

2x1 USB 3.2 Switcher with HDBT Transmitter



Model:

HDBT-SWUSB3T-100M

rev.2024.07Jul.04

User Operation Guide

OVERVIEW

The 100M USB 3.2 Gen 1 extender is designed to transmit USB signal up to 100m distance. HDBT-SWUSB3T-100M is the host port of the extender, it contains one Type-B and one Type-C for PC or laptop connect. It also has two local USB-A port with 5V500mA power supply for speakerphone and headset. The extender also supports bi-directional 24V PoC power.

PRODUCT FEATURES

- 2x1 USB 3.2 Gen1 switcher;
- Support extend USB signal up to 100m;
- Support RS232 passthrough/control/upgrade;
- Auto/manual switching mode;
- Bi-directional 24V PoC power supply

PANEL DESCRIPTIONS

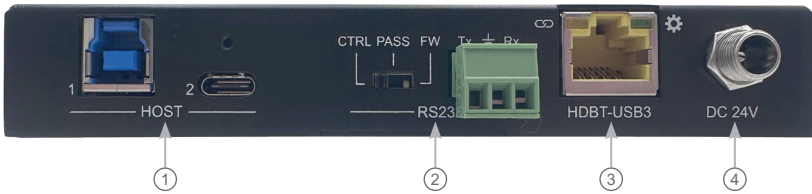
Front Panel



No.	Name	Description
1	Power LED	The LED illuminates green when the unit is power on.
2	Select 1/2 LED Auto LED	The LED illuminates blue when switching to the corresponding host. The LED illuminates blue when in auto switching mode and light off when in manual switching mode.
	AUTO/3s	Press button to switch the host. Press and hold the button 3 seconds to switch the switching mode. Note that the factory default switching mode is AUTO.
3	PoC	1x DIP switch, turn on/off the PoC.
4	Devices	2x Type-A USB 3.2 Gen1, shared 5V500mA total and limit 5V500mA per port. Connecting to the speakerphone and headset

PANEL DESCRIPTIONS

Rear Panel



No.	Name	Description
1	HOST	Type-B and Type-C USB 3.2 Gen1, connecting to the PC/Laptop.
2	RS232	1x 3-pin DIP switch for select the RS232 port function.
	CTRL	Control the unit via sending the RS232 commands.
	PASS	RS232 pass-through.
	FW	Firmware upgrade.
3	HDBT-USB3	1x RJ45 port for connecting with the device unit of the extender. The yellow light indicates the connection status of the HDBT, and the green LED is the data light.
4	DC 24V	DC barrel port for DC24V 1.5A power adapter connection.

User Operation Guide

SYSTEM OPERATIONS

System Connection

Usage Precaution

- Make sure all components and accessories included before installation.
- System should be installed in a clean environment with proper temperature and humidity.
- All of the power switches, plugs, sockets, and power cords should be insulated and safe
- All devices should be connected before power on.

Button Control

Manual Switching

When the unit is in the manual switching mode, press the **AUTO/3s** button repeatedly to cycle through the two hosts, and the corresponding host LED illuminates blue immediately.

Automatic Switching

Press and hold the **AUTO/3s** button at least three seconds to enable automatic switching. The current host will not be changed, and the auto LED will turn blue.

When in the AUTO mode, the unit will switch according to the following rules:

- *Press and hold the **AUTO/3s** button at least three seconds again can exit AUTO mode, but the host will not be changed, and the auto LED will turn off.*
- *New host: Once detecting a new host, the unit will automatically select the new host.*
- *Press the **AUTO/3s** button also can forcibly change the host.*
- *Reboot: Once power is restored to the unit, it will automatically reconnect the host before powered off.*
- *Source removed: When an active host is removed, the switcher will switch to the other active host.*

SYSTEM OPERATIONS

RS232 Control

Connect the RS232 port to control device (e.g. PC) with RS232 cable. The switcher can be controlled by sending RS232 commands.

RS232 Control Software

- Installation: Copy the control software file to the control PC.
- Uninstallation: Delete all the control software files in corresponding file path.

Basic Setting:

Connect the switcher with all input devices and output devices needed, then to connect it with a PC which is installed with RS232 control software. Double-click the software icon to run this software.

Here takes the software **CommWatch.exe** as an example:



CommWatch.exe

The main view is shown as below:

The screenshot shows the CommWatch.exe application window. It features a left-hand sidebar for configuration and control, and a large central area for monitoring. Red boxes and arrows highlight specific sections:

- Parameter configuration area:** Located in the top-left sidebar, it includes dropdown menus for PORT (com1), BaudRate (9600), Parity (pNone), Byte (8), and Stop (1). Below these are buttons for Reset, Clear, and Save To File.
- Monitoring area:** A large central text area where commands and feedback information are displayed.
- Command sending area:** Located in the bottom-right of the sidebar, it contains a Send button, a Load File button, and a Counter Reset button.
- Operation area:** Located at the bottom of the sidebar, it includes checkboxes for Hex View, Stop View, Auto Clear View, New Line, Hex Send Mode, and Auto Send. Below these are input fields for Interval (1000 ms) and a Counter Reset button.

The status bar at the bottom of the window displays the date and time (2013-01-14:03:35), Send:0, Receive:0, and Version (V1.0).

User Operation Guide

SYSTEM OPERATIONS

Please set the parameters of COM number, baud rate, data bit, stop bit and the parity bit correctly, and then you will be able to send command in command sending area.

RS232 Command

Communication protocol: RS232 Communication Protocol Baud

rate: 9600

Data bit: 8

Stop bit: 1

Parity bit: none

Note: All commands need to be ended with "<CR><LF>".

System Control

Command	Description	Example & Command Feedback
>Help	Query commands	>Help

>GetStatus	Query status	>GetStatus
		<HDBT-SWUSB3T-100M <FW Version: V1.0.0b <AutoSwitch Mode On <USB 02 <Device Power Follow Host Mode On <Device1 Power On <Device2 Power On <SetRS232Baud: 9600
>Reboot	Restart the unit	>Reboot
		<Reboot <HDBT-SWUSB3T-100M <FW Version: V1.0.0b <AutoSwitch Mode On

SYSTEM OPERATIONS

		<p><USB 02</p> <p><Device Power Follow Host Mode On</p> <p><Device1 Power On</p> <p><Device2 Power On</p> <p><SetRS232Baud: 9600</p>
>SetUSB	Switch the local USB-A to HOST[Param1] Param1 = 01,02	>SetUSB 01
		<SetUSB 01
>FactoryReset	Factory default the unit	>FactoryReset
		<p><FactoryReset</p> <p><U3_302H</p> <p><FW Version: V1.0.0b</p> <p><AutoSwitch Mode On</p> <p><USB 02</p> <p><Device Power Follow Host Mode On</p> <p><Device1 Power On</p> <p><Device2 Power On</p> <p><SetRS232Baud: 9600</p>
>SetDeviceFollow [Param1]	Set the devices power mode: Param = On (Follow mode, turn off the power when no host connect) Param = Off (Always on, always provide the power to devices)	>SetDeviceFollow On
		<Set Device Power Follow Host Mode On
>GetDeviceFollow	Query devices power mode	>GetDeviceFollow
		<Device Power Follow Host Mode On

User Operation Guide

SYSTEM OPERATIONS

>SetAutoSwitch	Set the auto switching mode status Param = On, Off	>SetAutoSwitch On
		<SetAutoSwitch On
>GetAutoSwitch	Query auto switching mode status	>GetAutoSwitch
		<SetAutoSwitch On
>SetRS232Baud	Set the baud rate of the unit. Param = 9600(default), 19200, 38400, 57600, 115200	>SetRS232Baud 9600
		<SetRS232Baud: 9600
>SetDevicePower [param1][param2]	Control the devices power supply on/off Param1 = 00~02 00: All devices 01~02: Device1~ Device2 Param2 = On/Off	>SetDevicePower 0 Off
		<Set All Device Power Off
>GetDevicePower	Query devices power status	>GetDevicePower
		<Device1 Power On <Device2 Power On

DIAGRAM

HDBT-SWUSB3T-100M
Transmitter
(front view)



USB Out
USB Out



USB In
USB In

HDBT-SWUSB3T-100M
Transmitter
(back view)



HDBaseT
CAT 5e/6/7
(100m)

HDBT-SWUSB3R-100M
Receiver
(back view)



USB In
USB In
USB In
USB In

TECHNICAL SPECIFICATIONS

Host	1 x USB [Type B] 1 x USB [Type C]
Devices	2 x USB [Type A]
Devices Power	5V 500mA total
USB Version	USB 3.2 Gen1
Control	1 x Button 1 x RS232 (3 Pin 3.5mm Terminal Block)
Transmission distance	Up to 100m with CAT6A cable
PoC standard	Bi-directional 24V PoC
Data Rate	5Gbps
Operation Temperature	-10°C ~ +55°C
Storage Temperature	-25°C ~ +70°C
Relative Humidity	10% ~ 90%
External Power Supply	DC 24V 1.5A (Comes with Power Adaptor)
Power Consumption	6.4W (Max)
Dimension (W*H*D)	133.0mm x 21.5mm x 105.0mm
Net Weight	325g