

Highway 9 Outdoor 5G Access Point

Cloud-Managed, AI-Ready Outdoor 5G Access for Enterprise Private Networks

Introduction

The Highway 9 Outdoor Access Point provides the outdoor access layer for the Highway 9 Mobile Cloud platform, delivering secure, high-performance 5G connectivity for enterprise private wireless networks. Designed for seamless integration into enterprise IT environments, it supports zero-touch provisioning, an integrated CBRS Domain Proxy, enterprise-grade security, and integration with major 5G core platforms.

Built for demanding outdoor environments, the Outdoor Access Point enables reliable connectivity for connected workers, industrial IoT, autonomous mobile robots (AMRs), connected vehicles, HD video analytics, and other mission-critical applications across manufacturing, logistics, ports, utilities, government, campuses, and smart infrastructure deployments.

Key Enterprise Benefits

- Zero-touch deployment through Highway 9 Mobile Cloud
- Cloud-based operations with centralized management
- Extends enterprise connectivity beyond the LAN
- Support for private spectrum and CBRS deployments
- Enterprise security with SIM-based authentication and encrypted communications
- Optimized for Industry 4.0 and critical infrastructure applications

Product Description

Like a Wi-Fi access point, the Highway 9 Outdoor Access Point integrates seamlessly into existing enterprise IT environments using Power-over-Ethernet (PoE++) or fibre connectivity and zero-touch provisioning, enabling rapid deployment without specialized cellular expertise. The unit features 4x4 MIMO, multi-band 5G NR operation, integrated high-gain directional antennas, external antenna ports, and up to 55 dBm maximum EIRP, providing reliable long-range outdoor coverage across enterprise and industrial environments.

Working in concert with Highway 9 Mobile Edge, the Outdoor Access Point keeps user and control traffic local to the secure enterprise network while supporting highly available deployment topologies. Highway 9 Mobile Center provides centralized cloud management, AI-powered diagnostics, firmware upgrades, telemetry, parameter optimization, and lifecycle automation across the deployment.



4T4R GEN 2 MIMO	IP67 WEATHERPROOF	128 ACTIVE UEs	<170W POWER DRAW
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Key Capabilities

- Multi-band 5G NR support (n48, n77, n78, n79)
- 4x4 DL/UL MIMO with carrier aggregation and up to 256QAM modulation
- IP67-rated enclosure for harsh outdoor deployments
- Integrated CBRS Domain Proxy and 5G RedCap support
- AI-powered diagnostics and lifecycle management through Highway 9 Mobile Center
- High-gain directional antennas with external antenna support
- Enterprise-grade security with mutual authentication, IPsec tunnels, encrypted communications, and granular RAN management

Radio Specifications

Radio Type	5G Outdoor Enterprise All-in-One Access Point
Bands	n48 (3550–3700 MHz, CBRS) · n78 (3420–3800 MHz) · n77 (3700–4200 MHz) · n79 (4600–5000 MHz)
MIMO	4x4 DL/UL MIMO
Carrier Aggregation	DL/UL 2CA (40+40, 20+20, 20+10, 10+10 MHz and more); upgradeable to 3CA
Modulation	Up to 256QAM DL/UL

Channel Bandwidth	n48: 10/20/30/40 MHz · n77/n78: 10–100 MHz in 10 MHz steps
Instantaneous Bandwidth	IBW 400 MHz / OBW 200 MHz
Tx Output Power	Up to 37 dBm (5 W) per antenna port; max 55 dBm EIRP
Antenna	4 x 12 dBi internal directional antennas (65°±6° horizontal / 22°±3° vertical); 4 x external Nex10 5G ports; 1 x external N-type GPS port
Timing	PTP (IEEE 1588v2, G8275.1/G8275.2); GNSS holdover up to 4 hours
Capacity	128 active UEs
Compute Platform	Qualcomm FSM20056 + NXP LX2160A
Throughput (typical)	40 MHz 8:2: 611 Mbps DL / 71 Mbps UL · 100 MHz 4:1: 1566 Mbps DL / 193 Mbps UL
Latency	< 10 ms (ping RTT to 5G core), < 15 ms end-to-end

Network Interfaces & Power

Interfaces	10GE with PoE++ (IEEE 802.3bt Class 8) · 10 Gbps SFP (fiber) · additional 10GE port for daisy-chaining · 1GE for LAN management
Power Supply	DC input: -48V @ 6A · AC input: 100–240V 50/60Hz, 8A max
Power Consumption	< 170 W

Physical & Environmental

Dimensions	444 x 274 x 157 mm
Weight	< 15 kg
Mounting	Pole mount
Operating Environment	Temperature: -40°C to 50°C · Humidity: 5%–95%, non-condensing
Storage Environment	Temperature: -40°C to 60°C · Humidity: 5%–95%, non-condensing
Ingress Protection	IP67
Wind Resistance	200 km/h
Reliability (MTBF)	370,000 hours @ 25°C · 190,000 hours @ 60°C

Compliance & Certification

- FCC Part 96 Category B CBSD
- CE, UL
- Trade Agreements Act (TAA) compliant; RoHS compliant
- Manufactured to ISO 9001:2015, TL 9000, ISO 14001, OHSAS 18001, and ESD 20.20 quality standards

Ordering Information

H9P-AP-O5-M5	Outdoor Sub-6 GHz Access Point
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Why Highway 9?

Highway 9 enables organizations to extend secure private 5G connectivity beyond the enterprise LAN to campuses, ports, logistics facilities, utilities, and manufacturing sites. With cloud-native management, zero-touch deployment, and AI-powered operations, enterprises can rapidly deploy and scale resilient outdoor wireless infrastructure.

Contact sales@highway9.com for more information or to place an order.