# Product Specifications

# 300Mbps 802.11n Outdoor Wireless AP

# WAP-552N

Version 1.0

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Change History:

| Revision: | Date: | Author: | Change List: |
|---|---|---|---|
| Version 1.0 | 2017-12-05 | Miki Chou | Initial release |

| | | | |
|---|---|---|---|
| Author | Miki Chou | Editor: | Miki Chou |
| Approved by: | Kent Kang | Project Leader: | Kent Kang |

# 1. PRODUCT DESCRIPTION

### Cost-effective Wireless Solution with Superior Performance

PLANET WAP-552N 300Mbps 802.11n Outdoor Wireless AP offers a better range and excellent throughput than those of the traditional 802.11a wireless device. Via the adjustable transmit power and N-type antenna connectors, it can directly connect with various high gain antennas to extend wider coverage, thus heightening the performance of a long-distance connectivity.

### Designed for Various Requirements

The WAP-552N is specifically designed for those difficult to construct network infrastructure through cable. It is capable to bridge remote sites without considering antenna alignment through the omnidirectional antennas, which are suitable to work with IP surveillance system. Besides, subscribers are able to achieve various wireless connectivities (AP, Gateway, WDS, Repeater and WISP) by replacing any high-gain or directional outdoor antennas, thus meeting comprehensive application requirements.

### Advanced Security and Rigorous Authentication

The WAP-552N supports 128-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. For management purposes, the IEEE 802.1Q VLAN supported allows multiple VLAN tags to be mapped to multiple SSIDs to distinguish the wireless access.

### Flexible and Reliable Outdoor Characteristics

Meeting the IP67 rating aluminum enclosure, the WAP-552N can perform normally under rigorous weather conditions, meaning it can be installed in any harsh, outdoor environments. With the standard IEEE 802.3af/at Power over Ethernet (PoE) design, the WAP-552N can be easily installed in the areas where power outlets are not available.

### Easy Deployment and Management

With user-friendly Web UI and comprehensive management features like client limit control and coverage threshold, the WAP-552N is easy to limit the client access, even for users who never experience in setting up a wireless network. Furthermore, with the PLANET SNMP-based centralized management and PLANET Smart Discovery Utility, the WAP-552N is convenient to be managed remotely.

## 2. PRODUCT FEATURES

- **Industrial Compliant 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 two N-type connectors
  - High output power with multiply-adjustable transmit power control
- **Outdoor Environmental Characteristics**
  - Sturdy aluminum case with IP67-rated protection
  - IEEE 802.3af/at Power over Ethernet design
  - Operating temperature: -40~70 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: 64-/128-bit WEP, 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 Deployment and Management

- 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. PRODUCT SPECIFICATIONS

## 3.1 MAIN COMPONENTS

| | |
|---|---|
| **SoC** | Atheros AR9344 |
| **RAM** | 64MB |
| **Flash** | 8MB |

## 3.2 FUNCTIONAL SPECIFICATIONS

| | |
|---|---|
| **Product** | **WAP-552N** |
| | 300Mbps 802.11n Outdoor Wireless AP |
| **Hardware** | |
| **Standard Support** | IEEE 802.11a/n<br>IEEE 802.11i<br>IEEE 802.3 10BASE-T<br>IEEE 802.3u 100BASE-TX<br>IEEE 802.3x flow control |
| **Material** | Aluminum |
| **Dimensions (W x D x H)** | 153.2 x 79.5 x 234.5mm |
| **Weight** | 2kg |
| **Power Requirement** | 48V 0.5A, IEEE 802.3af/at PoE+ |
| **Power Consumption (max.)** | < 13W |
| **Mounting Type** | Mast mounting |
| **Interface** | Wireless IEEE 802.11a/n, 2T2R<br>PoE LAN: 1 x 10/100BASE-TX, auto-MDI/MDIX, 802.3af/at PoE In |
| **Button** | Reset button |
| **Antenna** | Built-in two N-type connectors |
| **Data Rate** | IEEE 802.11a: up to 54Mbps<br>IEEE 802.11n (20MHz): up to 150Mbps<br>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<br>ETSI: 5.180~5.700GHz |

| | | | |
|---|---|---|---|
| **Operating Channels** | FCC: 36, 40, 44, 48, 149, 153, 157, 161, 165 (9 channels)<br>ETSI: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 132, 136, 140 (16 channels)<br><br>**5GHz channel list will vary in different countries according to their regulations.** | | |
| **Max. Transmit Power (dBm)** | FCC: up to 27 ± 2dBm<br>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** | -40 ~ 70 degrees C | | |
| **Operating Humidity** | 10 ~ 90% (non-condensing) | | |
| **IP Level** | IP67 | | |
| **ESD Protection** | ± 8kV air-gap discharge<br>± 4kV contact discharge | | |
| **Surge Protection** | ± 4kV | | |
| **Regulatory** | CE, RoHS | | |
| **Software** | | | |
| **LAN** | Static IP | | |
| | Supports IP-MAC binding | | |
| **WAN Type (GW/WISP mode)** | ■ Static IP<br>■ Dynamic IP<br>■ PPPoE | | |
| **Wireless Modes** | ■ Access Point<br>■ Gateway<br>■ Repeater<br>■ WDS (AP/Bridge/Station)<br>■ WISP | | |
| **Channel Width** | 20MHz, 40MHz | | |
| **Encryption Type** | 64-/128-bit WEP, WPA, WPA-PSK, WPA2, WPA2-PSK, 802.1X | | |
| **Wireless Security** | Enable/Disable SSID Broadcast | | |
| | Wireless MAC address filtering | | |
| | User Isolation | | |
| **Max. SSIDs** | 4 | | |
| **Max. Wireless Clients** | 64 per radio (50 are suggested, depending on usage) | | |

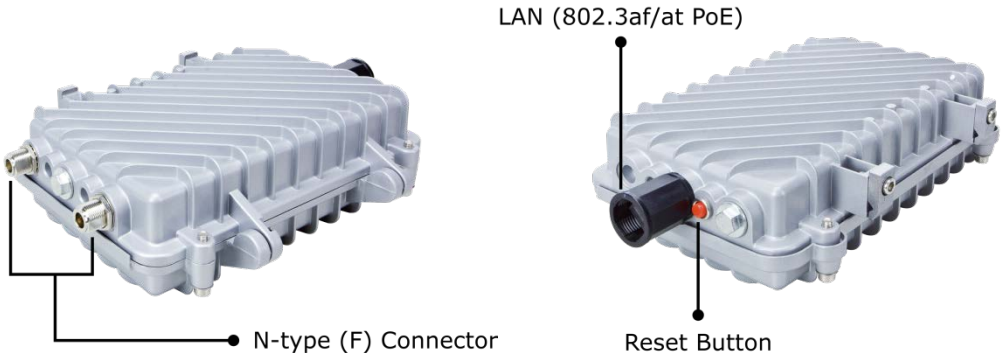
| | |
|---|---|
| **Max. WDS Peers** | 4 |
| **Wireless QoS** | Supports Wi-Fi Multimedia (WMM) |
| **Wireless Advanced** | Auto Channel Selection |
| | 5-level Transmit Power Control (100%, 75%, 50%, 25%, 12.5%) |
| | Client Limit Control, Coverage Threshold |
| | Distance control (Auto Ack Timeout) |
| | 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** | Supports PLANET Hardware AP Controller/ Software AP Controller<br>Applicable controllers[1]: WAPC-500, WAPC-1000, SAPC |
| | 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 |
| **Remarks** | *1. ^ the feature will be supported through firmware/system upgrade |

## 3.3 PHYSICAL SPECIFICATIONS

| Physical Specifications | |
|---|---|
| **Dimensions (W x D x H)** | 153.2 x 79.5 x 234.5mm |
| **Weight** | 2kg |

### Appearance

### Port & Connector




### Hardware Interface Definition

| Object | Description |
|---|---|
| **Antenna Connectors** | 2 N-type (female) antenna connectors |
| **PoE LAN Port** | 10/100Mbps RJ45 port, auto MDI/MDI-X<br>802.3af/at PoE+ supported, 48VDC In |
| **Reset Button** | Press and hold the **Reset** button on the PCBA for over 15 seconds to return to the factory default setting. |

## 3.4 ENVIRONMENTAL SPECIFICATIONS

| Environmental Specifications | |
|---|---|
| **Temperature** | Operating: -40 ~ 70 degrees C<br>Storage: -40 ~ 75 degrees C |
| **Humidity** | Operating: 10 ~ 90% (non-condensing)<br>Storage: 5 ~ 90% (non-condensing) |

## 3.5 BASIC PACKAGING

- WAP-552N
- Quick Installation Guide x 1
- RJ45 Waterproof Kit x 1
- L-type Bracket x 2
- U-bolt Kit x 2

## 3.6 PACKAGING INFORMATION

| Packaging Information | |
|---|---|
| **Dimensions (W x D x H)** | 380 x 259 x 170mm |
| **Weight** | 2.15kg (gross weight) |

## APPENDIX: Default Settings

| System | |
|---|---|
| **Device Name** | WAP-552N |
| **Firmware Version** | 1.0 |
| **Connection Type (LAN IP)** | Static IP |
| **IP Address** | 192.168.1.253 |
| **Gateway** | 192.168.1.253 |
| **Subnet Mask** | 255.255.255.0 |
| **Wireless Settings** | |
| **Operation Mode** | Access Point |
| **Mode** | 802.11AN |
| **Bandwidth** | 40MHz |
| **SSID** | PLANET_5GHz |
| **Channel** | 5.8G: 36 (ETSI region)/ 149 (FCC region) |
| **Wireless Advanced Settings** | |
| **RF Output Power** | 100% |
| **Data Rate** | Auto |
| **Transmit Power** | Auto |
| **RTS Threshold (0-2347)** | 2346 |
| **Max User (0-64)** | 64 |
| **Coverage Threshold (-95~-65dBm)** | -90 |