

cudy

Model: WR6500H

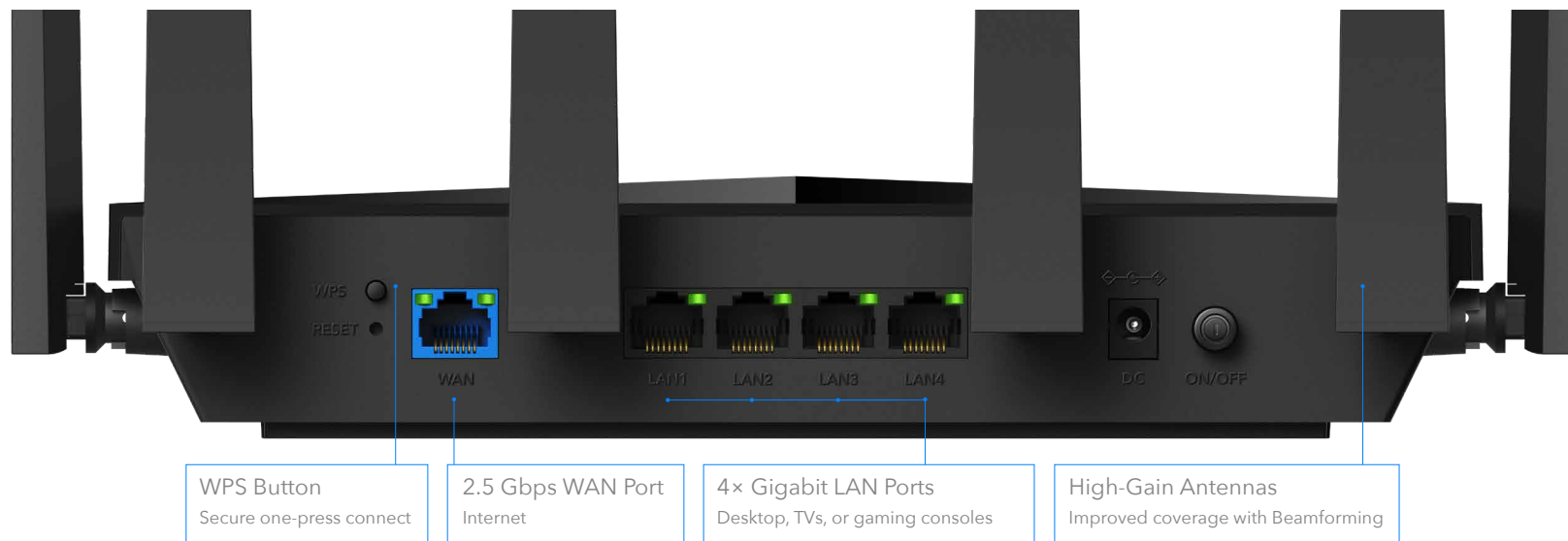
# BE6500

2.5G Wi-Fi 7 Router

Wi-Fi 7



[Datasheet](#)



## Supercharged Speed. Blazing-Fast Wi-Fi.

For the first time, MLO in Wi-Fi 7 connects clients through multiple bands simultaneously, aggregating the speed and making congestion on any single band insensible. In addition, the 4K-QAM boosts speed by another 20%, delivering a total of 2.7X faster speed for smoother experience in larger homes.



## Versatile Management



### Parental Control

Set up profiles with corresponding policies to establish a safer network for your loved ones.



### VPN Client and Server

Connect and share a VPN or establish your own server to secure remote access.



### IPTV

Includes Tag VLAN to support assigning IPTV/VoIP ports. IGMP snooping improves IPTV network efficiency.



### IPv6

Support the IPv6 services by your ISP and browse the IPv6 websites with faster performance.



### Cudy APP Control

Manage your network right on your phone. This device supports cloud remote management.

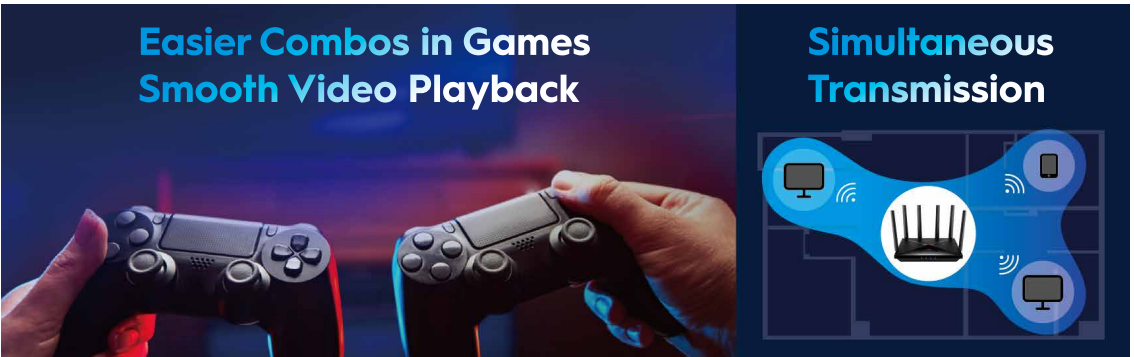


### QoS

Set speed limits for certain clients to prioritize your gaming rigs and other important devices.

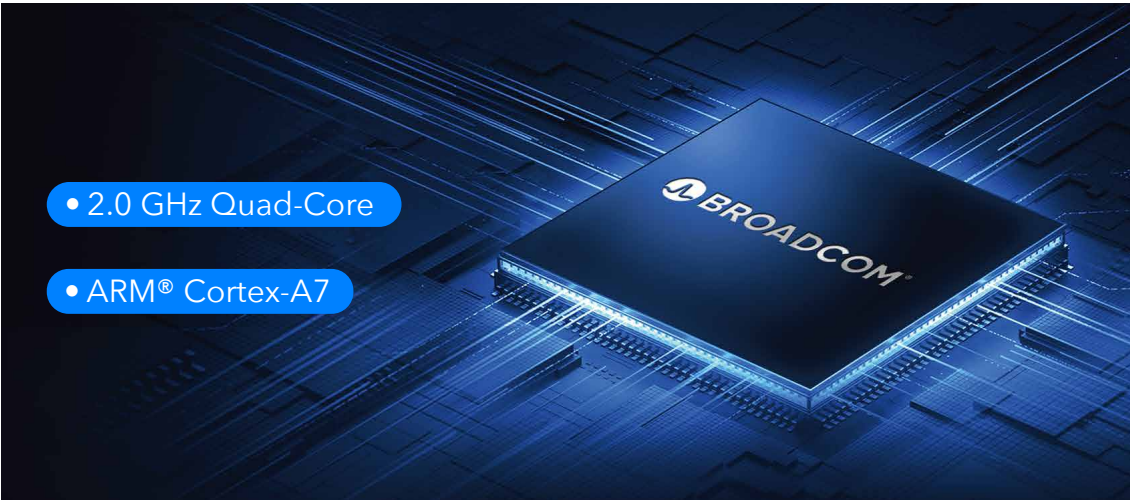
## Immersive Gaming with Lower Latency

The enhanced OFDMA with multi-RU and puncturing utilize non-busy frequency resource unit to fit more connections at the same time.



## Powerful Wi-Fi 7 Chip for Responsive Network

The next-gen Wi-Fi 7 Broadcom CPU with fabulous efficiency processes more tasks instantly, keeping network super-capable and responsive.





## Highlights

A dual-band WiFi 7 router with an aggregate of 6.5 Gbps speed, and five Gigabit ports, catering to super-fast internet access, gaming, and entertainment scenarios.

- Broadcom 2 GHz Quad-Core CPU
- 6-Stream Dual-Band Wi-Fi 7
- 5760 Mbps + 688 Mbps Wi-Fi
- 1× 2.5GbE and 4× GbE
- 200 Connected Devices
- Covers 140 m² (1,500 ft²)
- Cudy Mesh, VPN Server and Client
- Cudy App, Cloud Control

## Package Content

- WR6500H
- Power Adapter
- Ethernet Cable
- Installation Guide

## Hardware Specs

|                |                          |                                                                               |
|----------------|--------------------------|-------------------------------------------------------------------------------|
| CPU            | Chipset                  | BCM6766                                                                       |
|                | CPU Details              | 2.0 GHz Quad-core, ARM Cortex-A7                                              |
| Memory/Storage | Flash/ROM                | 128 MB (1 Gbit) NAND                                                          |
|                | DDR/RAM                  | 512 MB (4 Gbit) DDR4                                                          |
| Wireless       | 5 GHz Wi-Fi Speed        | 5765 Mbps                                                                     |
|                | 2.4 GHz Wi-Fi Speed      | 688 Mbps                                                                      |
|                | 5 GHz Wi-Fi Streams      | 4T4R (4×4 MIMO)                                                               |
|                | 2.4 GHz Wi-Fi Streams    | 2T2R (2×2 MIMO)                                                               |
|                | Wi-Fi Antennas           | 6× Fixed                                                                      |
|                | 5 GHz Antenna Gain Max   | 5.27dBi                                                                       |
|                | 2.4 GHz Antenna Gain Max | 5.19dBi                                                                       |
|                | FEM or PA/LNA            | 5 GHz: 4× External                                                            |
|                |                          | 2.4 GHz: 2× External                                                          |
|                | Beamforming              | True                                                                          |
|                | Range Performance        | Max: 240 m (787 ft)                                                           |
|                |                          | Indoor WiFi range varies depending on the layout and wall materials. See Wall |
|                |                          | Performance spec for placement suggestions.                                   |
|                | Wall Performance         | Two wooden walls with thickness < 10 cm (4")                                  |
|                |                          | One concrete wall with thickness < 20 cm (7")                                 |
|                |                          | or two concrete walls with thickness < 10 cm (4")                             |



# Hardware Specs

|            |                           |                                                               |
|------------|---------------------------|---------------------------------------------------------------|
| Interfaces | 2.5G RJ45 Ports           | 1                                                             |
|            | Gigabit RJ45 Ports        | 4                                                             |
|            | Ethernet Notes            | The 2.5G port is WAN port,<br>the Gigabit ports are LAN ports |
|            | LED                       | System                                                        |
|            |                           | Internet                                                      |
|            |                           | Wi-Fi                                                         |
|            |                           | WPS                                                           |
|            | Physical Buttons          | Power On/Off Button                                           |
|            |                           | WPS Button                                                    |
|            |                           | Reset Button                                                  |
| Power      | Power Input               | DC Jack                                                       |
|            | Power Methods             | DC                                                            |
|            | DC                        | 12V 1.5A                                                      |
|            | Power Adapter             | Input: 100 ~ 240 V, 50/60 Hz AC                               |
|            |                           | Output: 12V 1.5A DC                                           |
|            | Max Power Consumption (W) | 17W                                                           |

|                      |                          |                                           |
|----------------------|--------------------------|-------------------------------------------|
| Reliability          | Environment              | Operating Temperature:                    |
|                      |                          | 0 °C ~ 40 °C (32 °F ~104 °F)              |
|                      |                          | Storage Temperature:                      |
|                      |                          | -40 °C ~ 70 °C (-40 °F ~ 158 °F)          |
|                      |                          | Humidity: 10% ~ 90% non-condensing        |
|                      |                          | Storage Humidity: 5% ~ 95% non-condensing |
| Certifications       | FCC, CE                  |                                           |
| Mechanical           | Installation             | Desktop                                   |
|                      |                          | Wall-mount                                |
|                      | Dimension                | 253×152.5×48.2 mm                         |
|                      |                          | 9.96×6×1.9 inches                         |
|                      | Product Weight           | 580.0 g (20.46 oz.)                       |
| Ordering Information | Retail Package Weight    | EU: 1190.0 g (41.98 oz.)                  |
|                      | Retail Package Dimension | 431×324×58 mm                             |
|                      |                          | 16.97×12.76×2.28 inches                   |
|                      | Units per Carton         | 8                                         |
|                      | Carton Dimension         | 49.2×44.5×34.4 cm                         |
|                      |                          | 19.37×17.52×13.54 inches                  |
|                      | Carton Gross Weight      | EU: 10.5 kg (23.15 lbs)                   |
| Carton Net Weight    | EU: 9.5 kg (20.94 lbs)   |                                           |



# Software Specs

|          |                                |                           |
|----------|--------------------------------|---------------------------|
| Wireless | Wi-Fi Standards                | Wi-Fi 7                   |
|          | Max Wi-Fi Modulation           | 4K-QAM                    |
|          | Wi-Fi Efficiency               | MLO                       |
|          |                                | MRU                       |
|          |                                | Puncturing                |
|          |                                | OFDMA                     |
|          |                                | MU-MIMO                   |
|          |                                | BSS Color                 |
|          | Max Capacity                   | 512                       |
|          | Recommended Client Upper Limit | 200                       |
|          | Max Wi-Fi Channel Width        | 160 MHz                   |
|          | Wi-Fi Security                 | WPA/WPA2/WPA3             |
|          | Guest Network                  | 2.4 GHz, 5 GHz            |
| General  | WPS                            | True                      |
|          | Operation Modes                | Wi-Fi Router              |
|          |                                | Access Point              |
|          |                                | Range Extender            |
|          | Mesh                           | Cudy Mesh                 |
|          | Mesh Backhaul                  | Wireless & Wired Backhaul |
|          | Multi-Band Backhaul            | True                      |
|          | WAN Mode                       | DHCP, Static IP, PPPOE    |
|          |                                | PPTP, L2TP                |

|         |                   |                        |
|---------|-------------------|------------------------|
| Network | QoS               | Per-User Rate Limiting |
|         |                   | Address Reservation    |
|         |                   | DHCP Client List       |
|         | IP Versions       | Server                 |
|         |                   | IPv4/IPv6              |
|         |                   | Relay                  |
|         |                   | Dynamic (SLAAC/DHCPv6) |
|         | IPv6 Protocols    | Static (Fixed IP)      |
|         |                   | Passthrough            |
|         |                   | 464XLAT                |
|         |                   | MAP-E                  |
|         |                   | DS-Lite                |
|         | IPTV/VLAN         | Bridge                 |
|         |                   | Tag VLAN               |
|         |                   | VoIP VLAN              |
|         |                   | IPTV VLAN              |
|         | TTL Customization | Extend                 |
|         |                   | Spoof                  |
|         |                   | Custom                 |
|         | IGMP              | IGMP Proxy             |
|         |                   | IGMP Snooping          |



# Software Specs

|           |                           |                   |
|-----------|---------------------------|-------------------|
| Network   | Forwarding                | Port Forwarding   |
|           |                           | Port Triggering   |
|           |                           | UPnP              |
|           |                           | DMZ               |
|           | Firewall                  | SPI Firewall      |
|           |                           | DoS Protection    |
|           |                           | Block PING        |
|           | Application Layer Gateway | IPSec Passthrough |
|           |                           | L2TP Passthrough  |
|           |                           | PPTP Passthrough  |
|           |                           | FTP Passthrough   |
|           |                           | TFTP Passthrough  |
|           |                           | H323 Passthrough  |
|           |                           | SIP Passthrough   |
|           |                           | RTSP Passthrough  |
| Utilities | VPN Server                | WireGuard         |
|           |                           | OpenVPN           |
|           |                           | IPsec             |
|           |                           | Zerotier          |
|           |                           | PPTP              |
|           |                           | L2TP              |

|            |                        |                       |
|------------|------------------------|-----------------------|
| Utilities  | VPN Client             | WireGuard             |
|            |                        | OpenVPN               |
|            |                        | IPsec                 |
|            |                        | Zerotier              |
|            |                        | PPTP                  |
|            |                        | L2TP                  |
|            | DNS Options            | DNS over TLS          |
|            |                        | Manual DNS            |
|            |                        | Rebind Protection     |
|            |                        | Override Clients' DNS |
|            | DNS over TLS Providers | Cloudflare            |
|            |                        | Google                |
|            |                        | Quad9                 |
|            |                        | Custom                |
|            | Wake on LAN            | True                  |
|            | Online Detection       | True                  |
| Management | All Devices Management | Wi-Fi Time Schedule   |
|            |                        | MAC Filter            |
|            |                        | IP/MAC Binding        |
|            | Per-Devices Management | Internet On/Off       |
|            |                        | VPN On/Off            |
|            |                        | Online Time Schedule  |
|            |                        | Device Rename         |
|            |                        |                       |



# Software Specs

|                       |                                                                 |                                |
|-----------------------|-----------------------------------------------------------------|--------------------------------|
| System                | LED Control                                                     | True                           |
|                       | Local Control Method                                            | Config Web Page<br>App Control |
| Remote Control Method | Config Page via HTTPS<br>App Control<br>TR069/TR098/TR111/TR181 |                                |
|                       |                                                                 |                                |
|                       |                                                                 |                                |
| Firmware Upgrade      | Local Update                                                    |                                |
|                       | App (Over the Air)                                              |                                |
|                       | Online Update                                                   |                                |
| Reliability           | Timed Reboot                                                    |                                |
|                       | Backup and Restore                                              |                                |
| Diagnostic Tools      | Diagnosis                                                       |                                |
|                       | Ping                                                            |                                |
|                       | Traceroute                                                      |                                |
|                       | NSLookup                                                        |                                |
|                       | System Log                                                      |                                |
| Languages             | • English • Bengali • Catalan • Czech                           |                                |
|                       | • German • Greek • Spanish • French                             |                                |
|                       | • Hebrew • Italian • Croatian • Hungarian                       |                                |
|                       | • Khmer • Korean • Dutch • Japanese                             |                                |
|                       | • Russian • Slovak • Swedish • Romanian                         |                                |

|           |           |                                            |
|-----------|-----------|--------------------------------------------|
| System    | Languages | • Turkish • Vietnamese • Thai • Ukrainian  |
|           |           | • Polish • Norwegian • Portuguese          |
|           |           | • Simplified Chinese • Traditional Chinese |
| Dashboard | Panel     | Internet Status                            |
|           |           | Devices Management                         |
|           |           | WAN Status                                 |
|           |           | LAN Status                                 |
|           |           | Wi-Fi Status                               |
|           |           | VPN Status                                 |
|           |           | DHCP Server Status                         |
|           |           | System Version                             |
|           | Charts    | Internet Speed                             |
|           |           | Wi-Fi Speed                                |