

# 6-Port RS-232/422/485 USB-to-serial converter

**User Manual** 





rev: 160205 Made in Taiwan



The **HUB-66U 6-Port RS-232/422/485 USB-to-serial converter** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the **HUB-66U** should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.



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# INTRODUCTION

The **HUB-66U 6-Port RS-232/422/485 USB-to-serial converter** provides user to connect 6 RS-232 or RS-232/422/485 devices to the laptop or workstation through the USB port. HUB-66U is compatible with new and legacy serial devices, and are perfect for mobile, instrumentation, and point-of-sale applications. With HUB-66U, user can control up to 6 devices with RS-232/422/485 connector through one USB port on the lap or PC.

## FEATURES

- Supports Hi-Speed USB 2.0 (up to 480 Mbps)
- USB type A connector
- 256-byte FIFO and on-chip H/W, S/W flow control
- Built-in 15 kV ESD protection for all serial ports
- Hassle-free COM port retention
- Drivers provided for Windows
- External power
- Locking power jack

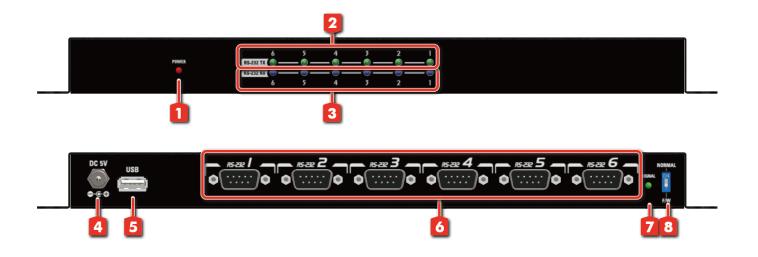
# **PACKAGE CONTENTS**

- 1x HUB-66U
- 1x 5V power supply unit
- 1x Installation software CD

# SPECIFICATIONS

Model Name		HUB-66U	
Technical			
Role of usage		6 Port USB to Serial Converter	
Compliance		USB 1.1/2.0 compliant	
Speed		480 Mbps (Hi-Speed USB) and 12 Mbps (Full-Speed USB)	
ESD protection		[1] Human body model—±19kV [air-gap discharge] & ±12kV [contact discharge] [2] Core chipset — ±8kV	
PCB stack-up	)	4-layer board [impedance control — differential 100 $\Omega$ ; single 50 $\Omega$	
Input		1x USB	
Output		6x RS-232	
USB connect	or	USB type A	
RS-232 connector		DE-9 [9-pin D-sub female]	
Mechanical			
	Model	295 x 93 x 25mm [11.6" x 3.6" x 1"]	
Dimensions [L x W x H]	Package	371 x 170 x 77mm[1'5" x 6.7" x 3"]	
	Carton	410 x 368 x 393mm[1'3" x 1'4" x 1'5"]	
\\/aiabt	Model	588g [20.7 oz]	
Weight	Package	1018g [2.2 lbs]	
Fixedness		Wall-mounting case	
Power supply		5V 2A DC	
Power consumption		3Watts [max]	
Operation temperature		0~40°C [32~104°F]	
Storage temp	erature	-20~60°C [-4~140°F]	
Relative humidity		20~90% RH [no condensation]	

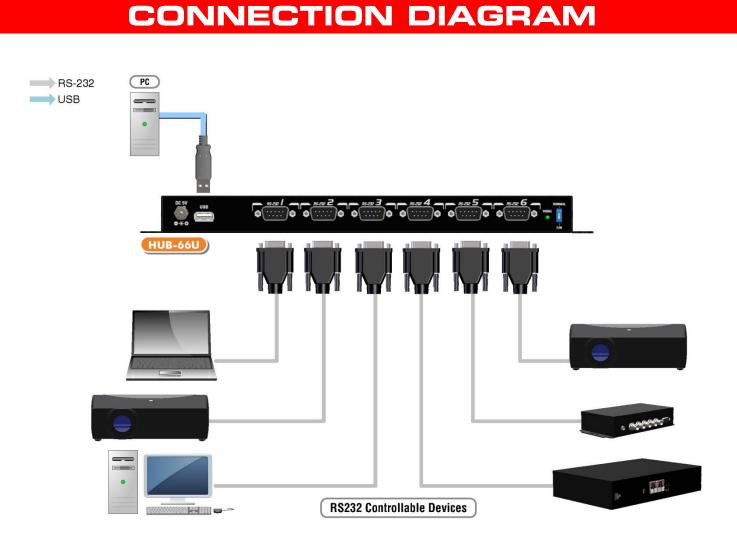
# PANEL DESCRIPTIONS



- 1. Power LED: Power on/off indicator
- 2. RS-232 TX LED: Port is sending data to connected device
- 3. RS-232 RX LED: Port is receiving data to connected device
- 4. +5V DC: Connect to a 5V power supply unit
- 5. USB: Connect to the USB port of PC
- 6. RS-232 PORT 1 ~ 6: .Connect to serial port devices with a DSUB-9 female-female or male-female cable
- 7. LED: FW update indicator. LED will light when dip switch is set to FW update mode
- 8. DIP SWITCH: FW update mode/ Normal mode

# HARDWARE INSTALLATION

- 1. Connect the HUB-66U to your PC
- 2. Connect your serial device to the HUB-66U
- 3. Plug in 5V DC power supply unit to the power jack of HUB-66U



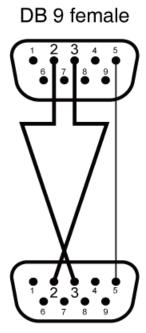
## 4

# **RS-232 PIN DEFINITON**

1. DB 9 Male RS-232/422/485 PIN DEFINTION

Pin	RS-232	RS-422/ 4-wire RS-485	2-wire RS-485
1	DCD	TxD-(A)	
2	RxD	TxD+(B)	
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR		
7	RTS		
8	CTS		

## 2. RS-232 CABLE PIN DEFINTION



MODEM NULL CABLE(DCE to DCE)

DB 9 female

Connector 1	Connector 1 Connector 2 Function	
2	3	Rx 🔶 Tx
3	2	Tx → Rx
5	5	Signal ground

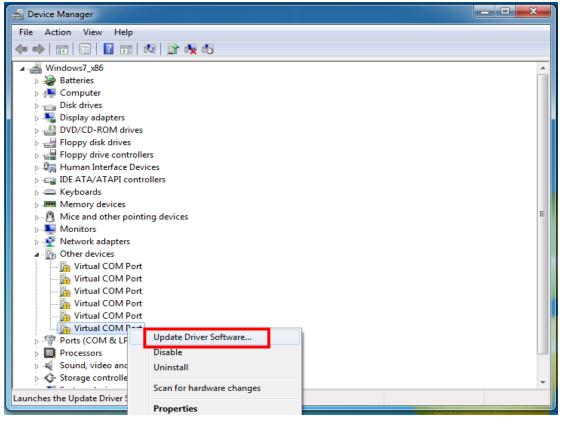
#### Step 1.

Use cable (USB to USB) to connect with the computer and Hub-66U. After connection, it will show 6 unknown virtual COM Port in the device manager.

🚔 Device Manager	_ <b>D</b> X
File Action View Help	
⊿ - 🚔 Windows7_x86	*
🔉 🎲 Batteries	
▷ - 🖳 Computer	
Disk drives	
🔉 📲 Display adapters	
DVD/CD-ROM drives	
Floppy disk drives	
Floppy drive controllers	
Image: Interface Devices	
▷ - IDE ATA/ATAPI controllers	
p Keyboards ▶ Memory devices	-
▷ - M Mice and other pointing devices	E
Man Name	
Port 1	
Virtual COM Port	
Virtual COM Port	
Virtual COM Port > Port 3	
Virtual COM Port	
Ports (COM & LPT)	
Processors	
Sound, video and game controllers Port 6	
b d≥ Storage controllers	<b>T</b>

#### Step 2.

In the device manager, please click the Virtual COM Port with the right button to update the device driver software.



#### **Step 3.** Browse the driver file on the computer and install it.

🚔 Device Manager		x
File         Action         View         Help           (= -)         (=)         (=)         ([])         (		
Browse For Folder Browse For Folder Browse For Folder Search C:\U Mathematical and contains drivers for your hardware. C:\U Mathematical and contains drivers for your hardware. C:\U Mathematical and contains drivers for your hardware. Mathematical and contains drivers for your hardware. Browse	2	
	ncel	_

## Step 4.

When alert window pops out, please select the "Install this driver software anyway".

	dows can't verify the publisher of this driver software
•	Don't install this driver software You should check your manufacturer's website for updated driver software for your device.
<b>&gt;</b>	Install this driver software anyway Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or stea information.

## Step 5.

After finishing the installation, the order of COM port in the device manager is different from the device (Hub-66U).

	ALC: MALL HAR AND THE PARTY	X 0 =
File Action View Help		
🗢 🔿 🖬 📓 🛛 🖬 😺 🔛		
DVD/CD-ROM drives		
Floppy disk drives		
Floppy drive controllers		
Human Interface Devices		
IDE ATA/ATAPI controllers		
⊳ · Æ Keyboards		
Memory devices		
Mice and other pointing devices		
Monitors		
Network adapters		
Portable Devices		
Ports (COM & LPT)		
Printer Port (LPT1)		-
		=
TivaWare USB Serial Port (COM6)		
TivaWare USB Serial Port (COM8)		
Processors		
Sound, video and game controllers		
Storage controllers		
July System devices		
🔈 🟺 Universal Serial Bus controllers		-
P		

## Step 6.

Operate the Hub-66U software to test the order of COM port.

- (a) Select any COM port (take COM port 7 as an example).
- (b) Input some string or number and click the "Send" button.

🖳 RS-232 Hub V1.0.7			
1			
Status: CLOSED	OPEN CLOS		۱
	ASCII		) Hex
			CLEAR
Send			
	💿 ASCII 📃 CR		🔘 Hex 📄 Auto
ghfgh			SEND
Test			
Transmission Port	Receive Port	Enable	Start Abort
File Info	mation: -		
File:			
File Size: 0 bytes			

#### Step 7.

After step 6 finished, LED indicator with corresponding device's COM port will light on when transferring data.



#### Step 8.

You can click the right button of mouse to select the content of virtual COM port to re-arrange the COM port number.

\*Before this step, please remember to close the Hub-66U software. Or it will occupy the COM port that we cannot change the order.

🚔 Device Manager		
File Action View Help		
	vaWare USB Serial Port (COM7) Properties	
DVD/CD-ROM		<u>^</u>
Floppy disk driv Floppy drive co	General Port Settings Driver Details	
- Uman Interfac		
	Bits per second: 9600 -	
Keyboards		
Memory device	Data bits: 8	
Monitors	Parity: None	
Network adapte	Stop bits: 1	
Portable Device		
Ports (COM & L     Gommunica	Flow control: None	
Communica		
Printer Port	Advanced Restore Defaults	
TivaWare US	Advanced	=
Advanced Settings for	COM7	2
	ers (requires 16550 compatible UART) ettings to correct connection problems.	ОК
		Cancel
Select higher	settings for faster performance.	Defaults
Receive Buffer: L	ww (1) High (14) (14)	
Transmit Buffer: L	w (1) High (16) (16)	
COM Port Number:	сом7 -	

## **OPERATION SOFTWARE**

	1 2 3 4 5 OPEN CLOSE Status: CLOSED
6	Receive O Hex
	CLEAR
	Send
7	Sein           Image: Sein         Image: Sei
	SEND
	Test
8	Transmission Port      Receive Port     Enable     Start     Abort     Abort
	File Infomation: -
	File:
	File Size: 0 bytes

- 1. Select COM Port
- 2. Open the selected COM Port
- 3. Close the selected COM Port
- 4. Set the Baud Rate/ Parity/ Databits/ StopBits
- 5. Set the RS-232 or RS-485 mode to each port
- 6. Received data information
- 7. Sent data information
- 8. Use the file to send or receive data (User has to click "Enable" item to use this function)

# WARRANTY

The SELLER warrants the **HUB-66U 6-Port RS-232/422/485 USB-to-serial converter** to be free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surges.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables are limited to a 30 day warranty and cable must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. Also, the technical information contained herein regarding the HUB-66U features and specifications is subject to change without further notice.