Real HD 5 Port 2.5GB Web Managed Switch

Real HD 5 Port 2.5GB Web Managed Ethernet Network Switch User Manual

Model: 5 Port 2.5GB Web Managed Switch

1. Introduction

This manual provides detailed instructions for the installation, configuration, and operation of your Real HD 5 Port 2.5GB Web Managed Ethernet Network Switch. This device is designed to enhance your network performance with high-speed connectivity and advanced management features. Please read this manual thoroughly before using the product to ensure proper setup and functionality.

2. Product Overview

The Real HD 5 Port 2.5GB Web Managed Ethernet Network Switch features 5 x 2.5G RJ45 ports and 1 x 10G SFP+ port, offering a total switching capacity of 45Gbps. It is designed for high-speed network upgrades, supporting various devices such as 4K video streams, laptops with 2.5G Ethernet adapters, WiFi 6 routers, WiFi 6 APs, 2.5G gaming PCs, and 2.5G NAS computers. The switch includes a fanless metal housing for quiet operation and efficient heat dissipation.

Key Features:

- **Web Managed Interface:** Provides secure setup and access for device/port status queries and various configurations.
- **High-Speed Connectivity:** 5 x 2.5G RJ45 ports and 1 x 10G SFP+ port for multi-gigabit networking.
- **Advanced Network Management:** Supports VLAN, QoS, security, multicast, and MAC address table configurations.
- **Robust Design:** Compact, sturdy metal housing with 6KV lightning protection and fanless operation.
- **Wide Application:** Compatible with a broad range of Ethernet devices for home and office environments.

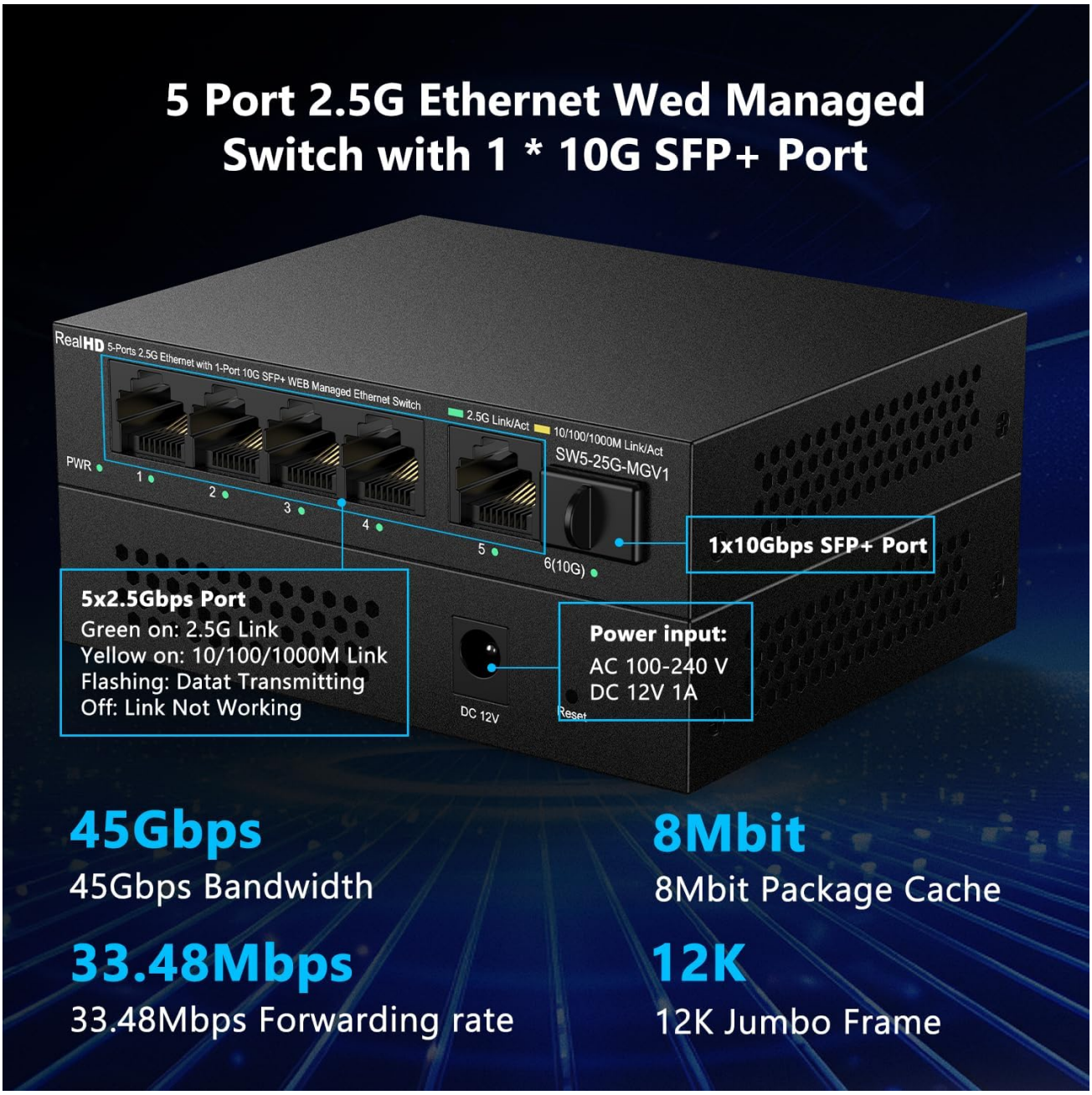

Image: Front view of the Real HD 5 Port 2.5GB Web Managed Ethernet Network Switch, highlighting the 5x 2.5Gbps ports, 1x 10Gbps SFP+ port, power input, and reset button. Key performance metrics such as 45Gbps bandwidth, 8Mbit package cache, 33.48Mbps forwarding rate, and 12K jumbo frame are also displayed.

3. Setup Instructions

3.1 Physical Installation

1. **Unpack the Switch:** Carefully remove the switch and all accessories from the packaging.
2. **Connect Power:** Connect the provided power adapter to the DC 12V input port on the switch and then plug it into a power outlet. The PWR indicator light should illuminate.
3. **Connect Network Devices:** Connect your network devices (e.g., computers, NAS, routers, access points) to the RJ45 ports (1-5) using Ethernet cables. For 2.5GB speeds, use CAT6 or higher level pure copper Ethernet cables. The corresponding Link/Act LED will light up when a connection is established.
4. **Connect SFP+ Module (Optional):** If using the 10G SFP+ port, insert a compatible SFP+ module (not included) into the SFP+ slot (Port 6). Then connect a fiber optic cable to the module.

Image: The network switch connected to a laptop, printer, and router, demonstrating a typical plug-and-play setup. It emphasizes the use of CAT6 or higher cables for optimal 2.5Gbps performance and shows the 10G SFP+ port functionality.

3.2 Initial Web Management Configuration

To access the web management interface for advanced configuration, follow these steps:

1. **Connect a PC:** Connect a PC directly to any of the switch's RJ45 ports.
2. **Configure PC IP Address:** Set your PC's Ethernet Network Interface Card (NIC) to a manual IP address within the same subnet as the switch's default IP. For example, set your PC's IP to **192.168.2.5** with a subnet mask of **255.255.255.0**.
3. **Access Web Interface:** Open a web browser on your PC and enter the switch's default IP address:**192.168.2.1**.
4. **Login:** Enter the default credentials:
   Username: admin
   Password: admin
5. **Change Default Password:** For security reasons, it is highly recommended to change the default administrator password immediately after your first login.

Image: A laptop screen displaying the web management interface login page for the Real HD switch, showing the fields for username and password. The default IP address 192.168.2.1 is also indicated.

4. Operating Instructions

4.1 Basic Network Connectivity

Once the switch is powered on and devices are connected, it operates as a standard unmanaged switch, providing immediate network connectivity. The 2.5G RJ45 ports automatically detect and adapt to 10/100/1000Mbps or 2.5Gbps speeds. The 10G SFP+ port supports 10Gbps connectivity with a compatible SFP+ module.

4.2 Advanced Web Management Features

The web management interface allows for configuration of various advanced network features to optimize performance and security:

- **VLAN (Virtual Local Area Network):** Segment your network into smaller, isolated broadcast domains to improve security and network efficiency. The switch supports configurable VLAN IDs from 1-4094 and up to 31 static VLAN groups.

- **QoS (Quality of Service):** Prioritize network traffic to ensure critical applications (e.g., voice, video) receive sufficient bandwidth and experience minimal latency. Supports SF and WRR scheduling with up to 8 queues per port.
- **Link Aggregation (LAG):** Combine multiple physical links into a single logical link to increase bandwidth and provide link redundancy. Supports Static Group and LACP (Link Aggregation Control Protocol) with up to 2 groups and a maximum of 4 members per group.
- **Multicast:** Optimize multimedia traffic delivery using IGMP Snooping (IGMP V1/V2) to prevent unnecessary flooding of multicast packets.
- **Spanning Tree Protocol (STP/RSTP/MSTP):** Prevent network loops and provide path redundancy in complex network topologies.
- **MAC Address Table:** View and manage the MAC address table, supporting dynamic and static MAC addresses up to 4K entries.
- **Jumbo Frame:** Supports 12K Jumbo Frames for increased data transfer efficiency.

Image: A visual representation of the Real HD switch with text bubbles indicating various management features such as QoS, Static Aggregation, VLAN, LACP, Loop, Spanning Tree Protocol, Jumbo Frame, and Multicast.

4.2.1 VLAN Configuration

VLANs allow you to logically group devices regardless of their physical location, enhancing security and network performance. Refer to the web interface for specific VLAN setup options (Access/Trunk/Hybrid modes).

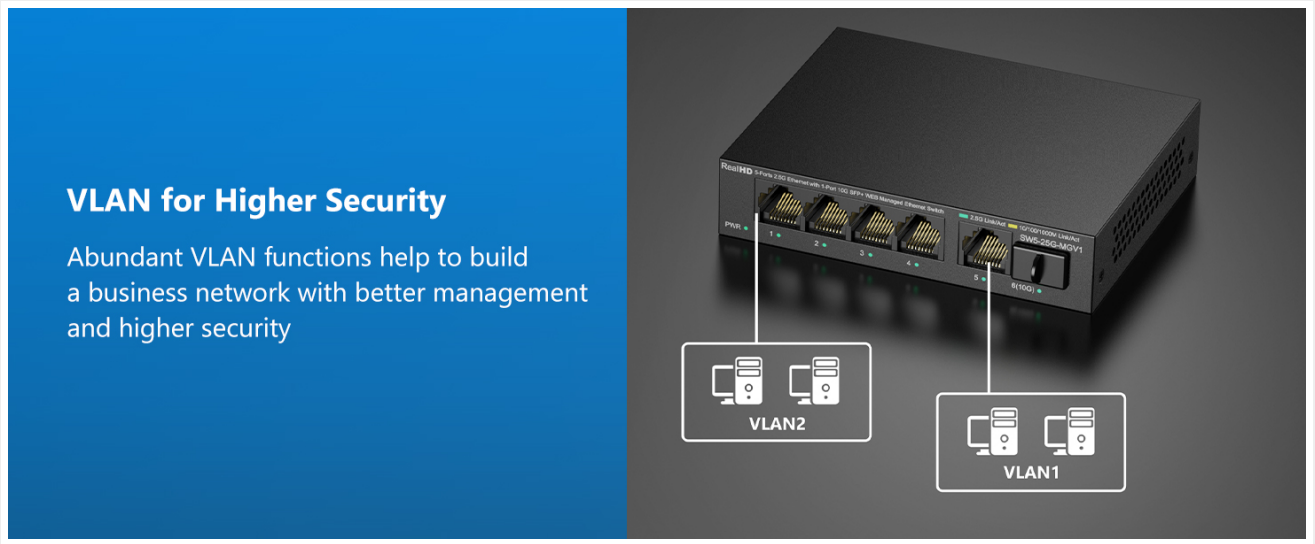

Image: A diagram illustrating how VLANs can segment a network, showing two separate VLANs (VLAN1 and VLAN2) connected to the switch, enhancing security and management.

4.2.2 QoS Configuration

QoS ensures that time-sensitive applications like video conferencing or online gaming receive priority over less critical traffic, providing a smoother user experience.

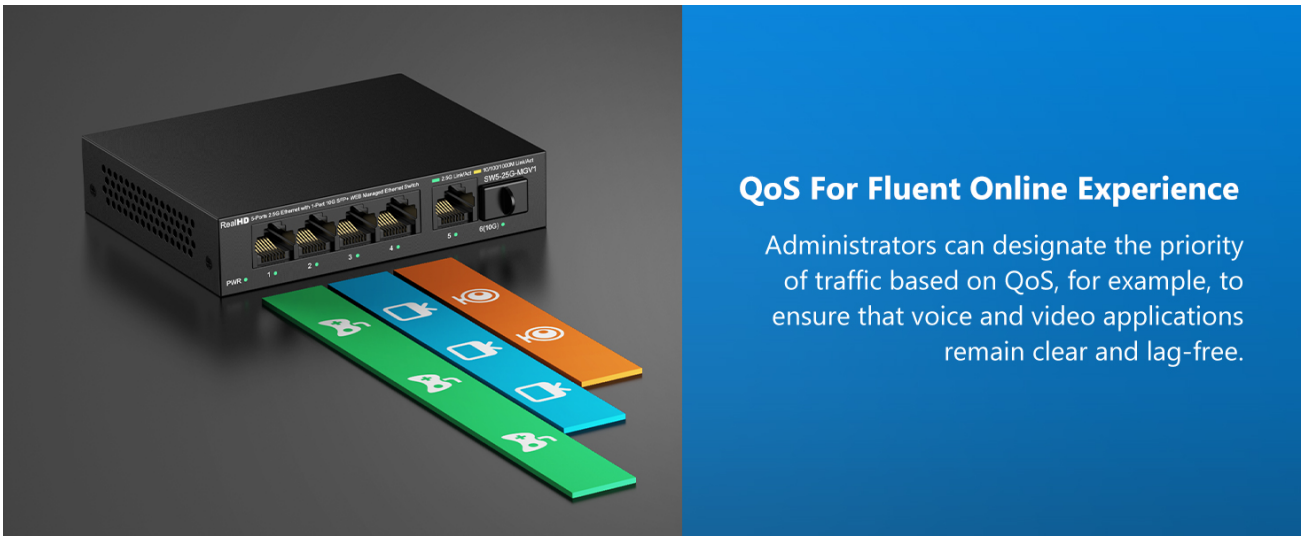

Image: A visual representation of Quality of Service (QoS) prioritizing different types of network traffic, such as video and voice, to ensure a fluent online experience.

4.2.3 IGMP Snooping for Multicast Optimization

IGMP Snooping optimizes the delivery of multicast traffic, such as IPTV, by forwarding it only to ports that have explicitly requested it, reducing unnecessary network load.

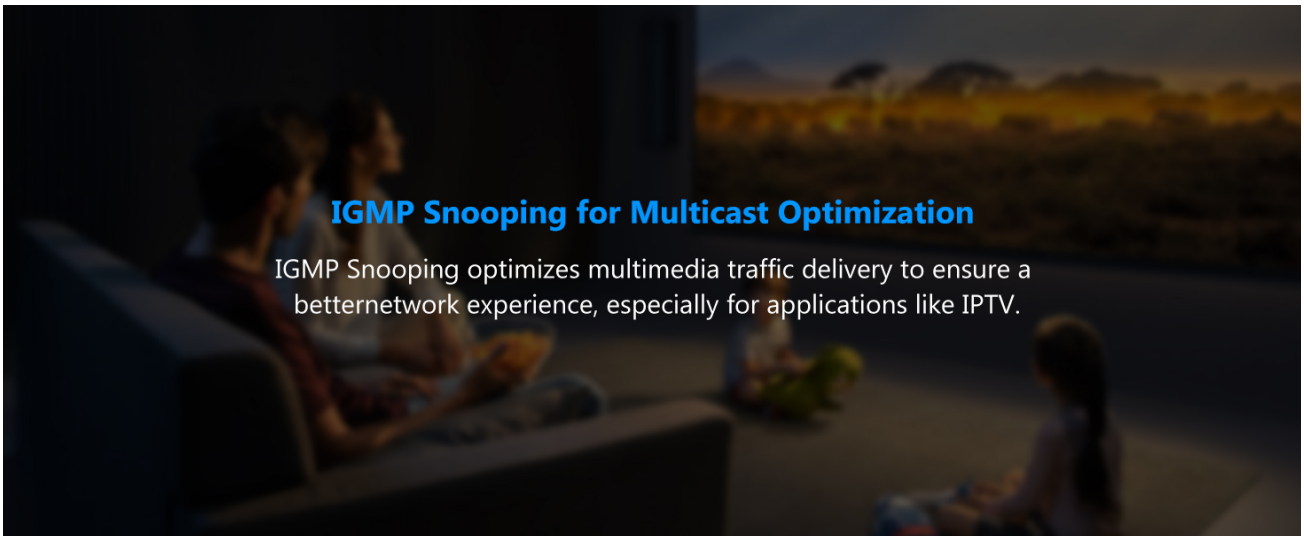

Image: A family watching a movie, illustrating how IGMP Snooping optimizes multimedia traffic delivery for applications like IPTV, ensuring a better network experience.

5. Maintenance

To ensure the longevity and optimal performance of your Real HD switch, consider the following maintenance guidelines:

- **Placement:** Place the switch in a well-ventilated area, away from direct sunlight, heat sources, and excessive moisture.
- **Cleaning:** Periodically clean the exterior of the switch with a soft, dry cloth. Do not use liquid or aerosol cleaners.
- **Firmware Updates:** Check the manufacturer's website for any available firmware updates. Keeping the firmware

updated can improve performance, add features, and fix bugs.

- **Cable Management:** Ensure all network cables are neatly organized and not excessively bent or strained.

6. Troubleshooting

If you encounter issues with your Real HD switch, refer to the following common troubleshooting steps:

- **No Power:** Ensure the power adapter is securely connected to both the switch and a working power outlet. Check if the PWR LED is illuminated.
- **No Link/Connectivity:**
  - Verify that Ethernet cables are properly connected to both the switch and the network device.
  - Check the Link/Act LED for the connected port. If it's off, try a different cable or port.
  - Ensure the connected device is powered on and its network adapter is enabled.
- **Slow Network Speed:**
  - For 2.5GB speeds, ensure you are using CAT6 or higher level pure copper Ethernet cables.
  - Verify that all connected network devices (e.g., network cards, routers) support 2.5GB speeds. The overall network speed will be limited by the slowest device in the chain.
  - Check for network congestion or excessive traffic.
- **Cannot Access Web Management Interface:**
  - Ensure your PC's IP address is configured manually within the **192.168.2.x** subnet (e.g., 192.168.2.5).
  - Confirm you are entering the correct default IP address: **192.168.2.1**.
  - Verify the default username (admin) and password (admin).
  - If the password was changed and forgotten, a factory reset might be necessary (refer to the reset button on the device, typically requiring a paperclip press for several seconds while powered on).
- **Unexpected Behavior (e.g., VLAN issues, random DHCP):** Some users have reported firmware-related bugs. Ensure your firmware is up to date. If issues persist, contact technical support.

7. Specifications

Feature	Specification
Brand	Real HD
Model Number	5 Port 2.5GB Web Managed Switch
Number of Ports	6 (5 x 2.5G RJ45, 1 x 10G SFP+)
Interface Type	RJ45, SFP+
Data Transfer Rate	45 Gigabits Per Second (Total Bandwidth)
Case Material	Metal
Cooling	Fanless
Operating Temperature	-20 to 50°C

Feature	Specification
Package Dimensions	7.01 x 4.88 x 2.52 inches
Item Weight	12.6 ounces
Included Components	5 Port 2.5GB Web Managed Switch
Compatible Devices	Gaming Console, Laptop, Printer, NAS, WiFi 6 AP/Router

8. Warranty and Support

Real HD provides technical support for this product. For assistance, please contact our US-based technical support team.

- **Technical Support Hours:** 9 am - 5 pm CST.
- **Contact:** Please refer to the contact information provided with your product packaging or on the Real HD official website for the most current support details.

This product is covered by a standard manufacturer's warranty. Please retain your proof of purchase for warranty claims. Specific warranty terms and conditions may vary and are available upon request or on the manufacturer's website.