

5GHz 802.11n 300Mbps Outdoor Wireless CPE



Flexible and Reliable Outdoor Characteristics

With the standard **IEEE 802.3af/at** Power over Ethernet (PoE) design, the WBS-502N can be easily installed in the areas where power outlets are not available. The WBS-502N is definitely suitable for wireless IP surveillance, and bridge link of building to building and backbone of public service. Additionally, **the self-healing** capability keeps connection alive all the time. With the **IP55-rated** outdoor enclosure, the WBS-502N can perform normally under rigorous weather conditions, meaning it can be installed in any harsh, outdoor environments.



Designed for Various Requirements

The WBS-502N is specially designed for long-distance outdoor surveillance and wireless backhaul solutions that are capable of establishing stable bridge connection through the embedded 15dBi unidirectional antenna. To provide maximum performance, the WBS-502N can implement up to 8 operation modes where a multitude of applications in communities, warehouses, campuses, harbors, etc. can be made.

Industrial Wireless LAN and LAN

- Compliant with the IEEE 802.11a/n wireless technology
- 2T2R architecture with data rate of up to 300Mbps
- Equipped with 10/100Mbps RJ45 port, auto MDI/MDI-X supported

Fixed Network Broadband Router

- Supported WAN connection types: DHCP, Static IP, PPPoE
- Supports Port Forwarding and DMZ for various networking applications
- Supports DHCP server in Gateway/WISP mode

RF Interface Characteristics

- Built-in 15dBi dual-polarization antenna
- High output power with multiply-adjustable transmit power control

Outdoor Environmental Characteristics

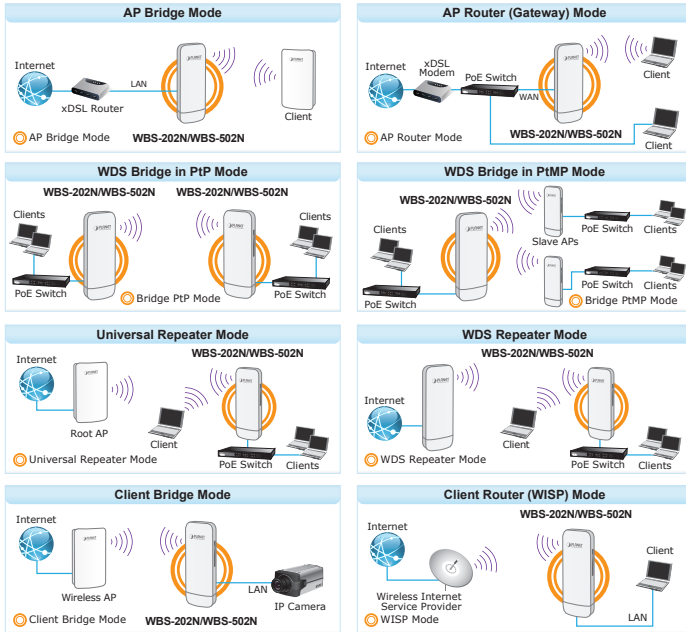
- IP55 rating
- IEEE 802.3at Power over Ethernet design
- Operating temperature: -20~70 degrees C

Multiple Operation Modes and Wireless Features

- Multiple operation modes: AP, Gateway, Repeater, WDS, WISP
- WMM (Wi-Fi multimedia) provides higher priority to multimedia transmitting over wireless
- Coverage threshold to limit the weak signal of clients occupying session
- Real-time Wi-Fi channel analysis chart and client limit control for better performance

Secure Network Connection

- Full encryption supported: WPA/WPA2, WPA-PSK/WPA2-PSK and 802.1X RADIUS authentication
- Supports 802.1Q VLAN and SSID-to-VLAN mapping
- Supports IP/Port/MAC address/URL filtering, DoS, SPI Firewall



- Supports DMZ and Port Forwarding
- Bandwidth control per IP address to increase network stability

Easy Installation and Management

- 3 simple steps to establish WDS connection easily
- Supports PLANET AP Controllers in AP mode
- Easy discovery by PLANET Smart Discovery
- Self-healing mechanism through system auto reboot setting
- System status monitoring through remote Syslog Server
- Supports PLANET DDNS/Easy DDNS

3 Simple Steps to Set Up WDS

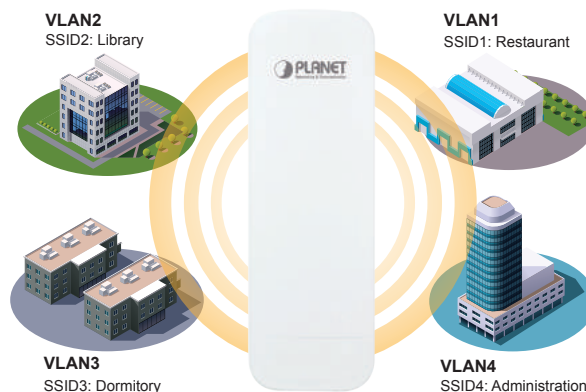
Without needing to enter the Web interface for configuration, the WBS-502N needs three simple steps to establish the WDS PtP connection without any difficulty. By just clicking the **Pair** button on the WBS-502N and within 2 minutes, you can connect two WBS-502Ns without complicated configuration.

3-Steps to Set Up PtP WDS



Multiple SSIDs with VLAN Tagging

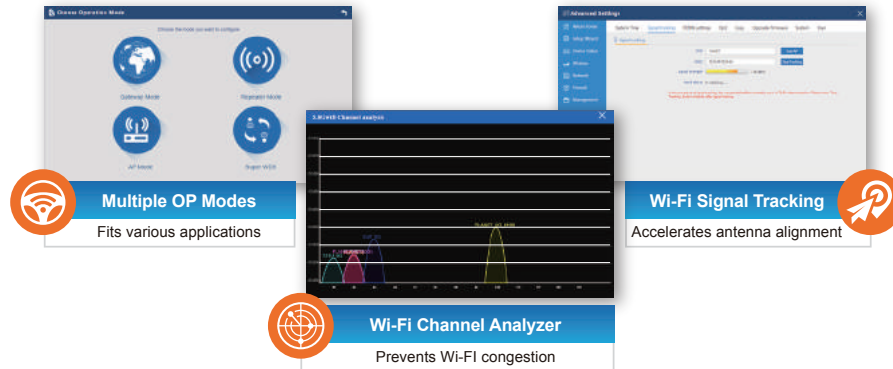
As for security, the WBS-502N supports WPA/WPA2, and the 802.1X RADIUS authentication to secure the wireless connection. Besides, the supported IEEE 802.1Q VLAN allows multiple VLAN tags to be mapped to multiple SSIDs to distinguish the wireless access. This makes it possible for the WBS-502N to work with managed Ethernet switches to have VLANs assigned to a different access level and authority.



Multi-SSIDs + VLANs

Optimized Efficiency in AP Management

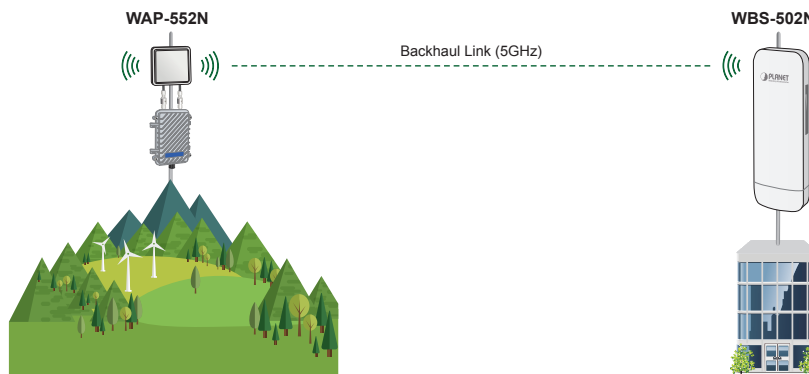
The brand-new GUI configuration wizard helps the system administrator easily set up the WBS-502N step by step. Besides, the built-in Wi-Fi analyzer provides real-time channel utilization to prevent channel overlapping to assure greater performance. With the automatic transmission power mechanism, distance control and scheduling reboot setting, the WBS-502N is easier for the administrator to deploy and manage without on-site maintenance. Moreover, you can simply use PLANET AP controller and **SAPC (Smart AP Control)** to deliver wireless profiles to multiple APs simultaneously, thus making the central management simple.



Applications

Cost-effective 5GHz Wireless Backhaul Solution

PLANET WBS-502N is specially designed for long-distance outdoor surveillance and wireless backhaul solutions that are capable of providing farther connection through the built-in 15dBi dual-polarity antenna. With multiple operation modes and adjustable Tx power, it is easy to install and adjust the suitable setting in appropriate locations. In the aspect of management, the Traffic Shaping and IEEE 802.1Q VLAN supported allows it to limit and set priority for different traffic purposes. Furthermore, the self-healing capability keeps connection alive all the time, thus reducing the maintenance effort and deployment cost.



Specifications

Product	WBS-502N		
	300Mbps 802.11n Outdoor Wireless CPE		
Hardware			
Standard Support	IEEE 802.11a/n IEEE 802.11i IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3x flow control		
Dimensions (W x D x H)	87 x 38 x 260mm		
Weight	405g		
Power Requirements	48V DC IN, 0.5A, IEEE 802.3at PoE+ or 12V DC IN, 1.0A from DC Jack		
Power Consumption (max.)	< 13W		
Interface	Wireless IEEE 802.11a/n, 2T2R PoE: 1 x 10/100BASE-TX, auto-MDI/MDIX, 802.3at PoE In LAN: 1x 10/100BASE-TX, auto-MDI/MDIX		
Button	Reset/Pair button, WDS Switch		
Antenna	Built-in 15dBi directional antenna with dual polarization Horizontal: 70 degrees Vertical: 15 degrees		
Data Rate	IEEE 802.11a: up to 54Mbps IEEE 802.11n (20MHz): up to 150Mbps IEEE 802.11n (40MHz): up to 300Mbps		
Media Access Control	CSMA/CA		
Modulation	802.11a/n: OFDM (BPSK/ QPSK/ 16QAM/ 64QAM)		
Frequency Band	FCC: 5.180~5.240GHz, 5.745~5.825GHz ETSI: 5.180~5.700GHz		
Operating Channels	FCC: 36, 40, 44, 48, 149, 153, 157, 161, 165 (9 channels) ETSI: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 132, 136, 140 (16 channels) 5GHz channel list will vary in different countries according to their regulations.		
Max. Transmit Power (dBm)	FCC: up to 29 ± 1dBm ETSI: < 20dBm (EIRP)		
Receiver Sensitivity (dBm)	Network Mode	Data Rate	Receive Sensitivity (dBm)
	802.11a	6Mbps	-92
		54Mbps	-75
	802.11n HT20	MCS0/MCS8	-91
		MCS7/MCS15	-72
802.11n HT40	MCS0/MCS8	-88	
	MCS7/MCS15	-70	
Environment & Certification			
Operating Temperature	-20 ~ 70 degrees C		
Operating Humidity	5 ~ 90% (non-condensing)		
IP Level	IP55		
ESD Protection	± 8kV air-gap discharge ± 4kV contact discharge		
Surge Protection	± 4kV		
Regulatory	CE, RoHS		
Software			
LAN	Static IP Supports IP-MAC binding		
WAN Type (GW/WISP mode)	Static IP Dynamic IP PPPoE		
Wireless Modes	Access Point Gateway Repeater WDS (AP/Bridge/Station) WISP		
Channel Width	20MHz, 40MHz		
Encryption Type	WPA, WPA-PSK, WPA2, WPA2-PSK, 802.1X		
Wireless Security	Enable/Disable SSID Broadcast Wireless Max. 32 MAC address filtering User Isolation		
Max. SSIDs	4		
Max. Wireless Clients	64 per radio (50 is suggested, depending on usage)		
Max. WDS Peers	4 (Up to 3 peers by using "One-click WDS")		
Wireless QoS	Supports Wi-Fi Multimedia (WMM)		

Wireless Advanced	Auto Channel Selection 5-level Transmit Power Control (100%, 75%, 50%, 25%, 12.5%) Client Limit Control, Coverage Threshold Distance control (Auto Ack Timeout) Wi-Fi channel analysis chart Fast Roaming
Status Monitoring	Device status, wireless client List PLANET Smart Discovery DHCP client table System Log supports remote syslog server
VLAN	IEEE 802.1Q VLAN (VID: 3~4094) SSID-to-VLAN mapping up to 4 SSIDs
Self-healing	Supports auto reboot settings per day/hour
Management	Remote management through PLANET DDNS/ Easy DDNS Configuration backup and restore Supports UPnP Supports IGMP Proxy Supports PPTP/L2TP/IPSec VPN Pass-through SNMP v1/v2c/v3 support, MIB I/II, Private MIB
Central Management	Applicable controllers: WAPC-500, WAPC-1000 and Smart AP Control(SAPC)

Ordering Information

WBS-502N	5GHz 802.11a/n 300Mbps Outdoor Wireless CPE (Built-in 15dBi Antenna)
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Related Products

WDAP-802AC	1200Mbps Dual Band 802.11ac Outdoor Wireless AP (IP68, 802.3at PoE+, 4 x N-Type connector)
WDAP-702AC	1200Mbps Dual Band 802.11ac Outdoor Wireless AP
WDAP-8350	600Mbps Dual Band 802.11n Outdoor Wireless CPE (IP66, 802.3at PoE, 4 x N-type connector)
WAP-552N	5GHz 802.11a/n 300Mbps Outdoor Wireless AP (IP67, 802.3af/at PoE, 2 x N-Type Connector)
WDL-U601AC	433Mbps 802.11AC Dual Band Wireless USB Adapter
BSP-360	Industrial Renewable Energy 4-Port 10/100/1000T 802.3at PoE+ Managed Ethernet Switch
ELA-100	Ethernet Lightning Arrest Box

Accessories

CB-STP-25	25-meter STP Cat5 Cable
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