CSW-USB3210G

Pro AV/IT Integrator Series™ 2x1 USB 3.2 10Gbps Hub Auto Switcher with RS232 Control

Version: 1.25

Preface

Read this user manual carefully before using the product. Pictures shown in this manual are for reference only. Different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated till January 2023. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.

SAFETY PRECAUTIONS

To ensure the best from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to people.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Do not put any heavy items on the extension cable in case of extrusion.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with fine ventilation to avoid damage caused by overheating.
- Keep the module away from liquids.
- Spillage in the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not twist or pull by force ends of the cable. It can cause malfunctions.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical waste.

Table of Content

1. Product Introduction

Comprehensive's CSW-USB3210G is a 2x1 USB 3.2 10Gbps hub auto switcher that allows you to switch between two (2) USB host computers to share up to four (4) USB devices such as a keyboard, webcam, PTZ camera, external hard drives, mics and video bar in a room. The CSW-USB3210G can switch automatically when it notices a new device, or you can press a button on the front to switch it yourself. It uses USB 3.2 Gen2, which means it can move data really fast — up to 10 gigabits per second (that's super quick!).

It's plug-and-play, so you just plug it in, and it works — no setup needed. It's easy and flexible to use. It is compatible with various operating systems, including Windows, Mac OS, and Linux, requiring no drivers.

1.1 Feature

- USB 3.2 Gen2 hub switcher.
- Supports USB Super-Speed+ 10 Gbps transfer rates.
- Supports auto & manual switching.
- Backward compatible with USB 3.0, USB 2.0 and USB 1.1 devices.
- Share room's USB devices between to host PCs.
- USB power management to supply sufficient current of 4.5A for four USB devices ports.
- Supports push button, RS232 and GPIO control.
- Plug and play, no additional power supply required.
- Durable Metal Enclosure.
- Controllable by 3rd party control systems such as Crestron.
- 3 Year Worry-Free Warranty.

1.2 Package Contents

- 1x CSW-USB3210G (2x1 USB 3.2 hub switcher)
- 2x Mounting ears with 2 x screws
- 4x Rubber feet
- 1x 4-pin terminal block
- 1x RS232 cable (3-pin to DB9)
- 1x DC12V2A power adaptor
- 1x User manual

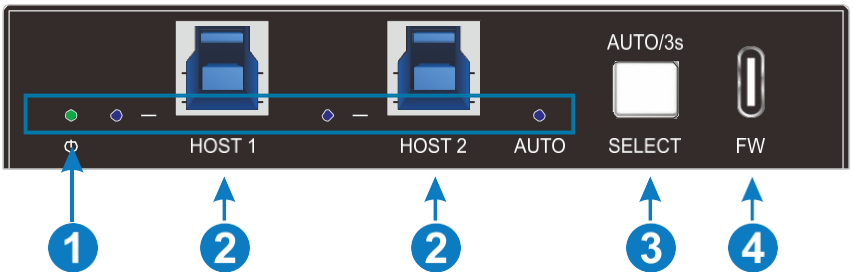
***Note**: Please confirm if the product and the accessories are all included, if not, please contact with the dealers.*

2. Specification

HOST	
Host Connector	2x USB 3.2 [USB-B female]
DEVICES	
Device Connector	3x USB 3.2 [USB-A female] 1x USB 3.2 [USB-C female]
Current	Three USB-A and one USB-C share 4.5A total current
Control	
Control Connector	1x RS-232 [3 pin-3.81mm phoenix connector] 1x GPIO [1 pin-3.81mm phoenix connector]
Power	
Power Supply	Input: AC 100 - 240V 50/60Hz Output: DC 12V/2A (locking connector)
General	
USB Bandwidth	10Gbps
USB Version	USB 3.2 gen2
Maximum Power Consumption	10.65W
Operation Temperature	-5~ +55℃
Storage Temperature	-25 ~ +70℃
Relative Humidity	10% ~ 90%
Dimension (W*H*D)	112mm x 21.7mm x 90mm
Net Weight	245g

3. Panel Description

3.1 Front Panel



① **LED light:**

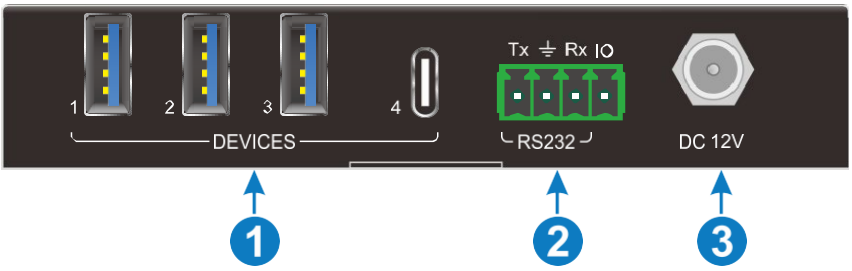
- Power LED: The indicator illuminates green when powering on and flashes when the devices cur rent is overloaded.
- HOST LED: When switching to the current host, the indicator illuminates blue, otherwise it turns off.
- AUTO LED: When entering the automatic switching mode, the indicator illuminates 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.

3.2 Rear Panel



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 4.5A total current.

② **RS232 and GPIO:** 4-pin terminal block to connect central control device.

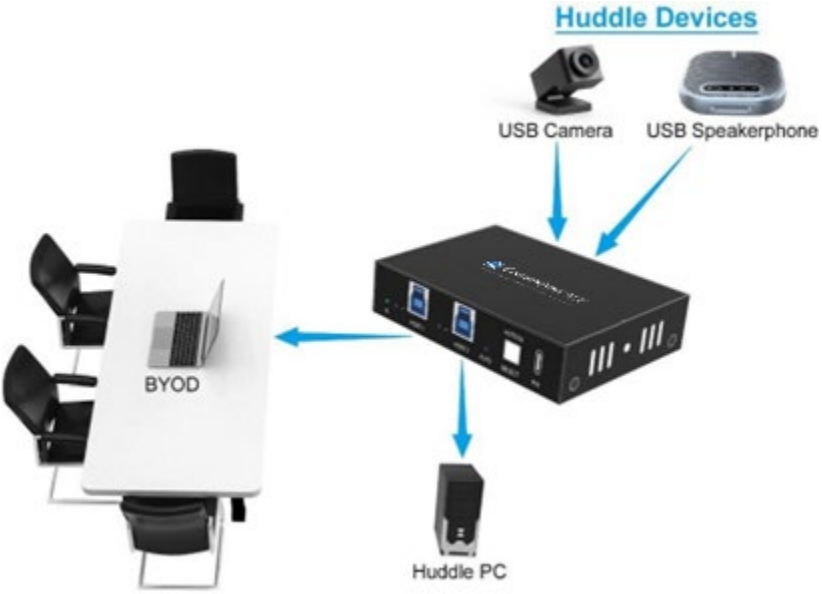
③ **DC IN:** 1x locking block port to connect 12V 2A DC power adapter.

4. System Connection

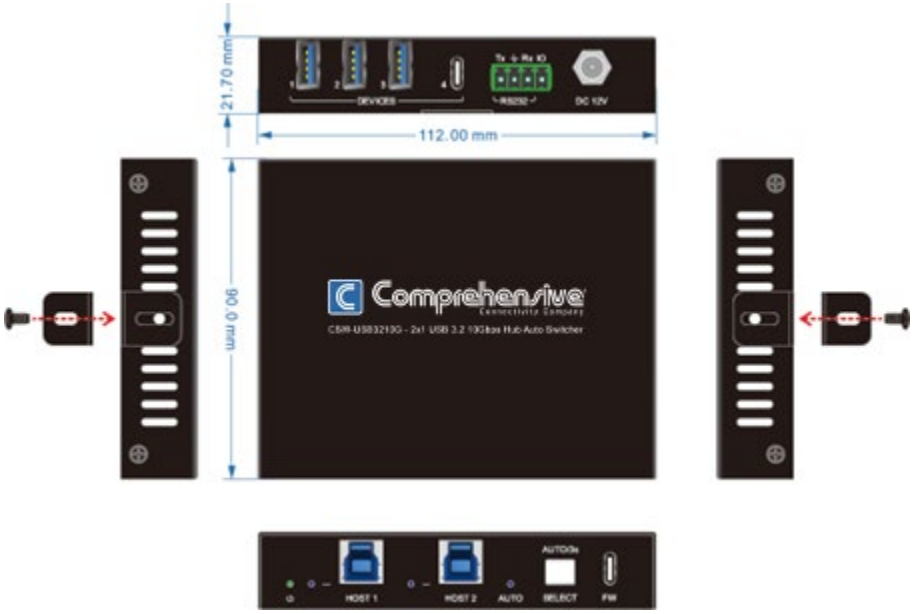
Usage Precautions

- Make sure all components and accessories are 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 they power on.

The following diagram illustrates typical input and output connection that can be utilized with the transmitter



5. Panel Drawing



6. RS232 Control

Connect the RS232 ports of CSW-USB3210G, the hub can be controlled by the PC. Baud Rate: 9600 (default), 19200, 38400, 57600, 115200

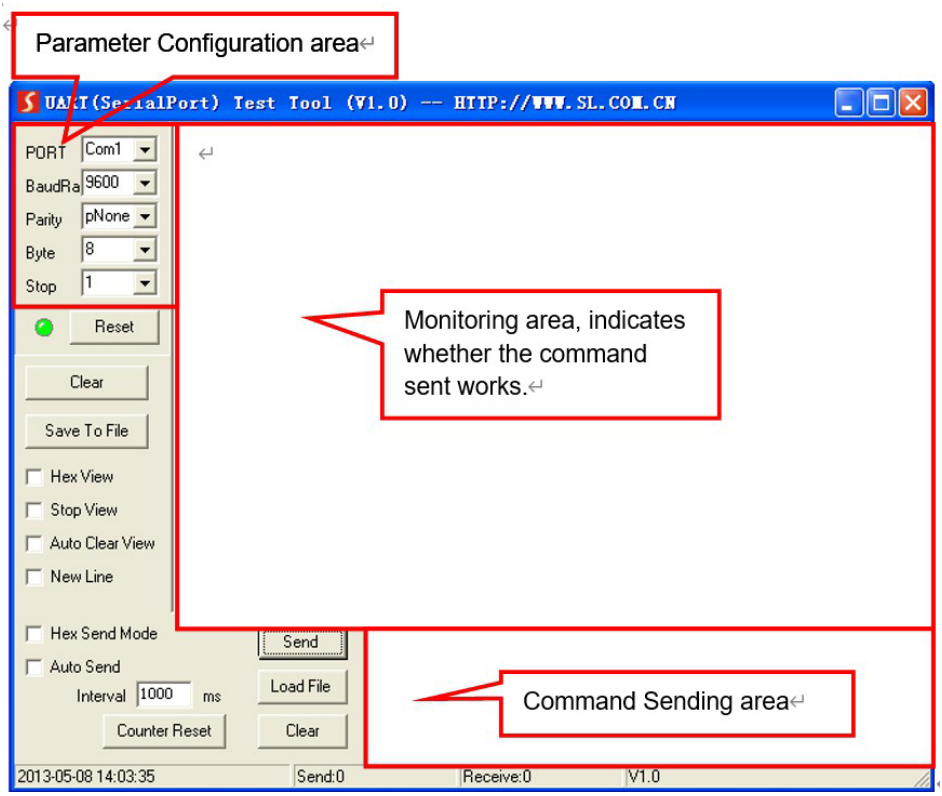
6.1 Installation/uninstallation of RS232 Control Software

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

6.2 Basic Setting

Firstly, connect the CSW-USB3210G with host and devices. Then, connect it to a computer which is installed with a RS232 control software.

The interface of the control software is shown 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 WUB2 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.

6.3 RS232 Communication Commands

The command end symbol is <CR><LF>

Command	Function	Feedback Example
>Help	Inquire RS232 commands	<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
>GetStatus	Inquire status	<WUB2 <FW Version: 1.0.0 <USB Device All Host 1 <HostLink Host 1 2

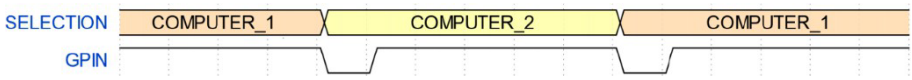
		Link N N <DevicePower Device 1 2 3 4 Power 0 0 0 0 <RS232Baud: 9600 <AutoSwitch On <IOMode 0
>Reboot	Reboot device	<Reboot
>SetUSB [param1]	Switch the devices to HOST [Param1] Param1= 01, 02	<SetUSB 01 <SetUSB 02
>FactoryReset	Restore to factory settings	<FactoryReset
>SetAutoSwitch [param1]	Set auto-switchmode [param1]= On/Off	<SetAutoSwitch On <SetAutoSwitch Off
>SetRS232Baud [param1]	Set RS232 Baud rate [param1]= 9600、19200、38400、57600、115200	<SetRS232Baud: 9600 <SetRS232Baud: 19200 <SetRS232Baud: 38400 <SetRS232Baud: 57600 <SetRS232Baud: 115200
>SetDevicePower [param1] [param2]	Set power supply function of the devices port	<SetDevicePower Device 1 Power 0 <SetDevicePower

	[param1] = 00~04 00：All devices ports 01~04：devices ports 01~04 [param2] = On/Off	Device 1 2 3 4 Power 0 0 0 0
>SetIOMode [param1]	Set GPIO control mode Parem1 = 0, 1, 2 0= close IO 1= Pluse mode 2= Level mode	<SetIOMode 0 <SetIOMode 1 <SetIOMode 2

7. GPIO Mode

The GPIO of CSW-USB3210G has 3 modes: Off mode (default), PULSE mode and LEVEL mode.

- The GPIO pulse mode: each transition from HIGH to LOW on GPIO pin will force a PC change. See the following picture for the explanation of the mode.



- The GPIO level mode uses a level “0” (short to ground) and “1” (open or voltage higher than threshold) to select a specific HOST, the threshold voltage is 2.3V.

  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

80 Little Falls Road, Fairfield, NJ 07004

sales@comprehensiveco.com l 800.526.0242 l www.ComprehensiveCo.com