Altai A8
WiFi Cellular Base Station

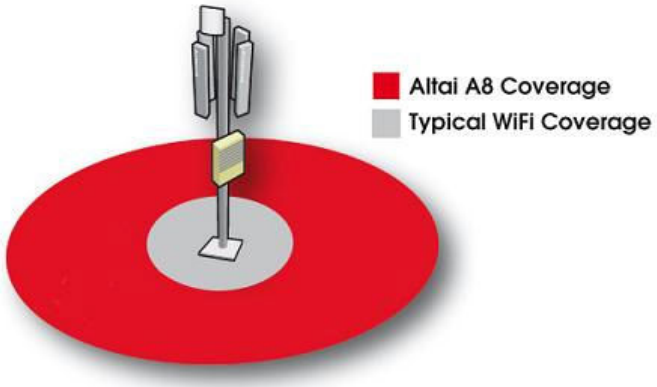
The Altai A8 WiFi Cellular Base Station is the world's first WiFi outdoor access point optimized for maximum coverage from a minimum number of installation sites. The Altai A8 has been designed to provide industry best coverage and capacity without complicated networking protocols or the need for a high 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 70% 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 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 WiFi Cellular 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. The A8 can be co-located to provide bandwidth up to 54 Mbps within existing micro-cell areas.



As an integral part of our WiFi cellular 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 microcellular deployments in dense urban environments
- Dual-diversity Beam-forming 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
- High data throughput running at 54 Mbps data rate
- Supports real-time applications such as VoIP, video-streaming and interactive gaming with minimal latency
- Standard 802.11 b/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)

Wireless Interface

802.11b/g Radio

- Operation Mode: Access Point
- Standard: IEEE 802.11b/g
- Operating Frequency: 2.412-2.4835GHz (CH 1 – 13)
- Transmit Power: 5 – 23 dBm in 1dB step
- Receive Sensitivity (Typical)
  - 802.11b
    - 11 Mbps: -90 dBm
    - 1 Mbps: -95 dBm
  - 802.11g
    - 54 Mbps: -73 dBm
    - 6 Mbps: -92 dBm
- Connect up to 8 Antennas
- Transmit and Receive Diversity
- Automatic Channel Assignment

802.11a Radio

- Operation Mode: Point to point bridging; Point to multipoint bridging (Upto 4 peers)
- Standard: IEEE 802.11a
- Operating Frequency: 5.15 – 5.35GHz; 5.47 – 5.725GHz; 5.725 – 5.825GHz
- Transmit Power: 17 dBm (Max.)
- Data Rate: 54, 48, 36, 24, 18, 12, 9, 6Mbps
- Receive Sensitivity (Typical)
  - 54 Mbps: -70 dBm
  - 6 Mbps: -88 dBm

Antenna

802.11b/g Antenna

- Frequency: 2.4-2.5 GHz
- Gain: 14 dBi (Max.)
- Polarization: Dual Linear ±45°
- 3-dB Horizontal Beamwidth: 70° ±3°
- 3-dB Vertical Beamwidth: 11° ±2°
- VSWR: < 2
- Impedance: 50Ω
- Isolation between Ports: > 15 dB
- Antenna Connector: Dual N-female

802.11a Antenna

- External Antenna: +18dBi Flat Panel; +8 dBi Omni
- Antenna connector: N-female

Networking

- 1 to 16 Multiple Virtual AP
- VLAN
- DHCP Client / Server / Relay
- Dynamic NAT
- PPPoE Client, PPPoE Pass-through
- VPN Pass-through
- Switch and Gateway Mode
- 10/100Mbps Ethernet Port
- 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

- WEP

Management

- Web-based administration tool
- CLI-based administration tool (Telnet and Console)
- SNMP v1/v2c, Altai MIB
- Remote Firmware Upgrade
- Performance Monitoring
- RF statistics reporting
- Syslog support

Physical Specification (Base Station unit)

- Dimension: 290 x 210 x 89 mm
- Weight: 5kg (Unit weight) / 7.6kg (Gross weight)
- Mounting: Pole or Wall-mounted

Power Supply

- Voltage: 80-264 V AC
- Power Consumption: 20W (Typical) / 58 W (Max.)
- Frequency: 47-63 Hz

Environmental Specification

- Operating temperature: -33 °C to +55 °C (Ambient)
- Storage temperature: -40 °C to +80 °C
- Humidity: 100% (Condensing)
- Lightning Protection: EN 61000-4-5
- Wind loading: 100 mph (Operational); 135 mph (Survival)

Certification

- CE
- FCC
- Others

ALTAI

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