



Altai A8-E Super WiFi Base Station

The Altai A8-E Super WiFi Base Station is the world's leading WiFi outdoor access point optimized for maximum coverage from a minimum number of installation sites. The Altai A8-E has been designed to provide industry best coverage and capacity without complicated networking protocols or the need for a high density of transmitters.

The A8-E 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-E is designed to provide up to 5 times the range and 25 times per site coverage as traditional access point. Accordingly, by using up to 96% fewer installation sites than other WiFi systems to cover the same area, the A8-E enables less complex network design and provides lower latency for improvement in handling real-time applications such as VoIP and video streaming.

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

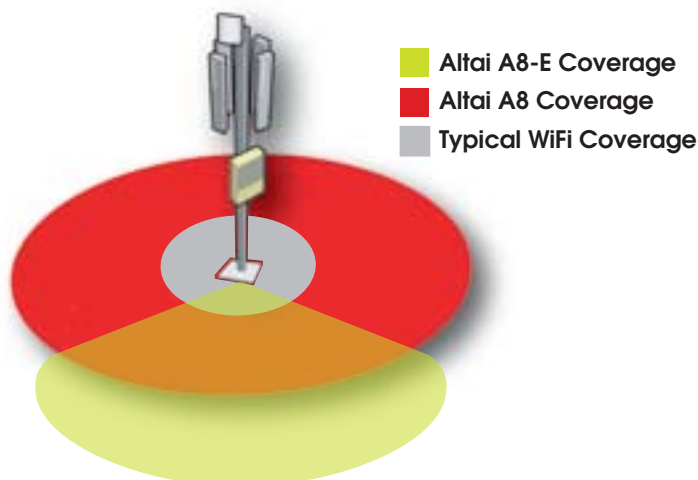
The Altai A8-E can also serve as last mile infrastructure for a wide range of broadband applications. It provides low deployment cost and fast provisioning of WiFi systems with the greatest coverage and bandwidth per installed base station.

The A8-E Super WiFi Base Station can also be deployed in conjunction with existing micro-cellular wireless networks to provide high bandwidth, high-speed fixed and mobile data services.



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

- Extended coverage in a Non-Line-of-Sight (NLOS) environment which matches the foot print of most micro-cellular 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
- Cellular architectural radio and coverage planning specially designed for city-wide WiFi deployments
- Adaptive interference control to mitigate the surrounding interference effects
- 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
- Flexible antenna deployment including rooftop, wall, tower and lamppost mounting
- Remote configuration through the Altai Wireless Management System (AWMS)



Wireless Interface

802.11b/g Radio

- Operation Mode Access Point
- Standard IEEE 802.11b/g
- Operating Frequency 2.412-2.472GHz (CH 1- 13)
- Transmit Power 5 – 26 dBm in 1dB step
- Receive Sensitivity (Typical)
 - 802.11b
 - 11 Mbps -90 dBm
 - 1 Mbps -96 dBm
 - 802.11g
 - 54 Mbps -74 dBm
 - 6 Mbps -92 dBm
- Connect to A8-E antenna array
- Transmit and Receive Diversity
- Automatic Channel Assignment

802.11a Radio

- Operation Mode Point to point bridging
Point to multi-point bridging
(Up to 4 peers)
- Standard IEEE 802.11a
- Operating Frequency 5.15 – 5.35GHz
5.47 – 5.725GHz
5.725 – 5.825GHz
- Transmit Power 24 dBm (Max.)
- Data Rate 54, 48, 36, 24, 18, 12, 9,
6Mbps
- Receive Sensitivity (Typical)
 - 802.11a 54 Mbps -73 dBm
 - 6 Mbps -90 dBm

Antenna

802.11b/g Antenna

- Frequency 2.4 - 2.5 GHz
- Gain 19 dBi (Max.)
- Polarization Dual Linear $\pm 45^\circ$
- 3-dB Horizontal Beamwidth $75^\circ \pm 3^\circ$
- 3-dB Vertical Beamwidth $12^\circ \pm 2^\circ$
- VSWR < 2
- Impedance 50Ω
- Isolation between Ports > 15 dB
- Antenna Connector 8 x N-female

802.11a Antenna

- External Antenna +18dBi Flat Panel
+8 dBi Omni
- Antenna connector 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
- 10/100Mbps Ethernet Port
- Backup Radius Server Support
- Backhaul link integrity/ resilience
- WMM

Security

802.11b/g

- Authentication Open system, Shared key
WPA/WPA-PSK,
WPA2/WPA2-PSK
802.1x (PEAP, TLS, TTLS)
- Encryption WEP, TKIP, AES
- MAC based Access Control
- SSID Suppression
- Inter-VAP/ 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
- Performance Monitoring
- RF Statistics Reporting
- Syslog Support

Physical Specification (BTS Unit)

- Dimension 290 x 210 x 89 mm
- Weight 4kg (Unit Weight) /
6.5kg (Gross Weight)
- Mounting Pole or Wall-mounted

Power Supply

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

Environmental Specification

- Operating temperature -40°C to $+60^\circ\text{C}$ (Ambient)
- Storage temperature -40°C to $+85^\circ\text{C}$
- Humidity 100% (Condensing)
- Lightning Protection EN 61000-4-5
- Wind loading 100 mph (Operational)
135 mph (Survival)
- Weatherproof IP67 Compliant

Certification

- CE
- FCC
- Others



Altai Technologies Limited
www.altaittechnologies.com
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