

Altai A8-Ein Super WiFi Base Station

The world's leading 802.11n WiFi outdoor access point with integrated multi-beam antenna array optimized for maximum coverage and highest throughput from a minimum number of installation sites. This eliminates external RF cabling between base station and antennas and makes installation simple.



The A8-Ein 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 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 Coverage

A8-Ein 11n Sector	Range
LOS / CPE	4,000 m
LOS Laptops / Smartphones	1,700 m
NLOS Laptops / Smartphones	800 m
LOS Backhaul	30 km

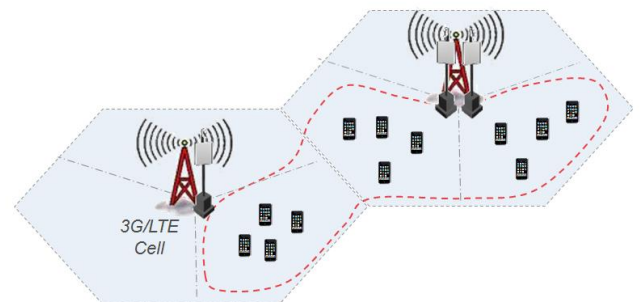
Altai A8-Ein for Wireless Broadband

The Altai A8-Ein serves 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 A8-Ein for Super 3G/4G Offload

The A8-Ein 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 can be co-located with existing 3G cell sites allowing immediate WiFi provisioning at much lower acquisition and operating costs.



Co-locate A8-Ein 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 include:

- Base station and antenna array in one integrated unit, eliminating RF cabling work. Simple installation at rooftop, wall, tower and lamppost
- High 11n throughput capacity up to 300 + 300 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 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 access/ backhaul
- Giga Ethernet or integrated 802.11a/n wireless backhaul
- Remote configuration through the Altai Wireless Management System (AWMS)

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

- Built-in Antenna Array
- Interference Mitigation
- Direction Finding*

802.11a/n (2x2:2) Radio

- Operating Mode AP/ CPE/ Bridge/ Repeater
- 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

- 32 SSID (Max. 16 SSID per Radio)
- WDS
- Altai AirFi™ Throughput Optimization
- Band Steering
- Automatic Channel Selection (with Scheduling)
- WMM

Antenna

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

- VLAN
- IPv4/ IPv6 Dual-stack
- Switch (Bridge) and Gateway Mode
- DHCP Client/ Server/ Relay
- NAT
- PPPoE Client/ PPPoE Pass-through
- VPN Pass-through
- Bandwidth Control Per VAP/ Client
- Multicast Rate Filter/ IGMP Snooping
- Spanning Tree Protocol
- Access Link Safe Mode

Security

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

Management

- Standalone (Managed by AWMS)
- Thin AP/ CAPWAP Protocol (Managed by Access Controller)
- Web User Interface
- Command Line Interface (SSH and Console)
- 3-level User Login
- Remote Firmware Upgrade (HTTP, TFTP)
- SNMP v1/ v2c
- MIB2/ IF-MIB/ Altai Enterprise MIB
- Performance Statistics/ Alarm Information Display
- WiFi Client Association/ Disassociation Statistics
- Syslog

Physical Specification

- Dimension 467 x 439 x 111 mm (without mounting)
- Weight 8.2 kg (without mounting)
- 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 Up to 216 km/h (134 mph)
- Weatherproof IP67 Compliant

Certification

- FCC/ CE/ IC/ Others

Product Ordering Information

Standard Package

- A8-Ein Super WiFi Base Station (Model No.: WA8011N)
- Built-in Antenna Array
- PoE Injector and Mounting Accessories

Other Packages

- A8-Ein (US) – Operating at 2.412-2.462 GHz (Ch 1-11)

Contact Us

- Email: sales@altaitechnologies.com

* Will be available in future.

A8Ein-PB-150212

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.