



**2 Channel
USB to RS232 Converter
USB-302
User's Manual
Ver. 1.0**

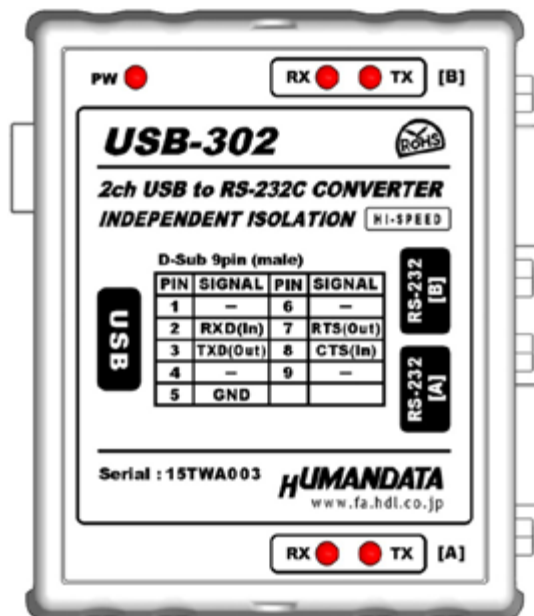




Table of Contents

- **Precautions** 2
- **Revision History**..... 1
- **Introduction** 1
- 1. Overview** 1
 - 1.1. Power Supply..... 2
 - 1.2. Block Diagram..... 3
- 2. RS232C Pin Assignment**..... 3
- 3. Specifications** 4
 - 3.1. Optional Accessories 5
- 4. Additional Documentation and User Support**..... 6
- 5. Warranty and Compensation**..... 6

● **Precautions**

 Do Not	1	This product uses ordinary off-the-shelf electronic components, and is therefore inappropriate for use in applications that require special quality or reliability and are expected to protect human lives or prevent accidents, such as safety mechanisms in fields including space, aeronautics, medicine, and nuclear power.
	2	Do not be used underwater or in high-humidity environments.
	3	Do not be used in the presence of corrosive gases, combustible gases, or other flammable gases.
	4	Do not turn on power when circuit board surface is in contact with other metal.
	5	Do not apply voltage higher than rated voltage.

 Attention	6	This manual may be revised in the future without notice owing to improvements.
	7	All efforts have been made to produce the best manual possible, but if users notice an error or other problem, we ask that they notify us.
	8	Item 7 notwithstanding, HuMANDATA cannot be held liable for the consequences arising from use of this product.
	9	HuMANDATA cannot be held liable for consequences arising from using this product in a way different from the uses described herein, or from uses not shown herein.
	10	This manual, circuit diagrams, sample circuits, and other content may not be copied, reproduced, or distributed without permission.
	11	If the product emits smoke, catches fire, or becomes unusually hot, cut the power immediately.
	12	Do not install the control cables or communication cables together with the main circuit lines or power cables. In such an environment, it may result in malfunction due to noise.
	13	Be careful of static electricity.

● Revision History

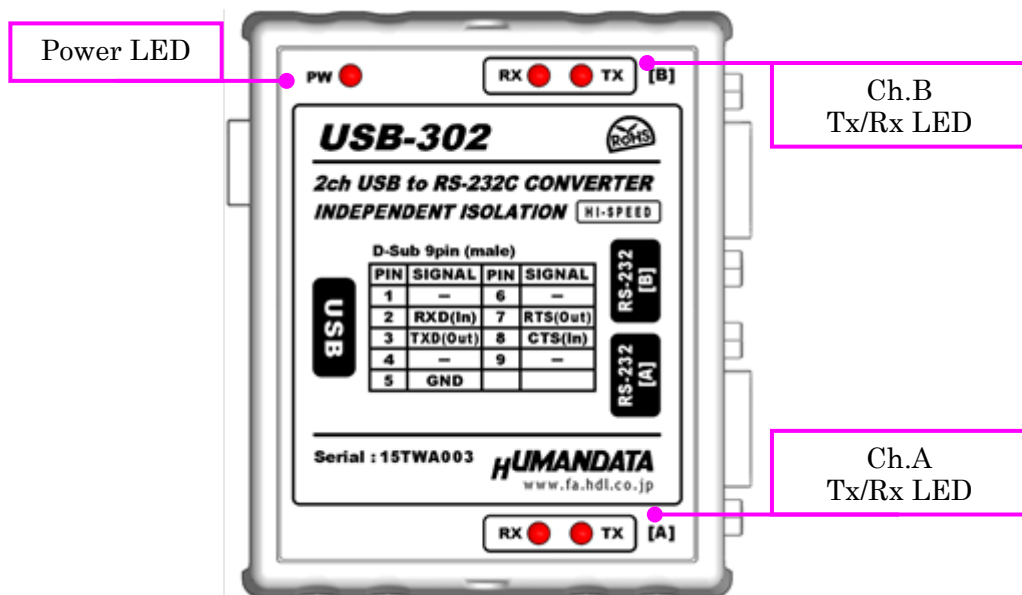
Date	Revision	Description
July 5, 2018	v1.0	Initial release

● Introduction

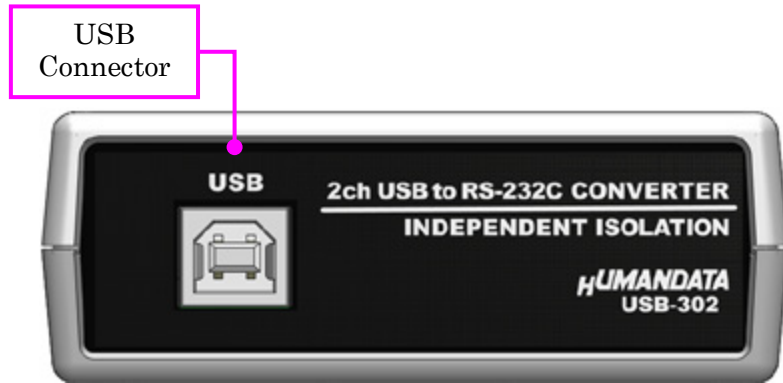
Thank you very much for purchasing our product of USB-302.

USB-302 is a 2 channel USB to RS-232C converter that isolated between each RS-232C channels and USB port. You can add 2 channels of RS-232C port from 1 USB port. Those 2 ports are isolated independently from USB side.

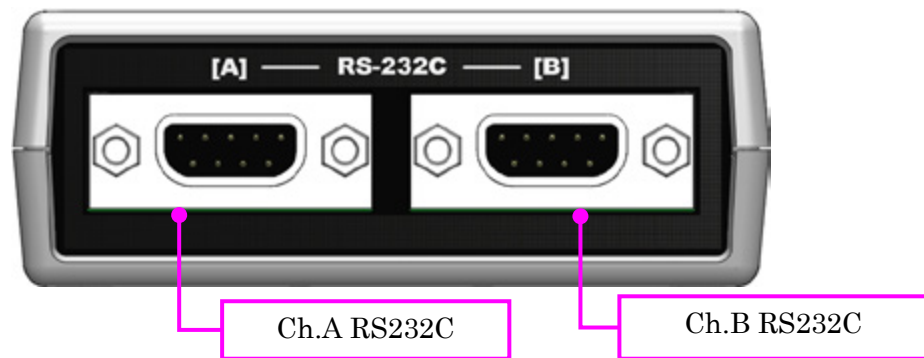
1. Overview



TOP side (Block diagram)



Front Side (USB)

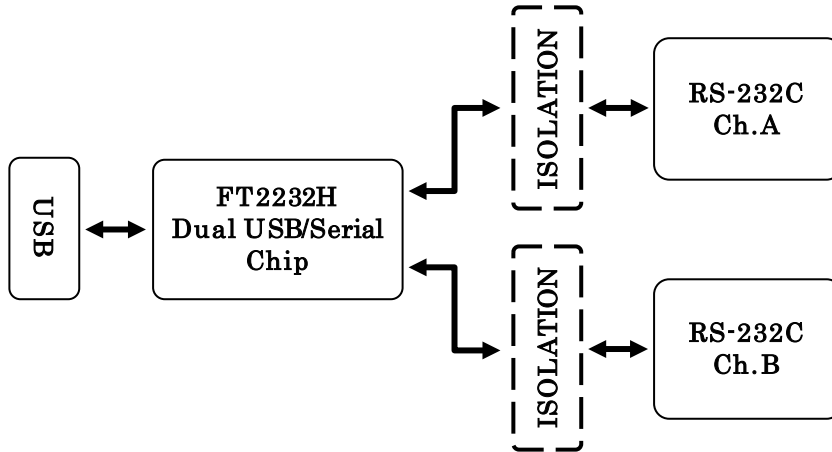


Rear Side (RS-232)

1.1. Power Supply

USB-302 is powered through a USB port (Bus-powered). No external power supply is required.

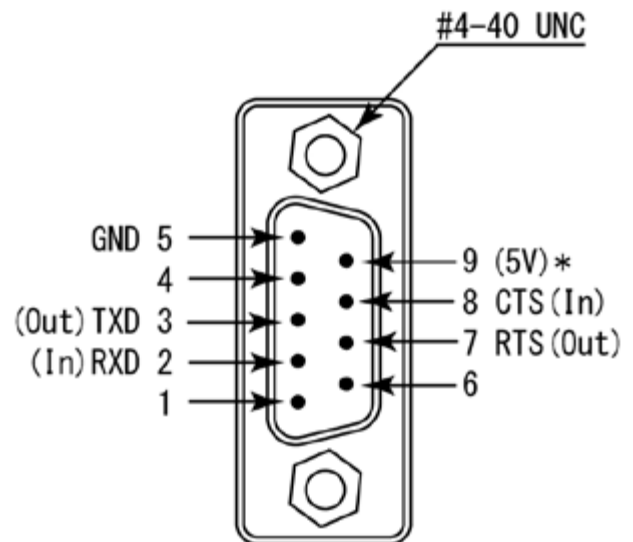
1.2. Block Diagram



Between USB and each RS-232C port are isolated.

2. RS-232C Pin Assignment

Pin No	Signal	Dir.	Remarks
1		-	
2	RXD	In	
3	TXD	Out	
4		-	
5	GND	-	Signal GND
6		-	
7	RTS	Out	
8	CTS	In	
9	(5V)	-	* reserved for 5V output
CASE	FG	-	Connect to GND



D-Sub 9pin Male




3. Specifications

Item	Description	Remarks
Model	USB-302	
Power	DC 5V / Less than 300mA Supplied through a USB port	Bus-powered
RS232C Port	2 Port	
Input/Output Interface	RS232C	Use 4 signals (TXD, RXD, RTS, CTS) ESD protection
HOST interface	USB 2.0 Compliant (High Speed is supported)	USB 1.1 compatible ESD protection
Isolation Method	Bus isolation	Independent Isolation
Isolation Protection	2500VDC	Designed value
Communication Method	Asynchronous Serial Communication	
LSI	FT2232H	FTDI
Baud Rate	300 bps to 1 Mbps	Support custom baud rate
Data Bits	7 or 8 bit	
Stop Bits	1 or 2 bit	
Parity	Even, Odd, No-parity	
FIFO RX Buffer Size	4096 bytes/ch	
FIFO TX Buffer Size	4096 bytes/ch	
Supports OS	Windows 10 / 8.1 / 8 / 7 / Vista / XP	
Operating Ambient Temp.	-20 to 60 °C (-4 to 140 °F)	No condensation permitted
Operating Ambient Humi.	30 to 85 %RH	
Noise Tolerance	Not defined	
Standard	Not defined	
Weight	Approx. 100 [g]	Only main body
Dimensions	69 x 82.5 x 30 [mm] (2.638" x 3.248" x 1.181")	Without projections

* There is a case to be changed to the parts of the compatibility

* Power saving function (suspend, standby, sleep and others) is not supported

3.1. Optional Accessories

Model Name	Image	Description
PEN-003		USB series Attachment with clamping screw JAN : 4937920800709
PEN-003-DIN		USB series Attachment for 35mm DIN rail JAN : 4937920800716
PEN-003-MG		USB series Attachment with neodymium magnet JAN : 4937920801201

4. Additional Documentation and User Support

The following documents and other supports are available at

<http://www.hdl.co.jp/en/faspc/USB/usb-302>

- Device Driver
 - Outline Drawing
- ... and more.

5. Warranty and Compensation

Please refer to the following URL for the warranty.

<http://www.fa.hdl.co.jp/en/fa-warranty.html>

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HuMANDATA LTD.

Address: 1-2-10-2F, Nakahozumi, Ibaraki
Osaka, Japan
ZIP 567-0034

Tel: 81-72-620-2002 (Japanese)

Fax: 81-72-620-2003 (Japanese/English)

URL: <http://www.fa.hdl.co.jp> (Japan)

[http://www.fa.hdl.co.jp/en\(Global\)](http://www.fa.hdl.co.jp/en(Global))
