

# ALTAI Super WiFi

## Altai A8-Ein (ac) Super WiFi Base Station 802.11ac All-in-One Long Range Sector

### 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

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

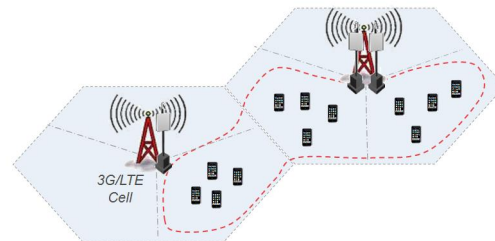
### Altai A8-Ein (ac) for Wireless Broadband

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 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
- 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 (Max. 16 SSID per Radio)
- 802.11h\*, 802.11k\*, 802.11r\*, 802.11v\*, 802.11w\*
- Hotspot 2.0
- Altai AirFit™ Throughput Optimization
- Band Steering
- WMM (802.11e)

### 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

- 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 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 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 to 100% (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

- A8-Ein (ac) Super WiFi Base Station (Model No.: WA8011NAC)
- Built-in Antenna Array
- Mounting Accessories and PoE Injector (Order Separately)

#### Contact Us

- Email: [sales@altaitechnologies.com](mailto:sales@altaitechnologies.com)

A8Ein(ac)-PB-170224

*\* Will be available in future.*

*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.*