

Altai A8n Super WiFi Base Station

The world's leading 802.11n WiFi outdoor access point optimized for maximum coverage and highest throughput from a minimum number of installation sites. The Altai A8n has been designed to provide industry best coverage and capacity without complicated networking protocols or the need for a high density of transmitters.



The A8n 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 can be configured to provide coverage that is optimized for area, pattern and elevation. The multi-beam antennas of the A8n 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 Coverage

A8n 11n 90° to 360°	Radius
LOS / CPE	2,700 m
LOS Laptops / Smartphones	1,000 m
NLOS Laptops / Smartphones	500 m
LOS Backhaul	30 km

As an integral part of our Super WiFi network infrastructure, key benefits of the Altai A8n 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 11n throughput capacity up to 300 + 300 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 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 access/ backhaul
- Giga Ethernet or integrated 802.11a/n wireless backhaul
- Remote configuration through the Altai Wireless Management System (AWMS)

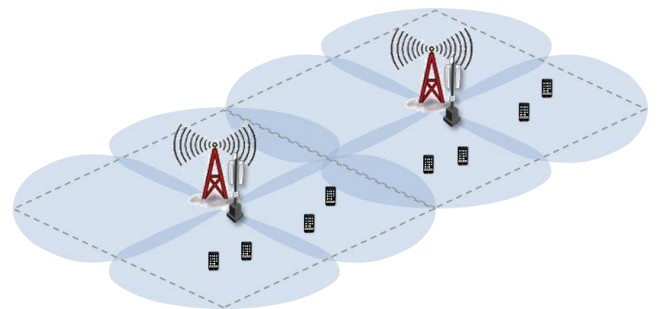
Altai A8n for Wireless Broadband

The Altai A8n can serve as last mile infrastructure for a wide range of wireless broadband access applications. It provides low deployment cost and fast provisioning of WiFi systems with the greatest coverage and bandwidth per installed base station.



Altai A8n for Super 3G/4G Offload

The A8n 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 WiFi provisioning at much lower acquisition and operating costs.



Co-locate A8n with existing 3G/LTE cell site to offload traffic for an almost identical cell area.

Wireless Interface

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

- Operating Mode Access Point
- Standard IEEE 802.11b/g/n
- Operating Frequency 2.412 – 2.472 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
- Direction Finding*

802.11a/n (2x2:2) Radio

- Operating Mode Access Point/Bridge
- Standard IEEE 802.11a/n
- Operating Frequency 5.15 – 5.35 GHz
5.47 – 5.725 GHz
5.725 – 5.825 GHz
- Transmit Power 20 dBm (Max.)
17 dBm (Per Chain)
- Receiver Sensitivity (Typical)

802.11a	54 Mbps	-77 dBm;	6 Mbps	-94 dBm
802.11n	HT20	-93 dBm;	HT40	-90 dBm

For both 2.4 and 5 GHz

- Bandwidth Control / VAP/ Client
- Altai AirFi™ Throughput Optimization/ Radio
- Transmit and Receive Diversity
- Automatic Channel Selection (with Scheduling)
- Site Survey Channel Scan

Antenna

2.4 GHz Antenna

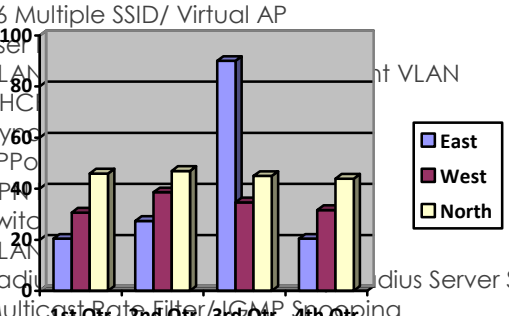
- External Antenna 14 dBi (Max.) Sector
- Frequency 2.4 – 2.5 GHz
- Polarization Dual Slant ±45°
- 3-dB Horizontal Beamwidth 70°
- 3-dB Vertical Beamwidth 12°
- VSWR 2 (Max.)
- Impedance 50 Ω
- Front-to-back Ratio -25 dB (Max.)
- Isolation Between Ports 20 dB (Min.)
- Antenna Connector 8 x Dual N-female

5 GHz Antenna (separate orderable item)

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

Networking

- 16 Multiple SSID/ Virtual AP
- User Authentication
- VLAN
- DHCP
- Dynamic VLAN
- PPPoE
- VPLS
- Switch
- VLAN
- Radius Server Support
- Multicast Rate Filter/IGMP Snooping
- Spanning Tree Protocol
- Access Link Safe Mode
- WMM



Security

802.11a/b/g/n

- Authentication – Open system, Shared key, WPA/ WPA-PSK, WPA2/ WPA2-PSK, 802.1x (EAP-TLS/ TTLS/ SIM/ AKA), PEAP
- Encryption – WEP, TKIP, AES
- WAPI
- MAC based Access Control List (White/ Black)
- SSID Suppression
- Inter/ Intra-VAP Client Isolation

Management

- Web-based Administration Tool
- CLI-based Administration Tool (Console and SSH)
- SNMP v1/ v2c, Altai MIB
- 3 User Access Levels for Web Login
- Remote Firmware Upgrade (HTTP, FTP)
- Performance Statistics/ Alarm Information Display
- WiFi Client Association Status/ Bad Client Disassociation
- Customized Configuration File/ Product Info Display
- Syslog Support
- Packet Capture Diagnosis
- Throughput Test Utility

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 Source PoE Injector (AC or -48V DC)
- 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 to 100% (Condensing)
- Lightning Protection EN 61000-4-5
- Wind Loading 161 km/h (Operational)
217 km/h (Survival)
- Weatherproof IP67 Compliant

Certification

- FCC*/ CE*/ IC*/ Others*

Product Ordering Information

Standard Package

- A8n Super WiFi Base Station (Model No.: WA8011N-X)
- Smart Antennas
- RF Cables
- PoE Injector and Mounting Accessories

Other Package

- A8n (US) – Operating at 2.412-2.462 GHz (Ch 1-11)

Contact Us

- Email: sales@altaittechnologies.com

* Feature will be available in future release A8n-PB-130812

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.