

5.8G 450Mbps Outdoor Wireless Bridge

Model: WB501H



Description

The WB501H is a high-performance enterprise-grade outdoor wireless bridge operating on the 5.8 GHz 802.11ac band, delivering up to 450 Mbps wireless throughput via dual 100 Mbps Ethernet interfaces. It features proprietary digital-tube pairing technology that enables tool-free, PC-free configuration for Point-to-Point and Point-to-Multipoint (≤ 8 nodes) deployments. Flexible power options include 24V non-standard PoE (cable reach 50–70 m) and DC 12V/1A local input. The IP65-rated enclosure with built-in 14 dBi dual-polarized directional antenna ensures stable, high-quality video and data transmission across medium- to long-range outdoor environments under harsh conditions.

Main Features

- **High-Performance Hardware** — MTK enterprise-class chipset with industrial-grade circuit design; supports IEEE 802.11ac, delivering 450 Mbps wireless and 100 Mbps wired throughput with exceptional stability at extreme temperatures.
- **Robust Outdoor Protection** — IP65-rated weatherproof housing resistant to wind, rain, dust, and solar exposure; operating temperature range -40°C to $+55^{\circ}\text{C}$ for deployment in the harshest outdoor environments.
- **Powerful Wireless Transmission** — High-power RF front-end with high receive sensitivity and built-in 14 dBi dual-polarized directional antenna (H/V beamwidth: 60°) ensures strong, stable long-range links.
- **Tool-Free Digital-Tube Pairing** — No PC or wireless expertise required. Simply align the digital-tube display values on Master and Slave units to complete PTP / PTMP (≤ 8 nodes) pairing in seconds.
- **Flexible Power Supply** — Supports 24V non-standard PoE (50–70 m cable reach) and DC 12V/1A local input, reducing deployment cost and adapting to diverse site conditions.
- **Enhanced Network Security** — WPA-PSK / WPA2-PSK encryption, SSID hiding, and bridge SSID concealment from client terminals protect the network from unauthorized access and data interception.
- **Multi-Mode Management** — Web GUI (HTTP), cloud-based remote management (free account), mobile HTML5 interface, and integrated AC controller for centralized batch management of LAN bridges via 169.254.254.254.
- **Flexible Network Modes** — Gateway mode (Static IP / DHCP / PPPoE) and Bridge transmission mode for easy adaptation to diverse network environments.
- **Compact & Easy to Install** — Slim, weatherproof enclosure with multiple mounting options (wall, pole). Reduces installation difficulty and speeds up deployment.

Hardware Specification	
Model	WB501H
Chipset	MTK 450Mbps High-Performance Enterprise Chip
CPU Frequency	560 MHz
Wireless	5.8 GHz, 450 Mbps, IEEE 802.11ac, MIMO technology
Memory	64 MB DDR RAM
Flash	8 MB
Network Interface	2 × 10/100 Mbps Adaptive RJ45 (LAN/WAN)
Antenna	Built-in dual-polarized high-gain directional antenna 14 dBi, H-plane beamwidth: 60°, V-plane beamwidth: 60°
LED Indicators	Signal (SIG), Ethernet port status, Power, Digital tube indicator
Buttons	1 × Reset (hold 15 s to restore factory defaults)
Power Supply	24V 0.5A Non-standard PoE (cable reach: 50–70 m) DC 12V / 1A local power input Max power consumption: < 10 W
Dimensions	188 mm × 188 mm × 33 mm
Waterproof Rating	IP65
Operating Temperature	-40°C to +55°C (operating) -40°C to +70°C (storage)
Humidity	5% – 90% RH, non-condensing (operating) 5% – 95% RH (storage)

RF Specification	
Frequency Range	ISM Band: 4.900 GHz – 5.850 GHz
Supported Channels	5G: 36, 40, 44, 48, 52, 56, 60, 64, 149, 153, 157, 161, 182, 186, 190, 194
Modulation	OFDM: BPSK, QPSK, 16-QAM, 64-QAM DSSS: DBPSK, DQPSK, CCK
TX Power	802.11a @54M: 25 ± 2 dBm @6M: 27 ± 2 dBm 802.11n @MCS7: 23 ± 2 dBm @MCS0: 25 ± 2 dBm
Receive Sensitivity	802.11a @54 Mbps: -72 dBm @6 Mbps: -90 dBm 802.11n

	@MCS7: -70 dBm @MCS0: -90 dBm
EVM	802.11n: ≤ -28 dB 802.11a: ≤ -25 dB
Frequency Offset	± 20 ppm
Data Rate	802.11a: up to 54 Mbps 802.11n: up to 300 Mbps 802.11ac: up to 450 Mbps

Firmware Specification

Operating Mode	Master AP mode / Slave AP mode
Network Topology	Point-to-Point; Point-to-Multipoint (≤ 8 nodes)
Internet Access	Bridge mode: Static IP / DHCP Gateway mode: Static IP / DHCP / PPPoE
Management	Web-based GUI (HTTP) Cloud-based remote management (free account binding) Mobile HTML5 interface via 5G VAP signal
Wireless Settings	Bridge configuration, advanced configuration, Wi-Fi settings SSID broadcast / hide, TX power, channel, bandwidth
Security	WPA-PSK / WPA2-PSK encryption SSID hiding MAC address filtering Bridge SSID not discoverable by client terminals
System	Time zone / NTP configuration Admin password change Backup / restore configuration Reboot / scheduled reboot Local and online firmware upgrade
Protocol / Standard	IEEE 802.3, IEEE 802.3u, IEEE 802.11a/n/ac

Package Contents

Included Items	WB501H Unit $\times 1$ PoE Power Adapter (24V / 0.5A) $\times 1$ Ethernet Cable $\times 1$ User Manual $\times 1$
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What's in the box:

