Altai A8in (ac) Super WiFi Base Station

All-in-One 802.11ac Large Area Omni

Altai A8in (ac) Super WiFi Base Station

The world's leading 802.11ac WiFi outdoor access point with integrated base station, antennas and RF cabling optimized for long range 360-degree access coverage and with the highest possible throughput using a minimum number of installation sites. It is the A8in model with the 5 GHz radio upgraded to 802.11a/n/ac standards.

One of the benefits of A8in (ac) is its simple installation design – the RF cabling work is no longer necessary; no extra installation is required.

The A8in (ac) is a multi-radio base station utilizing 8x8 MIMO smart antenna technologies and a patented signal processing algorithm to provide the industry's best coverage per base station, especially in non-line-of sight (NLOS) environments. Using up to 80% fewer access points than standard Wi-Fi systems to cover the same area enables less complex network design.

Super Long Range and High Throughput Coverage

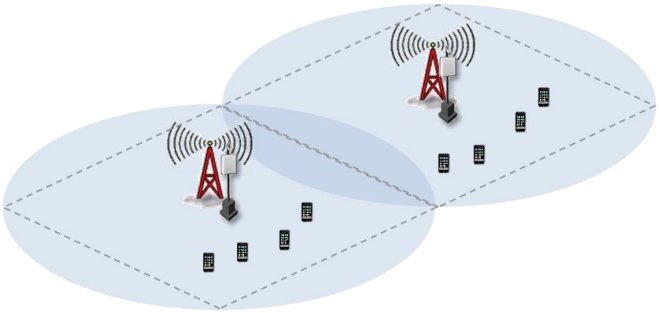
Max. LOS CPE	2.7 km (2.4 GHz) 1.7 km (5 GHz)
Max. LOS Smartphones	1 km (2.4 GHz) 900 m (5 GHz)
Max. LOS Backhaul	30 km (5 GHz)
Max. Data Rate	300 + 867 Mbps

Altai A8in (ac) for Wireless Broadband

The Altai A8in (ac) serves as last mile infrastructure for a wide range of wireless broadband access applications. It provides low deployment cost and fast provisioning of Wi-Fi systems with the greatest coverage and bandwidth per installed base station.

Altai A8in (ac) for Super 3G/4G Offload

The A8in (ac) Super WiFi Base Station can be deployed in conjunction with existing 3G mobile networks to provide low cost high bandwidth mobile data offloading solution. The A8in (ac) can be co-located with existing 3G cell sites allowing immediate Wi-Fi provisioning.



Co-locate A8in (ac) with existing 3G/LTE cell site to offload traffic for an almost identical cell area.

As an integral part of our Super WiFi network infrastructure, key benefits of the Altai A8in (ac) include:

- Base station and antenna in one integrated unit, eliminating RF cabling work. Simple installation at rooftop, lamppost, tower, wall and indoor environments
- High 11ac throughput capacity up to 1,167 Mbps data rate
- Extended coverage in a Non-Line-of-Sight (NLOS) environment which matches the foot print of most 3G deployments in dense urban environments
- Multi-beam 8x8:2 MIMO Smart Antenna Technology to provide superior signal strength and link budget in dense urban environment deployments
- 2.4 GHz and 5 GHz dual band concurrent access
- Backhaul redundancy and access link safe mode
- Adaptive interference control mitigates the influence from surrounding interfering sources
- Standard 802.11b/g/n access and 802.11a/n/ac access/ backhaul
- Giga Ethernet or integrated 802.11a/n/ac wireless backhaul
- Remote configuration through the Altai Wireless Management System (AWMS) or AltaiCare network management solution

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Wireless Interfaces

802.11b/g/n (8x8:2) Radio

- Operating Mode: Access Point
- Standard: IEEE 802.11b/g/n
- Operating Frequency: 2.400 – 2.484 GHz (Ch 1-13)
- Transmit Power: 27 dBm (Max.); 5 – 24 dBm (Per Chain) in 1 dB step
- Receiver Sensitivity (Typical)

802.11b	11 Mbps	-90 dBm;	1 Mbps	-95 dBm
802.11g	54 Mbps	-80 dBm;	6 Mbps	-93 dBm
802.11n	HT20	-94 dBm;	HT40	-89 dBm

- 8 Built-in Antennas
- Interference Mitigation

802.11a/n/ac (2x2:2) Radio

- Operating Mode: AP/Bridge/Repeater
- Standard: IEEE 802.11a/n/ac
- Operating Frequency: 5.150 – 5.350 GHz; 5.470 – 5.725 GHz; 5.725 – 5.850 GHz
- Transmit Power: 29 dBm (Max.); 26 dBm (Per Chain)
- Receiver Sensitivity (Typical)

802.11a	54 Mbps	-79 dBm;	6 Mbps	-92 dBm
802.11n	HT20	-92 dBm;	HT40	-89 dBm
802.11ac	VHT20	-92 dBm;	VHT40	-89 dBm
	VHT80	-87 dBm		

For both 2.4 and 5 GHz

- 32 SSID (16 SSID per Radio)
- WMM, 802.11h, 802.11k, 802.11r, 802.11v, 802.11w
- Passpoint (Release 2)
- Fast Roaming
- Band Steering
- Dual Radio Redundancy
- 1+ N Redundancy
- Auto Channel Selection and TX Power Control
- Bandwidth Control Per SSID/Client
- Altai *AirFi*™ Throughput Optimization

Antennas

2.4 GHz Antenna

- Built-in Antenna: 14 dBi (Max.) Omni
- Frequency: 2.4 – 2.5 GHz
- Polarization: Dual Slant ±45°
- Horizontal Beamwidth: 360° (-3 dB, Overall)
- Vertical Beamwidth: 14° (-3 dB)
- Fixed Down Tilt: 5.5°

5 GHz Antenna (Optional Accessories)

- External Antenna: 20 dBi Panel/9 dBi Omni/ 16 dBi 100° Sector
- Antenna Port: 2 x N-Female

Network

- Switch (Bridge) and Gateway Mode
- IPv4/IPv6 Dual-Stack
- NAT
- DHCP Client/Server
- PPPoE Client
- Soft-GRE
- VLAN
- Multicast Rate Filter/IGMP Snooping

Security

- Authentication – Open, Shared key, WPA/WPA-PSK, WPA2/WPA2-PSK, WPA3*, 802.1x (EAP-PEAP/TLS/TTLS/SIM/AKA)
- Encryption – WEP, TKIP, AES
- Inter/Intra-SSID Client Isolation
- MAC-based Access Control (White/Black List)
- RADIUS/Active directory
- Dynamic VLAN Assignment
- Firewall
- WIDS/WIPS
- Broadcast/Multicast/Unicast Flooding Control

Management

- Management Platforms: AltaiGate, AltaiCare, AtlaiCare Appliance
- Web User Interface
- Command Line Interface (SSH)
- Remote Factory Reset
- Trusted Management IP List
- SNMP v1/v2c /v3
- MIB2/IF-MIB/Altai Enterprise MIB
- Syslog
- Spectral Analysis*
- KPI Monitoring*
- Client OS and Hostname Detection

Physical Specifications

- Dimension: 455 x 431 x 163 mm
- Weight: 8 kg (Unit Weight); 10.5 kg (Gross Weight)
- Mounting: Pole or Wall-mounted
- Network Interface: 10/100/1000 Mbps Ethernet Port

Power

- Power Supply: 56 VDC Passive PoE PD
- Power Consumption: 30 W (Typical)/60 W (Max.)

Environmental Specifications

- Operating Temperature: -40 °C to +60 °C (Ambient)
- Storage Temperature: -40 °C to +85 °C
- Humidity: 5 to100% (Condensing)
- Lightning Protection: EN 61000-4-5
- Wind Loading: Up to 216 km/h (134 mph)
- Weatherproof: IP67 Compliant

Certifications

- FCC/CE/Others
- RoHS Compliance

Product Ordering Information

A8in(ac) (Part No.: SD.A8-HNAC-00)
Standard Package

- A8in (ac) Super WiFi Base Station (Model No.: WA8011NAC-H)
- Built-in Smart Antennas
- Mounting Kit

Accessories

- 56 VDC Passive PoE Injector (Optional)

Contact Us

- Email: sales@altaitechnologies.com

A8in(ac)-PB-210830

**Will be available in the future.*
The coverage range will vary depending on NLOS and interference conditions
The transmit power may vary according to country regulation