High Speed Industrial USB Serial Adapters

Add standard serial ports via USB 2.0 without replacing peripheral hardware or application software

Connect Industrial serial peripherals with Ruggedized USB 2.0 Serial Multiport Adapters

If speed, expansion, reliability and support are what you're looking for in a USB Serial Adapter to handle harsh conditions and environments, think Quatech Industrial USB 2.0 to Serial adapters.

With Quatech's USB 2.0 based adapters, you can now broaden the range of external peripherals used on your computer at higher speed rates . The USB 2.0 has more bandwidth that allows higher data rates on all of the serial ports for more efficiency.

The new High Speed USB Serial Adapter line adds the COM port(s) via its USB connection and is compatible with new and legacy RS-232 or RS-232/422/485 devices. The Industrial USB Serial Adapters are the ideal solution for a variety of applications including industrial automation / control, material handling / logistics and laboratory test and measurement in addition to other demanding applications where a robust and ruggedized solution is required.

For over 20 years, Quatech has been known to help you *Connect with Reliability*. As we continue as an industry leader an objective to meet our customers requirements, our high performance device connectivity line expands to offer hardened industrial products. The next generation Quatech Industrial USB Serial Adapter hits speeds of up to 921.6 kbps, 2kbyte FIFO and hardware and software flow control.

Quatech USB Serial Adapters enumerate themselves as standard COM ports that are compatible with all standard RS-232 or RS-232/422/485 devices and software created for them. With 3000 VDC to DC optical isolation, the QSU2-540IS is ideal for implementing USB-to-serial networks in factories, power plants and other potentially harsh industrial environments with power surges.

Quatech Industrial USB to Serial adapters are configured with DB9s (RS-232) and terminal block (RS-422/485) connections for convienent integration into data systems. The RS-232 and RS-422/485 ports are seperate allowing signals to be independent and mixed. The unit utilizes an auto detect feature that recognizes which data port configuration is active.

While the units are bus powered, a DC voltage power input is avaialble via terminal blocks to provide power output in RS-232 mode on pin 9 to power external serial devices. LEDs indicators for power, USB ready and data (transmit and receive per port) give visual indication of proper function.

KEY FEATURES

- 4 Independent Serial Ports
- RS-232 or RS-232/422/485 MEI with Terminal Block Connectors
- Compatible with USB 2.0/ USB 1.1
- Plug-and-play capability
- Devices enumerate themselves as standard COM ports
- Speeds up to 921.6 kbps
- High speed UARTs with 1KB FIFOs to boost data rates
- Full modem control and hardware and software flow control
- Bus powered: no external power required, External power input available by terminal block to provide optional VDC out on Pin 9 in RS-232 operation
- Windows 2000/XP/Vista/Windows 7, Linux
- RoHS compliant
- **NEW!** U3000 V DC to DC Optical Isolation available (QSU2-540IS)
- LED Indicators (Power, USB Ready, Data Transmit and Recieve per Port)
- 1 year warranty

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QUATECH
A DPAC TECHNOLOGIES COMPANY

5675 Hudson Industrial Parkway * Hudson, OH 44236

1.800.553.1170 * +1 330.655.9000 * www.quatech.com

HIGH SPEED USB 2.0 SERIAL ADAPTER SPECIFICATIONS

Ordering Information

Model	Ports	Interface
QSU2-540	4	RS-232/422/485 MEI with USB cable
QSU2-540IS	4	RS-232/422/485 MEI with USB cable and 3000V DC to DC isolation

Bus Interface
USB 2.0 High Speed

OS Support
Virtual Comm Port Utility
Windows 2000/XP/Vista/Windows 7 and Linux support

Data Rate
Up to 921.6 kbps (max)

Serial Ports Provided
QSU2: 4 Independent RS-232/422/485 Auto Detect

USB Ports Required
QSU2: 1, USB type B

Connectors
RS-232 - DB-9 male
RS-422/485 - Terminal Block
4 Ports of RS-232 and 4 Ports of RS-422/485 with individual connections. Auto Detect feature allows any combination of communication

Signals
RS-232: TXD, RXD, RTS, CTS, DTR, DSR, DCD, GND, RI, Optional VDC Power output

RS-422: RXD+, RXD-, TXD+, RXD-

RS-485: Data+, Data-

UARTS
2k-byte FIFOs for transmit and receive

Transceiver (RS-232/422/485)
MAX491 or compatible

Differential Driver Output (50Ù Load):
+2V (min), +3.3V (max)
Differential Driver Output (27Ù Load):
+1.5V (min), +3.3V (max)

Surge Suppression:
RS-422/485 mode- Standard Over current and Surge protection applied to each line that is capable of sustaining up to 40A peak, 8 x 20is transient surges, a clamping voltage of 30V and a peak energy dissipation of 0.1 Joules

IS Option: Model QSU2-100IS
3000 VDC transmit/recieve optical isolation protection

Environment
Operating: 0° to 70°C
Storage: -50° to 80° C
Humidity: 10% to 90%

Power Requirements
Bus-powered device, no external power supply required, External power input provided by terminal block to provide optional VDC power output on Pin 9 in RS-232 operation

Enclosure
Ruggedized Metal box

Size
Dimensions 110 x 180 x 25 mm (W x D x H)

Certifications
CE, FCC Class B, RoHS & WEEE Compliant

Industrial Data Collection
Model QSU2-540IS

Quatech QSU2-540IS Industrial four port USB to RS-232 Serial adapters with optical isolation are being used as part of a real-time reaction analysis system. The system is designed to both identify reactants, products and intermediates in a chemical reaction and to track the course of the reaction with a single automated system. The system is comprised of four reactors, each of which can be individually controlled and conditioned, with a probe integrated into the base of each. Modulated infrared radiation is passed to each of the reactors in turn, and a spectrum is measured and passed to a Windows 7 based PC via a serial to USB interface. Up to thirty spectra per hour are obtained from each reactor and used by the system to derive concentration profiles. After much testing, our customer found that the added protection of Quatech's isolation/suppression package was the only USB to Serial solution that would work reliably and protect their expensive test systems.

Quatech's QSU2-540IS is used by a major natural gas producer to implement a well monitoring system. Each well is monitored by an electronic gas meter. Each group of wells uses telemetry and a master radio to transmit data. Each master radio requires a dedicated serial port on the polling computer, and Quatech's QSU2-540IS provides the additional serial ports required.

Signal Connections
RS-422/485, USB and Power Input Connections

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