2.4GHz 300Mbps 802.11n Outdoor Wireless CPE

Cost-effective Wireless Solution with Superior Performance

PLANET WBS-200N 300Mbps 802.11n Outdoor Wireless CPE offers a better range and excellent throughput than those of the traditional 802.11g wireless device. Via the embedded 8dBi dual-polarization (vertical and horizontal) directional antenna, the WBS-200N provides good diversity coverage and better noise immunity effect, thus heightening the performance of a long-distance, outdoor connectivity even though the environment is flooded with many 2.4GHz wireless equipment.

Designed for Various Requirements

The WBS-200N is dedicatedly designed for WISP solution that provides CPE users with Internet access via the WISP provider in rural areas. Besides, it caters to various wireless communication connectivities (AP, Client, WDS, Repeater and WISP), thus meeting users' application requirements.

Industrial Compliant Wireless LAN and LAN

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

Fixed Network Broadband Router

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

RF Interface Characteristics

- Built-in 8dBi dual-polarization antenna
- High output power up to 400mW with multiply-adjustable transmit power control

Outdoor Environmental Characteristics

- IP55 rating
- Passive Power over Ethernet design
- Operating temperature: -20~70°C
- Multiple Operation Modes and Wireless Features

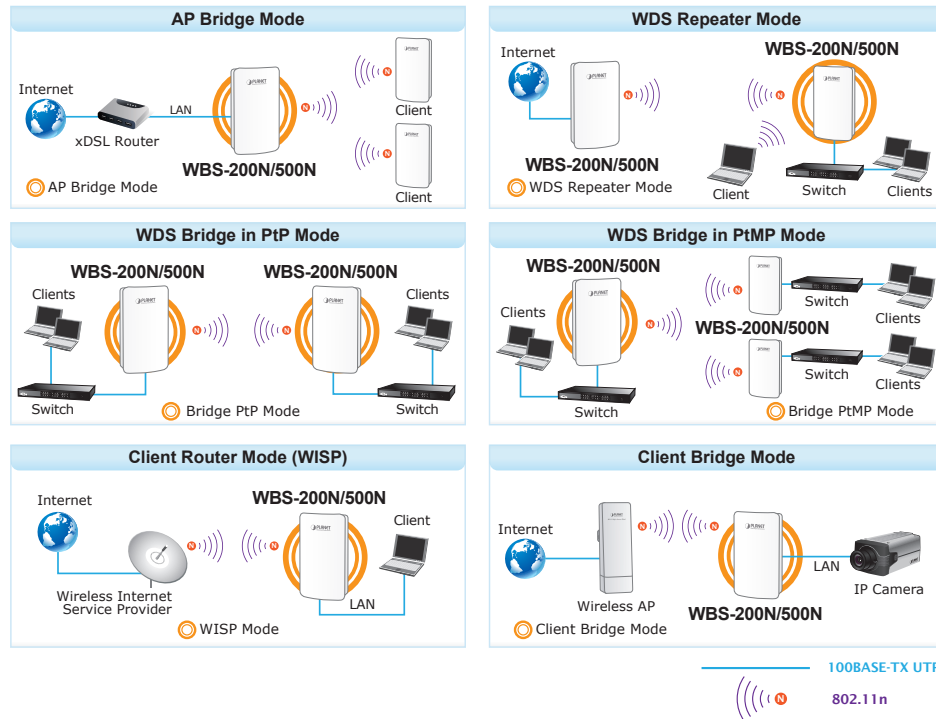## Multiple operation Modes and Wireless Features

- WMM (Wi-Fi multimedia) provides higher priority to multimedia transmitting over wireless
- Wireless Traffic Shaping to control the upload/download bandwidth
- Wi-Fi scheduler allows to enable or disable based on predefined schedule

Secure Network Connection

- Full encryption supported: 64-/128-/152-bit WEP, WPA/WPA2, WPA-PSK/WPA2-PSK and 802.1X RADIUS authentication
- Supports 802.1Q VLAN pass-through over WDS and SSID-to-VLAN mapping
- Supports up to 50 entries of MAC address filtering

Easy Installation and Management

- IPv4/IPv6 dual-stack management networks
- Multilingual Web User Interface: English, Spanish, French, German, Portuguese, Russian, Simplified Chinese
- CLI command and SNMP-based management interface
- Self-healing mechanism through system auto reboot setting
- System status monitoring through remote Syslog Server and Device Discovery
- Diagnostic tools include Ping, Traceroute, Speed
- Planet Smart Discovery Utility allows administrator to discover and locate each AP

AP Bridge Mode

WDS Repeater Mode

WDS Bridge in PtP Mode

WDS Bridge in PtMP Mode

Client Router Mode (WISP)

Client Bridge Mode

100BASE-TX UTP
802.11n

Multiple SSIDs with VLAN Tagging

Multiple SSIDs can broadcast up to four wireless networks with different names. For management purposes, the IEEE 802.1Q VLAN supported allows multiple VLAN tags to be mapped to multiple SSIDs to distinguish the wireless access. This makes it possible for the WBS-200N to work with managed Ethernet switches to have VLANs assigned for a different access level and authority.
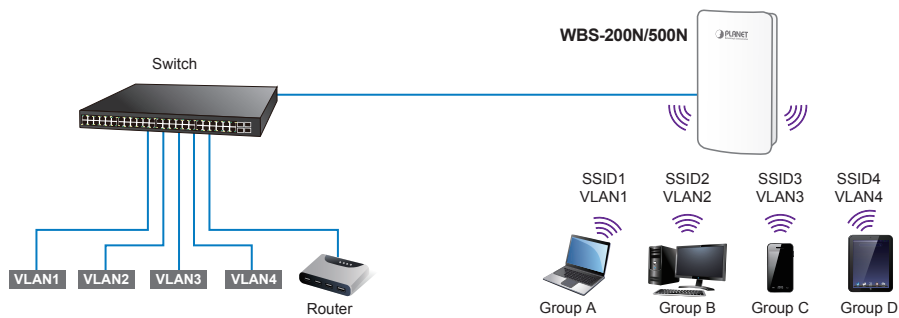
Flexible and Reliable Outdoor Characteristics

The WBS-200N 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 UV-resistant enclosure, the WBS-200N can perform normally under rigorous weather conditions, meaning it can be installed in any harsh, outdoor environments. With the proprietary Power over Ethernet (PoE) design, the WBS-200N can be easily installed in the areas where power outlets are not available.

Advanced Security and Rigorous Authentication

The WBS-200N supports 152-bit WEP, WPA/WPA2, WPA-PSK and WPA2-PSK wireless encryptions, the advanced WPA2-AES mechanism and 802.1X RADIUS authentication, which can effectively prevent eavesdropping by unauthorized users or bandwidth occupied by unauthenticated wireless access. Furthermore, any users are granted or denied access to the wireless LAN network based on the ACL (Access Control List) that the administrator pre-established.
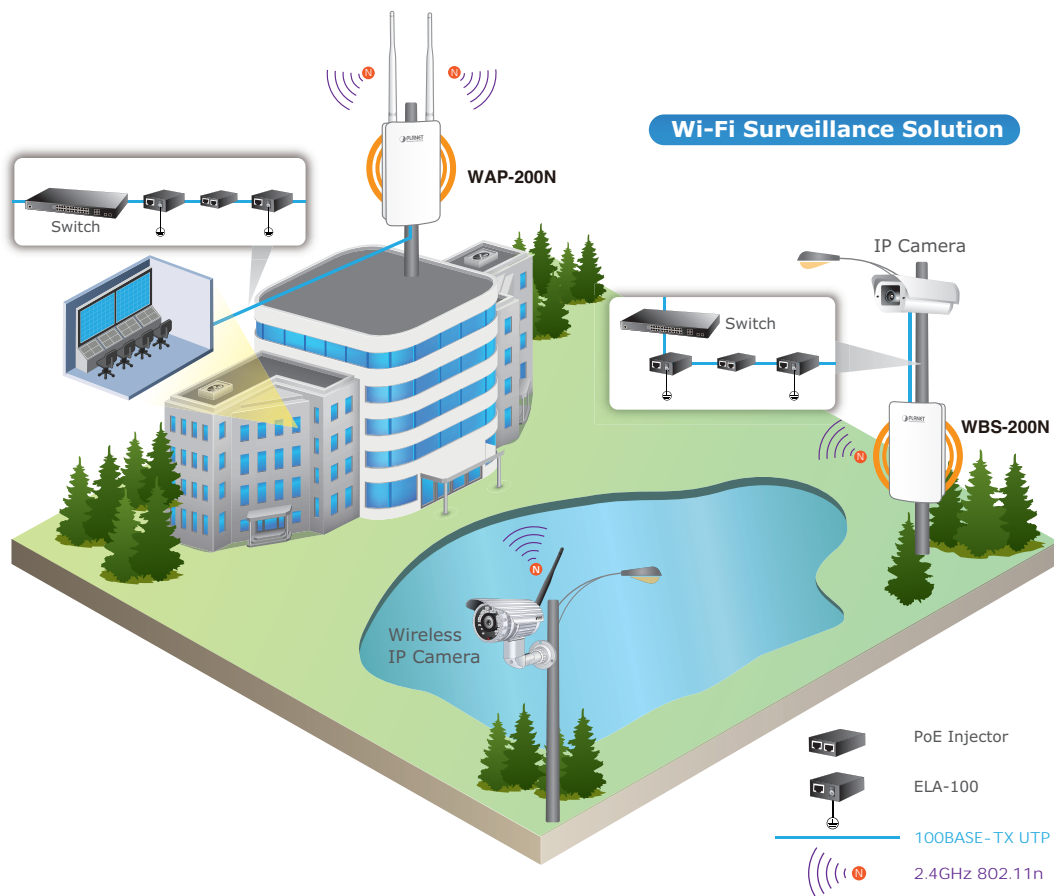
Easy Deployment and Management

With user-friendly Web UI and comprehensive management features like client limit control and wireless traffic shaping, the WBS-200N is easy to limit the client access and control the bandwidth, even for users who have no experience in setting up a wireless network. Furthermore, with the Planet Smart Discovery Utility, SNMP and diagnostics tools, the WBS-200N is convenient to be managed remotely.

Applications

Reliable and Stable Outdoor Wireless Solution

The WBS-200N is a cost-effective outdoor wireless solution for widely open space applications. It is definitely suitable to provide outdoor wireless connectivity for CPE users or bridging across long-ranging connection between suburban/rural areas through the 2.4GHz frequency band. With the built-in 8dBi dual-polarization directional antenna, the WBS-200N brings higher performance and longer distance of wireless connection. The WBS-200N provides high output power with multiply-adjustable Tx controller, which allows CPE users to easily install and adjust the suitable value in appropriate locations. When connecting with the WBS-200N, the system integrator is able to expand a reliable wireless connection from indoors to outdoors.

Wi-Fi Surveillance Solution

WAP-200N
Switch
IP Camera
Switch
WBS-200N
Wireless IP Camera

PoE Injector
ELA-100
100BASE-TX UTP
2.4GHz 802.11n

**We recommend you to match the WBS-200N with our related products to get the best results.

Specifications

Product	WBS-200N
	2.4GHz 300Mbps 802.11n Outdoor Wireless CPE
Hardware	
Standard Support	IEEE 802.11b/g/n IEEE 802.3 IEEE 802.3u IEEE 802.3x
Memory	64 Mbytes DDR SDRAM 16 Mbytes Flash
PoE	Passive PoE
Interface	Wireless IEEE 802.11b/g/n, 2T2R PoE LAN (LAN 1): 1 x 10/100BASE-TX, auto-MDI/MDIX, 24V passive PoE In LAN 2: 1 x 10/100BASE-TX, auto-MDI/MDIX
Button	Reset button
LED	PWR, LAN, WLAN, Signal Strength
Antenna	Built-in 8dBi directional antenna with dual polarization [Port1] HPBW Horizontal: 78 degrees HPBW Vertical: 45 degrees [Port2] HPBW Horizontal: 54 degrees HPBW Vertical: 59 degrees
Data Rate	IEEE 802.11b: 1, 2, 5.5, 11Mbps IEEE 802.11g: up to 54Mbps IEEE 802.11n (20MHz): up to 150Mbps IEEE 802.11n (40MHz): up to 300Mbps
Media Access Control	CSMA/CA
Modulation	Transmission/Emission type: OFDM Data Modulation type: OFDM with BPSK, QPSK, 16-QAM, 64-QAM
Frequency Band	2.412GHz - 2.472GHz
Operating Channels	United States -- FCC: 2.414~2.462GHz (11 channels) Europe -- ETSI: 2.412~2.472GHz (13 channels)
Max. Transmit Power (dBm)	FCC : IEEE 802.11b/g/n: up to 26 ± 2dBm ETSI : IEEE 802.11b/g/n: < 20dBm (EIRP)
Receiver Sensitivity (dBm)	IEEE 802.11b: -95/ -93dBm (1~2/ 5.5~11Mbps) IEEE 802.11g: -95/ -93/ -92/ -80/ -77/ -75dBm (6/ 9~18/ 24/ 36/ 48/ 54Mbps) IEEE 802.11n: MCS0/ MCS8 : -95dBm MCS1/ MCS9 : -93dBm MCS2/ MCS10 : -92dBm MCS3/ MCS11 : -90dBm MCS4/ MCS12 : -86dBm MCS5/ MCS13 : -83dBm MCS6/ MCS14 : -76dBm MCS7/ MCS15 : -73dBm
Power Consumption	Maximum 7.2W
Power Requirements	LAN1 • 24V DC, 0.6A/ Passive PoE • Pin 4, 5 V DC+ • Pin 7, 8 V DC-
Environment and Certification	
Operating Temperature	-20~70 degrees C
Operating Humidity	10~90% (non-condensing)
IP Level	IP55
Regulatory	CE, FCC, RoHS
Software	
LAN	• Static IP • Dynamic IP • DHCP server in WISP mode
	Supports 802.1d STP (Spanning Tree Protocol)
WAN Connection Type (WISP Mode only)	• Static IP • Dynamic IP • PPPoE • PPTP

Firewall	Offers DoS protection to guard user's content network against DoS attacks
	Built-in DMZ and Port Forwarding
	VPN Pass-through: • PPTP Pass-through • L2TP Pass-through • IPSec Pass-through
Wireless Modes	• Access Point • Client Bridge • WDS (AP/Bridge/Station) • Client Router (WISP)/Client AP Router (WISP+AP) • Repeater
Channel Width	20MHz, 40MHz
Encryption Type	64-/128-/152-bit WEP, WPA, WPA-PSK, WPA2, WPA2-PSK, 802.1X
Wireless Security	Enable/Disable SSID Broadcast
	Wireless MAC address filtering up to 50 entries
	VAP Separation, Station Separation
Max. SSIDs	Up to 4
Max. Wireless Clients	Max. 64 (Suggested 32, depending on usage)
Max. WDS Peers	Up to 4
Wireless QoS	Supports Wi-Fi Multimedia (WMM)
	Supports Wireless Traffic Shaping per Radio
Wireless Advanced Control	Auto Channel Selection
	Auto Transmit Power by Regular Domains
	Client Limit Control
	Distance Control (Auto Ack Timeout)
	Wi-Fi Schedule
Status Monitoring	Connection Status
	Device Discovery, PLANET Smart Discovery
	Wireless Client List/WDS Link List
	DHCP Client Table
	System Log supports remote syslog server
	Signal Strength LEDs in Client Bridge and WDS Station modes
VLAN	VLAN pass-through over WDS
	SSID-to-VLAN mapping
	Management VLAN (VID: 1~4094)
Self Healing	Supports auto reboot settings
NTP	Network Time Management
Management	Web-based UI, CLI (Command Line Interface) supported
	Configuration backup and restore
	SNMP v1/v2c/v3 support, MIB I/II, Private MIB
Diagnostic Tools	Built-in Ping, Trace Route, Speed Test Tools

Ordering Information

WBS-200N	2.4GHz 300Mbps 802.11n Outdoor Wireless CPE (Built-in 8dBi Antenna)

Related Products

WAP-200N	2.4GHz 300Mbps 802.11n Outdoor Wireless AP (2 x 5dBi detachable antenna)
WNAP-6335	2.4GHz 300Mbps 802.11n Outdoor Wireless AP/Router (2 x RP-SMA Connector)
WNAP-6350	2.4GHz 300Mbps 802.11n Outdoor Wireless Access Point (2 x N-type Connector)
WNL-U601AC	433Mbps 802.11AC Dual Band Wireless USB Adapter
ICA-W3250V	Full HD Outdoor IR Wireless IP Camera
POE-165S	IEEE 802.3af/at to Passive PoE Power Converter (12V/19V/24V)
ELA-100	Ethernet Lightning Arrest Box

Accessories

CB-STP-25	25-meter STP Cat5 Cable

WBS-200N