Altai A8-Ein (ac) Super WiFi Base Station

The world's leading 802.11ac WiFi outdoor access point with integrated multi-beam antenna array optimized for maximum coverage and highest throughput from a minimum number of installation sites. It is the A8-Ein model with the 5 GHz 802.11a/n radio upgraded to 802.11a/n/ac radio.

The A8-Ein (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 multi-beam antenna array of the A8-Ein (ac) is designed to provide up to 5 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

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Max. LOS CPE	4 km (2.4 GHz) 1.7 km (5 GHz)
Max. LOS Smartphones	1.7 km (2.4 GHz) 900 m (5 GHz)
Max. LOS Bridge	30 km (5 GHz)
Max. Data Rate	300 + 867 Mbps

Altai A8-Ein (ac) for Wireless Broadband

The Altai A8-Ein (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 A8-Ein (ac) for Super 3G/4G Offload

The A8-Ein (ac) Super WiFi Base Station can also be deployed in conjunction with existing 3G mobile networks to provide low cost high bandwidth mobile data offloading solution. The A8-Ein (ac) can be co-located with existing 3G cell sites allowing immediate Wi-Fi provisioning at much lower acquisition and operating costs.
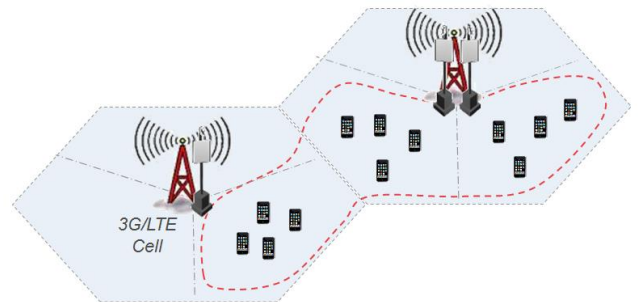
Co-locate A8-Ein (ac) with existing 3G/LTE cell site to offload traffic for an almost identical cell area.

As an integral part of our Super WiFi network infrastructure, key benefits of the Altai A8-Ein (ac) include:

- Base station and antenna array in one integrated unit, eliminating RF cabling work. Simple installation at rooftop, wall, tower and lamppost
- High 802.11ac 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 dual 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

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

- Built-in Antenna Array
- 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 Array — 19 dBi (Max.)
- Frequency — 2.4 – 2.5 GHz
- Polarization — Dual Slant ±45°
- Horizontal Beamwidth — 80° (-3 dB), 100° (-8 dB)
- Vertical Beamwidth — 14° (-3 dB)
- VSWR — 2 (Max.)
- Impedance — 50 Ω
- Front-to-back Ratio — -25 dB (Max.)
- Isolation between Ports — 20 dB (Min.)

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
- 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 — 467 x 439 x 111 mm
- Weight — 8.2 kg (Without Mounting Kit)
- Mounting — Pole or Wall-mounted
- Network Interface — 10/100/1000 Mbps Ethernet Port

Power

- Power Supply — 56V Passive PoE PD
- Power Consumption — 30 W (Typical)/65 W (Max.)

Environmental Specifications

- Operating Temperature — -40 °C to +60 °C (Ambient)
- Storage Temperature — -40 °C to +85 °C
- Humidity — Up to 95% (Non-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

A8-Ein (ac) (Part No.: SD.A8-EHNAC-00)
Standard Package
- A8-Ein (ac) Super WiFi Base Station (Model No.: WA8011NAC)
- Built-in Antenna Array
- Mounting Kit

Accessories
- 56 VDC Passive PoE Injector (Optional)

Contact Us
- Email: sales@altaitechnologies.com

A8Ein(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