



MiniModule™ UART

PC/104 expansion modules offer 4 configurable serial ports to extend your system's communication interfaces



FEATURES

- (4) serial ports, RS232, RS422, or RS485
- Configurable by jumper- or software-selection
- Programmable baud rates, data format, and interrupt control
- IRQ selection (2-7, 10-12, 15) for each port
- COM1: through COM4: addressing
- 16554 with 16 byte FIFO supports up to 115K baud
- 16C864 with 128 byte FIFO supports up to 921.6K baud
- RS485 supports 2-wire or 4-wire interface
- RS422/485 termination and "echo" individually selectable
- QuickStart Kits include board, cables, software, and documentation

The MiniModule™ UART PC/104 expansion modules feature configurable serial ports to extend the number of communication interfaces of your embedded system.

Based on 16C550-compatible asynchronous receiver and transmitter chips with 16-byte FIFO buffers, the MiniModule UART adds extra RS232, RS422, or RS485 ports to your PC/104-compatible CPU or single board computer (SBC). Onboard transceivers can support high-speed operation to 115K baud (bits per second) over short distances, or 9600 baud up to 4,000 feet (1,200 meters). The software-selectable RS232/422/485 model is the first of its kind in the industry, and extends the FIFO size from 16 bytes to 128 bytes for error-free operation, even in high-speed applications up to 921.6K baud.

The serial ports have individually selectable IRQs for each port, giving the flexibility to retain OS compatibility while avoiding conflicts with other PC/104 modules present in the system. Addressing options include standard COM1: through COM4: as

well as other user-selectable I/O addresses. Hardware compatibility with the standard 16C550 family means proven support built into many leading operating systems.

The rugged PC/104 implementation ensures reliable operation in demanding and harsh environments, and the MiniModule UART comes with a lifetime warranty. Ampro's QuickStart Kits provide a convenient development package with serial port cables, documentation, and COM drivers and Auto RS-485 driver for Windows 95/98/ME/NT/2000/XP which allow IRQ sharing and Windows serial port diagnostics. Linux and QNX utilities are also included to simplify installation.

The MiniModule UART fully complies with the industry-standard PC/104 Specification, making it a natural choice for system OEMs who need a drop-in expansion for their new or existing PC/104 or EBX CPUs and SBCs. For your next design, choose MiniModule UART from Ampro, the inventor of the PC/104 and EBX standards.

SPECIFICATIONS

I/O

- (4) serial ports, RS232, RS422, or RS485
- Configurable by jumper- or software-selection

Special Features

- Programmable baud rates, data format, and interrupt control
- IRQ selection (2-7, 10-12, 15) for each port
- COM1: through COM4: addressing
- Other user-selectable I/O addresses with PAL options
- 9600 baud at distances up to 4,000 feet (1,200 meters)
- 16554 with 16 byte FIFO supports up to 115K baud
- 16C864 with 128 byte FIFO supports up to 921.6K baud
- RS485 supports 2-wire or 4-wire interface
- RS422/485 termination and "echo" individually selectable

Bus Interface

- PC/104 bus (ISA)

Mechanical

- **Size** – 90x108mm (3.6x3.8") PC/104
- **Power** – (typical): 0.4A @ +5V
- **Environmental** – Operating temperature: 0° to 70°C standard

Warranty

- Lifetime warranty

ORDERING INFORMATION

MODEL	DESCRIPTION
MM2-UART-K-11	QuickStart Kit, software selectable 232/422/485 (Q-01 module, cables, documentation, software)
MM2-UART-K-12	QuickStart Kit, jumper selectable 232/422/485 (Q-02 module, cables, documentation, software)
MM2-UART-Q-01	MiniModule UART, 4 RS232/422/485, software selectable
MM2-UART-Q-02	MiniModule UART, 4 RS232/422/485, jumper selectable
MM2-UART-Q-03	MiniModule UART, 4 RS232
MM2-UART-Q-04	MiniModule UART, 4 RS422/485

