

Carrier-Grade Wi-Fi Solutions

Wi-Fi Solutions



As far as Wi-Fi can go



Alvarion's Carrier-grade Wi-Fi Solution



Two-way Beamforming 802.11n

Alvarion's technology combines Tx and Rx spatially adaptive Beamforming 802.11n and 3x3:3 MIMO for optimal coverage and capacity. The true spatially adaptive Beamforming technology leverages a unique High Gain Diversely Polarized (HGDP) antenna array for maximum performance. The Beamforming significantly increases the link gain and interference immunity. With 3x3 MIMO and three spatial data streams, Alvarion's Wi-Fi base stations set up a new market milestone delivering up to gigabit per second capacity and 450 Mbps data speeds.

Interference Immunity Suite

Alvarion's Interference Immunity Suite combines the Beamforming inherent ability to suppress interference, the Dynamic Interference Handling (DIH) algorithm for continuous receiver parameter optimization according to noise level, Automatic Channel Selection (ACS) algorithm for optimal selection of the best operating channel, Automatic Rate Adaptation (WARA) for optimal rate selection for any environment, and Down Tilted Antennas (DTA) and sector antennas capability to reject interference out of the antenna field-of-view.

Multi-band Access

Simultaneous 2.4 and 5 GHz bands support for access services, addressing the growing usage of 5 GHz in handheld devices and laptops.

Carrier-grade Wi-Fi

WBSn outdoor base stations are IP-68 rated for robust operation, even in extreme weather conditions. Leveraging over 15 years of wireless experience with numerous operators worldwide, Alvarion's technology includes a rich set of features for a flexible service offering and back office integration.

Technology Benefits

- Extended Coverage and NLOS Operation with up to three times the coverage as compared to conventional Wi-Fi products, with homogenous coverage, even in NLOS conditions
- Enhanced capacity and throughput with more users per node and better QoS
- Indoor penetration, connecting indoor users from outdoor base stations
- Optimal Return on Investment (ROI) with fewer sites per sq-km, high network reliability and enhanced quality of service. WBSn may provide up to 50% savings in CAPEX and OPEX and a faster ROI

Markets and Applications



Mobile Data Offloading and Hotspots



Hotels and Resorts



Residential and Business



Malls and Large Retail Stores



Wi-Fi Wholesale



Hospitals



Managed Wi-Fi Services



Industrial Areas



Rural Broadband



Smart Cities



Campus Coverage



Smart Utilities

Complete Solution

Alvarion's carrier-grade Wi-Fi solution is a complete family of products including access, backhauling, CPEs, service management and element management tools. Alvarion's Wi-Fi solution enables constructing scalable Wi-Fi networks with Quality of Service (QoS), security and high service reliability. Alvarion's Wi-Fi solution is future-ready for the Wi-Fi Certified Passpoint™ certification to enable seamless Wi-Fi® access in hotspots, and includes a rich set of networking features for core integration into fixed and cellular networks.



Alvarion's Complete Carrier-grade Wi-Fi Solution

Access Network

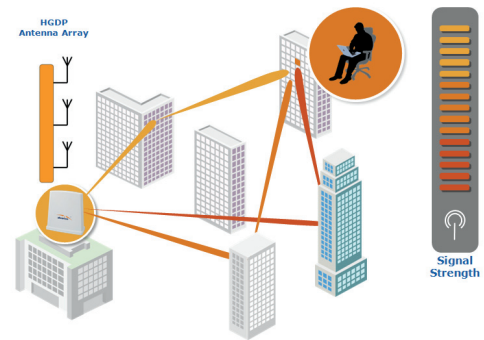
At the Core of Alvarion's Wi-Fi solution is WBSn, a family of advanced carrier-grade Wi-Fi base stations with unique two-way Beamforming 802.11n, outstanding interference immunity and 3x3:3 MIMO. With powerful 2.4 and 5 GHz radios, WBSn delivers up to one gigabit capacity and robust connectivity in challenging conditions of interference, Non-Line-of-Sight (NLOS) and outdoor-to-indoor penetration. For back office integration and numerous service plans, WBSn includes a rich set of features including an optional built-in Access Controller for efficient service level enforcement at the Wi-Fi base station. The WBSn family includes indoor Wi-Fi base stations, and outdoor IP-68 rated base stations for operation in extreme weather conditions. The WBSn family is environmentally friendly with low power consumption, ideal for off-grid powering, and complies with green standards. The WBSn family enables service providers to deliver the QoS end users expect and facilitates a faster ROI with minimum number of base station sites per any given area.

Indoor and outdoor CPEs

Alvarion's Wi-Fi solution includes indoor and outdoor 802.11n Wi-Fi CPEs, in both 2.4 and 5 GHz for numerous applications such as residential access, SME access, rural connectivity, video surveillance, as well as backhauling for cellular micro cells and Wi-Fi access. Alvarion Wi-Fi CPEs include a USB adaptor in 2.4 GHz for laptop users extended reach, dual zone (DZ) repeater CPE in 2.4 GHz for residential/SOHO broadband connectivity, and outdoor CPEs in 2.4 and 5 GHz. Alvarion's Wi-Fi CPEs are easy to install and to configure, and are designed to ensure quality of service.

Backhaul

Alvarion Wi-Fi supports Mesh with self-healing, Point-to-Point (PtP) and Point-to-Multi-Point (PTMP) topologies. In mesh topologies, powerful 5 GHz radios are used with Beamforming 11n, and MIMO for high capacity backhauling in metro areas addressing NLOS and high-level of noise. For PtP and PtMP topologies, Alvarion's outdoor Wi-Fi CPEs are used in 2.4 and 5 GHz bands, providing connectivity for up to 15 km*. *Subject to regulation and environmental conditions



WavioNet - Network Management

WavioNet is a comprehensive, carrier-grade Network Management System (NMS) enabling operators to effectively control and monitor their Wi-Fi network. WavioNet supports various network operation and control activities and allows day-to-day monitoring, as well as planning network expansions.

WCC-1000 W-Fi Cloud Control

The WCC-1000 is a centralized control point of the Wi-Fi cloud and a mediation device between the operator's control core and the Wi-Fi infrastructure, hiding the Wi-Fi access-specific complexities from operator's core network. WCC-1000 main functions include AAA gateway, Rogue AP prevention, zero-touch provisioning, mobility management and Passpoint (Hotspot 2.0) gateway.

Wi-Fi Service-Pro (WSP)

A comprehensive OSS/BSS service management solution for broadband wireless providers, based on three components: a RADIUS server, a payments management module, and an access controller. It offers a wide range of capabilities including subscriber management, bandwidth management, billing, service plans and captive portals.

Wi-Fi Coverage Tool (WCT)

The WCT is an easy to use tool for Wi-Fi field testing, supporting both point measurements and drive tests. WCT allows walking or driving in an area while recording locations and actual throughputs. The results are then uploaded on Google Earth maps for analysis.

Complete Wi-Fi Solution



2400

WBSn-2400-S

Sector base station, operating in the 2.4 GHz band

2450

WBSn-2450-S

Sector base station, operating in 2.4 and 5 GHz bands simultaneously



2400

WBSn-2400-O

Omni base station, operating in the 2.4 GHz band

2450

WBSn-2450-O

Omni base station, operating in 2.4 and 5 GHz bands simultaneously



2450

WBSn-2450-OS, WBSn-2450-SO

Omni base station in 2.4 GHz with Sector base station in 5 GHz, and Sector in 2.4 GHz with Omni in 5 GHz



2450

WBSn-2450-I

Indoor base station, operating in 2.4 and 5 GHz band simultaneously



2400

WCPEn-2400-I, Dual-Zone CPE

Indoor 2.4 GHz repeater which connects to outdoor WBSn base stations and provides indoor access through both Wi-Fi and Ethernet



2400

WCPEn-2400-U, USB Adapter CPE

High-end 2.4 GHz Wi-Fi 802.11n 1x1 MIMO USB CPE with high power and a 5 dBi high gain antenna



2400

WCPEn-2400-O, Outdoor CPE

2.4 GHz 802.11n 2x2 outdoor CPE with high power and dual polarization directional 12 dBi antenna

5000

WCPEn-5000-O, Outdoor CPE

5 GHz 802.11n 2x2 outdoor CPE with high power and dual polarization directional 14 dBi antenna



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