



## Overview

AP-5012N series are specially designed industrial grade equipment to operate in Access Point, Client (CPE), Repeater or Sensor Access Point (sniffer) mode. It can be used for point-to-point or point-to-multipoint application. It is equipped with 2x2 MIMO radios (Multi-transmit and Multi-Receive) where two transceivers transmit and receive concurrently. These two concurrent signals will be combined with the use of DSP technology to achieve better signal to noise ratio and improved signal quality.

AP-5012N delivers a high data rate of up to 300Mbps with auto data rate fall back when signal quality degrades. The radio is based on IEEE802.11n standard and is equipped with RfNet long distance wireless profiling which automatically selects the suitable data rate, burst rate and frame size to achieve a stable and optimum wireless performance over long distance communication links.

## Key Features

- Up to 300Mbps, 2x2 MIMO concurrent radios
- IEEE 802.11a/n (5GHz) or a/b/g/n (2.4GHz) compliant
- Support dual N ports for external antennas(AP-5012N-1E2N, AP-5012N-2E2N)
- Support point-to-point and point-to-multipoint link
- Outdoor IP67 Casing
- Up to 200mW output power for one stream
- Antenna alignment mode & LED Signal indicator
- Support Gb LAN IEEE802.3af PoE
- Support 12~48V Pseudo PoE
- Two Gb PoE LAN ports
- Supports dual PoE input for power redundancy(AP-5012N-2E2N)
- Supports IEEE 802.11i, 11e, 11d, WPA2 and WMM
- Supports up to 16 Multiple ESSID
- Channel Bandwidth 20, 40 MHz

## Applications

The AP-5012N is designed for a wide range of applications which include the following:

- Fixed Broadband Communication
- Outdoor AP/Repeater/Bridge/Sensor AP
- Point-to-multipoint Wireless
- Wireless CCTV Surveillance
- Industrial Wireless applications



City surveillance



River Monitoring with sensor

## Model

### AP-5012N-2E2N / AP-5012N-2E2N-STN<sup>1</sup> / AP-5012N-2E2N-STN-2R<sup>2</sup>

- Two N type RF ports for external antennae.
- Dual LAN 10/100/1000 Base-T PoE ports for input power redundancy.

### AP-5012N-1E2N

- Two N type RF ports for external antennae.
- Single LAN 10/100/1000 Base-T PoE port.

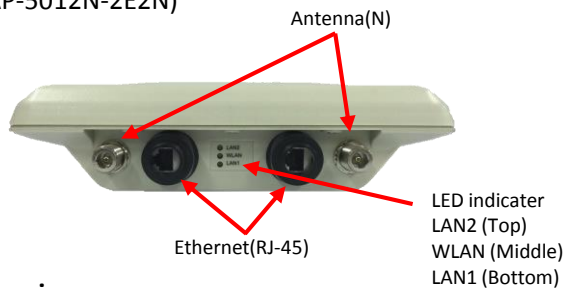
### AP-5012N-1E1S-E

- One integrated 17dBi antenna.
- Single LAN 10/100/1000 Base-T PoE port.

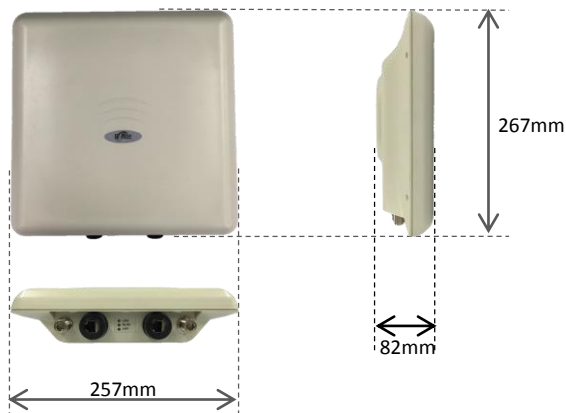
STN<sup>1</sup>: Additional Certification For Railway Application (Such As Station)  
2R<sup>2</sup>: With Dual Concurrent Radios

## Interfaces

(AP-5012N-2E2N)



## Dimension



## Standard Package

- One AP-5012N Access Point module
- Quick installation guide
- Pole mounting bracket Kit

Interface	
Power IN	IEEE802.3af & Pseudo 12-48V PoE
LAN port	AP-5012N-1E : 1x10/100/1000 BaseT AP-5012N-1E2N : 1x10/100/1000 BaseT AP-5012N-2E2N : 2x10/100/1000 BaseT
WiFi Antenna	N(F) connector
LED	LAN2 (top) WLAN (middle) LAN1 (bottom)
Environmental	
IP Rating	IP67
Operating temperature	-35°C to +70°C
Storage temperature	-40°C to +75°C
Humidity	10% ~90% max non-condensing
Wind survivability	180km/h
General	
Dimension LxWxH	267 x 257 x 82 mm
Weight	1.2 kg
Power consumption	9 Watts maximum,
Compliant	CE, IDA, RoHS
Mounting	Wall and Pole Mounting

## Management Function

Management Function	
Management	<ul style="list-style-type: none"> <li>• Web management</li> <li>• SNMP V1, V2c &amp; V3 management and SNMP trap</li> <li>• Event syslog</li> <li>• Time setting (Current time, time zone &amp; NTP client)</li> <li>• Access Point monitoring (ping external device in client mode only)</li> </ul>
Security	<ul style="list-style-type: none"> <li>• IP filtering (Source IP &amp; destination IP)</li> <li>• Port filtering (Source port &amp; destination port)</li> <li>• Device administration access level                             <ul style="list-style-type: none"> <li>- Normal user (monitoring and basic setting)</li> <li>- Super user (advance setting &amp; firmware upgrade)</li> </ul> </li> </ul>
Network	<ul style="list-style-type: none"> <li>• Prioritization of data type</li> <li>• Static and dynamic DHCP client</li> <li>• DHCP server</li> <li>• Broadcast, Multicast, PPPoE</li> <li>• Disabling Broadcast/Multicast to Non-WDS Station</li> <li>• Support VLAN tagging (IEEE 802.1q) and pass Through</li> </ul>
Others	<ul style="list-style-type: none"> <li>• Operating Voltage: Data 5V ; PoE 12~48V</li> <li>• Clamping Voltage:                             <ul style="list-style-type: none"> <li>- Data, 7.5VDC</li> <li>- PoE, 53.3V DC Start, 77.4Vdc @ 10/1000uS;</li> </ul> </li> <li>100Vdc @ 8/20uS</li> <li>• Protection Mode: Common Mode, L-G</li> <li>• Response Time: &lt;5nS</li> <li>• Over Current Limiter:                             <ul style="list-style-type: none"> <li>- Holding Current: 300mA,</li> <li>- Trip Current, 600mA, auto recover.</li> <li>- Peak Pulse Current: 100A @ 10/1000uS</li> </ul> </li> <li>• Inrush Current Protection</li> </ul>

## Wireless

Wireless LAN Standards	IEEE 802.11a/b/g/n
11n mode	2x2 MiMo radios up to 300 Mbps
Operating Frequencies	IEEE 802.11b/g/n: 2.412 - 2.472 GHz IEEE 802.11a/n: 5.150 - 5.825GHz
Antenna Type	AP5012-1E: Integrated 17 dBi antenna AP5012-2E2N, AP5012-1E2N: 2 external
Operation Mode	Wireless Access Point Wireless Repeater Wireless Client Sensor AP (Sniffer)
Channel Bandwidth	20 & 40 MHz
Others	<ul style="list-style-type: none"> <li>• Support Dynamic Frequency Selection (DFS) and Transmit Power Control (TPC) on 5GHz</li> <li>• Transmit Power control up to Maximum 23dBm (for 1 radio, 5GHz), 17dBm (for 1 radio, 2.4GHz)</li> <li>• Support IEEE802.11e, 802.11i and WMM</li> <li>• Support up to 64 concurrent clients in PTMP mode</li> <li>• Support 16 ESSID in Access Point mode (optional)</li> </ul>
Data Rate	<ul style="list-style-type: none"> <li>• 802.11b/g :                             <ul style="list-style-type: none"> <li>: 1,2,5,5,11,6,9,12,18,24,36,48,54Mbps</li> </ul> </li> <li>• 802.11a                             <ul style="list-style-type: none"> <li>: 6, 9, 12, 18, 24, 36, 48, 54Mbps</li> </ul> </li> <li>• 802.11n : MCS 0-15 up to 300Mbps</li> </ul>
Security	<ul style="list-style-type: none"> <li>• WPA-PSK/WPA2-PSK (TKIP &amp; AES)</li> <li>• WPA/WPA2 (TLS, TTLS &amp; PEAP),</li> <li>• Static WEP up to 152 bits</li> <li>• MAC Address Control,</li> <li>• Wireless client to client isolation</li> <li>• Hidden ESSID</li> </ul>

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# Access Point Certification For Railway Application

\* For AP-5012N-2E2N-STN<sup>1</sup> & AP-5012N-2E2N-STN-2R<sup>2</sup> Model

Test Standard	Description
EN 50121-4 : 2006	
EN 61373	Shock Vibration
EN 60068-1/2/30	Climatic
EN 55016-2-1 : 2009 + A1 : 2011 Clause 7.4.1 EN 55016-1-2 : 2006 Clause 4.3	Conducted Emissions
EN 55016-2-3 : 2010 + A1 : 2010	Radiated Emissions
IEC 61000-4-2 : 2008	Electrostatic Discharge Immunity
IEC 61000-4-3 : 2010	RF Radiated Immunity
IEC 61000-4-4 : 2012	Electrical Fast Transient / Burst Immunity
IEC 61000-4-5 : 2005	Voltage Surge Immunity
IEC 61000-4-6 : 2008	Conducted Disturbance Immunity
IEC 61000-4-8 : 2009	Power Frequency Magnetic Field Immunity
IEC 61000-4-9 : 2001	Pulse Magnetic Field Immunity

## Additional Support IEC 61000-4-3 RF Radiated Immunity

Frequency	Temperature
80MHz – 1000MHz	20V/m, 80% AM 1kHz
1400MHz – 2100MHz	10V/m, 80% AM 1kHz
2100MHz – 2500MHz	5V/m, 80% AM 1kHz

## Other Related Products



RFAnt-50GP-31  
31 dBi grid  
parabolic antenna



RFAnt-50DP-23  
23 dBi directional  
panel antenna



RF cable

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