Model: WR6500H

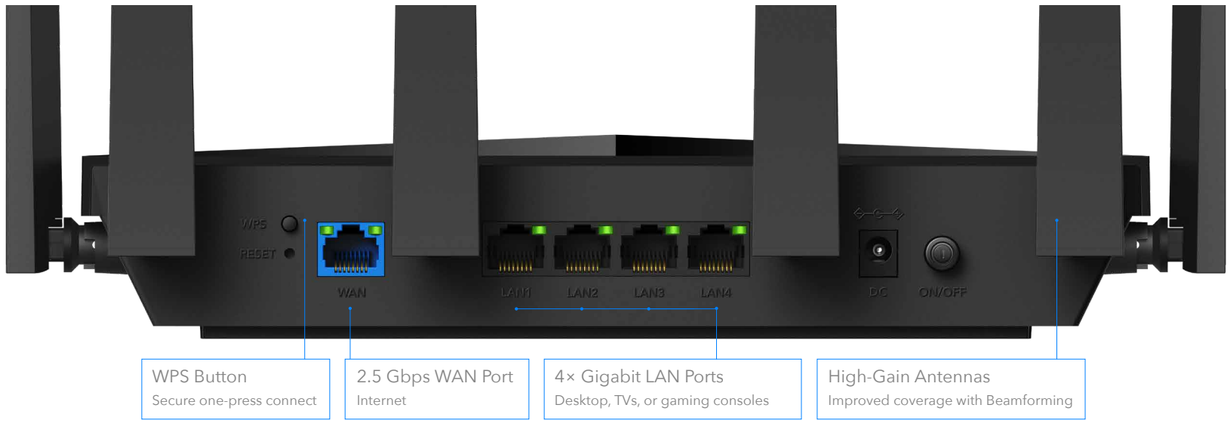
BE6500

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.

2.7X Faster

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.

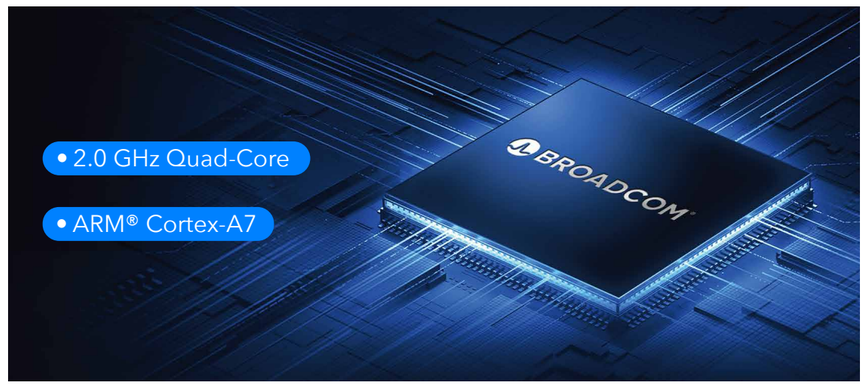
Immersive Gaming with Lower Latency

The enhanced OFDMA with multi-RU and puncturing utlize 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

* Cudy Mesh will be supported in June, 2025 with cloud Firmware upgrade,

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,
		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
Ordering Information	Product Weight	580.0 g (20.46 oz.)
	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
	WPS	True
General	Operation Modes	Wi-Fi Router
		Access Point
	Multi-Band Backhaul	True
	WAN Mode	DHCP
		Static IP
		PPPOE
		PPTP
		L2TP

Network	QoS	Per-User Rate Limiting
	DHCP	Address Reservation
		DHCP Client List
		Server
	IP Versions	IPv4/IPv6
	IPv6 Protocols	Relay
		Dynamic (SLAAC/DHCPv6)
		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
		App Control
	Remote Control Method	Config Page via HTTPS
		App Control
		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