13dBi 3km Wireless Network Bridge for PTP & PTMP (Single Unit)
57MM-WB06

Matchmaster
For the Best

The WB06 is a 5 GHz, 13 dBi wireless network bridge with a range of up to 3 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 10/100 Fast Ethernet ports, with 2 ports supporting PoE 802.3af output, allowing you to power other devices like cameras, the WB06 simplifies connectivity. With a maximum wireless data rate of 867 Mbps, the WB06 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 WB06 enables both short- and medium-range wireless links without the need for costly backhaul infrastructure.

Features and Benefits

» Wireless Network Bridge, 13 dBi, Horizontal 30°, Vertical 30° with up to 3 km range when used for PTP and PTMP links

» Flexible Powering Options: Supports 802.3af/at PoE, 24V passive PoE, or 12V DC input for versatile deployment. When powered via 802.3at or 24V passive PoE, the device offers two PoE output ports—ideal for directly powering CCTV cameras or other PoE devices.*

» 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.

* Note: 1. PoE Out supported, with 24 V passive PoE or 802.3at power input. 2. PoE Out is not supported with 12 V DC or 802.3af power input. Maximum 15.4 W (PoE budget for two ports)

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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	100 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	Yes Note: 1. PoE Out supported, with 24 V passive PoE or 802.3at power input; 2. PoE Out not supported, with 12 V DC or 802.3af power input.

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PoE Power Budget	15.4 W (PoE budget for two ports)
Antenna Type	Built-in antenna, horizontal 30°/vertical 30°
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 A, 24 V/1.5 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	13 dBi
Power Consumption	< 9 W (Without PoE Out) <24.4W (With PoE Out)
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	3 km
Bridging Performance	90 Mbps/0.5 km 80 Mbps/1 km (HT40) 60 Mbps/2 km (HT40) 40 Mbps/3 km (HT40)
RSSI (dBm)	-54 dBm/0.5 km -64 dBm/1 km -71 dBm/2 km -75 dBm/3 km
Throughput & Camera Limits: 3 MP	18/0.5 km 16/1 km 12/2 km 8/3 km
Throughput & Camera Limits: 4 to 5 MP	12/0.5 km 10/1 km 8/2 km 5/3 km
Throughput & Camera Limits: 6 to 7 MP	8/0.5 km 7/1 km 5/2 km 3/3 km
Throughput & Camera Limits: 7 to 8 MP	5/0.5 km 5/1 km 2/2 km 1/3 km
Management Radio	2.412 GHz ~ 2.472 GHz

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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
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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