



BG-USW-24

2x4 USB 3.2 Gen 1 Peripheral Sharing Switcher with 5Gbps Data Transfer/Auto Switching and RS-232 Control

User Manual







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Statement

Please read these instructions carefully before connecting, operating, or configuring this product. Please save this manual for future reference.

Safety Precaution

- To prevent damaging this product, avoid heavy pressure, strong vibration, or immersion during transportation, storage, and installation.
- The housing of this product is made of organic materials. Do not expose to any liquid, gas, or solids which may corrode the shell.
- Do not expose the product to rain or moisture.
- To prevent the risk of electric shock, do not open the case. Installation and maintenance should only be carried out by qualified technicians.
- Do not use the product beyond the specified temperature, humidity, or power supply specifications.
- This product does not contain parts that can be maintained or repaired by users. Damage caused by dismantling the product without authorization from BZBGear is not covered under the warranty policy.
- Installation and use of this product must strictly comply with local electrical safety standards.





Introduction

The BG-USW-24 USB 3.2 Gen1 2x4 Peripheral Sharing Switch enables two host computers to share up to four USB devices with reliable, high-speed performance. Fully compliant with USB 3.2 Gen1, it supports data transfer rates of up to 5Gbps and is backward compatible with USB 2.0 and USB 1.1 devices, making it suitable for bandwidth-intensive peripherals such as USB docking stations, HD cameras, and storage devices.

Designed for professional integration, the switch supports front-panel button control, RS-232 command switching, and automatic host switching with power-off memory to retain system state after reboot. LED indicators provide clear host status, while built-in over-current protection and dedicated 5V/1A power per USB port ensure stable and safe operation. With multi-platform support and true plug-and-play functionality, it is well-suited for professional AV, IT, broadcast, and control room environments.

Features

- **USB 3.2 Gen1 Compliance:** Supports data transfer speeds up to 5Gbps with backward compatibility for USB 2.0 and USB 1.1 devices.
- **2x4 Peripheral Sharing:** Allows two computers to share up to four USB devices without reconnecting cables.
- **High-Bandwidth Device Support:** Ideal for USB docking stations, HD cameras, storage devices, and other performance-intensive peripherals.
- **Multiple Switching Methods:** Supports front-panel push-button control, RS-232 commands, and automatic switching operation.
- **Auto Switching Function:** Automatically prioritizes the most recently active host computer for seamless transitions.
- **Power-Off Memory:** Retains switching state and auto-switch configuration after power loss or reboot.
- **LED Status Indicators:** Provides clear visual indication of the currently active host computer.
- **Per-Port Power Output:** Delivers dedicated 5V/1A power to each USB device port for stable peripheral operation.
- **Over-Current Protection:** Protects connected devices from power surges and electrical faults.
- **Multi-Platform Compatibility:** Fully compatible with Windows, macOS, and Linux operating systems.
- **Plug-and-Play Operation:** Requires no drivers or software installation for immediate deployment.
- **Professional Mounting Support:** Includes mounting ears and hardware for secure rack or surface installation.



Packing List

- 1 × USB 3.2 Gen1 2×4 Peripheral Sharing Switch
- 2 × USB 3.0 Cables (Type-A to Type-B, 1.8 m)
- 2 × Mounting Ears
- 4 × Machine Screws (KM3 × 4)
- 1 × 12V / 2.5A Multinational Locking Power Supply
- 1 × User Manual



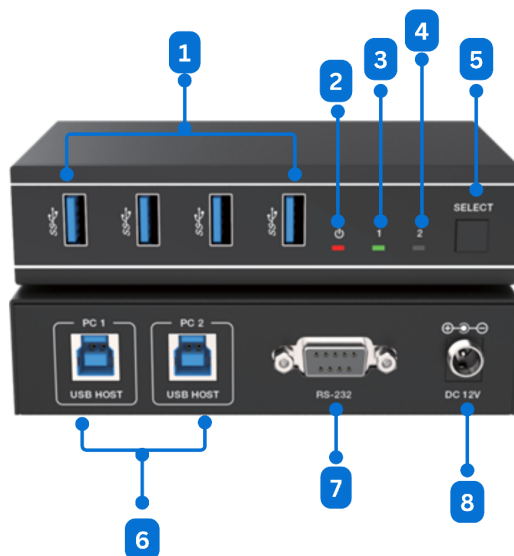
Specifications

Technical	
USB Compliance	USB 3.2 Gen1, USB 2.0 and USB 1.1
Data Transfer Rates	5Gbps
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap) & ±4kV (Contact)
Connection	
HOST Ports	2 × USB HOST [USB 3.0 Type B, 9-pin female]
DEVICE Ports	4 × USB DEVICES [USB 3.0 Type A, 9-pin female]
Control Port	1 × RS-232 [DB-9]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions (W × D × H)	4.9in × 3.1in × 1.2in / 125mm × 80mm × 30mm
Weight	0.7lb [319g]
Power Supply	DC 12V / 2.5A (US/EU standard, CE/FCC/UL certified)
Power Consumption	Typical: 21.12W, Standby: 0.6W
Operating	
Operating Temperature	32–104°F / 0–40°C
Storage Temperature	-4–140°F / -20–60°C
Relative Humidity	20–90% RH (no-condensing)



Operation Controls and Functions

Front and Rear Panel



No.	Name	Function Description
1	USB 3.0 Ports	USB 3.2 Gen1 device ports, connect USB flash drives, cameras, keyboards, mice, etc.
2	Power LED	Lights red when the product is powered on.
3	USB Select LED 1	Lights green when PC 1 is selected as the active host.
4	USB Select LED 2	Lights green when PC 2 is selected as the active host.
5	SELECT Button	Short press: switch input between PC 1/2. Long press (3 sec): enable/disable auto switching.
6	PC 1/2 USB HOST Ports	Connect to two host computers (PC 1 and PC 2).
7	RS-232 Port	Serial control port for RS-232 pass-through or sending ASCII commands from a PC/control system.
8	DC 12V	Power input port (DC 12V / 2.5A).



Auto Switching Function

The auto switching function allows the USB 3.2 Gen1 2x4 Peripheral Sharing Switch to automatically manage active host selection without manual input. This function can be **enabled or disabled** via the front-panel **SELECT button** or through **RS-232 serial command control**.

- When **enabled**:
 - If only one USB HOST is connected and the second host is later connected, the system automatically switches to the most recently connected host (last-in priority).
 - If both USB HOST ports are active and one host is disconnected, the system automatically switches to the remaining active host.
 - If only one host remains connected, the system **does not** switch to another host until it is reconnected.
- When **disabled**:
 - The switch will only change hosts manually via the **SELECT button** or RS-232 commands.
 - Automatic switching and LED updates are ignored.

LED Indicators:

The corresponding **USB Select LED** lights green to indicate the currently active host computer.

This feature ensures seamless connectivity and prevents interruptions when connecting or disconnecting multiple computers, making the switch ideal for professional AV, IT, and control room environments.

ASCII Commands

- **Serial Port Settings:** Baud rate 115200, 8 data bits, 1 stop bit, no parity.
- **Connection:** Use the RS-232 port on the device. If connecting to a PC without a native RS-232 port, use an RS-232-to-USB adapter.

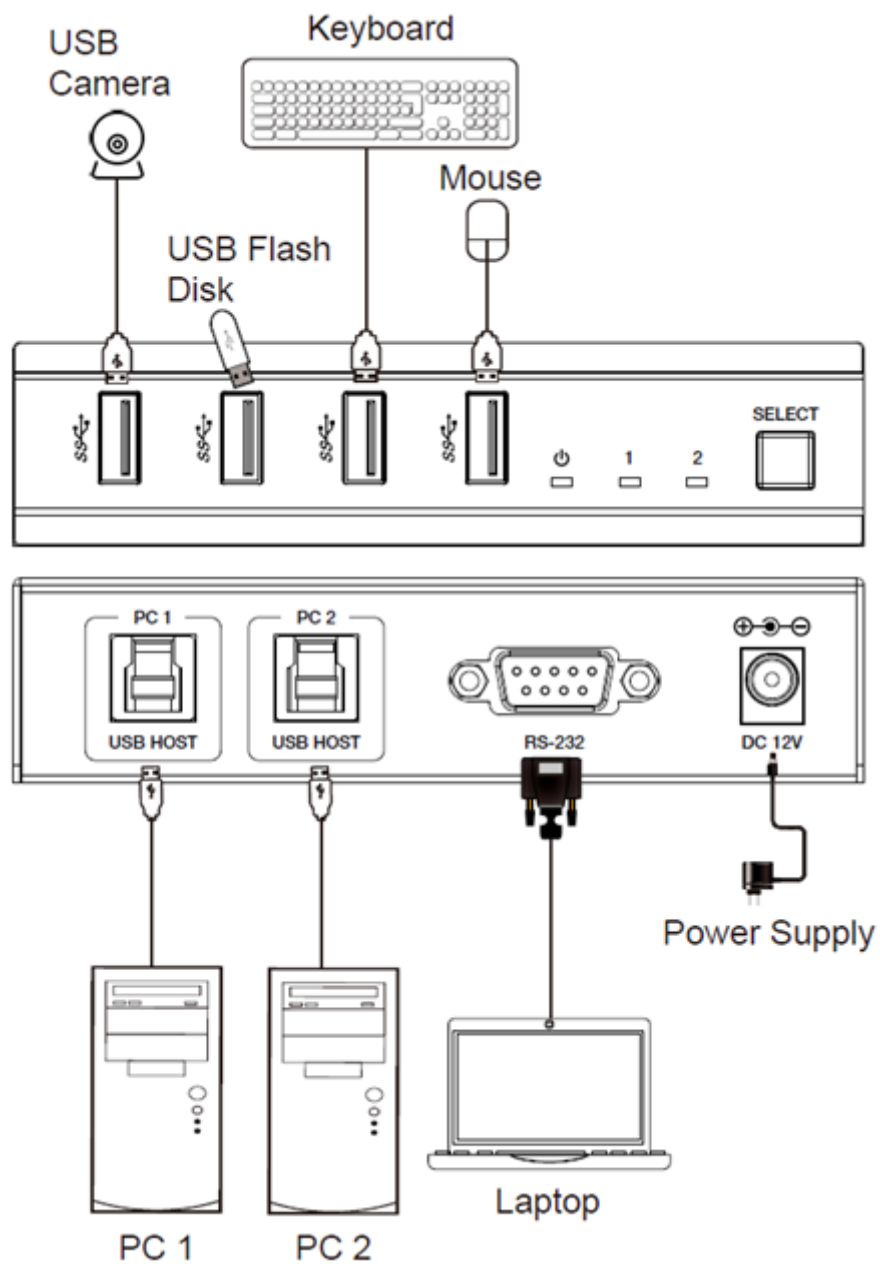


- **Command Format:** Commands must end with the delimiter **!**. Parameters are separated by spaces.
- **Feedback:** The device will return status or confirmation messages in response to each command.
- **Functionality:** ASCII commands allow full control over input selection, auto switching, reboot, factory reset, and querying device status.

Command Code	Function Description	Example	Feedback	Default Setting
help!	List all commands	help!	—	—
status!	Get device current status	status!	—	—
r fw version!	Get firmware version	r fw version!	MCU BOOT: Vx.xMCU APP: Vx.xx.xx	—
r type!	Get device model	r type!	2x1 KVM Switcher	—
s reboot!	Reboot the device	s reboot!	reboot...	—
s reset!	Reset to factory defaults	s reset!	reset to factory defaults system initializing...	—
s output y in source x!	Route input source to output (y=0; x=1~2)	s output 0 in source 1!	output 0 in source 1!	1=input 12=input 2
r output y in source!	Get output selected input source	r output 0 in source!	output 0 in source x! (x=1 or 2)	—
s output y auto switch x!	Enable/disable auto switch (y=0; x=1/0)	s output 0 auto switch 1!	output 0 auto switch 1!	0=disable auto switch 1=enable auto switch
r output y auto switch!	Get output auto switch status	r output 0 auto switch!	output 0 auto switch x! (x=0 or 1)	0=disable auto switch 1=enable auto switch



Connection Diagram





Troubleshooting

Problems	Causes	Solutions
No Power / All LED off	Power supply not connected, connected fully, or wrong power supply.	Check if the power supply is connected correctly and the output voltage value is within recommended specifications.
No sound or sound issues	The HDMI connection is faulty, the audio format is not supported by the displays, or the source player is set to another port for audio output	Check if the HDMI cables are connected correctly. Check if the audio format is supported by the display and that a user has not changed the supported audio format on the player's audio output. Ensure output settings from the HDMI source device as set correctly.
No picture or picture flickers	The HDMI cable may be faulty or the category cable quality is faulty.	Check if the HDMI and category cable connections are correct and undamaged. Change to another good working HDMI cable or category cable (CAT6 or better cable is recommended).



Tech Support

Have technical questions? We may have answered them already!

Please visit BZBGear's support page (bzbgear.com/support) for helpful information and tips regarding our products. Here you will find our Knowledge Base (bzbgear.com/knowledge-base) with detailed tutorials, quick start guides, and step-by-step troubleshooting instructions. Or explore our YouTube channel, BZB TV (youtube.com/c/BZBTVchannel), for help setting up, configuring, and other helpful how-to videos about our gear.

Need more in-depth support? Connect with one of our technical specialists directly:

Phone	Email	Live Chat
1.888.499.9906	support@bzbgear.com	bzbgear.com

Limited Product Warranty Terms

Pro Line: 5-year warranty from the date of purchase for AV/Broadcasting products bought on or after August 1, 2024.

Essential Line: 3-year warranty from the date of purchase for AV/Broadcasting products bought on or after August 1, 2024.

Cables: Lifetime Limited Product Warranty.

For complete warranty information, please visit bzbgear.com/warranty.

For questions, please call 1.888.499.9906 or email support@bzbgear.com.



Mission Statement

BZBGear is a breakthrough manufacturer of high-quality, innovative audiovisual equipment ranging from AVoIP, professional broadcasting, conferencing, home theater, to live streaming solutions. We pride ourselves on unparalleled customer support and services. Our team offers system design consultation, and highly reviewed technical support for all the products in our catalog. BZBGear delivers quality products designed with users in mind.

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