AirEther™ WiFi Base Station Application Note

June 1, 2004

WiFi Base Station Applications

The AirEther 1000 & 3000 WiFi base stations are ideally for:

- Inter-state highway gas stations
- Beaches
- Public parks, e.g., State parks
- Conventions
- City police or emergency services
- University campuses
- Airports
- Shopping malls

- The radio coverage can be up to three to five miles or farther depending beam direction and line of sight, when communicating with the base station with a high power LAN card, i.e., client.

What is the AirEther WiFi Base Station

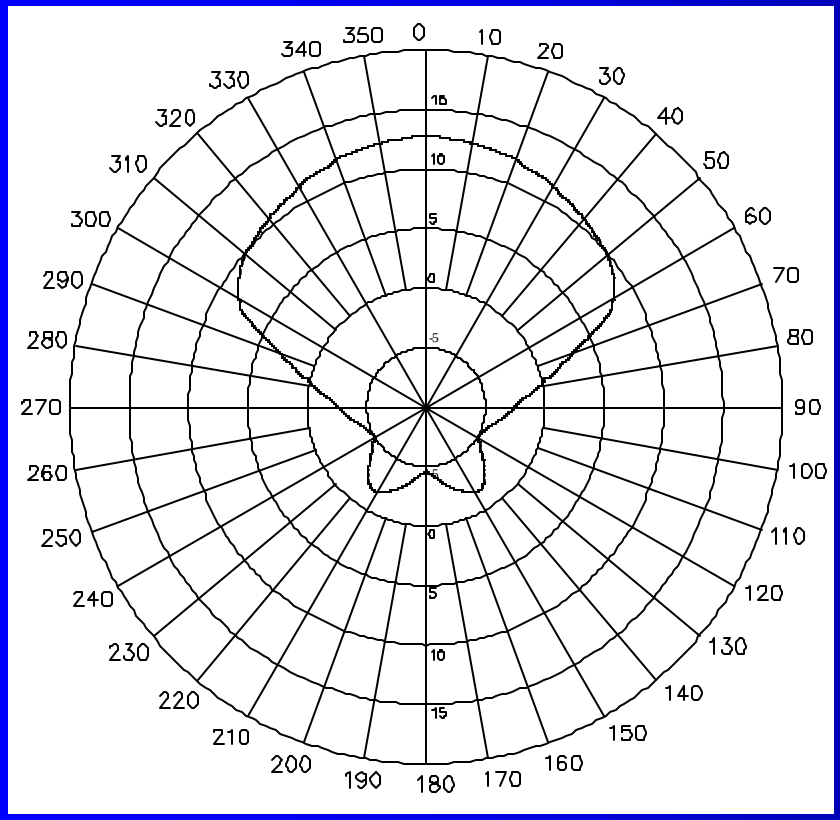
- The AirEther 1000 WiFi Base Station consists of one AirEther RB11 and one SA1218 Sector antenna
  - Configure the RB11 as central mode
  - Covers directional for 60^{o} ~ 120^{o}
  - up 18 dBi antenna gain with adjustable beamwidth
- The AirEther 3000 WiFi Base Station consists of three AirEther RB11s and three SA1218 sector antennas
  - The three RB-11s configured as central mode with 3 different RF channels
  - Covers 360^{o} all directions
  - Up to 18 dBi antenna gain with adjustable beamwidth

AirEther™ 1000 WiFi Base Station

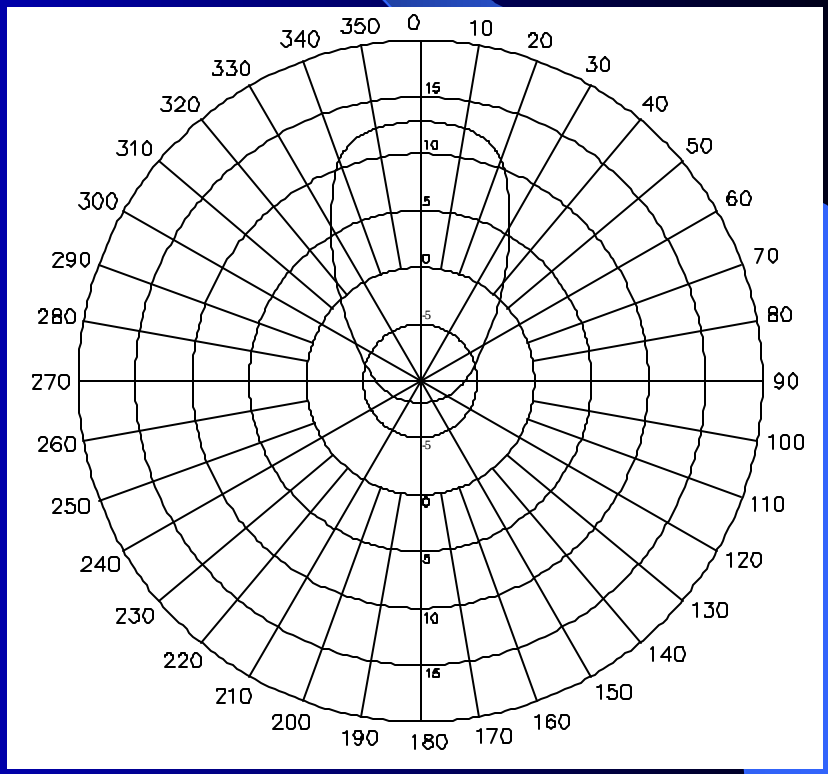
- One SA1218 sector antenna adjustable from 60 degree with 18 dBi to 120 degree with 12 dBi antenna gain

SA1218 Sector Antenna Electrics Characteristics

H-Plane



V-Plane

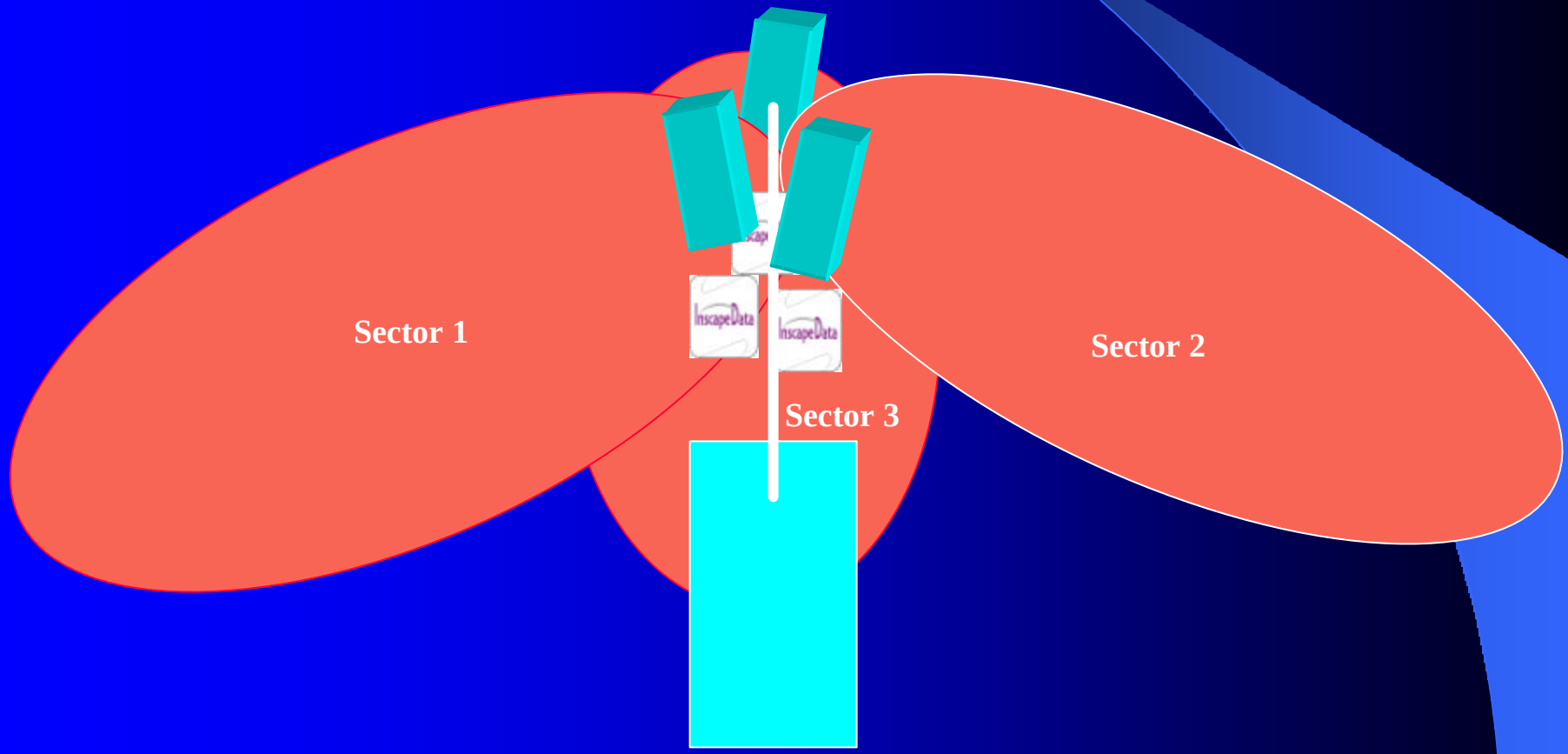


AirEtherÔ 3000 WiFi Base Station

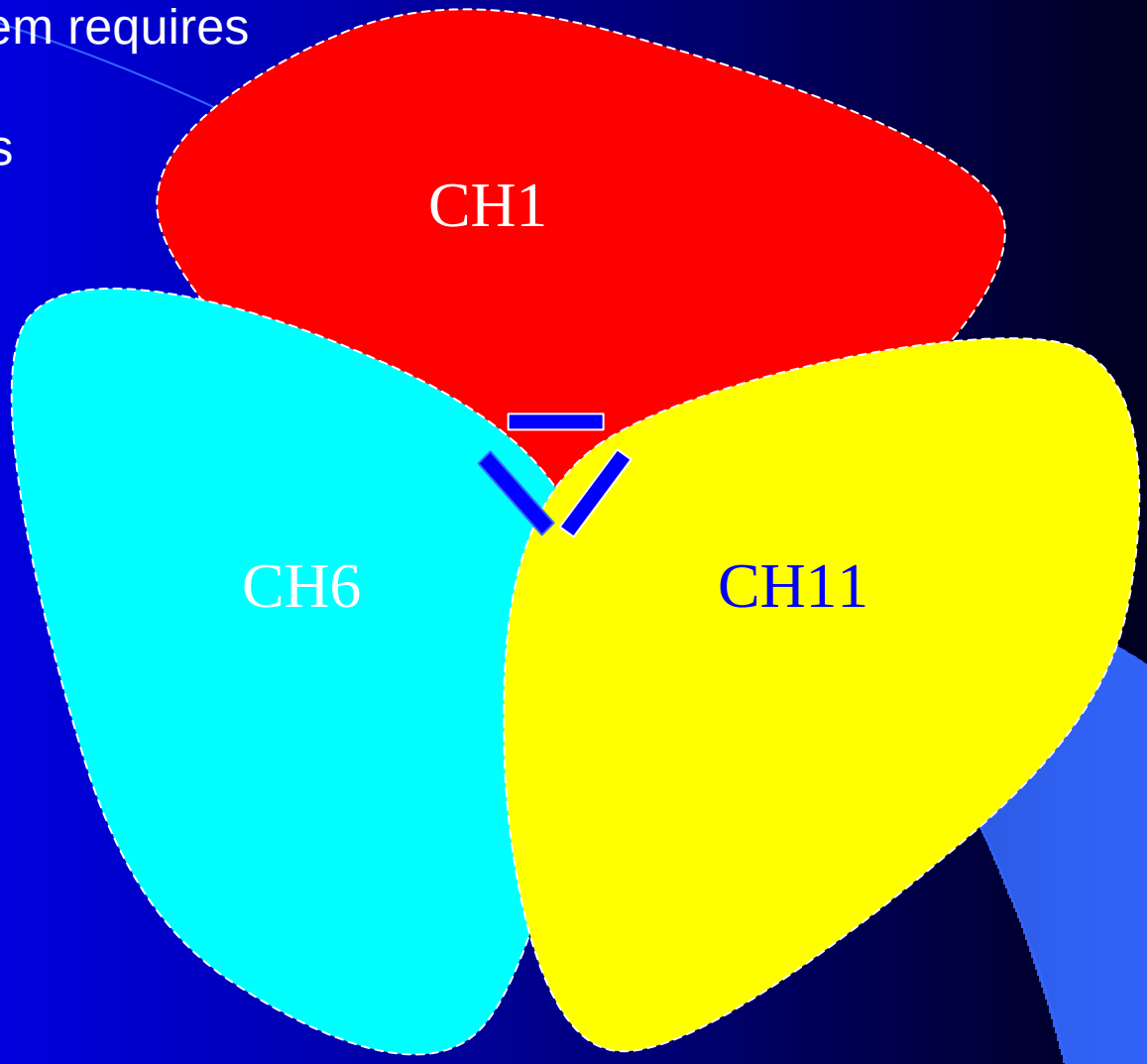
- The Base station can greatly extend the radio coverage, operating distance, and overall network throughput.
- The base station is consist of 3 RB11s and and three SA1218 sector antennas (up to 18 dBi with adjustable beamwidth)
- It extends the service coverage when compared with a single AP11 application.
- The base station system can support up to 33 mbps with 3 different channels (CH1, CH6, CH11)

Extended Radio Coverage with 3 RB11s & 3 Sector Antennas

Beamwidth, direction, and antenna gain are fully adjustable



This WiFi base station system requires
. 3 RB11s
. 3 SA1218 Sector antennas



- Each sector has dedicated frequency channel.
- The total network throughput is 3 times better than the coverage of a single RB11 unit.