



# Altai A8 Super WiFi Base Station

The Altai A8 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 has been designed to provide industry best coverage and capacity without complicated networking protocols or the need for a high density of transmitters.

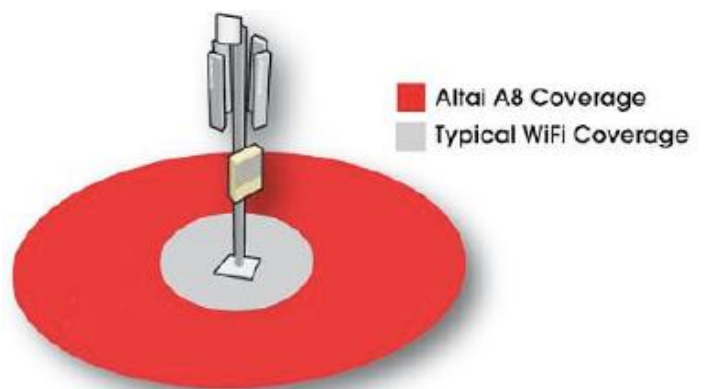


The A8 is a multi-radio base station utilizing smart antenna technologies and a patented signal processing algorithm to provide the industry's best coverage per base station, especially in non-line-of-sight (NLOS) environments. The multiple antennas of the A8 can be configured to provide coverage that is optimized for area, pattern and elevation. Using up to 80% fewer access points than other WiFi systems to cover the same area 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 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 can also serve 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 Super WiFi Base Station can also be deployed in conjunction with existing 3G networks to provide low cost high bandwidth mobile data offloading solution. The A8 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 include:

- Extended coverage in a Non-Line-of-Sight (NLOS) environment which matches the foot print of most 3G deployments in dense urban environments
- Dual-diversity advanced Smart Antenna Technology to provide flexible 90 to 360-degree coverage with minimal holes in dense urban environments
- Multi-radio platform to maximize both uplink/downlink performance and access redundancy
- Backhaul resilience and 1+1 protective switching
- 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 backhaul
- Fast Ethernet or integrated 802.11a wireless backhaul
- Flexible antenna deployment for various site conditions
- Remote configuration through the Altai Wireless Management System (AWMS)

# Altai A8 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
- Connect up to 8 Antennas
- Congestion Avoidance
- Bandwidth Control – Airtime/ Throughput
- Transmit and Receive Diversity
- Automatic Channel Assignment

### 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

## Antenna

### 802.11b/g Antenna

- Frequency 2.4 – 2.5 GHz
- Gain 14 dBi (Max.)
- Polarization Dual Linear  $\pm 45^\circ$
- 3-dB Horizontal Beamwidth  $70^\circ \pm 3^\circ$
- 3-dB Vertical Beamwidth  $12^\circ \pm 2^\circ$
- VSWR  $< 2$
- Impedance 50  $\Omega$
- Isolation between Ports  $> 15$  dB
- Antenna Connector Dual N-female

### 802.11a Antenna

- External Antenna +18 dBi 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
- 10/100 Mbps 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)  
WEP, TKIP, AES
- Encryption
- Rogue AP Detection
- 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
- TR-069 Support\*

## Physical Specification (BTS Unit)

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

## Power Supply

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

## Environmental Specification

- Operating Temperature -40 °C to +60 °C (Ambient)
- Storage Temperature -40 °C to +85 °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

## Product Ordering Information

### Standard Package

- A8 Super WiFi Base Station
- Smart Antennas
- RF Cables
- Mounting Accessories
- PoE Injector (optional)
- Backhaul Antenna (optional)



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\* Features will be available in future release

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