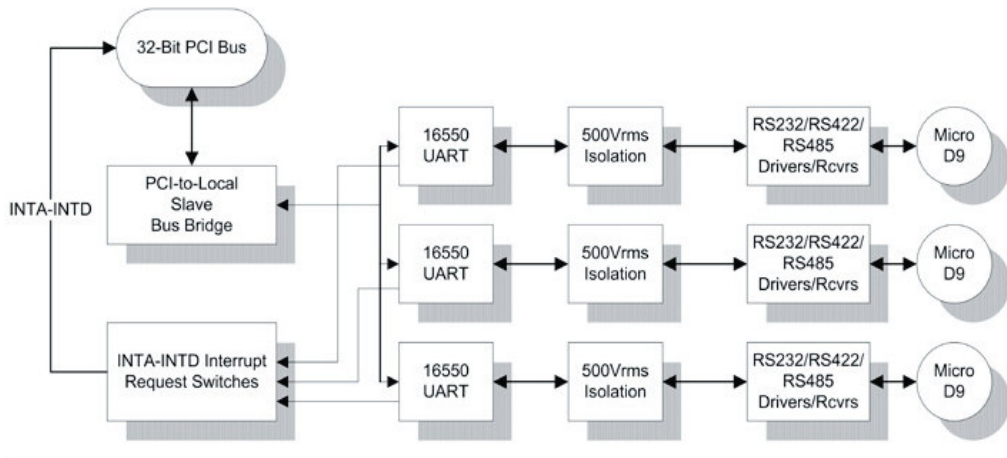
For 4-wire mode, the TXD is also driven on an additional RS422 unidirectional output. Control of transmit / receive direction is accomplished via the RTS control signal from the 16650 UART, as is customarily done for RS485 applications.

Options to terminate the differential RS422/RS485 signals with 150 ohm parallel termination are provided by the design. Please specify your termination requirements on order.

All three ports are accessed via 9-pin Micro D-Subminiature connectors on the PMC front panel.

Independent isolation is provided for each port using a separate isolated DC-to-DC converter and opto-isolators for conveying I/O signals. This implementation provides 500V RMS of electrical isolation.

Switches on the board direct the interrupts from each port to the desired INTA/INTB/INTC/INTD request on the PCI bus. Any combination of connection to the INTx lines is possible, thereby supporting shared and non-shared interrupt requests.



Industry standard 16550 UARTS operating up to 115K-baud are used in this product. The 16550 register set is accessed from the host processor using Programmed-I/O. "C" source code is provided with the board to illustrate how to set up the PCI bus bridge in order to access the UART registers. Once the registers are mapped into host I/O space, standard async communication drivers may be used to access the ports.

Higher baud rates (up to 1 Mbaud) are possible by changing the frequency of this crystal, which may find application in RS422 and RS485 environment. Please contact ACT Technico if you have non-standard baud rate requirements for your application. Except for rear I/O, this product is hardware and software compatible with ACT Technico P/N 8012 / 8012G non-isolated asynchronous adapters, providing an easy migration for customers using those products.

Technical Data

Temperature (Operating):	-40 to +85 degrees C
Temperature (Storage):	-50 to +100 degrees C
Altitude:	Typical similar equipment is at 15,000 ft
Humidity (Operating/Storage):	5% to 90% non-condensing
MTBF:	Available on request
Weight:	79 grams
Size:	74mm by 149mm
Voltages Required:	+5V
PCI Signaling:	3.3V, 5V
PCI Bus	33MHz, 32bit
Timing accuracy	+/- 200ppm full temperature range

Order Information

8075	Triple Isolated 4-port RS232/RS422/RS485 Async Communications PMC I/O
8012-CBL	Cable assembly; 36" MicroD9 to DB9 (m)