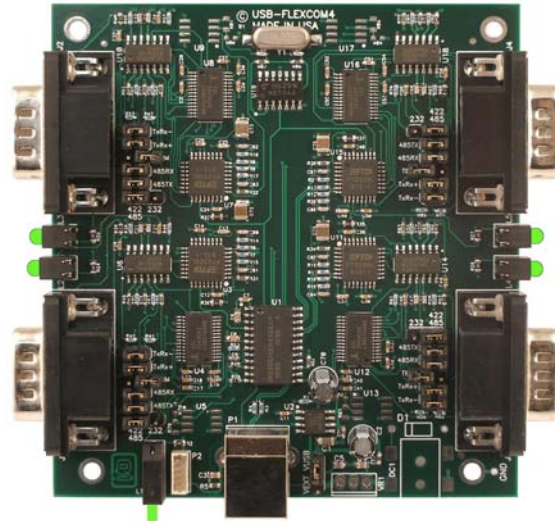# USB-FLEXCOM4 – USB to 4-Port Serial RS-232/422/485

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 FT232BM UART with 384-byte receive/128-byte transmit FIFO buffers
- Speeds up to 921.6kbps simultaneously
- Power LED and individual port activity LEDs next to the USB and each COM connector
- All required power drawn from USB port, no external power adapter required
- Compact, low profile enclosure

FACTORY OPTIONS

- **-OEM**   Board only version with no enclosure
- **-HDR**   -OEM with 10-pin headers per port
- **-DIN**   DIN rail mounting bracket
- **-RoHS**   Available in a RoHS compliant version
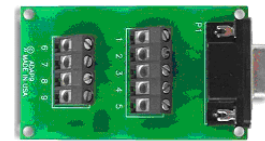
FUNCTIONAL DESCRIPTION

This flexible serial communications adapter was designed for effective multipoint transmission in any one of three modes on each channel. These modes are RS232, RS422 and RS485 (EIA485) protocol.

OEM USB/104 FORM FACTOR

The OEM (board only) version is perfect for a variety of embedded applications. What makes the OEM option unique is that its PCB size and mounting holes match the PC/104 form factor (without the bus connections). This allows our rugged USB to quad-serial port board to be added to any PCI-104 or PC/104 stack by connecting it to a simple USB port usually included on-board with embedded CPU form factors such as EBX, EPIC, and PC/104. This is especially important since many newer CPU chipsets do not support ISA and have plenty of USB ports. The USB-FLEXCOM4 OEM board can also be installed using standoffs inside other enclosures or systems.

ACCESSORIES

The USB-FLEXCOM4 is available with optional cable assemblies and screw terminal adapter board ADAP9.
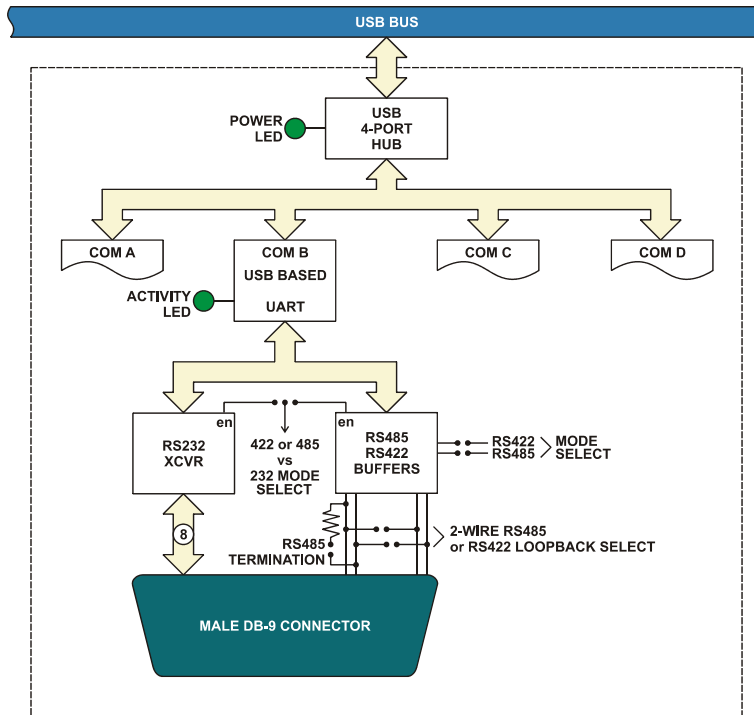
SOFTWARE

The USB-FLEXCOM4 is plug-and-play which allows quick connect or disconnect whenever you need additional I/O on your USB port. The module utilizes a high-speed custom function driver optimized for a maximum data throughput that is 50-100 times faster than the USB human interface device (HID) driver used by many competing products. This approach maximizes the full functionality of the hardware along with capitalizing the advantage of high-speed USB 2.0. The USB-FLEXCOM4 is supported for use in most USB supported operating systems and includes a free Linux and Windows 98se/Me/2000/XP/2003 compatible software package. 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. Third party support includes a Windows standard DLL interface usable from the most popular application programs. Embedded OS support includes Windows Xpe.

Block Diagram

Specifications

Communications Interface

Serial Ports:	Asynchronous COM A through COM D via four male DB9 connectors
Character length:	5, 6, 7, or 8 bits
Parity:	Even, odd or none
Stop Interval:	1, 1.5, or 2 bits
Serial Data Rates:	Up to 921.6k for RS-422/485 modes, 230.4kbps for RS-232
Receiver Input Sensitivity:	+200 mV, differential input
Common Mode Rejection:	+12V to -7V
Transmitter Output Drive:	Up to 60 mA, with thermal shut down
Bus Type	USB 2.0 Full-Speed
USB Connector:	Type B, high-retention
Embedded USB Connector	5-pin header, Molex part number 53047 Mating connector housing is Molex part number 51021 0500

Environmental

Operating Temperature:	0 ºC. to +60 ºC
Storage temperature:	-50 ºC. to +120 ºC
Humidity:	5% to 95%, non-condensing
Power Required:	5VDC at approximately 110 mA (plus loads up to an additional 240 mA) from USB bus
Size: Board Dimension:	3.550 x 3.775 inches (PC/104 size & mounting)
Box Dimension:	4.00 x 4.00 x 1.25 inches

Ordering Information

USB-FLEXCOM4	USB to four port RS-232/422/485 serial adapter
USB-COM232-4A	USB to four port RS-232 serial adapter