



Altai A8-Ei Super WiFi Base Station

ALL-IN-ONE (base unit, antennas, & external cables)

The Altai A8-Ei Super WiFi Base Station is the world's leading WiFi outdoor access point with integrated multi-beam antenna array optimized for maximum coverage from a minimum number of installation sites. This eliminates external RF cabling between base station and antennas and makes installation simple.

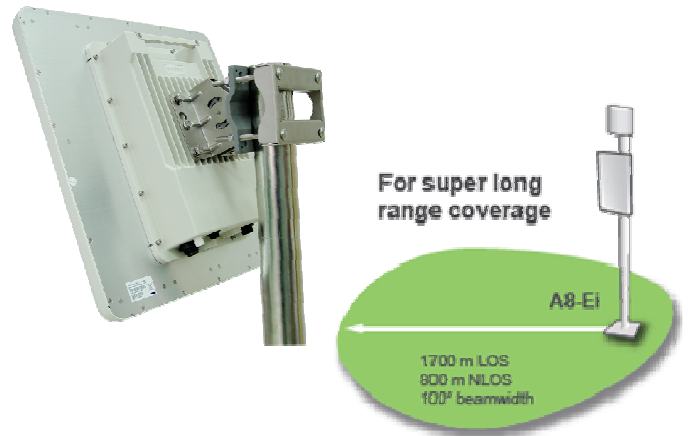


The A8-Ei is a multi-radio base station utilizing smart antenna technologies and a patented signal processing algorithm to provide the industry's best coverage per base station, especially in non-line-of-sight (NLOS) environments. The multi-beam antenna array of the A8-Ei is designed to provide up to 5 times the range and 20 times the per site coverage as traditional access point. Accordingly, up to 95% fewer installation sites for the same coverage area.

Whether deployed for a single location, a campus area or city-wide network coverage, the Altai A8-Ei is designed to minimize the total cost of ownership with significant savings in network equipment, broadband access, planning, site acquisition and installation.

The Altai A8-Ei 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.

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



As an integral part of our Super WiFi network infrastructure, key benefits of the Altai A8-Ei include:

- Base station and antenna array in one integrated unit, eliminating RF cabling work. Simple installation at rooftop, wall, tower and lamppost
- 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 Smart Antenna Technology to provide superior signal strength and link budget in dense urban environment deployments
- Multi-radio platform to maximize both uplink/downlink performance and access redundancy
- Link integrity, backhaul link self healing and safe mode
- Adaptive interference control mitigates the influence from surrounding interfering sources
- Supports real-time applications such as VoIP, video-streaming and interactive gaming with minimal latency
- Standard 802.11b/g access and 802.11a wireless backhaul
- Fast Ethernet or integrated 802.11a wireless backhaul
- Remote configuration through the Altai Wireless Management System (AWMS)

Altai A8-Ei Super WiFi Base Station

Wireless Interface

802.11b/g Radio

- Operating Mode Access Point
- Standard IEEE 802.11b/g
- Operating Frequency 2.412 – 2.472 GHz (Ch 1-13)
- Transmit Power 5 – 25 dBm in 1 dB step
- Receiver Sensitivity (Typical)

802.11b	11 Mbps	-90 dBm
	1 Mbps	-96 dBm
802.11g	54 Mbps	-74 dBm
	6 Mbps	-92 dBm
- Built-in Antenna Array
- Congestion Avoidance
- Bandwidth Control – Airtime/ Throughput/ VAP/ Client
- Transmit and Receive Diversity
- Automatic Channel Selection
- Site Survey/ Channel Scan

802.11a Radio

- Operating Mode Point to Point Bridging
Point to Multi-point Bridging
(Up to 4 peers)
- Standard IEEE 802.11a
- Operating Frequency 5.15 – 5.35 GHz
5.47 – 5.725 GHz
5.725 – 5.825 GHz
- Transmit Power 24 dBm (Max.)
- Data Rate 54, 48, 36, 24, 18, 12, 9, 6 Mbps
- Receiver Sensitivity (Typical)

54 Mbps	-73 dBm
6 Mbps	-90 dBm
- Turbo Mode Support

Antenna

2.4 GHz Antenna

- Built-in Antenna Array 19 dBi (Max.)
- Frequency 2.4 – 2.5 GHz
- Polarization Dual Linear $\pm 45^\circ$
- Horizontal Beamwidth $80^\circ \pm 3^\circ$ (-3 dB), $100^\circ \pm 3^\circ$ (-8 dB)
- Vertical Beamwidth $12^\circ \pm 2^\circ$ (-3 dB)
- VSWR 2 (Max.)
- Impedance 50 Ω
- Front-to-back Ratio 25 dB (Max.)
- Isolation between Ports 15 dB (Min.)

5 GHz Antenna (separate orderable item)

- External Antenna 18 dBi Panel/ 9 dBi Omni
- Antenna Connector 1 x N-female

Networking

- 16 Multiple SSID/ Virtual AP
- User Limit Per SSID
- VLAN / Configurable Management VLAN
- DHCP Client/ Server/ Relay
- Dynamic NAT
- PPPoE Client, PPPoE Pass-through
- VPN Pass-through
- Switch and Gateway Mode
- VLAN trunking/ WDS
- 10/100 Mbps Ethernet Port
- Radius Server Per VAP/ Backup Radius Server Support
- Multicast Rate Filter/ IGMP Snooping
- Link Integrity/ Backhaul Link Self Healing/ Safe Mode
- WMM/ Port-based Prioritization

* Feature will be available in future release

Security

802.11b/g

- Authentication Open system, Shared key, WPA/ WPA-PSK WPA2/ WPA2-PSK 802.1x (PEAP, TLS, TTLS) WEP, TKIP, AES
- Encryption
- Rogue AP Detection
- MAC based Access Control
- SSID Suppression
- Inter/ Intra-VAP Client Communication Control

802.11a

- Encryption WEP, AES

Management

- Web-based Administration Tool
- CLI-based Administration Tool (Telnet and Console)
- SNMP v1/ v2c, Altai MIB
- SNMP Manager Access Control List
- Remote Firmware Upgrade (HTTP, FTP)
- Performance Monitoring
- WiFi Client Association Status/ Bad Client Disassociation
- Customized Configuration File
- Syslog Support
- TR-069 Support*

Physical Specification

- Dimension 467 x 439 x 111 mm (without mounting)
- Weight 8.2 kg (without mounting)
- Mounting Pole or Wall-mounted

Power Supply

- Power Source PoE Injector or 90 – 240 VAC (Optional)
- Power Consumption 20 W (Typical) / 58 W (Max.)

Environmental Specification

- Operating Temperature -40 °C to +60 °C (Ambient)
0 °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 100 mph (Operational)
135 mph (Survival)
- Weatherproof IP67 Compliant

Certification

- FCC/ CE/ Others

Product Ordering Information

Standard Package

- A8-Ei Super WiFi Base Station (Model No.: WA8011E)
- Built-in Antenna Array
- Mounting Accessories

Base Station Options

- A8-Ei a+bg, PoE (Default)
- A8-Ei (AC) a+bg, AC+PoE
- A8-Ei (bg) bg, PoE



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