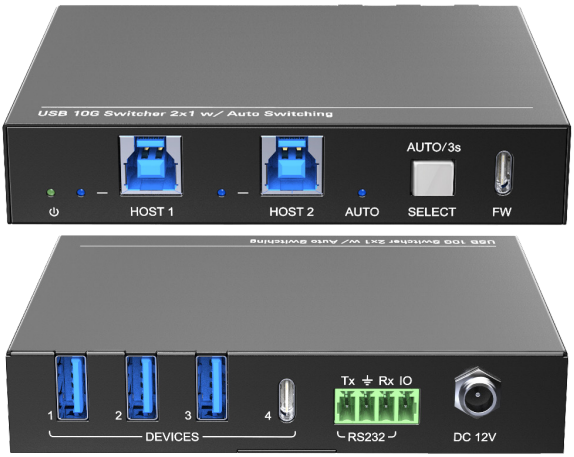
ABtUS 2x1
USB 3.2 Gen 2 10Gbps
Switcher



Model:

SW-USB21

rev.2024.01Jan.05

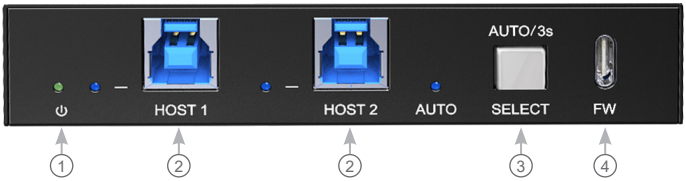
OVERVIEW

The ABtUS 10G hub, which is designed to switch between the host and connect KVM devices to the host. The hub can be controlled by button in front panel, RS232 and GPIO.

PRODUCT FEATURES

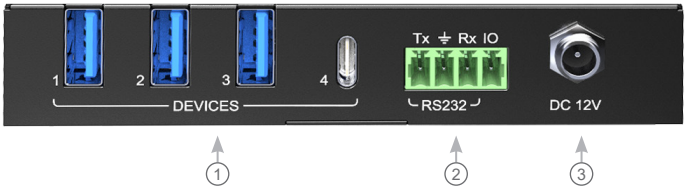
- 2x1 USB 3.2 switcher, 10G;
- Supports auto switching;
- Sufficient power(2A) for latest camera;
- Support button, RS232 and GPIO control

PANEL DESCRIPTION (FRONT)



1. **LED light**:
   - Power LED: The indicator illuminates green when powering on and flashes when the devices current is overloaded.
   - HOST LED: When switching to the current host, the indicator illuminates blue, otherwise it turns off.
   - AUTO LED: When entering the automatic switching mode, the indicator illuminates blue, otherwise it turns off.
2. **HOST**: 2x USB-B 3.2 gen2, connect to the PC host.
3. **SELECT BUTTON**: 1x white non-luminous button, click to switch host, long press for three seconds to enter/exit automatic mode
4. **Firmware**: 1x USB-C, use for firmware upgrade.

PANEL DESCRIPTION (BACK)



1. **DEVICES**:
   3x USB-A 3.2 gen2 for connecting KVM devices;
   1x USB-C 3.2 gen2 for connecting camera device;
   Four USB devices port share 2A total current
2. **RS232 and GPIO**: 4-pin terminal block to connect central control device.
3. **DC IN**: 1x locking block port to connect 12V2A DC power adapter.

SYSTEM CONNECTION

RS232 Control

Connect the RS232 ports of 10G hub, the hub can be control by the PC.
Baud Rate: 9600(default), 19200, 38400, 57600, 115200

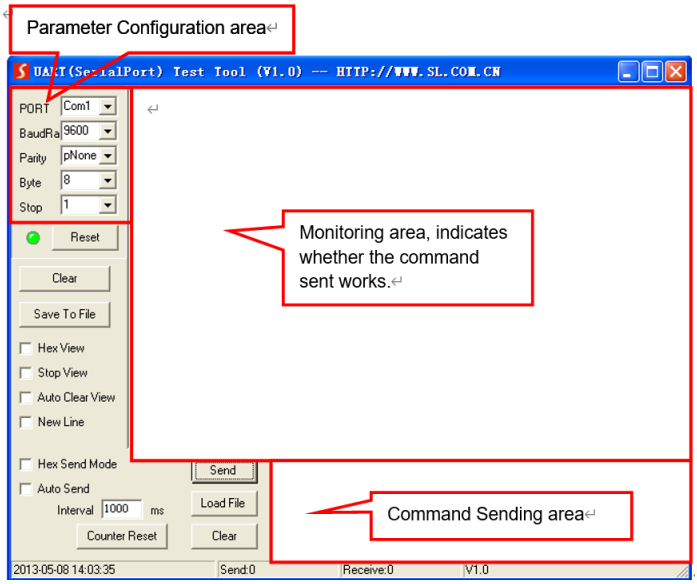
Installation/uninstallation of RS232 Control Software

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

Basic Setting

Firstly, connect 10G hub with host and devices. Then, connect it with a computer which is installed with RS232 control software. Double-click the software icon to run this software.
Here we take the software **CommWatch.exe** as example. The icon is showed as below:

The interface of the control software is showed as below:



Please set the parameters of COM number, bound rate, data bit, stop bit and the parity bit correctly, only then will you be able to send command in Command Sending Area.

Note: To control 10G hub via RS232 port, the communication protocol parameters should be configured in the right manner: Baud rate: 9600; Data bit: 8; Stop bit: 1; Parity bit: none.

SYSTEM CONNECTION

RS232 Communication Commands

The command end symbol is <CR><LF>

Command	Function	Feedback Example
>Help	>Help	<RS232 Commands: >GetStatus Print Status >Reboot System Reboot >FactoryReset Reset System To Default Setting >SetRS232Baud [param1] Set RS232 Baud param1 = 9600(Default), 19200, 38400, 57600, 115200 >SetAutoSwitch [param1] Set AutoSwitch Mode On Or Off param1 = On, Off >SetIOMode [param1] Set IO Control Mode [param1] param1 = 00~02 00: IO Control Mode Off(Default) 01: Whenever The IO Level From High To Low, Switch The Host 02: When The IO Level Is High, Switch To Host 1. When The IO Level Is Low, Switch To Host 2 >SetUSB [param1] Set USB Device Switch To Host [param1] param1 = 01~02: USB Host 1~2 >SetDevicePower [param1] [param2] Set Device [param1] Power On Or Off param1 = 00~04 00: All Device 01~04: Device 1~4 param2 = On, Off

SYSTEM CONNECTION

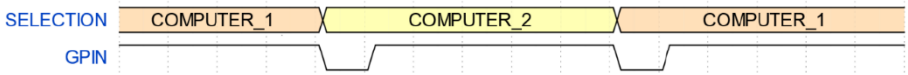
>GetStatus	>GetStatus	< <FW Version: 1.0.0 <USB Device All Host 1 <HostLink Host 1 2 Link N N
		<DevicePower Device 1 2 3 4 Power 0 0 0 0 <RS232Baud: 9600 <AutoSwitch On <IOMode 0
>Reboot	>Reboot	<Reboot
>SetUSB	>SetUSB01	<USB Device All Host 1
>FactoryReset	>FactoryReset	<FactoryReset
>SetAutoSwitch	>SetAutoSwitch On/Off	<SetAutoSwitch On <SetAutoSwitch Off
>SetRS232Baud	>SetRS232Baud 9600	<SetRS232Baud: 9600
>SetDevicePower [param1] [param2]	>SetDevice 1 Off >SetDevice 0 Off	<SetDevicePower Device 1 Power 0 <SetDevicePower Device 1 2 3 4 Power 0 0 0 0
>SetIOMode	>SetIOMode 1	<SetIOMode 1

SYSTEM CONNECTION

GPIO Mode

The GPIO of 10G hub have two modes: PULSE mode(default) and LEVEL mode

- The GPIN pulse mode is the factory default. Each transition from HIGH to LOW on GPIN pin will force a PC change. See the following picture for the explanation of the mode.



- The GPIN level mode uses a level “0” (short to ground) and “1” (open or voltage higher than threshold) to select a specific HOST.
  A level “0” or short to ground: HOST2 is selected.
  A level “1” or open: HOST1 is selected.

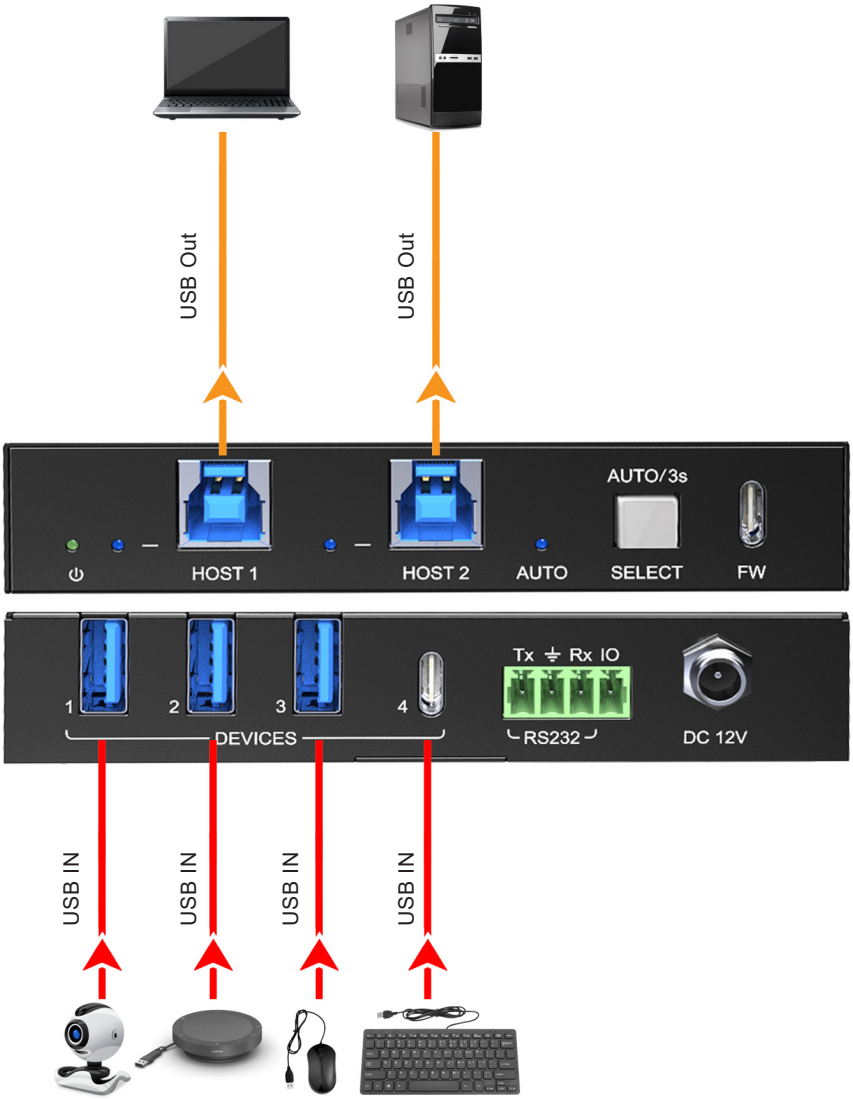
NOTE: In Level mode, can’t switch hosts by pressing button

Troubleshooting & Maintenance

Problems	Potential Causes	Solutions
Color losing or no video signal output in HDMI display.	The connecting cables may not be connected correctly or it may be broken.	Check whether the cables are connected correctly and in working condition.
No HDMI signal output in the device while local HDMI input is in normal working state.		
Output image with white noise.		
POWER indicator doesn’t work or no respond to any operation.	Loose or failed power cord connection.	Ensure the power cord connection is good.

Note: *If your problem still remaining after following the above troubleshooting steps, please contact your local dealer or distributor for further assistance.*

DIAGRAM



SW-USB21
Front view

SW-USB21
Back view

TECHNICAL SPECIFICATIONS

Host:	2 x USB-B
Bandwidth:	Up to 10Gbps
Device:	3 x USB-A
	1 x USB-C
Current:	Three USB-A and one USB-C share 2A total current
Control Ports:	1 x Button, 1 x White non-luminous button
	1 x RS232, 1 x 3-pin terminal block
	1 x GPIO, 1 x 1-pin terminal block
Power Supply:	DC 12V 2A, 1 x Locking block
USB Version:	USB3.2 gen2
Maximum Power Consumption:	10.65W
Operation Temperature:	-5~ +55°C
Storage Temperature:	-25 ~ +70°C
Relative Humidity :	10% ~ 90%
Dimension(W*D*H):	112mm x 90mm x 21.7mm
Weight:	245g

ABTUS
SINGAPORE