Altai A8n (ac) Super WiFi Base Station

802.11ac Flexible Large Area Outdoor Wi-Fi

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The world's leading 802.11n WiFi outdoor access point optimized for maximum coverage and highest throughput from a minimum number of installation sites. It is the A8n model with the 5 GHz radio upgraded to 802.11a/n/ac standards.

The A8n (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. The multiple antennas of the A8n (ac) can be configured to provide coverage that is optimized for area, pattern and elevation. The multi-beam antennas of the A8n (ac) is designed to provide up to 3 times the range and 10 times the per site coverage as standard access point. Accordingly, up to 90% fewer installation sites for the same coverage area.

Super Long Range High Throughput Coverage

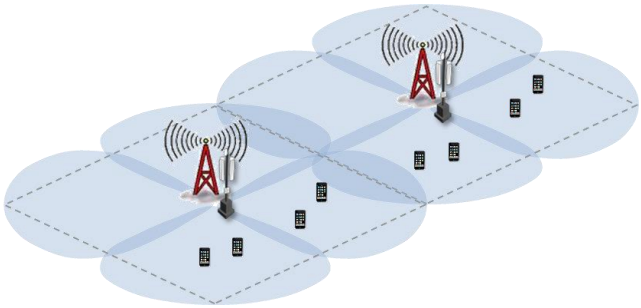
Max. LOS CPE	3 km (2.4 GHz) 2 km (5 GHz)
Max. LOS Smartphones	1 km (2.4 GHz) 900 m (5 GHz)
Max. LOS Backhaul	30 km (5 GHz)
Max. Data Rate	300 + 867 Mbps

Altai A8n for Wireless Broadband

The Altai A8n (ac) can serve 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 A8n (ac) for Super 3G/4G Offload

The A8n (ac) Super WiFi Base Station can be deployed in conjunction with existing 3G networks to provide low cost high bandwidth mobile data offloading solution. The A8n can be co-located with existing 3G cell sites allowing immediate Wi-Fi provisioning at much lower acquisition and operating costs.



Co-locate A8n (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 A8n (ac) include:

- Extended coverage in a Non-Line-of-Sight (NLOS) environment which matches the foot print of most 3G/LTE deployments in dense urban environments
- High 11ac throughout capacity up to 1,167 Mbps data rate
- 4-sector x dual slant advanced Smart Antenna Technology provides flexible 70 to 360-degree and large vertical beamwidth coverage with minimal holes in dense urban environments
- Multi-radio 8x8:2 MIMO platform maximizing both uplink/downlink performance and access redundancy
- 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 Interface

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

- Connect up to 8 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 (Max. 16 SSID per Radio)
- 802.11h*, 802.11k*, 802.11r*, 802.11v*, 802.11w*
- Hotspot 2.0
- Altai *AirFi*™ Throughput Optimization
- Band Steering
- WMM (802.11e)

Antenna

2.4 GHz Antenna (Optional Accessories)

- External Antenna: 14 dBi (Max.) Sector
- Frequency: 2.4 – 2.5 GHz
- Polarization: Dual Slant ±45°
- Horizontal Beamwidth: 70° (-3 dB)
- Vertical Beamwidth: 12° (-3 dB)
- VSWR: 2 (Max.)
- Impedance: 50 Ω
- Front-to-back Ratio: -25 dB (Max.)
- Isolation Between Ports: 20 dB (Min.)
- Antenna Connector: 8 x Dual N-female

5 GHz Antenna (Optional Accessories)

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

Networking

- Switch (Bridge) and Gateway Mode
- IPv4/ IPv6 Dual-stack
- NAT
- DHCP Client/ Server
- PPPoE Client
- VPN (IPsec)*
- VLAN
- Bandwidth Control Per VAP/ Client
- Multicast Rate Filter/IGMP Snooping

Security

- Authentication – Open system, Shared key, WPA/ WPA-PSK, WPA2/ WPA2-PSK, 802.1x (EAP-PEAP/ TLS/ TTLS/ SIM/ AKA)
- Encryption – WEP, TKIP, AES
- Inter/ Intra-client Isolation
- MAC-based Access Control (White/ Black List)
- RADIUS
- Active directory
- Firewall*
- WIPS*

Management

- Cloud or Server-based Management by AltaiCare
- Controller-based Management by Access Controller
- Web User Interface
- Command Line Interface (SSH)
- SNMP v1/ v2c / v3*
- MIB2/ IF-MIB/ Altai Enterprise MIB
- Syslog
- Auto Channel Selection and TX Power Control
- Spectral Analysis*
- KPI Monitoring*
- Client OS Detection*

Physical Specification

- Dimension: 360 x 234 x 80 mm (Chassis)
- Weight: 4 kg (Unit Weight) / 6.5 kg (Gross Weight)
- Mounting: Pole or Wall-mounted
- Network Interface: 10/100/1000 Mbps Ethernet Port

Power Supply

- Power Supply: 56V Passive PoE PD or -48V DC PoE Injector
- Power Consumption: 30 W (Typical) / 65 W (Max.)

Environmental Specification

- Operating Temperature: -40 °C to +60 °C (Ambient); -10 °C to +40 °C (PoE Injector)
- 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

Certification

- FCC / CE / Others*

Product Ordering Information

Standard Package

- A8n (ac) Super WiFi Base Station (Model No.: WA8011NAC-X)
- Mounting Accessories

Separate Orderable Items:

- Smart Antennas, RF Cables and PoE Injector

Contact Us

- Email: sales@altaitechnologies.com

** Will be available in future.*

A8n(ac)-PB-170815

The coverage range will be varied depending on NLOS and interference conditions.
The transmit power may be varied according to country regulation.
Although Altai has attempted to provide accurate information in these materials, Altai assumes no legal liability for the accuracy and completeness of the information.
All specifications are subject to change without notice.