

FEATURES

- ! Four-port serial communications adapter for USB 1.1 and USB 2.0 host ports
- ! Supports field selectable RS-232, RS-422 or RS-485 protocols, per port
- ! Includes type FT232 UART with 384-byte receive/128-byte transmit FIFO buffers
- ! Speeds up to 921.6Kbps for RS-422/485 and 230Kbps in RS-232 mode
- ! Power and individual port activity LEDs visible at front panel
- ! All required power drawn from USB port, no external power adapter required
- ! Compact, low profile enclosure

FACTORY OPTIONS

- ! Available as RS-232 and RS-422/485 only versions
- ! Rugged steel enclosure with attractive powder coat finish and anti-skid bottom
- ! DIN rail bracket for industrial environments



FUNCTIONAL DESCRIPTION

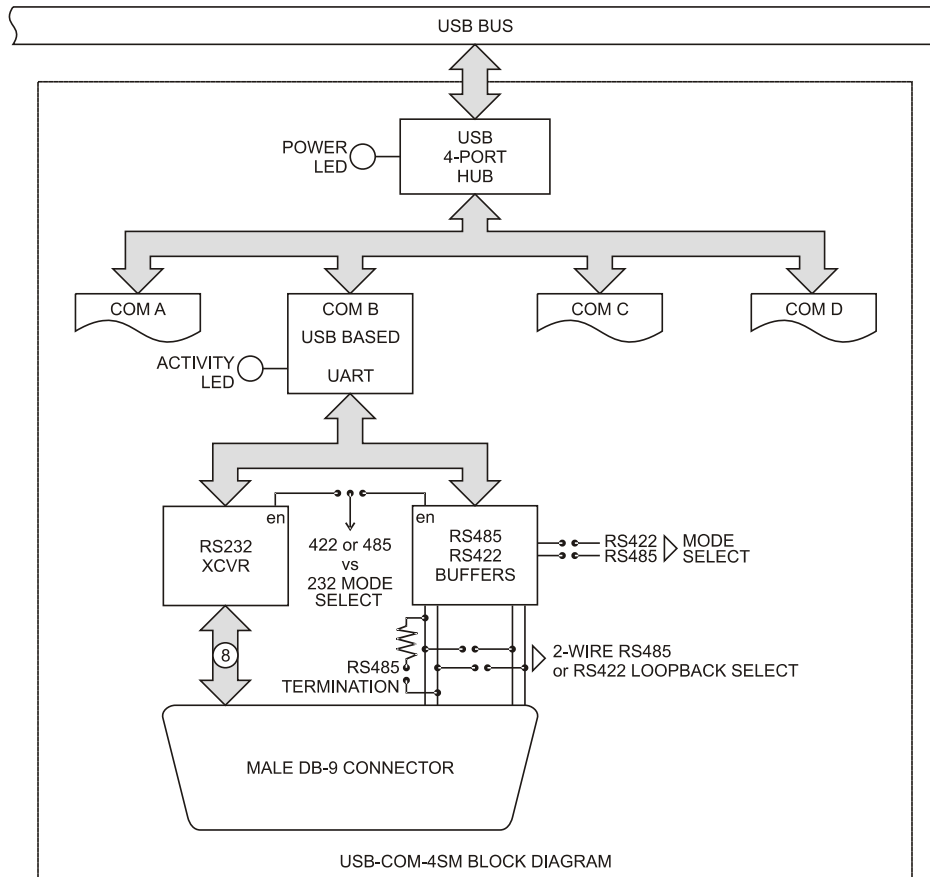
The USB-COM-4SM is a four-port asynchronous serial communication adapter designed for use with any computer system equipped with a USB port. Multiple peripherals such as POS, barcode scanners, scales, date-entry terminals, data acquisition modules, and automation equipment can now be recognized and used on a single USB port. Simply install the included software and connect the unit to your USB port. It instantly provides four RS-232, RS-422, or RS-485 serial ports which can be selected on a port by port basis. It is now easier than ever to add serial ports and serial devices to any application along with easy plug-and-play and hot-swapping features.

The unit enclosure is 7.5 inches wide by 4.35 inches deep by 1.2 inches high. The adapter is supplied with a 6 foot USB cable and has four male DB9 connectors with jack-screws for secure cable connections. The DB9 and USB connectors are conveniently located at the back of the unit and the front panel features an easy-to-read LED display indicating serial port activity and USB status. Port protocol is configured by opening the enclosure and configuring jumpers on the circuit board.

Type FT232 UARTs are used as asynchronous communication elements. This includes 384-byte receive / 128-byte transmit FIFO buffers for high data throughput and to protect against lost data in multitasking systems.

Crystal oscillators located on the card permit precise baud rate capability up to 230.4K for use in RS-232 mode, using ICL3243 type drivers. Speeds up to 921.6K are achievable using RS-422 and RS-485. The driver/receivers used are type SP491 which are capable of driving long communication lines at high baud rates. They can drive up to ± 60 mA on balanced lines and receive inputs as low as 200 mV differential signal superimposed on common mode noise of +12V to -7V. In case of communication conflict, the driver/receivers feature thermal shutdown.

BLOCK DIAGRAM



SPECIFICATIONS

Communications Interface

I/O Connections:

There are 9 pins per port including common grounds. All RS-232 signals are supported and present at the DB9 connectors.

RS-422 data signals – Tx+, Tx-, Rx+, Rx-, GND

RS-485 data signals – 2 wire: Tx/Rx+, Tx/Rx-, GND
4 wire: Tx+, Tx-, Rx+, Rx-, GND
Jumper selectable termination

Serial Data Rates:

Up to 230.4K bps, asynchronous for RS-232

Up to 921.6K bps, asynchronous for RS-422 & RS-485

Compatible with RS-485 specifications. Up to 32 drivers and receivers allowed on line. Driver / Receivers used are type SP491.

Multidrop:

Character Length, Parity and Stop Interval: 5,6,7, or 8 bits; Even, odd, or none; 1, 1.5, or 2 bits

Receiver Sensitivity: ± 200 mV differential input

Common Mode Voltage: +12V to -7V

Transmitter Output Drive: 60 mA with thermal shutdown

Termination: Jumper selectable per channel for RS-485 mode

Bias: On-board from factory on transmit lines for RS-485 & RS-422

USB 2.0 and 1.1 compatible

Environmental

Operating Temp:

0 to +70°C

Humidity:

5% to 95% RH, non-condensing

Storage Temp:

-50 to +120°C

Power:

+5 VDC supplied from USB

Size:

7.5" wide (184.4mm) by 4.35" deep (110.5mm) by 1.16" high (29.5mm)

SOFTWARE

A Complete Software Support Package is provided including an easy to use terminal program for testing out your COM ports. This package contains sample programs and source code in Visual Basic, Delphi, C++ Builder, and Visual C++ for Windows. Also incorporated is a graphical setup program in Windows. The adapter installs as Standard COM ports in all Windows and Linux operating systems. Supported operating systems include Windows, Linux, WinCE.net, Mac OS-8, OS-9, OS-X. Use in other operating systems may also be supported, contact Factory.

ORDERING GUIDE

USB-COM-4SM	- 4 port USB to RS-232/422/485 serial adapter
USB-COM-4S	- 4 port USB to RS-422 serial adapter
USB-COM232	- 4 port USB to RS-232 serial adapter
Options:	-OEM (board only version, no enclosure)

