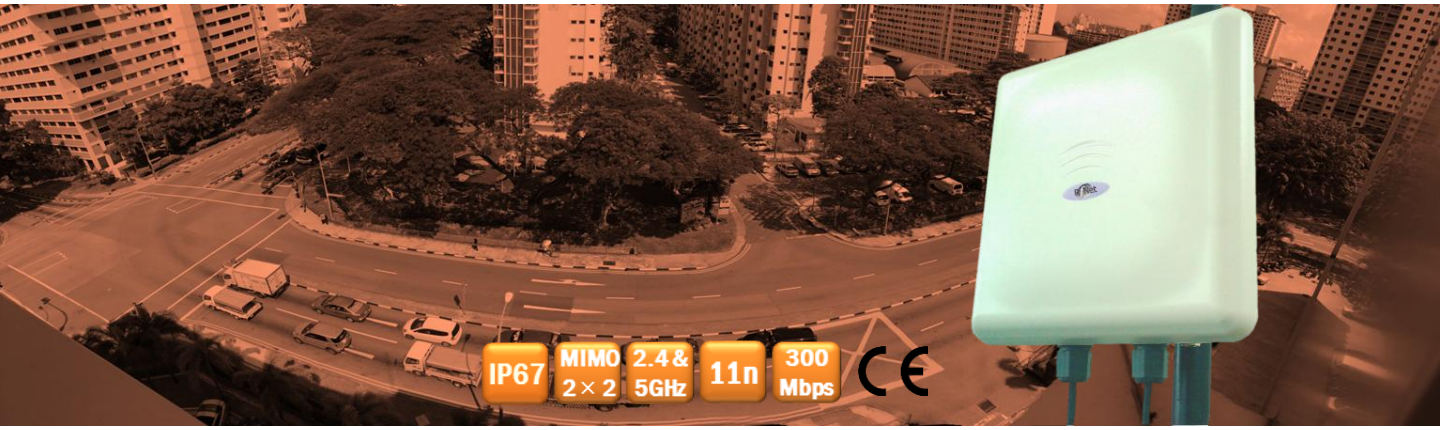
Professional Fixed Wireless IEEE802.11a/b/g/n

AP-5012N Series



Overview

The AP-5012N series is an industrial-grade wireless solution designed for operation in Access Point, Client (CPE), Repeater, or Sensor Access Point (sniffer) modes, supporting both point-to-point and point-to-multipoint applications. It features 2×2 MIMO technology with DSP-based signal processing to enhance signal-to-noise ratio and overall link quality.

The AP-5012N delivers high data rates of up to 300 Mbps with intelligent auto rate fallback and is based on the IEEE 802.11n standard, incorporating RFNet long-distance wireless profiling to dynamically optimise data rate, burst rate, and frame size for stable and reliable long-range wireless performance.

Key Features

- Up to 300Mbps, 2x2 MIMO Concurrent radios
- IEEE 802.11a/n (5GHz), n/j (4.9GHz), 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 GbE 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

Note:
STN[1]: Additional Certification For Railway Application (Such As Station)
2R[2]: With Dual Concurrent Radios

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[1] / AP-5012N-2E2N-STN-2R[2]

- 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.

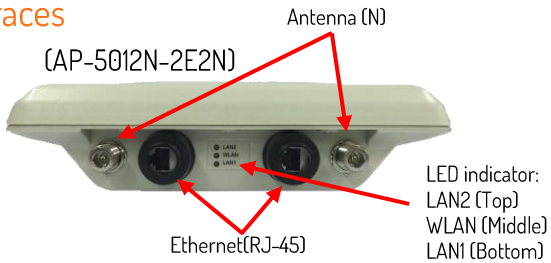
AP-5012N-1E1S-E

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

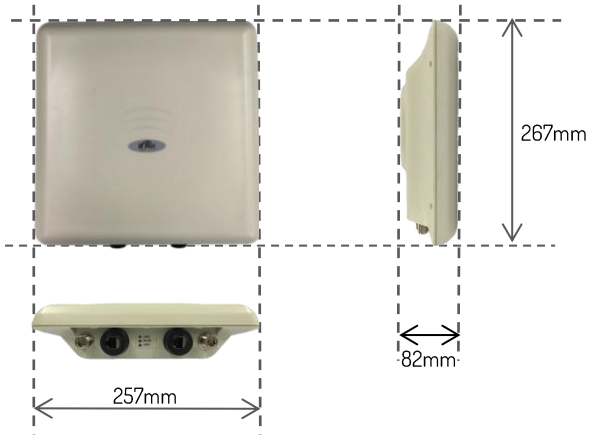
AP-5012N-1E1S-J

- One GLAN 11n/j AP/CPE integrated 16.69dBi antenna.
- Single LAN 10/100/1000 Base-T POE Port.

Interfaces



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-1E1S-J: 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	AP-5012N-1E, 1E2N, 2E2N: -35° C to +70° C AP-5012N-1E1S-J: -20° C to +55° C
Storage temperature	AP-5012N-1E, 1E2N, 2E2N: -40° C to +75° C AP-5012N-1E1S-J: -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	AP-5012N-1E, 1E2N, 2E2N: 1.2 kg AP-5012N-1E1S-J: 1.35kg
Power consumption	9 Watts maximum,
Compliant	AP-5012N-1E, 1E2N, 2E2N: CE, IDA, RoHS AP-5012N1E1S-J: MIC, JATE, IDA, RoHS
Mounting	Wall and Pole Mounting

Wireless

Wireless LAN Standards	IEEE 802.11a/b/g/n/j
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 IEEE 802.11n/j: 20MHz: 4920, 4940, 4960, 4980MHz; 40MHz: 4930, 4970MHz
Antenna Type	• AP5012-1E: Integrated 17dBi antenna • AP5012N-1E1S-J: Integrated 16.69dBi 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	• Support Dynamic Frequency Selection (DFS) and Transmit Power Control (TPC) on 5GHz • Transmit Power control up to Maximum 23dBm (for 1 radio, 5GHz), 16dBm (for 1 radio, 4.9GHz), 17dBm (for 1 radio, 2.4GHz) • Support IEEE802.11e, 802.11i and WMM • Support up to 64 concurrent clients in PTMP mode • Support 16 ESSID in Access Point mode (optional)
Data Rate	• 802.11b /g: 1,2,5.5,11,6,9,12,18,24,36,48 ,54Mbps • 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps • 802.11n / j: MCS0-7 up to 150Mbps • 802.11n: MCS 0-15 up to 300Mbps
Security	• WPA-PSK/WPA2-PSK (TKIP & AES) • WPA/WPA2 (TLS, TTLS & PEAP), • Static WEP up to 152 bits • MAC Address Control, • Wireless client to client isolation • Hidden ESSID

Management Function

Management	• Web management • SNMP V1, V2c & V3 management and SNMP trap • Event syslog • Time setting (Current time, time zone & NTP client) • Access Point monitoring (ping external device in client mode only)
Security	• IP filtering (Source IP & destination IP) • Port filtering (Source port & destination port) • Device administration access level – Normal user (monitoring and basic setting) – Super user (advance setting & firmware upgrade)
Network	• Prioritization of data type • Static and dynamic DHCP client • DHCP server • Broadcast, Multicast, PPPoE • Disabling Broadcast/Multicast to Non-WDS Station • Support VLAN tagging (IEEE 802.1q) and passthrough
Others	• Operating Voltage: Data 5V ; PoE 12~48V • Clamping Voltage: – Data, 7.5VDC – PoE, 53.3V DC Start, 77.4Vdc @ 10/1000uS; 100Vdc @ 8/20uS • Protection Mode: Common Mode, L-G • Response Time: <5nS • Over Current Limiter: – Holding Current: 300mA, – Trip Current, 600mA, auto recover. – Peak Pulse Current: 100A @ 10/1000uS • Inrush Current Protection

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RfNet
www.rfnetech.com

Access Point Certification For Railway Application

*** For AP-5012N-2E2N-STN[1] & AP-5012N-2E2N-STN-2R[2] Model Only***

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

Related Products



RFAnt-50GP-31
31dBi grid parabolic antenna



RFAnt-50DP-23
23dBi directional panel antenna



RF cable

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