

















# US-313 USB 2xRS422/485

### "SERIAL CARDS ENGINEERED TO EXCEED EXPECTATIONS"



#### **Features**

- 2 port RS422/485
- USB to Serial
- 128 Byte Tx and 384 Byte Rx FIFOs
- Up to 921,600 Baud
- 2xDB9 connector (9 Pin Male)
- Drivers for all popular operating systems
- Sample Programs, Test & Terminal software
- Lifetime Support
- Lifetime Warranty (registration required)
- Supplied with USB Cable
- Side hinges to allow DIN rail mounting

#### Accessories



DIN-Rail mounting kit for 1 & 2 Port ES/US

#### Description

USB to Serial providing two RS422/485 serial ports. Up to 921,600 data transfer rates and the 128 byte deep transmit and 384 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 configuations.

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.



ORDER Description USB 2xRS422/485

Code



## USB 2xRS422/485

#### US-313: Full Specification

Port	Ports	2 x RS422/485
Pin 1 TXD- Pin 2 TXD+ RS422/485 Pinout (9 pin)	Connector	2xDB9 connector (9 Pin Male)
Pin 3 RTS- Pin 4 RTS+	FIFO size	384 RX FIFO + 128 TX FIFO
Pin 5 GND Pin 6 RXD-	Operating Distance	RS422/485 Standard (4000 ft : 1200 metres)
Pin 7 RXD+ Pin 8 CTS-	Cable	USB Cable
Pin 9 CTS+ 6 9		
Port Settings	Baud Rate	921,600
921,600	Data Bits	7 or 8
<b>&gt; &gt;</b> >	Parity	Odd, Even, None, Mark or Space
baud	Stop Bits	1 or 2
	Flow Control	RTS/CTS, XON/XOFF
	Tx/Rx Modes	Full Duplex, Half Duplex Autogating
Interface	OS Compatibility	Windows 7 32 bit & 64 bit Editions Windows Vista 32 bit & 64 bit Editions Windows XP 32 bit & 64 bit Editions
	BUS	USB
Approvals	Other Approvals	WEEE RoHS EMC: CE Microsoft Certified Gold Partner
RoH5 CE	Microsoft Approvals	Microsoft Certified Gold Partner Windows 7 32 bit & 64 bit editions Windows Vista 32 bit & 64 bit editions
		Windows XP 32 bit & 64 bit editions
General	PCB Layers	4
	Power Consumption	180mA
	Weight	0.385 Kg
	Size	100 x 105 x 26 mm
Box Content	Packaging	Installation CD including manual, Microsoft signed drivers & utilities
	Device	USB 1xRS422/485
Product Support	Warranty	Lifetime (online registration required)
	Support	Lifetime Web, Email and Phone Support from fully qualified, friendly staff who work in and alongside the Product Development Team
Additional	OEM option	Available for bulk buy OEM
Elektra O5	Made In	Manufactured in the UK by Brainboxes Winner 2005 European Electronics Industry Awards "Manufacturer of the Year"
WINNER Manufacturer of the Year Made in the UK	Customisable	Brainboxes operate a "Perfect Fit Custom Design" policy for volume users. More Info: sales@brainboxes.com

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