

**USB-4232**

**Industrial USB To 4 Port RS-232 Converter**

Datasheet Revision 2.5

**GENERAL FEATURES:**

- Plug-and-Play (hot-pluggable)
- Adds 4 RS-232 ports using one USB port
- USB 1.1 and 2.0 compatible
- Port powered - no external power needed
- Supports 300 baud to 115,200 baud rates
- Supports all RS-232C signals: TX, RX, RTS, CTS, DTR, DSR, RI and GND
- 3 feet (1m) cable for convenience
- Transmit / Receive LED indicators
- Data direction auto-turnaround - no flow control necessary
- Internal 128/385 byte TX / RX buffers
- No IRQs, IO, DMA required. No IRQ conflicts
- Supports remote wakeup and power management
- Easy to install included drivers
- Built-in surge and static protection
- 5 year manufacturer's warranty
- RoHS, CE, and FCC certified



**DESCRIPTION:**

The SerialComm USB-4232 is an industrial grade bi-directional USB-powered or externally powered USB to 4 Port RS-232 converter, housed in heavy-duty steel case, which makes four full-duplex RS-232C ports available to a PC via one USB port. The USB-4232 has four db-9 male connectors on the RS-232 serial ports, and a USB type B female on the USB port. The adapter is powered from the USB port or an included external 100VAC-240VAC to 5VDC power supply. USB cable, power supply and drivers are included in the package.

The USB-4232 uses the latest FTDI chipset and is fully compatible with Windows 10 32/64, Windows 8 32/64, Windows 7 32/64, Vista 32/64, Server 2003, Server 2008, Server 2008 R2, XP 32/64, 2000 98Se, CE, Mac 8/9/x, Linux.

**CERTIFICATIONS:**

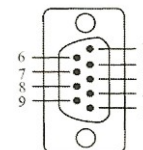


**PINOUT CONFIGURATION:**

**4 PORT RS-232 SIDE – DB9 MALE**

SIGNAL	DCD	DTR	DSR	RTS	CTS	TX	RX	GND
COM 1 PINS	1	4	6	7	8	2	3	5
COM 2 PINS	1	4	6	7	8	2	3	5
COM 3 PINS	1	4	6	7	8	2	3	5
COM 4 PINS	1	4	6	7	8	2	3	5

**MALE DB9**



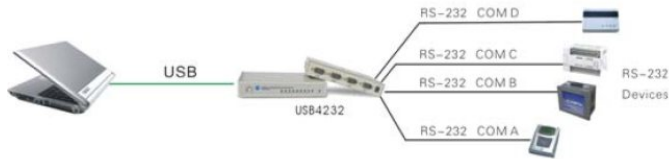
**SPECIFICATIONS:**

COMMUNICATION	
<b>STANDARDS:</b>	USB 2.0 and 1.1 Standards - EIA/TIA RS-232C Standard
<b>OPERATING SYSTEM:</b>	Windows 10 (32/64), Windows 8.1 (32/64), Windows 8 (32/64), Windows 7 (32/64), Vista (32/64), Server 2012, Server 2008 R2, Server 2008, Server 2003, XP (32/64), 2000, 98Se, CE, Mac 8/9/X, Linux and Android
<b>BAUD RATES:</b>	From 300 bps to 115,200 bps
<b>CONNECTOR TYPES:</b>	USB Side: Type B Female and RS-232 Side: DB9 Male
<b>DISTANCE:</b>	USB Side 10ft (3m) and RS-232 Side: 16 ft (5m)
<b>LED INDICATIONS:</b>	RS232 TX1, RX1, TX2, RX2, TX3, RX3, TX4, and RX4
<b>DRIVERS:</b>	FTDI drivers are included in package
ELECTRICAL	
<b>POWER SOURCE:</b>	Port Powered From USB Port or 5VDC/1A (Input: 100-240VAC 50/60Hz, USB Type A Plug)
<b>CURRENT CONSUMPTION:</b>	Less Than 300 mA
<b>STATIC PROTECTION:</b>	15KV Electric Static Discharge (ESD) Protection
<b>SURGE PROTECTION:</b>	600W Surge Protection
<b>CONVERSION IC:</b>	FTDI FT4232H
MECHANICAL	
<b>HOUSING:</b>	Heavy Duty Steel Case
<b>WEIGHT:</b>	16.1oz (456.5 grams)
<b>DIMENSIONS:</b>	6.30" X 3.94" X 1.36" (160.0 mm X 100.0 mm X 34.4 mm)
ENVIRONMENTAL	
<b>OPERATING TEMP.:</b>	-40° F to 185° F (-40°C to 85° C)
<b>STORAGE TEMP.:</b>	-40° F to 185° F (-40°C to 85° C)
<b>OPERATING HUMIDITY:</b>	5% To 95% - No Condensation
QUALITY	
<b>PRODUCT SAFETY:</b>	CE, FCC and RoHS Conformance Certified
<b>QUALITY MANAGEMENT</b>	Manufactured and Distributed to ISO 9001:2008
<b>RELIABILITY:</b>	Low Failure Rate – 99+% Reliability Since Inception
<b>WARRANTY:</b>	5 Year Replacement Warranty

## FRONT PANEL:



## FUNCTIONAL DIAGRAM:



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## TROUBLESHOOTING INSTRUCTIONS:

Using one USB-4232 unit:

1. Perform a loop back test on one unit:
  - a) Connect the TX to RX on one of the four RS232 ports.
  - b) Connect the USB connector on the cable to the USB port of the computer.
  - c) Install the USB / RS232 FTDI driver on the computer per instructions provided.
  - d) Running a hyper terminal program on the PC, send ASCII characters to the USB-4232 converter from one PC port, and check that the characters are received at the same PC port. This tests that the transmit and receive functions of the USB-4232 unit is working properly.
  - e) When there is constant TX data you should see the associated GREEN light blink. When there is constant RX data you should see the associated RED light blink.

Using two USB-4232 RS-232 Ports:

1. Perform a loop back test on two RS-232 ports:
  - a) Connect the two TX to RX and RX to TX on two USB-232-2 RS-232 ports. Or connect TX to TX and RX to RX with a null modem.
  - b) Connect the USB connector on the unit to a USB port on the computer.
  - c) Install the USB / RS232 FTDI driver on the computer per instructions provided.
  - d) Running hyper terminal programs on both PCs, send ASCII characters to the USB-4232 converter from one PC port, and check that the characters are received at the 2<sup>nd</sup> PC port. Repeat the test in the opposite direction. This tests that the transmit and receive functions of the USB-4232 unit is working properly.
  - e) The associated GREEN light should flash when there is TX data present and the associated RED light when there is RX data present.