# High Speed USB Serial Adapters

**Standard serial ports via USB 2.0 without replacing peripheral hardware or application software**

For over 20 years, Quatech has been known to help you *Connect with Reliability*. As we continue in the race to become the industry leader, our high performance device connectivity line expands with the new high speed USB 2.0 Serial Adapters. The next generation Quatech USB Serial Adapter hits speeds of up to 921.6 kbps, 1024-byte 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 the industrial surge suppression "IND" option, you can safeguard the USB Serial Adapter. The "IND" option is ideal for implementing USB-to-serial networks in factories, power plants and other potentially harsh industrial environments. USB 2.0 is fully compatible with USB 1.1 devices. The older devices work with the new bus, and vice versa.

The 400 Series models introduce the software-selectable RS-232/422/485 (Multi-Electrical Interface or MEI). The MEI capability is available on all ports at the click of a mouse. LEDs visually tell you which ports are using which protocol, so go ahead, mix and match.

Auto detect between RS-422 and RS-485 with Quatech's new USB Serial Converter.

## Connect serial peripherals with USB 2.0 Serial Adapters

If speed, expansion and support are what you're looking for in a USB Serial Adapter, think Quatech.

You can now broaden the range of external peripherals used on your computer at higher speed rates than the USB 1.1 series, with the introduction of the High Speed USB 2.0 Serial Adapters. The USB 2.0 has more bandwidth that allows higher data rates on the serial ports for more efficiency.

The new High Speed USB Serial Adapter line gives your laptop or workstation the ability to communicate between a USB port and up to eight RS-232, RS-422, or RS-485 serial peripherals. It 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 USB Serial Adapters are the ideal solution for a variety of industries and applications including banking, retail and industrial automation where PCs have a significantly shorter lifecycle than the peripherals that use them.

## Embedded USB Serial Adapters for custom enclosures

If you're looking to seamlessly connect multiple serial peripherals via a single USB port in a custom enclosure, try Quatech's board-level solutions, Embedded USB Serial Adapters.

## KEY FEATURES

- 1, 2, 4 or 8 independent serial ports
- RS-232 or software-selectable RS-232/422/485
- Compatible with 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
- Optional surge suppression package (standard on Embedded products)
- Full modem control and hardware and software flow control
- Bus powered: no external power required
- Embedded (board-only) units also available
- Windows 2000/XP/Vista and Linux
- RoHS compliant
- **NEW!** USB to RS-422/485 Converter
- 5 year warranty

# HIGH SPEED USB 2.0 SERIAL ADAPTER SPECIFICATIONS

## Ordering Information

| Model | Ports | Interface |
|---|---|---|
| DSU2-100 | 2 | RS-232 with cable |
| DSU2-400 | 2 | RS-232/422/485 with cable |
| QSU2-100 | 4 | RS-232 with cable |
| QSU2-400 | 4 | RS-232/422/485 with cable |
| ESU2-100 | 8 | RS-232 with cable |
| ESU2-400 | 8 | RS-232/422/485 with cable |

**Bus Interface**
USB 2.0 High Speed

**OS Support**
Windows 2000/XP/Vista and Linux support

**Data Rate**
Up to 921.6 kbps (max)

**Serial Ports Provided**
**SSU:** 1   **DSU:** 2   **QSU:** 4   **ESU:** 8
(For 400 models, each configurable as RS-232, RS-422 or RS-485 for full or half duplex communication)

**USB Ports Required**
**SSU:** 1   **DSU:** 1   **QSU:** 1   **ESU:** 1

**UARTS**
1024-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)

**High Input:** +2V (min)
**Low Input:** +0.8V (max)
**Driver Rise/Fall Time:** 5ns (min), 20ns (typ), 25ns (max)
**Driver Input to Output Delay:** 20ns (min), 40ns (typ), 60ns (max)
**Receiver Input to Output Delay:** 40ns (min), 70ns (typ), 100ns (max)

**RS-232 Output**
**Voltage Swing:** ±5V (min), ±5.4V (typ)

**RS-232 Input**
**Voltage Range:** -15V (min), +15V (max)
**Input Threshold Low:** 0.6V (min), 1.0 (typ)
**Input Threshold High:** 2.4VV (max), 1.5 (typ)

**IND Option:** Surge suppression applied to each line that is capable of sustaining up to 40A peak, 8 x 20ìs transient surges, a clamping voltage of 30V and a peak energy dissipation of 0.1 Joules.

**(NOTE: The "IND" option limits data rate to 115.2 kbps)**

**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

**Suspend power:** < 500 ì A
**Unconfigured power:** < 100 mA
**Configured power:** < 500 mA

**Size**
SSU: 3.6" L x 1.7" W x 1" H
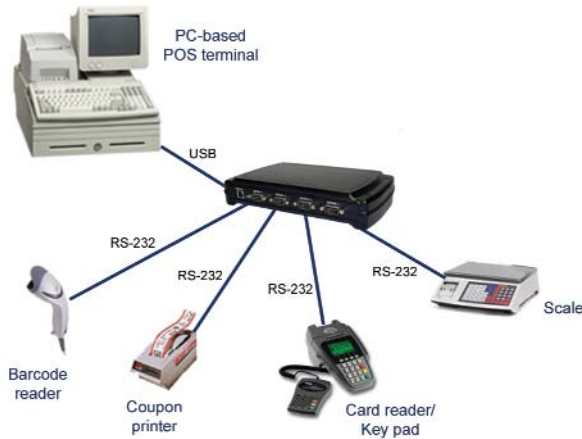DSU/QSU: 9.18" L x 5.25" W x 1.675" H
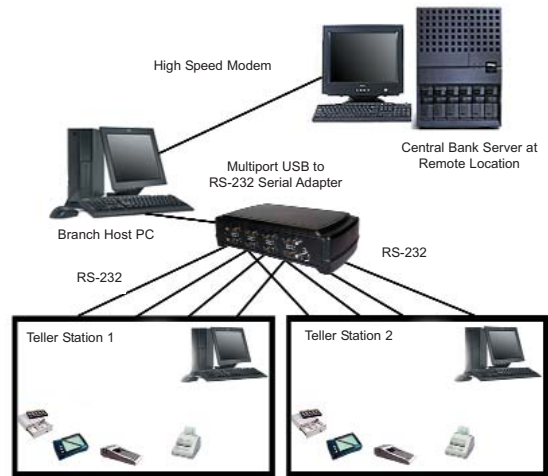ESU: 9.18" L x 5.25" W x 2.363" H

**Connectors**
DB-9 male

**Certifications**
CE, FCC Class B, RoHS & WEEE Compliant



**Retail Application**

**Banking Application**

**QUATECH**
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