16dBi 5km Wireless Network Bridge for PTP & PTMP

57MM-WB07

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The WB07 is a 5 GHz, 16 dBi wireless network bridge set that covers a range of up to 5 km. Supporting PoE 802.3af/at, 24V passive PoE, or 12V DC input, it offers flexible power options to suit various deployment scenarios. Equipped with 3 Gigabit Ethernet ports and a 31° horizontal beamwidth, the WB07 delivers reliable coverage over distances up to 5 km—ideal for large-scale network expansion. With a maximum wireless data rate of 867 Mbps, the WB07 ensures fast and stable connectivity for multiple clients simultaneously. It supports both PTP (Point-to-Point) and PTMP (Point-to-Multipoint) configurations, accommodating up to 5 clients. Perfect for connecting buildings, towns, farms, and mining sites, the WB07 enables both short- and long-range wireless links without the need for costly backhaul infrastructure.

Features and Benefits

» Wireless Network Bridge, 16 dBi, Horizontal 31°, Vertical 14° with up to 5 km range when used for PTP and PTMP links

» Flexible powering with 3 power supply options: 802.3af/at PoE, Passive PoE or local 12V DC

» It can be used with multiple CPE antennas when in PTMP solutions, WB06 (RG-EST330F-P) and WB05 (RG-AirMetro460G) can also be paired to BSA01 (RG-EST450G) as a CPE antenna.

» It supports Ruijie Reyee's self-organising network and is TDMA enabled for more consistent coverage and reduced link interference, with free cloud management for setup and remote monitoring.

» 3 Gigabit Ethernet ports for flexible connectivity and IP55 housing for ingress protection

» There is no need for expensive fibre backhauls with Ruijie's modern, reliable wireless technologies.

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Hardware Specifications	
Radio Design	5 GHz dual-stream 2.4 GHz single-stream
2.4 GHz Band	Yes
5 GHz Band	Yes
Protocol and Standard	5 GHz: 802.11ac/n/a 2.4 GHz: 802.11b/g/n
Wi-Fi Standard	Wi-Fi 5
Spatial Streams	5 GHz dual-stream, 2x2 MIMO 2.4 GHz single-stream
2.4 GHz Channel Width	Auto/20/40 MHz
5 GHz Channel Width	Auto/20/40/80 MHz
Receiver Sensitivity	11a: -89 dBm (6 Mbps), -80 dBm (24 Mbps), -76 dBm (36 Mbps), -71 dBm (54 Mbps); 11n: -83 dBm@MCS0, -65 dBm@MCS7, -83 dBm@MCS8, -65 dBm@MCS15; 11ac: -86 dBm (MCS0), -63 dBm (MCS9)
Nominal Receive Sensitivity @20 MHz Channel	-91 dBm (MCS0) to -57 dBm (MCS9)
Nominal Receive Sensitivity @40 MHz Channel	-83 dBm (MCS0) to -57 dBm (MCS9)
Nominal Receive Sensitivity @80 MHz Channel	-76 dBm (MCS0) to -51 dBm (MCS9)
Modulation Levels (Adaptive)	MCS0 (BPSK) to MCS9 (256QAM)
Wi-Fi Protocols (2.4 GHz)	Wi-Fi 4
Wi-Fi Protocols (5 GHz)	Wi-Fi 5 (IEEE 802.11ac)
Wireless Data Rate	1017 Mbps
Wireless Data Rate (2.4 GHz)	150 Mbps
Wireless Data Rate (5 GHz)	867 Mbps
Frequency Bands	2.4 GHz: 802.11b/g/n: 2.4000 GHz to 2.483 GHz 5 GHz: 802.11a/n/ac: 5.150 GHz to 5.350 GHz, 5.470 GHz to 5.725 GHz, 5.725 GHz to 5.850 GHz Note: Country-specific restrictions apply.
2.4 GHz Max. Transmit Power	20 dBm
5 GHz Max. Transmit Power	26 dBm
Surge Protection	Common mode: 34 kV Differential mode: 32 kV
Dimensions (W x D x H)	198.8 mm x 102 mm x 53.4 mm (7.827 in. x 4.016 in. x 2.102 in.) (without bracket)
Weight	0.37 kg (0.82 lbs.)
Number of Fixed LAN Ports	3
Max. LAN Port Rate	1000 Mbps
Number of 10/100BASE-T Ports	3
Reset	Yes
Status LED	Yes
Power Supply	12V DC or 24 V passive PoE or 802.3af/at
Local Power Supply	Yes
PoE Out	No
Supported PoE Standards	802.3af/at
Antenna Type	Built-in antenna, horizontal 31°/vertical 14°

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Hardware Button	1 x reset button
DC Power Connector Size	Inner Diameter: 2.10 mm 3 0.1 mm (0.083 in. 3 0.004 in.) Outer Diameter: 5.50 mm 3 0.1 mm (0.217 in. 3 0.004 in.) Depth: 10.0 mm 3 0.5 mm (0.394 in. 3 0.020 in.)
DC Voltage/Current	12 V/1.2 A, 24 V/0.6 A
LEDs	1 x system LED 3 x port LEDs 3 x signal strength LEDs
2.4 GHz Antenna Gain	2 dBi
5 GHz Antenna Gain	16 dBi
Power Consumption	< 12 W
IP Rating	IP55
Color	Elegant white
Operating Temperature	-30°C to +55°C (-22°F to +149°F) (-40°C to +80°C [-40°F to +176°F] in publicity materials)
Storage Temperature	-40°C to +85°C (-22°F to +185°F)
Operating Humidity	5% RH to 95% RH (non-condensing)
Storage Humidity	5% RH to 95% RH (non-condensing)
MTBF	> 400000 hours
Working Distance	5 km
Bridging Performance	230 Mbps/1 km (HT40) 200 Mbps/3 km (HT40) 150 Mbps/5 km (HT40)
RSSI (dBm)	–54 dBm/1 km –62 dBm/3 km –66 dBm/5 km
Throughput & Camera Limits: 3 MP	50/1 km 45/3 km 20/5 km
Throughput & Camera Limits: 4 to 5 MP	30/1 km 25/3 km 12/5 km
Throughput & Camera Limits: 6 to 7 MP	20/1 km 13/3 km 8/5 km
Throughput & Camera Limits: 7 to 8 MP	15/1 km 12/3 km 6/5 km
Management Radio	2.412 GHz ~ 2.472 GHz
Number of PtMP Links	5
ESD Protection	ESD tolerance: contact discharge=8 kV, air discharge=15 kV
Certification	CE
Software Features	
Operating Mode	BaseStation/CPE
TDMA	Fixed Mode/Flexible Mode
WLAN Security	WPA2-PSK
Management SSID	@Ruijie-bxxxx

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Management SSID for Internet Access	Yes
SSID Hiding	Yes
Spectrum Scan	Yes
Antenna Alignment	Yes
One-Touch Pairing	Yes
WMM	Yes
Storm Control	Yes
VLAN Packet Transmit	Yes
DHCP Server	Yes
DHCP Client	Yes
Network Diagnosis	Ping/Traceroute/DNS Lookup
Time & Date	Yes
Firmware Upgrade	Yes
Backup/Restore	Yes
Cloud Management	Yes
Power Configuration	Yes
Country/Region Code	Yes
Remote Restart	Yes
SON (Self-organizing Networking with all Reyee Devices)	Yes
SNMP	No
Link Aggregation	No
Bridge Speed Test	Yes
Max. Number of Devices on a SON	200
Ping	Yes
Traceroute	Yes
AI Heatmap	Yes

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