WR3000H SPEC SHEET V1.0

802.11AX WiFi6 3000M Wireless Router

1. Product Introduction

The WR3000H is a high-performance enterprise-grade Wi-Fi 6 router supporting the 802.11ax standard, operating on 2.4G and 5.8G wireless bands to enable high-speed wireless connectivity for up to 128 users simultaneously. Equipped with full Gigabit Ethernet ports, it offers up to 574Mbps wireless access speed in 2.4G 802.11ax mode, up to 2402Mbps in 5.8G 802.11ax mode, and a total wireless throughput of 2976Mbps. Featuring high performance, high gain, high receive sensitivity, high bandwidth, low latency, high-density device support, and a large concurrent user capacity, it ensures extended coverage alongside stable and high-speed data transmission. Its sleek design allows for easy installation while supporting MESH self-networking and repeater functions to quickly expand wireless coverage, making it the ideal choice for homes, shops, restaurants, enterprises, and other high-density, high-bandwidth environments that require robust, reliable and flexible wireless connectivity.

2. Product Image

3. Product Features

1) Hardware Design & Protection:

Engineered to meet carrier-standard hardware specifications, the device complies with YD/T968-2010 for electromagnetic interference (EMI) resistance and YD/T 993-2006 for surge/overvoltage protection, offering 6kV common-mode and 1.5kV differential-mode protection against simulated lightning strikes, power-line induction, and contact. It also meets

YD/T1082-2011 for overvoltage/overcurrent protection. An enhanced heat sink with optimized airflow prevents overheating-induced downtime, ensuring real-time, long-term, stable, and high-efficiency data transmission for superior user experience.

2) Wireless Performance:

Supports the 802.11AX protocol (Wi-Fi 6), delivering 2.4G 574Mbps + 5G 2402Mbps wireless speeds for a 3000Mbps total wireless throughput.

3) Signal Coverage:

Features an external professional Wi-Fi 6+ MIMO radio frequency chip to ensure broader signal coverage, higher data rates, and longer transmission distances.

4) High-Speed Forwarding:

Enables HNAT hardware-accelerated forwarding with 2Gbps bidirectional wired throughput on the WAN port, optimizing network efficiency.

5) Advanced Connectivity:

Integrates MU-MIMO, OFDMA, and BSS Color technologies for low-latency, high-density performance, enhancing wireless stability and user experience in environments with numerous connected devices.

6) Capacity & Bandwidth:

The 5G band supports 160MHz channel bandwidth, expanding user capacity to 128 concurrent devices.

7) Network Flexibility:

Offers versatile modes (router, bridge, IPV4/IPV6, IPTV, repeater, MESH) and features (DDNS, VPN client, port mapping/DMZ, traffic control) to adapt to complex network scenarios.

8) Security Features:

Includes WPS, WPA/WPA2/WPA3 encryption, SSID hiding, guest networks, MAC/IP filtering, URL control, and DDoS protection to safeguard user data.

9) User-Friendly Setup:

Built-in quick setup wizard allows hassle-free Wi-Fi configuration without technical expertise.

10) Continuous Improvement:

Receives ongoing firmware updates for optimized functionality and performance, ensuring adaptability to evolving network environments.

4. Technical Specifications

Hardware Configuration	
Main Chip	Hi5671Y(CPU)+Hi5622(Wi-Fi)+KCT8239(2.4G FEM)+KCT8531(5G FEM) High-performance enterprise-level chip
CPU Frequency	ARM dual-core 1.2 GHz
Memory	256MB
Flash	SPI NAND 128MB

Wireless Technology	2.4G WiFi: 2x2 802.11b/g/n/ax, with a theoretical maximum speed of 574Mbps. 5.8G WiFi: 3x3 802.11a/n/ac/ax, supporting up to 2402Mbps theoretical peak rate. High-Speed Technologies: ➢ 1024QAM for ultra-high-speed access rates and OFDMA for ultra-dense user connectivity. ➢ OFDMA/MU-MIMO for efficient uplink/ downlink data handling in high-device density environments. ➢ BSS Color spatial reuse to reduce interference and enhance spectral efficiency. Advanced Signal Processing: ➢ Space-time block coding (STBC) and low-density parity-check (LDPC) for error correction and reliability. ➢ Transmit/receive beamforming (Beamformer TX/RX) to improve signal strength and coverage. Power-Saving Features: Single-antenna standby, dynamic MIMO power-saving, enhanced automatic power-save

	transmission (APSD), and per-packet power control to optimize energy efficiency without compromising performance.
Interfaces	- WAN*1/LAN*3 10/100/1000Mbps adaptive - DC power interface compatible with power plug with outer diameter of 5.5mm, inner diameter of 2.1mm, and length above 9.5mm
Buttons	Reset Button: Press and hold for 6 seconds to factory reset the device. WPS/MESH Button: Enable effortless password-free Wi-Fi connectivity and one-touch MESH network setup.
Indicator	Status indicator
Antennas	- External 2.4G 5dBi rubber rod antennas * 2 - External 5G 5dBi rubber rod antennas * 2
Power	DC 12V/1A, positive outer and negative inner
Operating/Storage Temperature	-10℃～45℃/-20℃～70℃
Operating/Storage Humidity	10% to 90% (non-condensing) / 5% to 90% (non-condensing)
Dimensions	N/A
Weight	N/A

WiFi Spec	
Frequency Range	2.4G：2.4~2.4835GHz 5G: UNII-1: 5.15~5.35GHz UNII-2: 5.47~5.725GHz UNII-3: 5.725~5.825GHz
Channel	2.4G: 1、2、3、4、5、6、7、8、9、10、11、12、13 5G: 36、40、44、48、52、60、64、149、153、157、161、165
Modulation	802.11b: DSSS (DQPSK, DBPSK, CCK) 802.11g: OFDM (BPSK, QPSK,16-QAM) 802.11n: OFDM (BPSK, QPSK,16-QAM, 64-QAM) 802.11ac: OFDM (BPSK, QPSK,64-QAM, 256-QAM) 802.11ax: OFDMA (BPSK,256-QAM, 1024-QAM)
Transmission Rate	802.11b: Up to 11Mbps 802.11g: Up to 54Mbps 802.11n: Up to 300Mbps (2.4G) 802.11ac: Up to 866Mbps (5G) 802.11ax: ➢ 2.4G: Up to 574Mbps ➢ 5G: Up to 2402Mbps
Receiver	2.4G:

Sensitivity	11b：＜-89±1.5dBm dBm@11Mbps 11g：＜-73±1.5dBm @54Mbps 11n 20MHz：＜-71±1.5dBm @MCS7 11n 40MHz：＜-68±1.5dBm @MCS7 11ax 20MHz: ＜-92±1.5dBm @MCS0, ＜-60±1.5dBm @MCS11 11ax 40MHz: ＜-90±1.5dBm @MCS0, ＜-57±1.5dBm @MCS11 5G: 11a：＜-93±1.5dBm @6Mbps, ＜-75±1.5dBm @54Mbps 11ac 20MHz：＜-90±1.5dBm @MCS0, ＜-65±1.5dBm @MCS8 11ac 40MHz：＜-93±1.5dBm @MCS0, ＜-62±1.5dBm @MCS9 11ac 80MHz：＜-90±1.5dBm @MCS0, ＜-59±1.5dBm @MCS9 11ax 20MHz：＜-94±1.5dBm @MCS0, ＜-62±1.5dBm @MCS11 11ax 40MHz：＜-91±1.5dBm @MCS0, ＜-59±1.5dBm @MCS11 11ax 80MHz：＜-86±1.5dBm @MCS0,

	＜-55±1.5dBm @MCS9 11ax 160MHz：＜-82±1.5dBm @MCS0, ＜-52±1.5dBm @MCS11
Transmit Power	11b: 22dBm±1.5dBm@11Mbps 11g: 20dBm±1.5dBm@54Mbps 11n(20/40MHz): 19dBm±1.5dBm@MCS7 11ac(40/80MHz): 18dBm±1.5dBm@MCS9 11ax(20/40/80/160MHz) : 17dBm±1.5dBm@MCS11

Software Functions	
Work Mode	Router、Bridge、WISP、AP+Client、AP+WDS
Number of connected users	128 Users
Management mode	WEB remote management / Cloud platform WEB remote management
Routing Status	– Internet: WAN, LAN, Network Interfaces Status – Router: Routing Information, WiFi Information – User List: Main Network Users, Guest Network Users
Internet Settings	Internet Setup ● Modes: Router Mode, Bridge Mode, WISP,

	AP+Client, AP+WDS ● Connection Types: Dynamic IP, PPPoE (Broadband Dial-Up), Static IP ● DNS Settings: Automatic, Manual Input IPv6 Configuration ● WAN: ➢ Enable/Disable Switch ➢ Connection Types: Dynamic IP, Static IP ➢ DNS Settings: Automatic, Manual Input ● LAN: ➢ Client Address Modes: SLAAC,DHCPv6, DHCPv6/SLAAC, None ➢ Manual Prefix Setup
WiFi Settings	WiFi: Dual-band Integration, Country or Region 2.4G&5G WiFi: Status Switch, Hide SSID Switch, WiFi Name, WiFi Password, Security, Encryption Mode, Wireless Protocol, Wireless Channel, Txpower
More Features	Network: ● LAN Setup LAN IP Address, Subnet Mask, DHCP Server Switch, Starting IP Address, Ending IP Address, Lease time, Primary DNS, Secondary DNS

	● DHCP List Wireless: ● Black And White List Switch, Mode(Blacklist/Whitelist), Blacklist And Whitelist ● WPS 2G/5G WPS Switch, 2G/5G PBC, 2.4G/5G WPS Status ● Mesh Configuration Switch, Role(Auto/Master/Agent), Current Role ● Wireless Advanced Configuration High Performance Mode, Band Streering, WLAN QoS, WiF5 Compatibility Mode, Health Model(Switch, Strategy Time) Network Advanced: DDNS, IPTV, Static IP Assignment, Guest Network, Parental Control, VPN Client, Hardware NAT, Network Tools, UPnP, Static Route, IGMP Proxy, Flow Control, ARP Binding Features: Safety, ALG, Port Forwarding, DMZ Settings, MAC Filtering, IP Filtering, DDOS

	Management: System Time, User Info, Black & Upgrade, Restart &Reset, Led, System Log Router Topology Diagram Application: Intranet Penetration
Setup Wizard	Network, WiFi, Summary

5. Packaging information

WR3000H*1, DC 12V/1A Power adapter*1, Network Cable*1, Instruction manual