

Broadband Outdoor Access Point

EOC655 Series



High-Performance Outdoor Connectivity

The EnGenius Broadband Outdoor EOC series is an excellent outdoor Point-to-Point (PtP) and Point-to-Multipoint (PtMP) solution, which is perfect for Internet Service Providers (ISPs) and Smart Cities. It comes equipped with dual 5GHz radios that deliver high-performance throughput, providing up to 2 Gbps in challenging Radio Frequency (RF) environments.

Simplified Setup and Configuration

The EnGenius EOC series incorporates a dedicated 2.4 GHz radio, which is paired with a user-friendly mobile app to simplify the setup and configuration of PtP and PtMP links. This integration facilitates easy antenna alignment and efficient troubleshooting, allowing for quick and effortless installation, even in challenging locations.

GPS Integration for Enhanced Network Management

Equipped with built-in GPS, the EOC series ensures precise device placement and effective network mapping. This is crucial for PtP/PtMP setups, asset management, and network integration through auto-discovery features.

Rugged Design and Advanced Security

The EOC series is a rugged outdoor system that is designed to withstand harsh environmental conditions. It comes with an IP67 rating for resilience and features a Dying Gasp module for detecting power failures. The system places a high priority on security by utilizing AES-256 encryption and providing optional FIPS-140-2 compliance for reliable and secure communication. With the SkyPoint NMS, you can enjoy comprehensive web-based monitoring and management, while auto-provisioning enables efficient large-scale deployments.

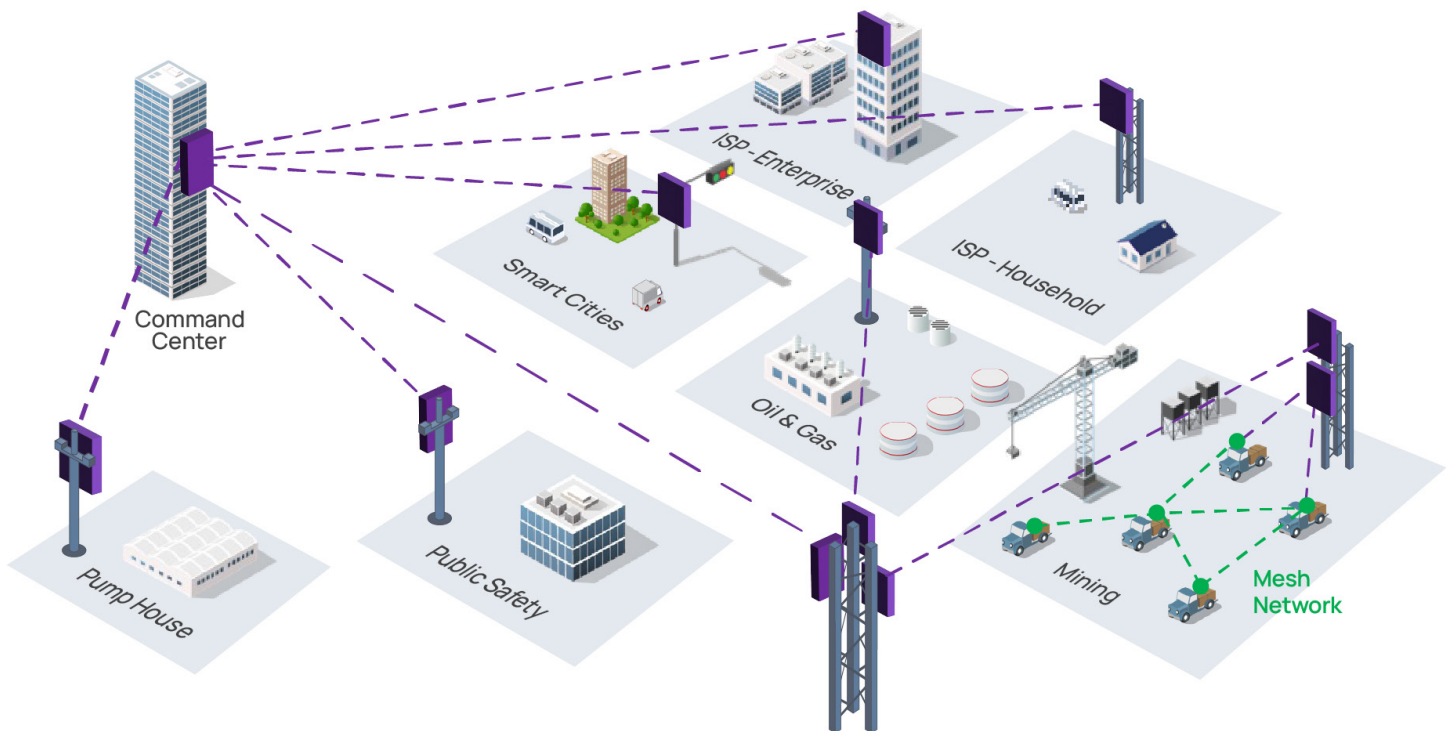
Intelligent Performance Management

The EOC series boasts intelligent RF and Quality of Service (QoS) management, which allows it to adapt to various conditions and ensure optimal performance for diverse ISP services. This product expertly blends high performance, simplified installation, and robust security, making it a perfect choice for reliable and efficient wireless connectivity in PtP/PtMP applications.

Features & Benefits

- **MAC Protocol:** Proprietary PtP and PtMP scheduler for outdoor dense RF deployments.
- **Mobile App Radio Tuning:** Integrates a 2.4 GHz radio with a mobile app for easy PtP/PtMP setup, efficient antenna alignment, and streamlined troubleshooting.
- **Enhanced Connectivity:** Employs 802.11ax technology with OFDMA, Beamforming, and MU-MIMO for improved throughput and coverage.
- **Dual 5GHz Radios:** Offers up to 2 Gbps link capacity, ideal for dual sector and repeater mode PtP and PtMP setups deployments, and supports up to 16 devices in PtMP setups.
- **Automatic RF Corrections:** Enhances network resilience by improving stability and reducing interruptions.
- **Quick Outage Response:** Features a Dying Gasp module for prompt alerts and response to power-related issues.
- **Dynamic Data Rates:** Adjusts transmission speeds based on signal quality for reliable and efficient connections.
- **Auto & Dynamic Channel Selection:** Automatically chooses optimal channels to avoid interference and enhance signal quality.

- **Superior QoS over RF Links:** Prioritizes critical traffic to ensure high service quality and better user experience.
- **Multi-Tenant Network Efficiency:** Utilizes VLAN, Q-in-Q, and filtering to manage multi-tenant networks effectively and reduce congestion.
- **Centralized NMS:** Offers a comprehensive web-based platform for network performance, health, and security management.
- **Auto Provisioning:** Streamlines large-scale network deployments with easy, centralized control.
- **Smart Network Mapping:** Built-in GPS enables auto-discovery and detailed network topology insights.
- **IP67-Rated Casing:** Ensures durability against harsh environmental conditions, prolonging device lifespan.
- **Uncompromised Security:** Ensures top-tier data protection with AES-256 encryption and optional FIPS-140-2 compliance.



EOC655 PtP/PtMP Deployment Applications Diagram

Technical Specifications

Broadband Outdoor Access Point		
Model Number	EOC655	EOC655-C18
Description	Outdoor 5GHz Dual Radio 2x2 Access Point with N-Type Connectors	Outdoor 5GHz Dual Radio 2x2 Access Point with 18dBi Panel Antenna
Chipset	Qualcomm Chipset - Dual Core CPU, ARM A53, 1.0 GHz	
Standards	IEEE 802.11ax on 5 GHz	
Memory	DDR3 1GB, Flash 32 MB, eMMC 8GB	
GPS	On board GPS with integrated Antenna, 1PPS pulse, GPS Synchronization	
Dying Gasp	40ms (Max)	
Thermal Sensor	To monitor board temperature	
Compass sensor (magnetometer)	Antenna Alignment	
Bluetooth*	For Radio Management	
Antenna	2x 2.4GHz: 3.5dBi (Integrated Omni-Directional) 2x 5GHz (Radio1): N-Type Connector 2x 5GHz (Radio2): N-Type Connector*	2x 2.4GHz: 3.5dBi (Integrated Omni-Directional) 2x 5GHz (Radio1): 18dBi Intergrated Panel Antenna 2x 5GHz (Radio2): N-Type Connector
External Antenna Connector Type	N-Type Female	
Physical Interfaces	1x 1G LAN-1 port (802.3at PoE) 1x 2.5G LAN-2 port (Proprietary PoE)	
Power Source	IEEE802.3at or Proprietary 48V/1A or Direct DC Input up-to 56V LAN2 Port	
Operation Modes	AP/STA Base Station (BSU), Subscriber (SU)	
Max Subscribers	16 per radio	
MAC Protocol	Proprietary polling based OFDMA Scheduling Protocol	
Frequency Bands	5.1 GHz - 5.9 GHz (Broadband Connectivity) 2.4 GHz / Bluetooth (Radio Management)	
Channel Bandwidth	20 / 40 / 80 / 160 MHz	
Channel Spacing	5 MHz	
Max Transmit Power	Up to 27 dBm (Combined)	
Dynamic Data Rate Selection (DDRS)	Automatically detect optimal data rate for given link	
Dynamic Channel Selection(DCS)	Selects optimal channel to operate to maintain SLAs (CIR & MIR)	
Auto Transmit Power Control (ATPC)	Automatically adapt the transmit power	
Interference Mitigation	Auto Channel Selection(ACS), Dynamic Channel Selection(DCS), Background Scan(BG Scan) features aid to adapt to varying RF medium	
Encryption	AES 256	

Technical Specifications

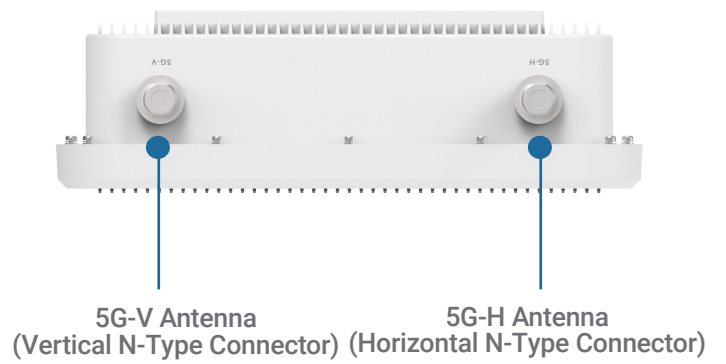
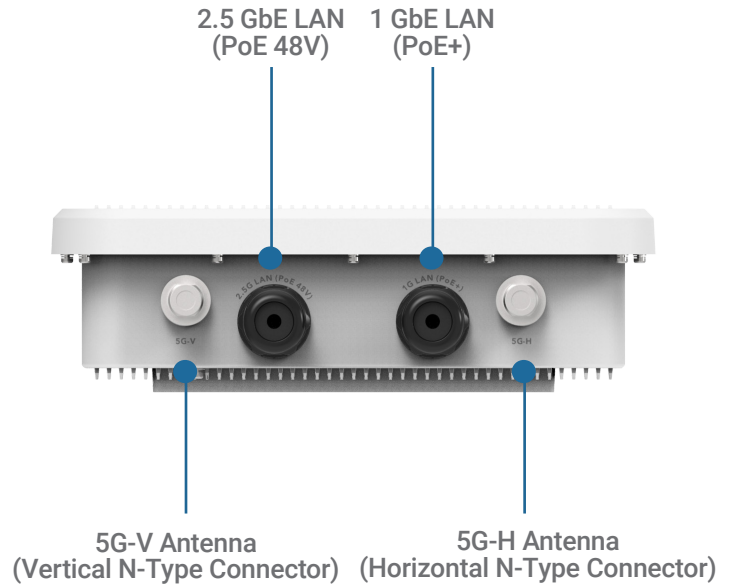
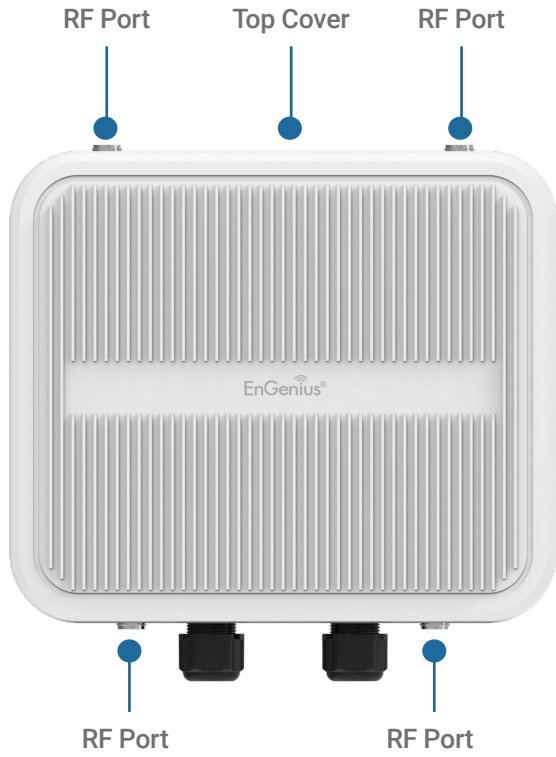
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Model Number	EOC655	EOC655-C18
Description	Outdoor 5GHz Dual Radio 2x2 Access Point with N-Type Connectors	Outdoor 5GHz Dual Radio 2x2 Access Point with 18dBi Panel Antenna
Spectrum Analyzer	Provides RF medium statistics	
Radio Chains	Dual 2x 2:2	
Supported Modulation	802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM	
Ethernet	1x GE PoE+ 1x 2.5GE Proprietary PoE	
Speed	10/100/1000/2500Mbps, Half/Full Duplex, Auto Negotiation	
Jumbo Frame	9K bytes	
PoE Source	Passive 48V/1A, 6KV Surge Protection	
Cable Length	STP Cat5e: MAX 130 meters FTP Cat6: MAX 180 meters	
Surge Protection	6KV Surge Protection on all Ethernet Ports	
Maximum Power Consumption	21W	
SNMP	v1, v2c, v3	
Authentication	Internal MAC Address Control List, Radius based Authentication	
Traffic Shaping	Downlink and Uplink traffic shaping	
Remote	SSH, Web, TFTP, HTTP, HTTPS, Syslog	
Smart Phone	Android & IOS based Application for Radio Management	
Antenna Alignment	Alignment aid provided via variable audible tone generation algorithm	
Operating Mode	Bridging	
IP Stack	IPv4, IPv6	
VLAN Tagging	802.1Q: Transparent, Access, Trunk, Q-in-Q	
Gateway Features	DHCP Server	
MAC-in-MAC	To improve the multicast traffic performance, IGMP Snooping	
Ethernet-OAM	Fault Link Management	
Packet Filtering	MAC, IP, Protocol, Port	
NTP Server	Stratum 1 NTP Server using GPS – less than 1msec accuracy	
Asymmetric Bandwidth Control	Asymmetric UL/DL committed and maximum information rate per Service Flow	
Packet Classification Capabilities	802.1p priority, IPTOS, VLAN ID, IP addresses, ports, Ethernet addresses, IP protocol, and Ether Type. Support maximum 4 SFC's with maximum 32 PIR's	
Scheduling	Real Time priority-based services	

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Description	Outdoor 5GHz Dual Radio 2x2 Access Point with N-Type Connectors	Outdoor 5GHz Dual Radio 2x2 Access Point with 18dBi Panel Antenna
Temperature Range	Operation: -10°C to +60°C / -14°F to +140°F Storage: -30°C to +80°C / -22°F to +176°F	
Humidity (Non-condensing)	Operating: 90% or less Storage: 90% or less	
IP Rating(Outdoor only)	IP67	
Wind loading	200Kmph	
ESD Protection(Outdoor only)	Contact: 4KV Air: 8KV	
Weight	2.02 kgs / 4.45 lbs	1.91 kgs / 4.21 lbs
Dimensions	267x227x82mm 267*258.1*82mm (w/n-type & cable gland)	267x227x82mm 267*255.1*82mm (w/n-type & cable gland)
Package Contents	1 – Outdoor Access Point 1 – Pole-Mounting Brackets 1 – PoE Injector with AC Power Cable 1 – Ethernet Cable Cat5e 1.5 mts 1 – Grounding Cable 1.8 mts	
Safety Compliance	CB	
WEEE	Yes	
RoHS	Yes	
Regulatory Compliance	FCC	
MTBF	100K hours	

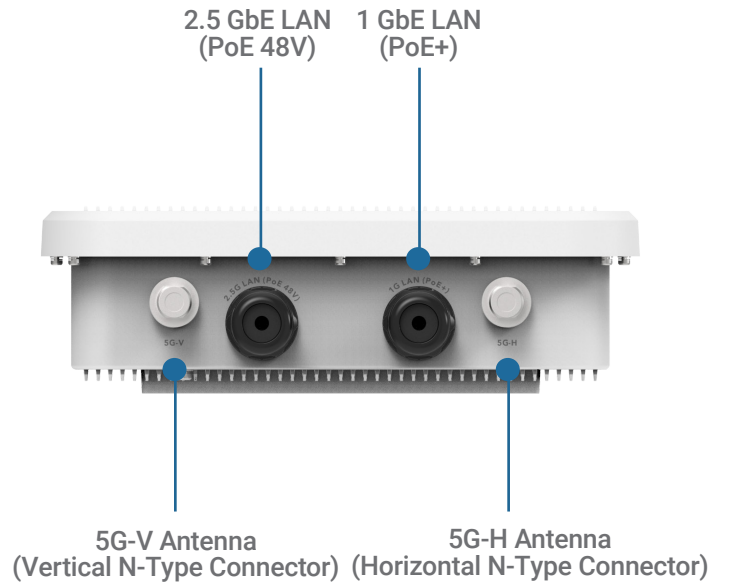
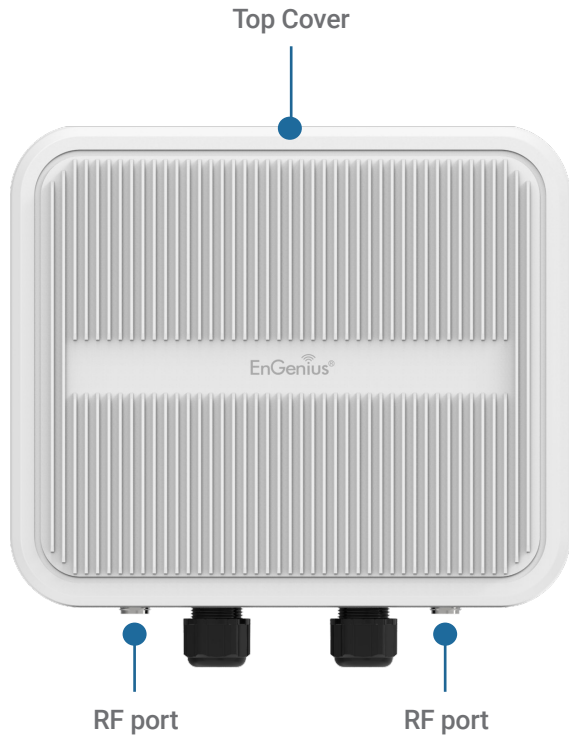
Product Views

EOC655



Product Views

EOC655-C18

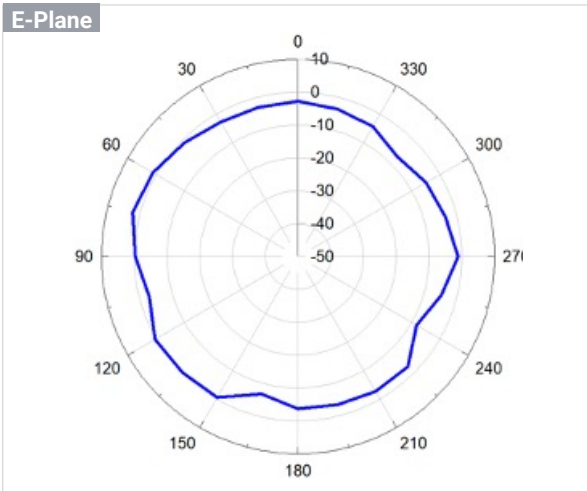


Antenna Patterns

EOC655 & EOC655-C18

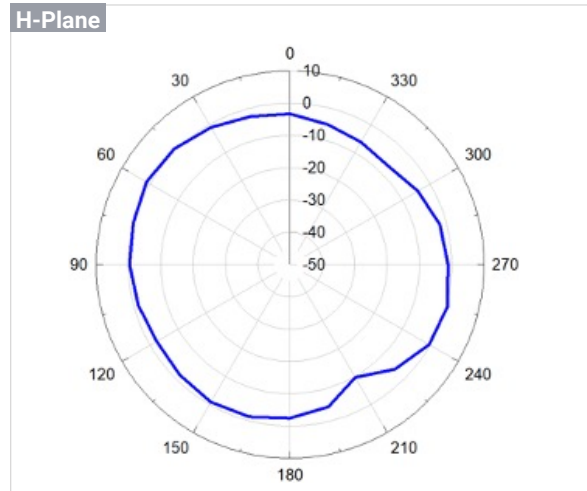
2.4GHz

E-Plane



2.4GHz

H-Plane

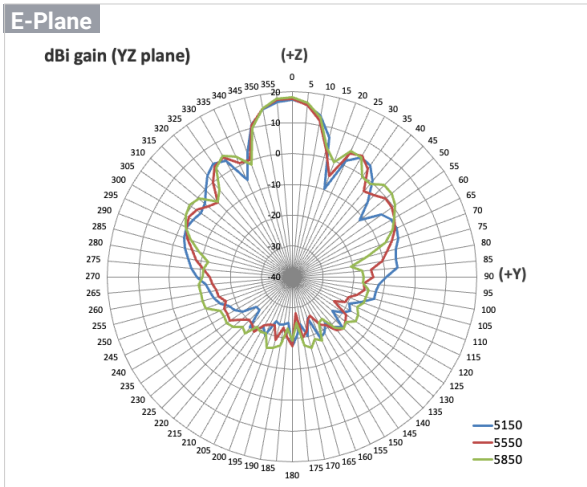


Antenna Patterns

EOC655-C18

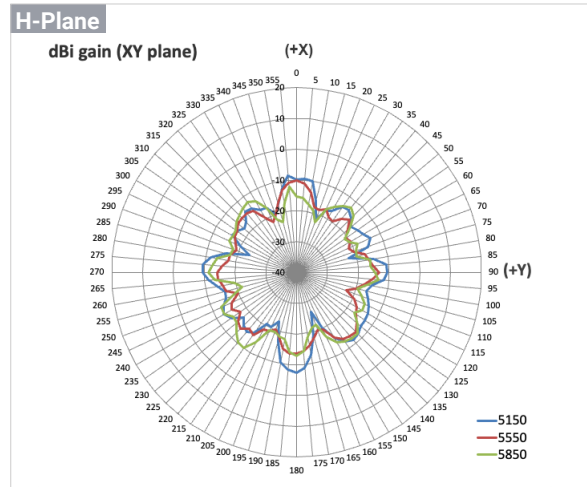
5GHz

E-Plane



5GHz

H-Plane



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Version 1.3 05152024