Real HD SW8-10G-SFP

Real HD SW8-10G-SFP 8-Port 10Gb SFP+ Unmanaged Switch User Manual

Model: SW8-10G-SFP

1. Introduction

Thank you for choosing the Real HD SW8-10G-SFP 8-Port 10Gb SFP+ Unmanaged Switch. This device is designed to provide high-speed network connectivity for your home or small office environment. It features eight 10 Gigabit SFP+ ports, offering flexible and powerful network expansion. This manual provides detailed instructions for setting up, operating, and maintaining your switch.

Key Features:

- **8 x 10Gb SFP+ Ports:** Provides high-speed fiber or copper connectivity (with SFP+ to RJ45 modules, not included).
- **Multi-Gigabit Compatibility:** Supports 10G, 2.5G, and 1G devices.
- **160Gbps Switching Capacity:** Ensures high data throughput.
- **Fanless Design:** Operates silently, suitable for noise-sensitive environments.
- **Plug & Play:** Requires no software configuration for basic operation.
- **Durable Metal Casing:** Provides robust protection and efficient heat dissipation.



Image 1.1: Front view of the Real HD SW8-10G-SFP switch, showing the eight SFP+ ports and LED indicators.



Image 1.2: The SW8-10G-SFP switch positioned on a desk, highlighting its 8x10Gbps SFP+ ports, 160Gbps bandwidth, plug & play functionality, fanless design, wall mount/desktop options, and rugged metal case.

2. Package Contents

Please verify the package contents upon opening. If any items are missing or damaged, please contact Real HD customer support.

- Real HD SW8-10G-SFP 8-Port 10Gb SFP+ Unmanaged Switch
- Power Adapter (DC 12V 2A)
- User Manual

3. Product Overview

Front Panel

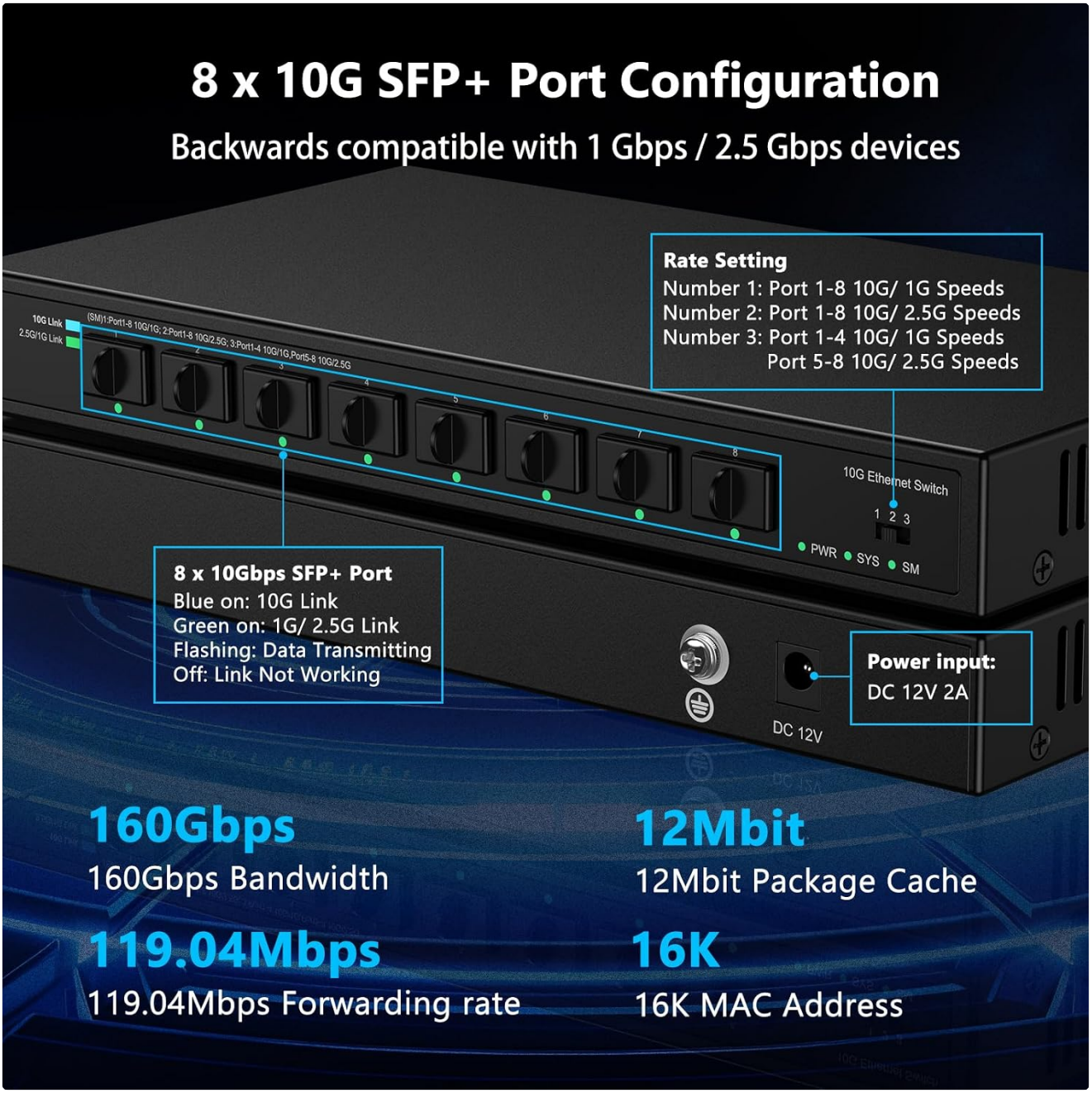


Image 3.1: Detailed view of the switch's front panel, showing the 8 SFP+ ports, LED indicators, and the power input on the rear.

The front panel of the SW8-10G-SFP switch features the following components:

- **SFP+ Ports (1-8):** Eight 10 Gigabit SFP+ ports for high-speed network connections. These ports are compatible with 10G, 2.5G, and 1G SFP/SFP+ modules.
- **LED Indicators:**
    - **PWR (Power):** Indicates the power status of the switch.
    - **SYS (System):** Indicates the system status.
    - **SM (Smart Management):** Not applicable for unmanaged switches.
    - **Link/Activity LEDs (per port):**
        - Blue: 10G Link/Activity
        - Green: 1G/2.5G Link/Activity
        - Flashing: Data Transmitting
        - Off: Link Not Working

Rear Panel

- **DC 12V 2A Power Input:** Connects to the included power adapter.

4. Setup

The Real HD SW8-10G-SFP switch is designed for simple plug-and-play operation. No complex software configuration is required for basic network functionality.

4.1 Placement

The switch can be placed on a desktop or mounted on a wall. Ensure adequate ventilation around the device, although its fanless design minimizes heat generation.

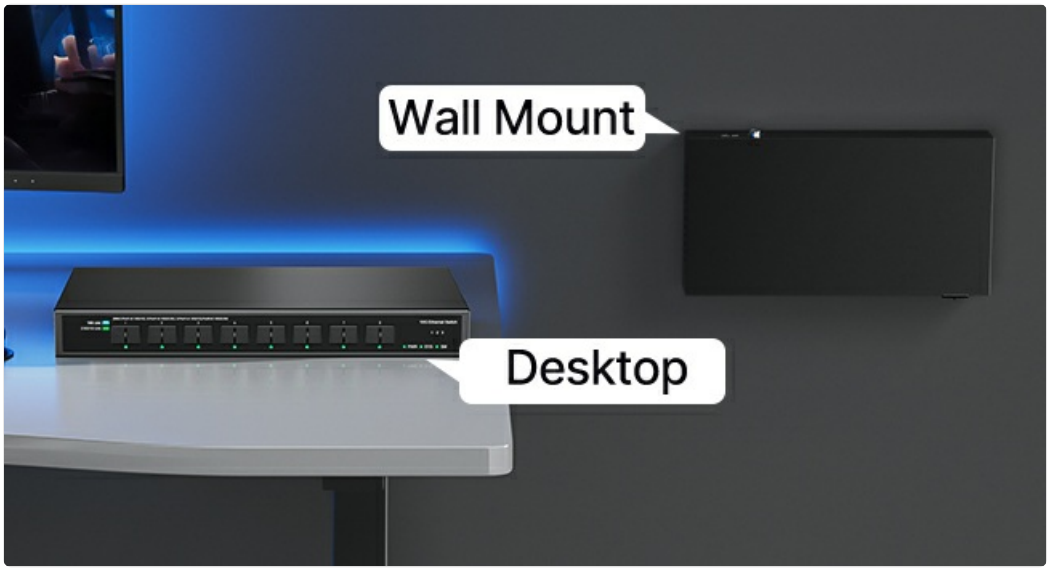


Image 4.1: The switch can be placed on a desktop or securely mounted on a wall for flexible installation.

4.2 Power Connection

1. Connect the power adapter to the DC 12V 2A power input port on the rear panel of the switch.
2. Plug the other end of the power adapter into a standard electrical outlet.
3. The PWR LED on the front panel will illuminate, indicating the switch is receiving power.

4.3 Connecting Network Devices

The SW8-10G-SFP switch uses SFP+ ports. You will need appropriate SFP/SFP+ modules (not included) and compatible fiber optic or copper cables (e.g., CAT6a or above with SFP+ to RJ45 modules) to connect your network devices.



Image 4.2: Illustrates the plug-and-play setup, showing the use of SFP+ ports with various SFP/SFP+ modules and the option to use CAT6a or above copper cable via an SFP+ to RJ45 module (module not included).

1. Insert the appropriate SFP/SFP+ modules into the desired SFP+ ports on the switch.
2. Connect your network devices (e.g., servers, workstations with 10G Ethernet adapters, Wi-Fi 6 routers, NAS devices) to the SFP+ ports using compatible fiber optic cables or copper cables with SFP+ to RJ45 modules.
3. Ensure the Link/Activity LED for the connected port illuminates, indicating a successful connection. The color of the LED will indicate the link speed (Blue for 10G, Green for 1G/2.5G).

5. Operating the Switch

As an unmanaged switch, the SW8-10G-SFP operates automatically once connected. There is no software interface or configuration required for its basic functions.

5.1 LED Indicators

Monitor the LED indicators on the front panel to understand the switch's status and network activity:

- **PWR (Power):**
  - On: The switch is powered on.
  - Off: The switch is powered off.
- **SYS (System):**
  - On: The system is operating normally.
  - Off: System error or not operating.
- **Link/Activity (per SFP+ port):**
  - Blue (Solid): 10 Gigabit link established.
  - Blue (Flashing): Data is being transmitted or received at 10 Gigabit speed.
  - Green (Solid): 1 Gigabit or 2.5 Gigabit link established.
  - Green (Flashing): Data is being transmitted or received at 1 Gigabit or 2.5 Gigabit speed.
  - Off: No link detected or port is inactive.

5.2 Network Performance

The switch provides a 160Gbps switching capacity, allowing for high-speed data transfer between connected devices. To achieve optimal performance, ensure all connected devices and cables support the desired speeds (e.g., 10G SFP+ modules and compatible cables for 10Gbps connections).

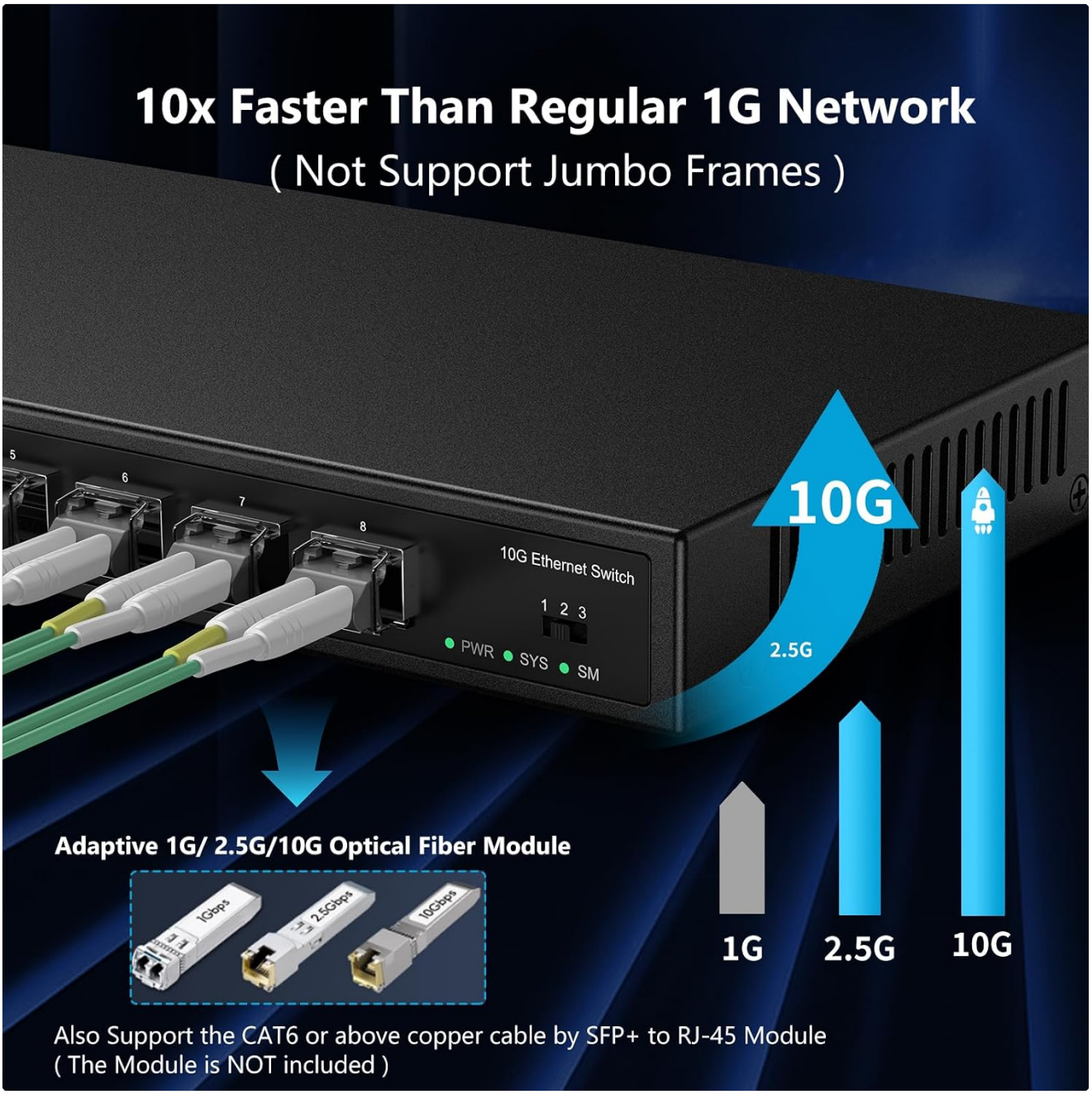


Image 5.1: Illustrates the 10G super-fast capability, showing 10G as significantly faster than 2.5G and 1G. It also depicts adaptive 1G/2.5G/10G optical fiber modules and the use of CAT6 or above copper cable via an SFP+ to RJ45 module.

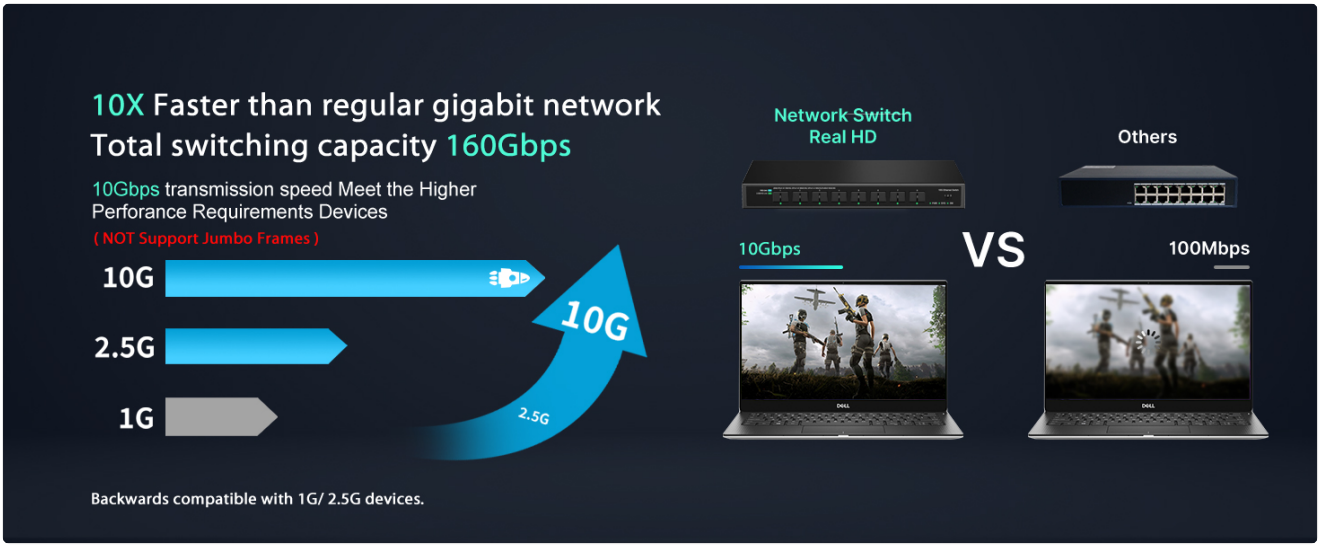


Image 5.2: Visual comparison demonstrating that a 10Gbps network is significantly faster than a regular gigabit (100Mbps) network, with a total switching capacity of 160Gbps.

5.3 Application Scenarios

This switch is suitable for various high-bandwidth applications:

- **8K Video Streaming:** Provides the necessary bandwidth for smooth 8K content delivery.
- **10G Gaming PCs:** Reduces latency and improves online gaming experience.
- **10G NAS Computers:** Enables rapid data transfer for network-attached storage.
- **Wi-Fi 6 Routers/APs:** Supports high-speed backhaul for advanced wireless networks.
- **Workstations with 10G Ethernet Adapters:** Accelerates data-intensive tasks.



Image 5.3: Illustrates various devices that meet the higher performance requirements of a 10G network, including 4K video, laptops with 10G Ethernet adapters, Wi-Fi 6 routers, Wi-Fi 6 APs, 10G gaming PCs, and 10G NAS.



Image 5.4: Shows multiple application scenarios for a 10G network, including small and home offices, home entertainment, instant transfer for workstations, and online gaming.

6. Maintenance

The Real HD SW8-10G-SFP switch is designed for minimal maintenance. Follow these guidelines to ensure optimal performance and longevity.

6.1 Cleaning

- Ensure the switch is powered off and unplugged before cleaning.
- Use a soft, dry cloth to wipe the exterior of the device.
- Do not use liquid or aerosol cleaners, as they may damage the device.

6.2 Environmental Considerations

- Operate the switch within the specified temperature range of -20°C to 50°C.
- Avoid placing the switch in direct sunlight or near heat sources.

- Ensure the area around the switch is free from excessive dust and moisture.



Image 6.1: The fanless design ensures silent operation, making it suitable for quiet environments like bedrooms or offices.

7. Troubleshooting

If you encounter issues with your Real HD SW8-10G-SFP switch, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No Power (PWR LED Off)	Power adapter not connected or faulty; power outlet not working.	Ensure the power adapter is securely connected to the switch and a working electrical outlet. Test the outlet with another device. Try a different power adapter if available.
No Link (Link/Activity LED Off)	Cable not connected properly; faulty cable or SFP/SFP+ module; connected device is off or faulty.	Verify that the SFP/SFP+ module is correctly inserted and the cable is securely connected to both the switch and the network device. Test with a different cable or SFP/SFP+ module. Ensure the connected device is powered on and functioning.
Slow Network Speed	Cable or SFP/SFP+ module does not support desired speed; connected device is operating at a lower speed; network congestion.	Ensure all SFP/SFP+ modules and cables (e.g., fiber or CAT6a/CAT7 for copper with SFP+ to RJ45) support 10Gbps. Check the speed settings on your connected devices. Reduce network traffic if possible.
Intermittent Connection	Loose cable connection; faulty SFP/SFP+ module or cable; environmental interference.	Check all cable connections. Replace suspected faulty SFP/SFP+ modules or cables. Ensure the switch is not near strong electromagnetic interference sources.

If the problem persists after trying these solutions, please contact Real HD technical support.

8. Specifications

Feature	Specification
Model	SW8-10G-SFP

Feature	Specification
Ports	8 x 10Gb SFP+ Ports
Switching Capacity	160 Gbps
Data Transfer Rate	10Gbps, 2.5Gbps, 1Gbps (auto-negotiation)
Forwarding Rate	119.04 Mpps
MAC Address Table Size	16K
Jumbo Frames	Not Supported
Power Input	DC 12V 2A
Power Consumption	Typically 1-1.5W base, less than 1W per additional RJ45 (SFP+ module dependent)
Cooling	Fanless
Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Humidity	10% to 90% non-condensing
Dimensions (L x W x H)	Approximately 10.24 x 9.13 x 2.36 inches
Weight	Approximately 1.98 pounds (0.9 kg)
Casing Material	Metal
Lightning Protection	6KV

9. Warranty and Technical Support

Real HD is committed to providing reliable products and customer satisfaction.

9.1 Technical Support

For technical assistance, please contact Real HD customer support. Our US-based technical support team is available from 9 AM to 5 PM CST. Please refer to your product packaging or the seller's information for specific contact details.

9.2 Warranty Information

Please refer to the warranty card included with your product or contact Real HD customer support for detailed warranty terms and conditions.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question