BV-Tech POE-SW1611G-FBA

BV-Tech 16-Port Gigabit PoE+ Switch User Manual

Model: POE-SW1611G-FBA

1. Introduction

The BV-Tech 16-Port Gigabit PoE+ Network Switch is engineered for efficient video data transmission and reliable network performance. This switch features 16 high-power PoE+ ports, supporting IEEE 802.3af/at standards, and delivers up to 30W per port. It is designed to power various PoE-enabled devices such as IP cameras, VoIP phones, and wireless access points. Its robust metal casing, 6kV surge protection, and wide operating temperature range make it suitable for diverse installation environments. The plug-and-play setup ensures ease of use, while compliance with international safety standards guarantees safe and dependable operation.

Key Features:

- **16 Gigabit PoE+ Ports:** Equipped with 16 x 10/100/1000 Mbps PoE+ ports, 1 x Gigabit RJ45 uplink port, and 1 x Gigabit SFP uplink port for flexible network expansion.
- **High Power PoE Supply:** Adheres to IEEE 802.3af/at standards with a 230W PoE power budget, providing up to 30W per port for multiple device connections.
- **Enhanced Performance:** Offers a 36 Gbps switching capacity and a 26.784 Mpps packet forwarding rate, ensuring smooth and uninterrupted data flow for video and network applications.
- **Reliable and Durable:** Features a metal case design with 6kV surge protection and operates within temperatures from -10°C to 55°C. Its plug-and-play installation simplifies setup and ensures robust performance.
- **Certified Safety and Compliance:** Meets FCC, CE-EMC, IC, UL, and RoHS standards, ensuring safe and reliable operation in various environments.

2. Package Contents

Verify that all items are present and in good condition upon unpacking.

- BV-Tech 16-Port Gigabit PoE+ Switch
- Power Cord
- Metal Housing (integrated)
- User Manual (this document)

3. Product Overview

Front Panel

The front panel of the switch features 16 Gigabit PoE+ ports (ports 1-16), one Gigabit RJ45 uplink port (port 17), and one Gigabit SFP uplink port (port 18). To the left of the ports are the LED indicators for power, PoE-MAX, and individual port status.

LED Indicators:

- **PWR (Power):** Illuminates when the switch is powered on.
- **PoE-MAX:** Illuminates when the total PoE power consumption approaches or exceeds the maximum budget (230W).
- **LINK/ACT (Per Port):** Solid green indicates a stable network link. Blinking green indicates data activity.
- **PoE (Per Port):** Solid amber indicates a PoE device is connected and receiving power.

Ports:

- **PoE+ Ports (1-16):** 10/100/1000 Mbps RJ45 ports supporting IEEE 802.3af/at, providing up to 30W per port.
- **Gigabit RJ45 Uplink Port (17):** 10/100/1000 Mbps RJ45 port for connecting to a router, NVR, or main network.
- **Gigabit SFP Uplink Port (18):** SFP slot for fiber optic connection to a router or main network, requiring a compatible SFP module (not included).

Rear Panel

The rear panel contains the AC power input connector (AC 100-240V, 50/60Hz) for connecting the provided power cord.

4. Setup

The BV-Tech 16-Port Gigabit PoE+ Switch is designed for plug-and-play operation, requiring no complex configuration.

1. Unpacking

- Carefully remove the switch and all accessories from the packaging.
- Inspect the device for any signs of damage. If damage is found, contact customer support immediately.

2. Connecting Power

- Connect one end of the provided power cord to the AC power input on the rear panel of the switch.
- Plug the other end of the power cord into a standard AC power outlet (100-240V, 50/60Hz).
- The PWR LED on the front panel should illuminate, indicating the switch is powered on.

3. Connecting Network Devices (Non-PoE)

- For devices that do not require power over Ethernet (e.g., computers, network printers), connect them to any of the 16 PoE+ ports using standard Ethernet cables.
- The corresponding LINK/ACT LED will illuminate when a stable connection is established.

4. Connecting PoE Devices

- Connect PoE-enabled devices (e.g., IP cameras, VoIP phones, wireless access points) to any of the 16 PoE+ ports using standard Ethernet cables.
- The switch will automatically detect and provide power to compliant PoE devices.
- The corresponding LINK/ACT LED will illuminate for network connectivity, and the PoE LED will illuminate when power is being supplied.

5. Uplink Connection

- Connect the Gigabit RJ45 uplink port (port 17) to your router, NVR, or main network switch using an Ethernet cable.
- Alternatively, for longer distances or fiber optic connections, insert a compatible SFP module into the Gigabit SFP uplink port (port 18) and connect it to your fiber network.

5. Operating

PoE Functionality

The switch automatically detects and supplies power to IEEE 802.3af/at compliant devices connected to its PoE+ ports. No manual configuration is required for basic PoE operation. The total power budget for PoE is 230W. Monitor the PoE-MAX LED; if it illuminates, the total power consumption is nearing or exceeding the budget, which may affect power delivery to additional devices.

Network Data Transmission

The switch provides full Gigabit speeds (10/100/1000 Mbps) across all 16 PoE+ ports and both uplink ports. Data is forwarded efficiently with a 36 Gbps switching capacity, ensuring high-bandwidth applications like video streaming and large file transfers operate smoothly.

LED Indicators

Regularly observe the LED indicators on the front panel to monitor the switch's status and troubleshoot connectivity issues:

- **PWR:** On (Switch is powered).
- **PoE-MAX:** On (PoE power budget is high/exceeded).
- **LINK/ACT:** Solid (Stable network link), Blinking (Data activity).
- **PoE:** Solid (PoE device connected and powered).

6. Maintenance

Environmental Considerations

- Ensure the switch is operated within its specified temperature range (-10°C to 55°C or 14°F to 131°F).
- Avoid exposing the switch to direct sunlight, excessive heat sources, or extreme cold.
- Maintain adequate ventilation around the device. Do not block any ventilation openings.
- Keep the switch away from moisture, water, and high humidity environments.

Cleaning

- Before cleaning, disconnect the power cord from the switch.
- Use a soft, dry cloth to wipe the exterior of the switch.
- Do not use liquid or aerosol cleaners, as they may damage the device.

Surge Protection

The switch is equipped with 6kV surge protection. However, for enhanced protection against electrical surges and lightning, it is recommended to connect the switch to a surge protector or an uninterruptible power supply (UPS).

7. Troubleshooting

No Power

- Ensure the power cord is securely connected to both the switch and a working power outlet.
- Verify that the power outlet is functional by plugging in another device.
- Check if the PWR LED on the front panel is illuminated. If not, try a different power cord if available.

No Network Connection

- Check the Ethernet cables connecting devices to the switch. Ensure they are securely plugged in and not damaged.
- Verify that the LINK/ACT LED for the respective port is illuminated. If not, try a different cable or port.
- Ensure the connected device (e.g., computer, router) is powered on and functioning correctly.

PoE Device Not Powering On

- Confirm that the connected device is PoE-enabled and compliant with IEEE 802.3af/at standards.
- Check if the PoE LED for the respective port is illuminated. If not, the device may not be receiving power.
- Ensure the total power consumption of all connected PoE devices does not exceed the 230W budget. If the PoE-MAX LED is on, disconnect some devices or use a separate power source for non-essential devices.
- Try connecting the PoE device to a different PoE+ port on the switch.
- Verify the Ethernet cable is functional and supports PoE.

8. Specifications

Technical Specifications:

Feature	Specification
Brand	BV-Tech
Model Number	POE-SW1611G-FBA
Number of Ports	16 (PoE+) + 1 (RJ45 Uplink) + 1 (SFP Uplink)
Switch Type	PoE+
PoE Standard	IEEE 802.3af/at
Maximum Power (PoE Budget)	230 Watts
Data Transfer Rate	1000 Megabits Per Second (Gigabit)
Switching Capacity	36 Gbps
Packet Forwarding Rate	26.784 Mpps
Case Material Type	Metal
Color	Black
Operating Temperature	-10°C to 55°C (14°F to 131°F)
Item Weight	3.11 Kilograms
UPC	811853033776

9. Safety and Regulatory Compliance

This device complies with the following international safety and regulatory standards:

- FCC (Federal Communications Commission)
- CE-EMC (Conformité Européenne - Electromagnetic Compatibility)
- IC (Industry Canada)
- UL (Underwriters Laboratories)
- RoHS (Restriction of Hazardous Substances)

These certifications ensure the product meets essential health, safety, and environmental protection standards.

10. Warranty and Support

Warranty Information

The BV-Tech 16-Port Gigabit PoE+ Switch comes with a **1-Year Limited Warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by misuse, accidents, unauthorized modifications, or external causes such as power surges not protected by the device's internal mechanisms.

Customer Support

If you encounter any issues or have questions regarding the installation, operation, or maintenance of your BV-Tech 16-Port Gigabit PoE+ Switch, please refer to the troubleshooting section of this manual. If the issue persists, contact BV-Tech customer support for assistance. Please have your model number (POE-SW1611G-FBA) and purchase information ready when contacting support.

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