# Extron WUB2 USB 10G Switcher 2×1 with Auto Switching User Manual



Contents



## Extron WUB2 USB 10G Switcher 2×1 with Auto Switching

## Product Information: USB 10G Switcher 2×1 with Auto Switching

- Model: WUB2
- Version: WUB2_2023V1.1

Description: The USB 10G Switcher 2×1 with Auto Switching is a device that allows you to switch between two USB devices using a single USB port. It supports high-speed data transfer of up to 10Gbps. The auto switching feature automatically detects and switches to the active USB device. This switcher is designed for commercial installations and complies with FCC regulations for Class A digital devices.

## Safety Precautions

- Read all instructions carefully before using the device.
- Keep the original box and packing material for possible future shipment.
- Follow basic safety precautions to reduce the risk of fire, electrical shock, and injury.
- Do not dismantle the housing or modify the module to avoid electrical shock or burn.
- Only use supplies or parts that meet the product's specifications to prevent damage or malfunction.
- Refer all servicing to qualified service personnel.
- Avoid exposing the unit to rain, moisture, or water to prevent fire or shock hazard.
- Avoid putting heavy items on the extension cable to avoid extrusion.
- Do not remove the housing of the device as it may expose you to dangerous voltage or hazards.
- Install the device in a well-ventilated place to prevent damage caused by overheating.
- Avoid contact with liquids as spillage may result in fire, electrical shock, or equipment damage. Unplug the module immediately if an object or liquid falls or spills on to the housing.
- Avoid twisting or pulling the cable ends by force as it can cause malfunction.
- Use a dry cloth to clean the unit. Do not use liquid or aerosol cleaners. Always unplug the power before cleaning.
- Unplug the power cord when the device is not in use for a long period of time.
- Dispose of scrapped devices properly. Do not burn or mix with general household waste. Treat them as normal electrical waste.

## Product Usage Instructions

1. Unpack the equipment carefully and keep the original box and packing material for future use.
2. Ensure that the device is placed in a well-ventilated area to prevent overheating.
3. Connect the USB devices that you want to switch between to the USB ports on the switcher.
4. Connect the USB port of the switcher to your computer or other host device using a USB cable.
5. Ensure that all connections are secure.
6. Power on the switcher using the provided power cord.
7. The switcher will automatically detect and switch to the active USB device. You can also manually switch between devices using the provided switch button, if desired.
8. If an object or liquid falls or spills onto the housing of the switcher, immediately unplug the module and clean it using a dry cloth. Ensure that the unit is completely dry before plugging it back in.
9. When not in use for a long period of time, unplug the power cord from the switcher.

**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 persons.
- 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 overheat.
- Keep the module away from liquids.
- Spillage into 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 malfunction.
- 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 wastes.

## Product Introduction

Thanks for choosing the WUB2 10G hub, which is designed to switch the host and connect KVM devices to control the host. The hub can be controlled by button in front  panel, RS232 and GPIO.

**Feature**

- 2×1 USB 3.2 switcher, 10G;
- Supports auto switching;
- Sufficient power(2A) for latest camera;
- Support button, RS232 and GPIO control.

**Package List**

- 1 x WUB2
- 2 x Mounting ears with 2 x screws
- 4 x Rubber feet
- 1 x 4-pin terminal block
- 1 x RS232 cable(3-pin to DB9)
- 1 x DC12V2A power adaptor
- 1 x User manual

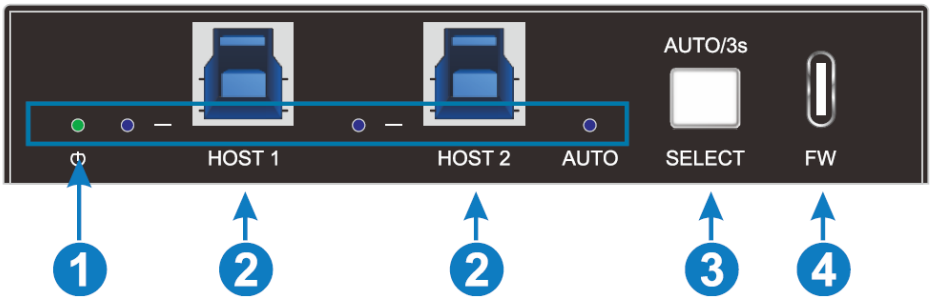
**Note:** Please confirm if the product and the accessories are all included, if not, please contact with the dealers.

**Specification**

| | |
|---|---|
| **HOST** | |
| Host | (2) USB-B |
| Host Connector | (2) USB-B |
| Bandwidth | Up to 10Gbps |
| **DEVICES** | |
| Devices | (3) USB-A (1) USB-C |
| Device Connector | (3) USB-A (1) USB-C |
| Current | Three USB-A and one USB-C share 2A total current |
| **Control** | |
| Control Ports | (1) Button, (1) RS232, (1) GPIO |
| Control Connector | (1) White non-luminous button,<br>(1) 3-pin terminal block,<br>(1) 1-pin terminal block |
| **Power** | |
| Power Ports | (1) 12V 2A DC IN |
| Power Connector | (1) Locking block |
| **General** | |
| Bandwidth | 10Gbps |
| USB Version | USB3.2 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 |

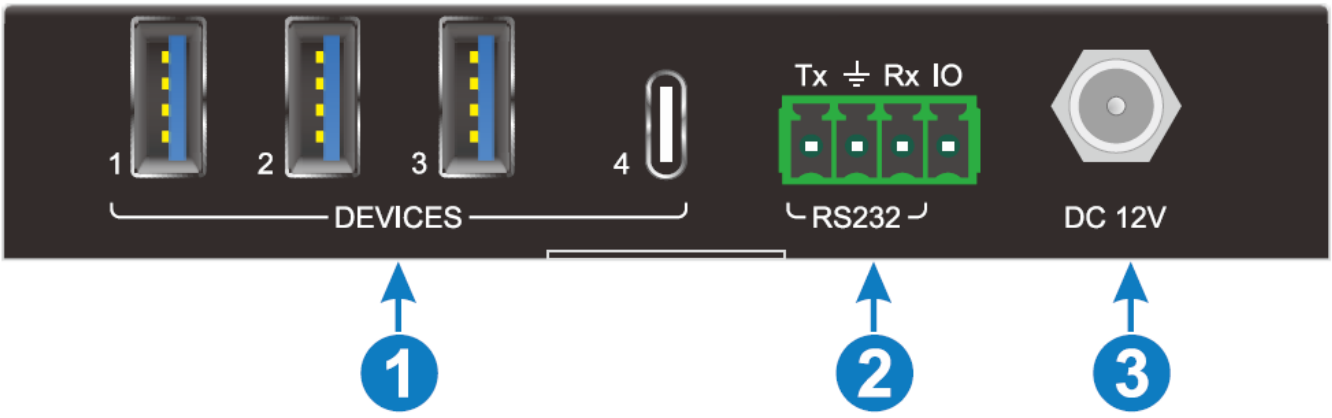
## Panel Description

### Front Panel




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.

**Rear Panel**




1. **DEVICES:**

    3x USB-A 3.2 gen2 for connecting KVM devices;

    1x USB-C 3.2 gen2 for connecting camera device;

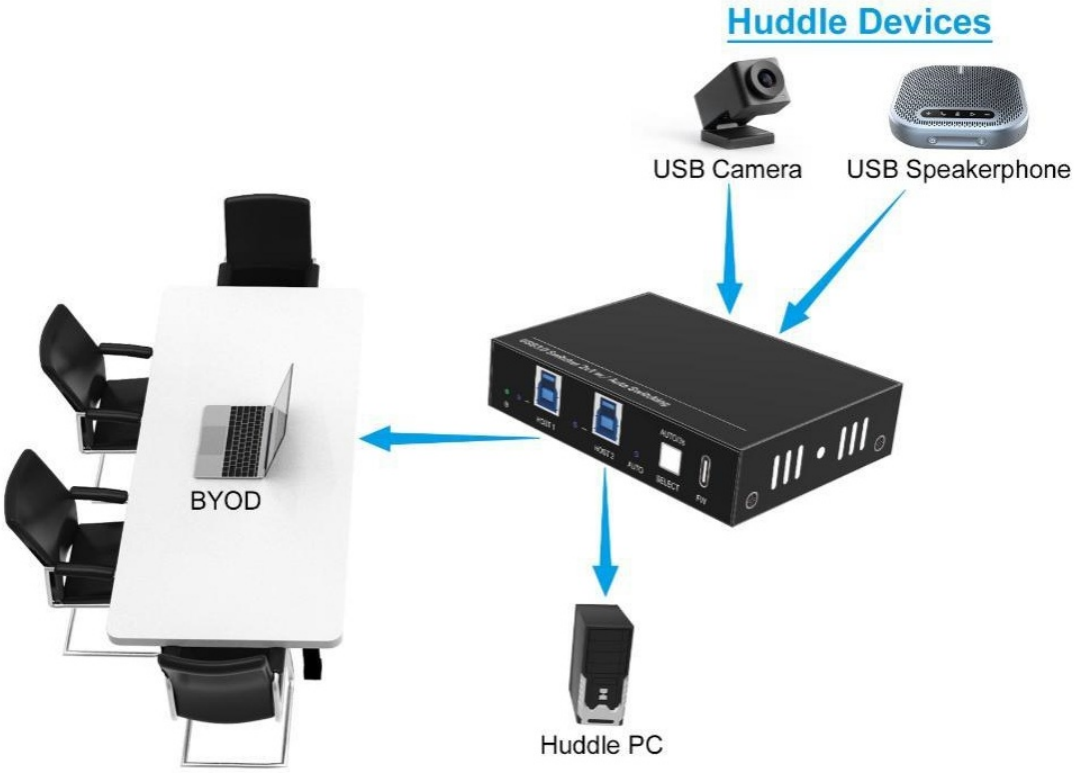
    Four USB devices port share 2A total current.
2. **RS232 and GPIO:** 4-pin terminal block to connect central control device.
3. **DC IN:** 1x locking block port to connect 12V2A DC power adapter.

**System Connection**
Usage Precautions

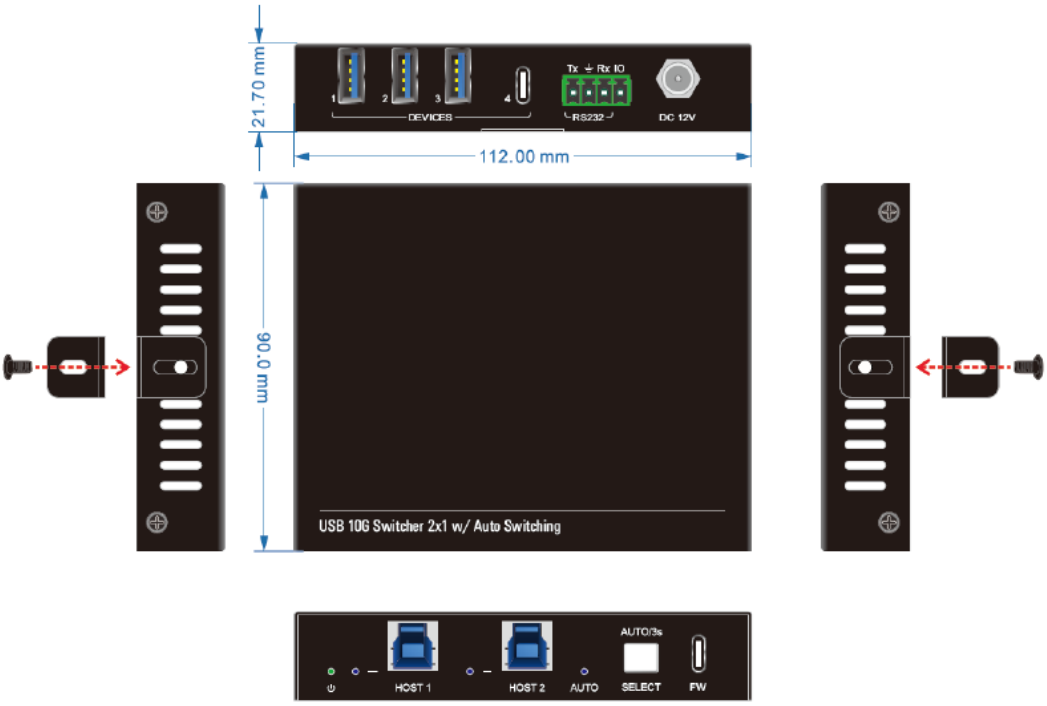
- Make sure all components and accessories included before installation.
- System should be installed in a clean environment with proper temperature and humidity.
- All of the power switches, plugs, sockets, and power cords should be insulated and safe.

- All devices should be connected before power on.

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




**Panel Drawing**




## RS232 Control

Connect the RS232 ports of WUB2, the hub can be control by the PC. Baud Rate: 9600(default), 19200, 38400, 57600, 115200

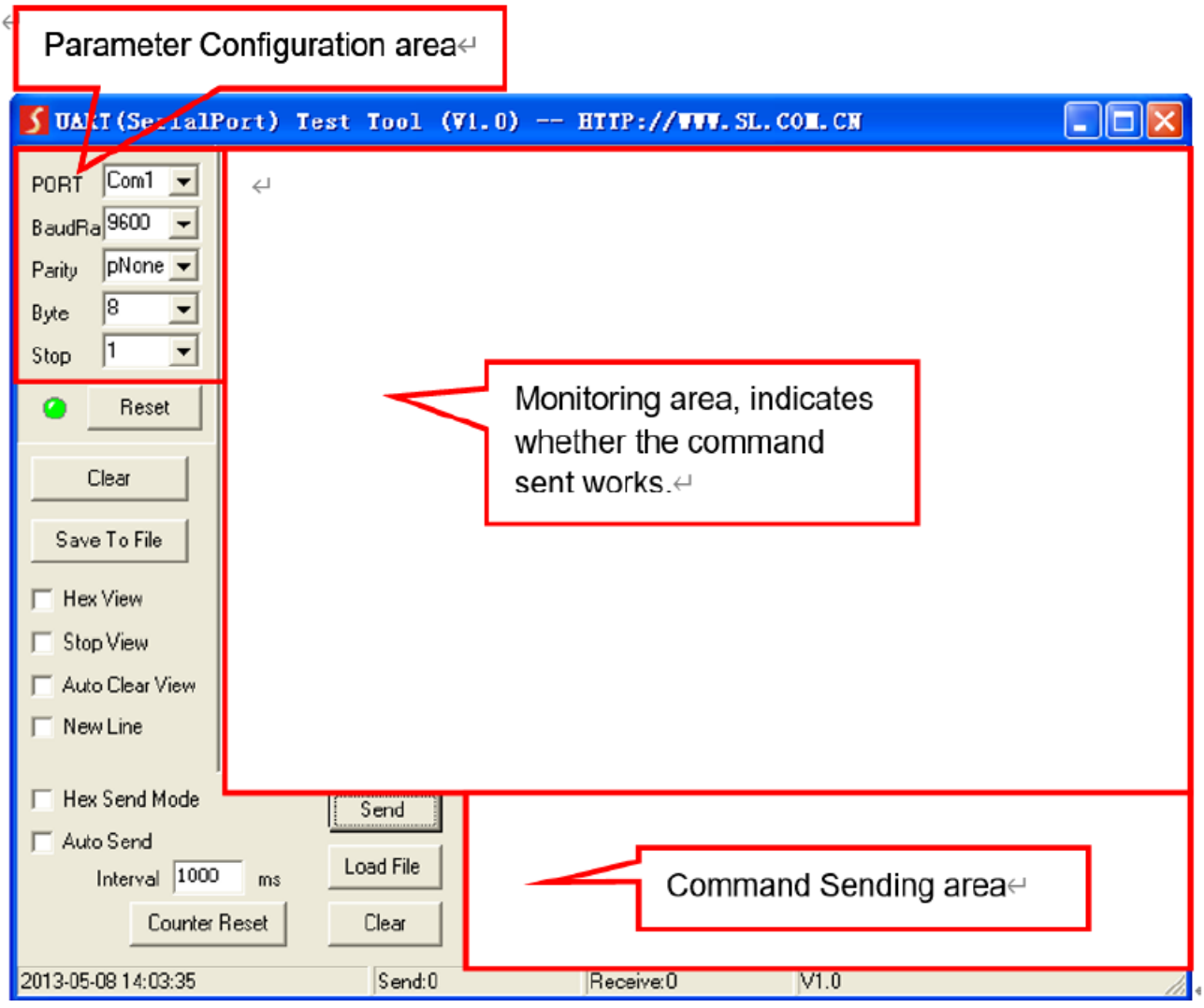
**Installation/uninstallation of RS232 Control Software**

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

**Basic Setting**
Firstly, connect WUB2 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 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.

**RS232 Communication Commands**
The command end symbol is <CR><LF>

| Command | Function | Feedback Example |
|---|---|---|

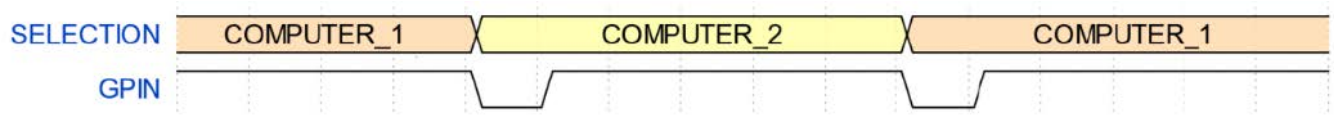
| | | |
|---|---|---|
| >Help | Inquire RS232 commands | <RS232 Commands:<br>>GetStatus Print Status<br>>Reboot System Reboot<br>>FactoryReset Reset System To Default Setting |
| | | >SetRS232Baud [param1] Set RS232 Baud<br>param1 = 9600(Default), 19200, 38400, 57600, 115200<br>>SetAutoSwitch [param1] Set AutoSwitch Mode<br>On Or Off param1 = On, Off<br>>SetIOMode [param1] Set IO Control Mode [param1]<br>param1 = 00~02<br>00: IO Control Mode Off(Default)<br>01: Whenever The IO Level From High To Low, Switch The Host<br>02: When The IO Level Is High, Switch To Host 1. When The IO Level Is Low, Switch To Host 2<br>>SetUSB [param1] Set USB Device Switch To Host [param1]<br>param1 = 01~02: USB Host 1~2<br>>SetDevicePower [param1] [param2] Set Device<br>[param1] Power On Or Off<br>param1 = 00~04 00: All Device<br>01~04: Device<br>1~4<br>param2 = On, Off |
| >GetStatus | Inquire status | <WUB2<br><FW Version: 1.0.0<br><USB<br>Device All Host 1<br><HostLink<br>Host 1 2 |

| | | |
|---|---|---|
| | | Link N N<br><DevicePower Device 1 2 3 4<br>Power 0 0 0 0<br><RS232Baud: 9600<br><AutoSwitch On<br><IOMode 0 |
| >Reboot | Reboot device | <Reboot |
| >SetUSB [param1] | Switch the devices to HOST [Param1] | <SetUSB 01<br><SetUSB 02 |
| | Param1= 01, 02 | |
| >FactoryReset | Restore to factory settings | <FactoryReset |
| >SetAutoSwitch [param1] | Set auto- switchmode | <SetAutoSwitch On<br><SetAutoSwitch Off |
| | [param1]= On/Off | |
| >SetRS23 | Set RS232 | <SetRS232Baud: 9600<br><SetRS232Baud: 19200<br><SetRS232Baud: 38400<br><SetRS232Baud: 57600<br><SetRS232Baud: 115200 |
| 2Baud | Baud rate | |
| [param1] | [param1]= | |
| | 9600 | |
| | 19200 | |
| | 38400 | |
| | 57600 | |
| | 115200 | |
| >SetDevicePower [param1] [param2] | Set power supply function of the devices port | <SetDevicePower Device 1<br>Power 0<br><SetDevicePower |

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

**GPIO Mode**
The GPIO of WUB2 have 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

## 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.

## Customer Service

The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter. There terms and conditions may be changed without prior notice.

**Warranty**
The limited warranty period of the product is fixed three years.

**Scope**
These terms and conditions of Customer Service apply to the customer service provided for the products or any other items sold by authorized distributor only.

**Warranty Exclusion**

- Warranty expiration.
- Factory applied serial number has been altered or removed from the product.
- Damage, deterioration or malfunction caused by:
  ✓ Normal wear and tear.
  ✓ Use of supplies or parts not meeting our specifications.
  ✓ No certificate or invoice as the proof of warranty.
  ✓ The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
  ✓ Damage caused by force majeure.
  ✓ Servicing not authorized by distributor.
  ✓ Any other causes which does not relate to a product defect.
- Shipping fees, installation or labor charges for installation or setup of the product.

**Documentation:**
Customer Service will accept defective product(s) in the scope of warranty coverage at the sole condition that the defeat has been clearly defined, and upon reception of the documents or copy of invoice, indicating the date of

purchase, the type of product, the serial number, and the name of distributor.

**Remarks:** Please contact your local distributor for further assistance or solutions.

## Documents / Resources

| | |
|---|---|
|  | Extron WUB2 USB 10G Switcher 2x1 with Auto Switching [pdf] User Manual<br>WUB2, WUB2 USB 10G Switcher 2x1 with Auto Switching, USB 10G Switcher 2x1 with Auto Switching, Switcher 2x1 with Auto Switching, Auto Switching, Switching |