Professional Fixed Wireless IEEE802.11ad

AP-60G3



Overview

The AP-60G3 is a specially designed industrial-grade Access Point, capable of providing gigabit Wi-Fi transmission at the 60GHz spectrum. It is developed based on the IEEE 802.11ad wireless networking standards, which allows for more bandwidth usage for data transmission at high data rates.

The AP-60G3 delivers a high data rate of 2.5Gbps, with throughput of up to 1.3Gbps at 500m. Enclosed in an IP67-rated casing, it is most suited for outdoor environment applications, while providing a stable and optimal wireless communication.

Product Features

Less Crowded, Unlicensed Band

The use of the unlicensed 60GHz band avoids the already crowded frequency of the 2.4GHz and 5GHz band. As there are not as many devices on the 60GHz band, incidents of interference are very low. This makes it easy to deploy a stable wireless system.

Beamforming Technology

The wireless transmission performance has been greatly enhanced through phased-array radio and beamforming algorithm which improves the gain and directionality. This results in a faster, more direct and reliable wireless connection.

High Throughput

Operating in the 60GHz band enables more accommodation of frequencies in the spectrum. This allows for data transmission with higher throughout. The AP-60G3 provides maximum throughput in the following scenario :

- Up to 1.8Gbps at 150m
- Up to 1.5Gbps at 300m
- Up to 1.3Gbps at 500m

Industrial-Grade Design, Weather Resistant

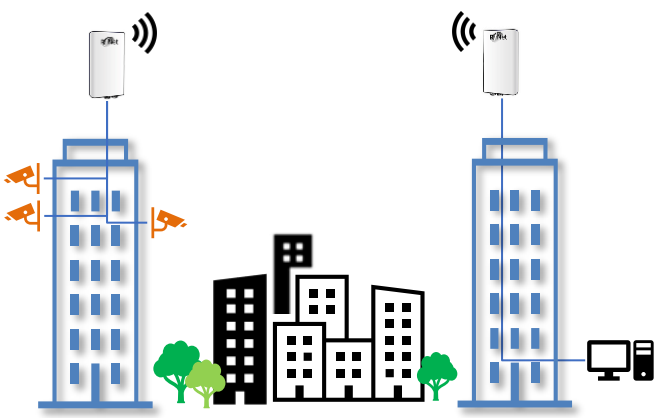
The AP-60G3 is housed in an industrial-grade casing that has an IP rating of 67. The casing is Dust-Tight (no ingress of dust), and is protected in water of up to 1m.

The AP-60G3 also encompasses port lightning protection, making it ideal to deploy in harsh climate conditions, typical of outdoor environment.

Applications

The AP-60G3 is designed for a wide range of applications which includes the following :

- Gigabit Wireless Backhaul (Similar To Wireless Air Fibre)
- Fixed Broadband Communication
- Point-To-Multipoint Wireless
- Wireless CCTV Surveillance
- Industrial Wireless Applications



AP-60G3 Technical Specification

Wireless

Wireless LAN Standards	IEEE 802.11 ad
Throughput*	• Up to 1.8 Gbps at 150m • Up to 1.5 Gbps at 300m • Up to 1.3 Gbps at 500m
Operating Frequencies	IEEE 802.11ad: 60GHz Unlicensed
Channel Bandwidth	Multiple 2.16GHz Channels: • Channel 1: 58.32GHz • Channel 2: 60.48GHz • Channel 3: 62.64 GHz • Channel 4: 64.80 GHz
Modulation & Coding Scheme	MCS 1-9
Transmission Range	Up to 500m
Antenna Type	Integrated Patch / Directional
Antenna Gain @ Channel 2	27dBi
3 dB Beamwidth	12° (both azimuth & elevation)
Over-The-Air RF Performance (TX) Peak EIRP @ Channel-2	Up to 38 dBm
Over-The-Air RF Performance (RX) (+/- 2dBm)	-68dBm @ MCS1 -63dBm @ MCS5 -59dBm @ MCS9
Operation Mode	Base / Terminal

General

Dimension LxWxH	288 x 150 x 68 mm
Weight	1.8kg (With Mounting Kit) 1.2kg (Without Mounting Kit)
Enclosure	Material: Outdoor ASA Stabilized Plastic
Mounting	Wall and Pole Mounting

Management Function

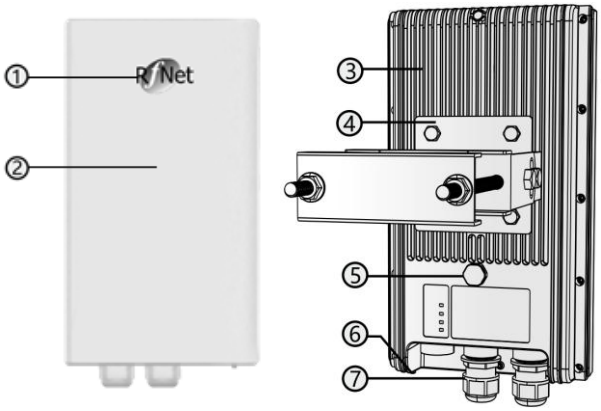
Management	• Web Management and TR-069 • Firmware Update By Web UI • System Log
Security	• 60GHz: WPA2-PSK encryption, • VPN (L2TP / PPTP), • Static IP Settings, • Basic WLAN Settings
Network	• VPN (L2TP/PPTP) • Static IP Settings • Basic WLAN Settings
System Tools & Monitoring	• Indicators: CPU, Memory • Monitoring: Throughput, Interfaces
Other System Optimizations	• Jumbo Packet Support (Up to 7,900 bytes) • Hardware Watchdog • Dual Flash Image Support

Interface

Power IN	• 48 V/0.5A Passive Gigabit PoE • IEEE802.3af PoE • DC Input (12V/3A)
Power consumption	15 Watts maximum
Interface	• 1x 2.5 GbE LAN Port (PoE In) • 1x Grounding Terminal • 1x Reset
LED	• 60G (Top) • ETH (Middle) • SYS (Bottom)

Environmental

IP Rating	IP67
Protection	• 15KV ESD Protection (Electrostatic Discharge) • 6KV Lightning Protection
Operating Temperature	-30° C to +60° C
Storage Temperature	-40° C to +70° C
Operating Humidity	10% ~ 90% max non-condensing
Storage Humidity	5% ~ 95% max non-condensing



Product Overview

① Logo
② Front-side Casing
③ Reverse-side Casing
④ Mounting Kit
⑤ Air Release Valve
⑥ Grounding Terminal
⑦ Waterproof Connector

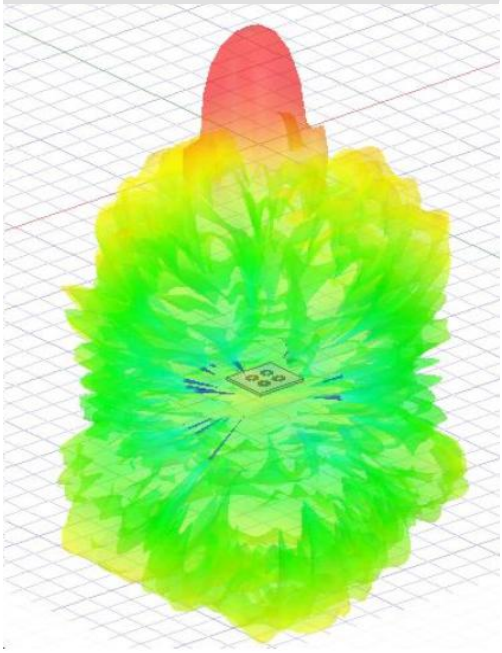
Standard Package

- One AP-60G3 Access Point Module
- Quick Installation Guide
- Pole Mounting Bracket Kit
- POE Injector(1 pcs)
- Safety Chain (1 pcs)

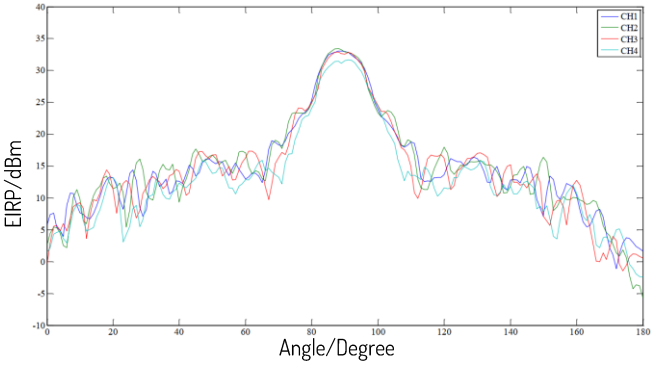
RfNet

Antenna Performance Parameter	
Horizontal Polarization	
3dB Beamwidth In E-Plane (Beam Steering)	12°
3dB Beamwidth In H-Plane (Beam Steering)	12°
Impedance Bandwidth	57GHz to 68GHz
Vertical Polarization	
3dB Beamwidth In E-Plane (Beam Steering)	12°
3dB Beamwidth In H-Plane (Beam Steering)	12°
Impedance Bandwidth	57GHz to 68GHz

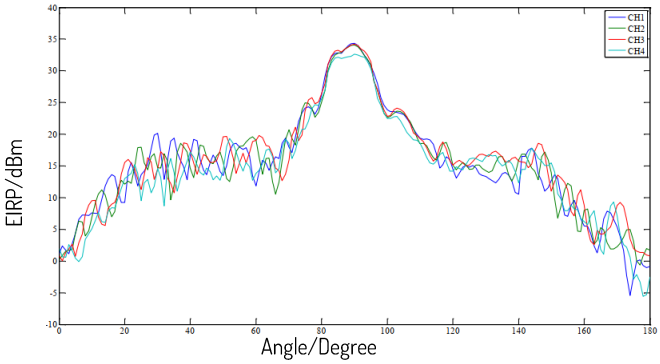
3D Radiation Pattern



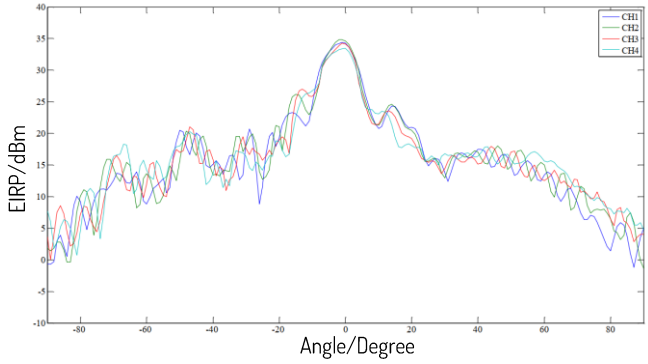
V Polarization H-Plane



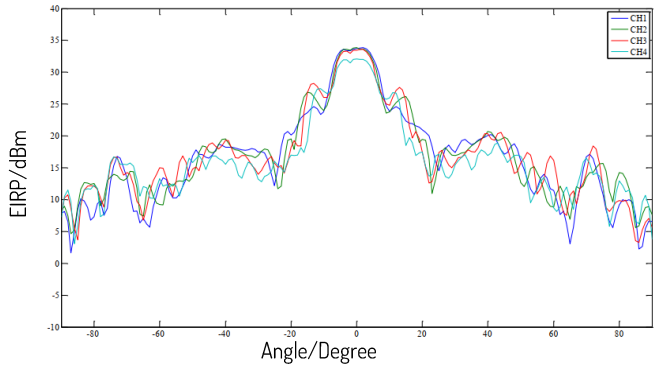
H Polarization V-Plane



V Polarization V-Plane



H Polarization H-Plane



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