

**RoHS Compliant**



**US-324**

**USB2SERIAL 1xRS422/485**

**"SERIAL CARDS ENGINEERED TO EXCEED EXPECTATIONS"**



### Description

USB to Serial providing one RS422/485 serial port. Up to 921,600 data transfer rates and the 128 byte deep transmit and 256 byte receive FIFOs, coupled with 1Mbit line drivers deliver uncompromising performance on your laptop/PC.

USB to serial is the quick low cost way to connect your computer to a serial comms enabled device. Boost software gives industry leading functionality and compatibility.

**RS422 Standard:** RS422 allows one transmitter and up to 10 receivers with data transmitter rates up to 10 megabits per second for distances up to 40 feet and up to 100 Kilobits per second for distances up to 4000 feet (1219 metres). To achieve good long distance noise immunity, 2 wires are used to carry each signal, configured as a twisted pair of cables. The TXD pair and RXD pair are used to carry the data whilst the RTS pair and CTS pair lines are used for handshaking. Thus 2 twisted pairs are used without handshaking and 4 twisted pair cable is used with handshaking both these schemes allow full duplex data communications.

**RS485 Standard:** RS485, based on the RS422 standard allows up to 32 driver/receivers pairs on a party line data bus. Whilst only one of these should be transmitting data at any time, the rest can all simultaneously listen to the data. Handshaking is performed by software protocol. Two twisted pairs form a full duplex system. Often only one twisted pair cable is used as the TXD and RXD lines are tied together; this is known as half duplex mode. Traditionally, the RTS signal is used as the party line control to tristate the PC's transmitter, but in multitasking operating systems like Windows or Linux the only reliable method is hardware autogating. Brainboxes RS422/485 products implement a state of the art autogating circuit thus ensuring error free communications in half duplex configurations.

These products do away with traditional issues with USB technology so you can buy with confidence!

With Brainboxes industry renowned Lifetime Warranty and Lifetime Support!

### Software

Microsoft signed drivers (easy installation & robust operation) for:

- Windows 7 32 bit and 64 bit editions
- Windows Vista 32 bit and 64 bit editions
- Windows XP 32 bit & 64 bit editions



As well as: full product documentation, a thorough troubleshooting guide and terminal software. Detailed sample source code for many popular programming languages. Further OS support on next page.

### Features

- 1 port RS422/485
- USB to Serial
- 128 Byte Tx and 256 Byte Rx FIFOs
- Up to 921,600 Baud
- DB9 connector (9 Pin Male)
- Drivers for all popular operating systems
- Sample Programs, Test & Terminal software
- Lifetime Support
- Lifetime Warranty (registration required)
- Includes 0.25m USB extender cable

### Product



US-324:  
USB2SERIAL 1xRS422/485

0.25m USB Extender  
Cable



### ORDER

Description

USB2SERIAL 1xRS422/485

Code

US-324



## USB2SERIAL 1xRS422/485

### US-324: Full Specification

|  |   |  |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
|--|---|--|-------|------|-------|------|-------|------|-------|-----|-------|------|-------|------|-------|------|-------|------|---|---|
| <p><b>Port</b></p> <table border="1"> <tr><td>Pin 1</td><td>TXD-</td></tr> <tr><td>Pin 2</td><td>TXD+</td></tr> <tr><td>Pin 3</td><td>RTS-</td></tr> <tr><td>Pin 4</td><td>RTS+</td></tr> <tr><td>Pin 5</td><td>GND</td></tr> <tr><td>Pin 6</td><td>RXD-</td></tr> <tr><td>Pin 7</td><td>RXD+</td></tr> <tr><td>Pin 8</td><td>CTS-</td></tr> <tr><td>Pin 9</td><td>CTS+</td></tr> </table> <p>RS422/485 Pinout (9 pin)</p> | Pin 1   | TXD-   | Pin 2 | TXD+ | Pin 3 | RTS- | Pin 4 | RTS+ | Pin 5 | GND | Pin 6 | RXD- | Pin 7 | RXD+ | Pin 8 | CTS- | Pin 9 | CTS+ | <p>Ports</p> <p>Connector</p> <p>FIFO size</p> <p>Operating Distance</p> <p>Cable</p> | <p>1 x RS422/485</p> <p>DB9 connector (9 Pin Male)</p> <p>256 RX FIFO + 128 TX FIFO</p> <p>RS422/485 Standard (4000 ft : 1200 metres)</p> <p>0.25m USB Extender Cable</p> |
| Pin 1  | TXD-  |  |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| Pin 2  | TXD+  |  |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| Pin 3  | RTS-  |  |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| Pin 4  | RTS+  |  |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| Pin 5  | GND   |  |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| Pin 6  | RXD-  |  |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| Pin 7  | RXD+  |  |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| Pin 8  | CTS-  |  |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| Pin 9  | CTS+  |  |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| <p><b>Port Settings</b></p> <p>921,600<br/> <br/>         baud</p>   | <p>Baud Rate</p> <p>Data Bits</p> <p>Parity</p> <p>Stop Bits</p> <p>Flow Control</p> <p>Tx/Rx Modes</p> | <p>921,600</p> <p>7 or 8</p> <p>Odd, Even, None, Mark or Space</p> <p>1 or 2</p> <p>RTS/CTS, XON/XOFF</p> <p>Full Duplex, Half Duplex Autogating</p>   |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| <p><b>Interface</b></p>  | <p>OS Compatibility</p> <p>BUS</p>  | <p>Windows 7 32 bit &amp; 64 bit Editions<br/>         Windows Vista 32 bit &amp; 64 bit Editions<br/>         Windows XP 32 bit &amp; 64 bit Editions</p> <p>USB</p>  |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| <p><b>Approvals</b></p>  | <p>Other Approvals</p> <p>Microsoft Approvals</p>   | <p>WEEE RoHS EMC: CE Microsoft Certified Gold Partner</p> <p>Microsoft Certified Gold Partner<br/>         Windows 7 32 bit &amp; 64 bit editions<br/>         Windows Vista 32 bit &amp; 64 bit editions<br/>         Windows XP 32 bit &amp; 64 bit editions</p>   |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| <p><b>General</b></p>  | <p>PCB Layers</p> <p>Power Consumption</p> <p>Weight</p> <p>Size</p>                                    | <p>4</p> <p>80mA @ 5V</p> <p>0.125 Kg</p> <p>90 x 35 x 20 mm</p>   |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| <p><b>Box Content</b></p>  | <p>Packaging</p> <p>Device</p>  | <p>Installation CD including manual, Microsoft signed drivers &amp; utilities</p> <p>USB2SERIAL 1xRS422/485</p>  |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| <p><b>Product Support</b></p>  | <p>Warranty</p> <p>Support</p>  | <p>Lifetime (online registration required)</p> <p>Lifetime Web, Email and Phone Support from fully qualified, friendly staff who work in and alongside the Product Development Team</p>  |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |
| <p><b>Additional</b></p>   | <p>OEM option</p> <p>Made In</p> <p>Customisable</p>  | <p>Available for bulk buy OEM</p> <p>Manufactured in the UK by Brainboxes Winner 2005 European Electronics Industry Awards "Manufacturer of the Year"</p> <p>Brainboxes operate a "Perfect Fit Custom Design" policy for volume users. More Info: <a href="mailto:sales@brainboxes.com">sales@brainboxes.com</a></p> |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |      |   |   |