

Highway 9 Indoor 5G Access Point

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

Introduction

The Highway 9 Indoor Access Point provides the indoor 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 cores.

Built for enterprise private deployments, the Indoor Access Point enables reliable connectivity for connected workers, industrial IoT, autonomous mobile robots (AMRs), HD video analytics, and other business-critical applications across manufacturing, logistics, healthcare, education, government, commercial real estate and smart campuses.

Key Enterprise Benefits

- Zero-touch deployment through Highway 9 Mobile Cloud
- Cloud-based operations with centralized management
- Extends enterprise LAN with secure private cellular connectivity
- Support for private spectrum and CBRS deployments
- Enterprise security with SIM-based authentication and encrypted communications
- Optimized for enterprise IT, IoT, and Industry 4.0 applications

Product Description

Like a Wi-Fi access point, the Highway 9 Indoor Access Point integrates seamlessly into existing enterprise IT environments using standard Power-over-Ethernet (PoE++) infrastructure and zero-touch provisioning, enabling rapid deployment without specialized cellular expertise. The unit features 4x4 MIMO, dual-band operation, integrated quasi-omnidirectional antennas (4 × 5 dBi), external antenna ports, and up to 35 dBm maximum EIRP per carrier to deliver robust indoor coverage and capacity.



The Indoor Access Point is optimized for enterprise indoor environments where reliable coverage, predictable capacity, and simplified operations are critical. Integrated with Highway 9 Mobile Edge, it helps keep user traffic local to the enterprise network while supporting highly available deployment topologies.

Managed through Highway 9 Mobile Center, the platform provides centralized cloud management, AI-powered diagnostics, telemetry, automated software updates, parameter optimization, and lifecycle automation to simplify the deployment and operation of enterprise private wireless networks.

4T4R GEN 2 MIMO	500 UEs (300 ACTIVE)	<70W POWER DRAW	35 dBm MAX EIRP
---------------------------	--------------------------------	------------------------------	---------------------------

Key Capabilities

- Industry 4.0-ready 3GPP Release 16 5G Standalone architecture for industrial automation, AMRs, and real-time applications
- Multi-band 5G NR support with software-selectable n48, n77, and n78 operation
- 4x4 DL/UL MIMO with carrier aggregation and up to 256QAM modulation
- Integrated CBRS Domain Proxy and 5G RedCap support
- AI-powered diagnostics and lifecycle management through Highway 9 Mobile Center
- Passive thermal design for quiet, fanless operation
- Enterprise-grade security with mutual authentication, multiple IPSec tunnels, encrypted communications, and granular RAN management

Radio Specifications

Radio Type	5G Indoor Enterprise All-in-One Access Point
Bands	n48 (3550–3700 MHz, CBRS) · n78 (3450–3800 MHz) · n77 (3450–3980 MHz) — software switchable
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	4 x 250 mW (24 dBm); max 35 dBm EIRP
Antenna	4 x 5 dBi internal quasi-omni (single sector); 4 x external 5G antenna ports (SMA); 1 x GPS antenna port (SMA)
Timing	PTP (IEEE 1588v2, G8275.1/G8275.2); GNSS holdover up to 4 hours
Capacity	500 UEs registered, 300 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)

Network Interfaces & Power

Interfaces	1 x 10GE with PoE++ (IEEE 802.3bt Class 8) · 1 x 10G SFP+ (fiber) · 1 x 10GE (WAN selectable)
Power Supply	PoE++ (IEEE 802.3bt Class 8) or 12V DC input
Power Consumption	< 70 W

Physical & Environmental

Dimensions	251 x 251 x 83 mm
Weight	4.5 kg
Mounting	Solid ceiling, solid wall, or drop-ceiling with bracket
Operating Environment	Temperature: -5°C to 40°C · Humidity: 5%–90% RH, non-condensing
Storage Environment	Temperature: 0°C to 40°C · Humidity: 5%–90% RH, non-condensing
Ingress Protection	IP40
Reliability (MTBF)	370,000 hours @ 25°C · 270,000 hours @ 40°C

Compliance & Certification

- FCC Part 96 Category A CBSD
- CE, IC, 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-I5-M4	Indoor Sub-6 GHz Access Point
---------------------	-------------------------------

Why Highway 9?

Highway 9 delivers cloud-native private wireless that simplifies enterprise connectivity — combining AI-powered operations, centralized management, and carrier-grade reliability to help organizations deploy and scale secure private cellular networks across manufacturing, logistics, healthcare, education, utilities, government, and commercial environments.

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