



Alcatel Internetworking, Inc.  
26801 West Agoura Road  
Calabasas, CA 91301 USA

## 2.4 GHz External Antenna(s) Pictures and data sheets

### Alcatel Omni Access Point Models 1200 & 1200B

**Prepared by:**

David Waitt  
202 Calvert Drive #217  
Cupertino, Ca. 95014  
[david@waitt.us](mailto:david@waitt.us)  
(408) 832 7053



Alcatel Internetworking, Inc.  
26801 West Agoura Road  
Calabasas, CA 91301 USA

**To:**

Federal Communications Commission  
7435 Oakland Mills Road  
Columbia, Maryland 21046

**Subject:** 2.4 GHz External Antenna

Gentlemen,

The attached data sheets for the 2.4 GHz external patch antennas indicates that the available gains in this series are 3dBi , 5dBi and 9 dBi.

Alcatel is only using the 3dBi and 5 dBi antennas of this series. It is NOT using the 9dBi antenna

If you have any questions, please do not hesitate to contact me at: [david@waitt.us](mailto:david@waitt.us) or (408) 832-7053

Sincerely,

A handwritten signature in black ink, appearing to read "David Waitt".

David Waitt  
Consultant representing Alcatel

## 2400 MHz Sphere

### Omnidirectional Antenna

Part Number (P/N):

 CAF94101 CAF94170  
 CAF94150 CAF94144

### Features:

- Omnidirectional antenna provides a considerable gain improvement over traditional dipole antennas, within a remarkably small case that perfectly blends into any environment.
- It is particularly applicable in environments such as offices and hospitals, where aesthetics are critical to successful wireless deployment and wide angle coverage is necessary.
- For easy installation, the Sphere quickly attaches to a ceiling tile frame with a standard metal clip.

### Specifications:

<b>Element Type</b>	Air-Loaded Patch
<b>Frequency Range</b>	2400-2500 MHz
<b>Peak Gain</b>	3 dBi
<b>Polarization<sup>1</sup></b>	Linear
<b>Impedance</b>	50 ohms
<b>Maximum Input Power</b>	50 watts
<b>VSWR (Min. Performance)</b>	1.5:1
<b>Connector</b>	Customer Choice
<b>Dimensions (cm)</b>	6.4 x 6.3 x 1.7 cm
<b>Housing Coating Material</b>	ABS
<b>Operating Temperature</b>	-40° to +70°C
<b>Storage Temperature</b>	-40° to +70°C

Includes a low-loss, RG 142, plenum rated "pigtail" cable.

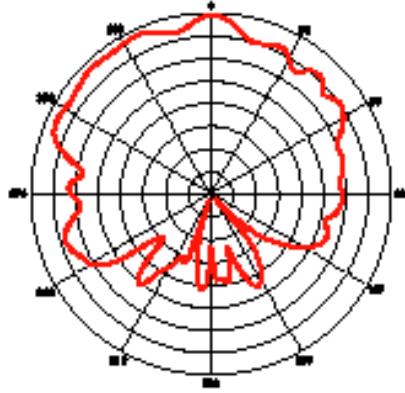
<sup>1</sup>Contains both vertical and horizontal components, the ratio of which varies with the spatial location.



Sphere 2400

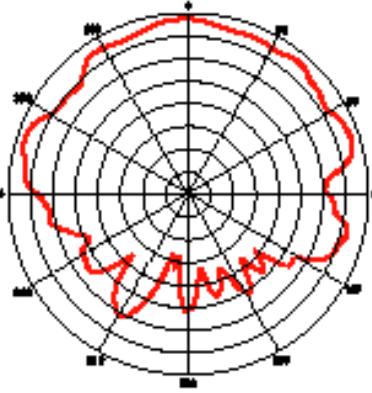
### Cables & Connectors:

Part Number	Cable	Connector
<b>CAF94101</b>	12" RG-142 Plenum Rated Coax	SMA-Male
<b>CAF94170</b>	12" RG-142 Plenum Rated Coax	N-Female
<b>CAF94150</b>	36" RG-142 Plenum Rated Coax	RP-TNC
<b>CAF94144</b>	36" RG-142 Plenum Rated Coax	RP-TNC



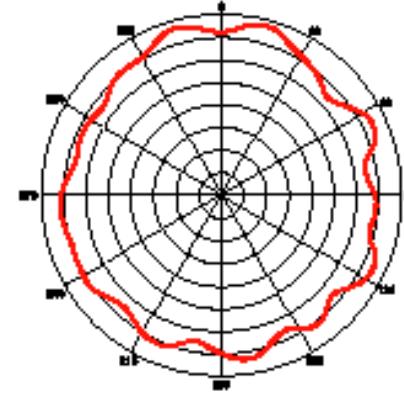
Azimuth Plane

Cut perpendicular to the antenna and perpendicular to the cable



Elevation Plane

Cut perpendicular to the antenna along the cable axis



Omni Plane

Cut in the plane of the antenna parallel to the cable

Specifications subject to change without notice

2400 MHz Sphere - 10/30/02



## DIRECTIONAL/BI-DIRECTIONAL ANTENNAS

### *Reliability Without the Expense...*

Reliable coverage is always a priority in streamlining the effectiveness of wireless devices. This is especially crucial in commercial, office, campus and residential environments that strive to cover a multitude of users in an open space or long corridor.

Centurion's Whisper directional and Terrace bi-directional antennas offer an affordable option for in-building antenna systems. Our innovative designs blend into any atmosphere and provide excellent coverage in high traffic areas.

#### **FEATURES & OPTIONS:**

##### **WHISPER - Directional Antenna**

- Self contained in a durable sleek radome, the Whisper is designed to blend in anywhere - residential, campus or commercial
- Inexpensive yet reliable, the Whisper utilizes Centurion's patented technology to achieve maximum efficiency.
- Typical applications include wireless local loop, in-building wireless (voice and data), WLAN, DECT, WPBX, and broadband Internet access.



##### **TERRACE - Bi-directional Antenna**

- Utilizes a patented low-profile design to provide coverage in corridors or long hallways
- Provides outstanding performance in healthcare and office environments, where a long hallway presents a design or coverage challenge



# In-Building DIRECTIONAL/BI-DIRECTIONAL ANTENNAS

## SPECIFICATIONS:

General specifications for In-Building Directional and Bi-Directional Antennas:

ELEMENT TYPE	Air-Loaded Patch
FREQUENCY RANGE	806-2500 MHz
PEAK GAIN	5.0-9.0 dBi
POLARIZATION <sup>1</sup>	Linear
IMPEDANCE	50 ohms
MAXIMUM INPUT POWER	50 watts
FRONT/BACK RATIO	18-20 dBi
VSWR (MIN. PERFORMANCE)	1.5:1-2.0:1
RADOME MATERIAL (INDOOR)	ABS or Luran
RADOME MATERIAL (OUTDOOR)	Kydex <sup>2</sup> or Luran <sup>2</sup>

All centurion products are designed for maximum efficiency and are customizable and scalable to meet your frequency and application requirements.

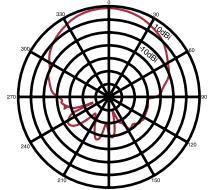
<sup>1</sup> Polarization axis is parallel to the cable axis, or along the long axis of the antenna for models without cable pigtauls.

<sup>2</sup> UV tolerance rated to 7 years of outdoor exposure.

## PATTERNS:

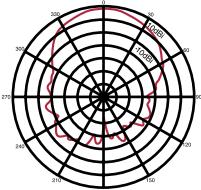
As displayed in these typical patterns, In-Building Directional and Bi-Directional antennas offer superior high-gain reception over a broad area.

### TYPICAL WHISPER ANTENNA PATTERNS



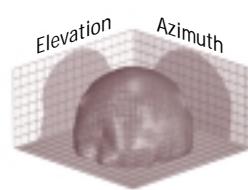
**AZIMUTH PLANE**

cut perpendicular to the antenna and perpendicular to the cable



**ELEVATION PLANE**

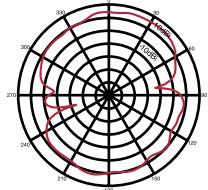
cut perpendicular to the antenna along the cable axis



**OMNI PLANE**

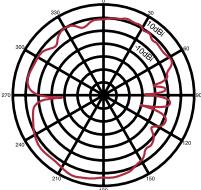
Spherical Projection

### TYPICAL TERRACE ANTENNA PATTERNS



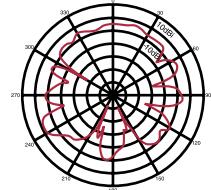
**AZIMUTH PLANE**

cut perpendicular to the antenna and perpendicular to the cable



**ELEVATION PLANE**

cut perpendicular to the antenna along the cable axis



**OMNI PLANE**

cut perpendicular to the antenna along the cable axis

Specifications subject to change without notice



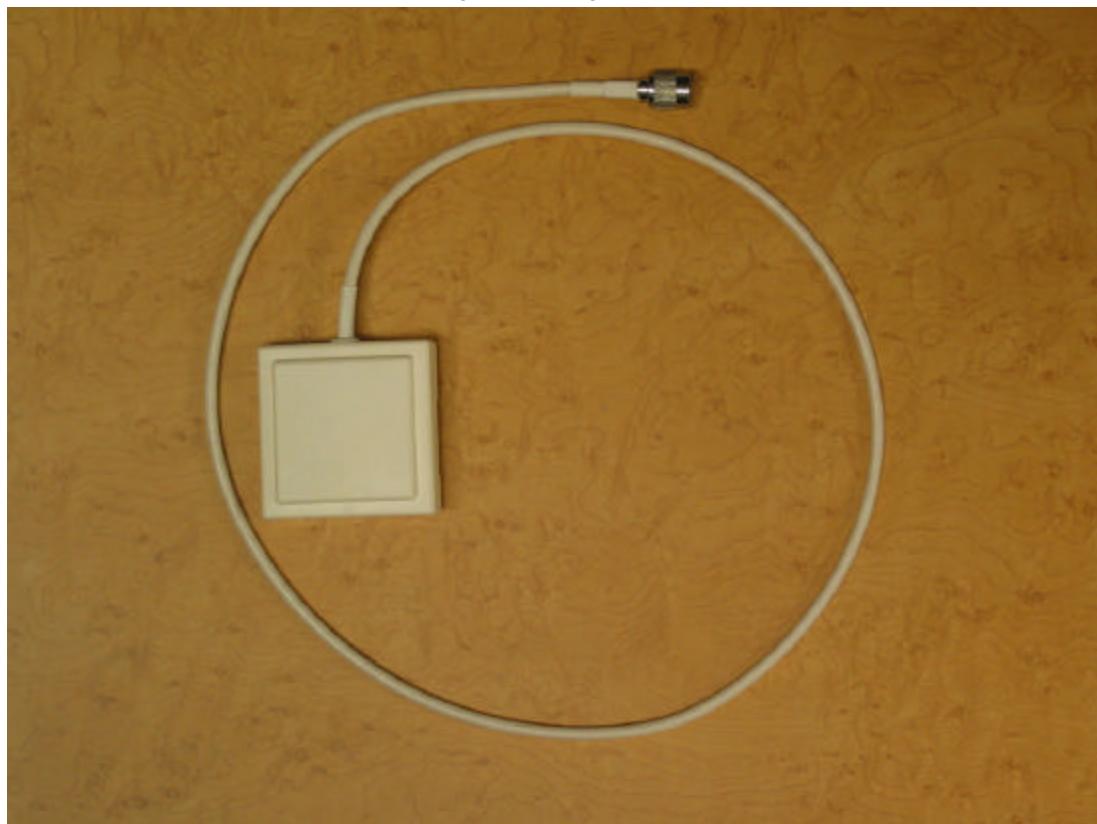
3425 N. 44th St., LINCOLN, NE 68504 USA  
SALES PHONE 800.228.4563 • SALES FAX 800.826.3774  
INTERNATIONAL PHONE 402.474.0706 • FAX 402.467.4528

[www.centurion.com](http://www.centurion.com)

Copyright © 2001 Centurion Wireless Technologies, Inc. All Rights Reserved



Centurion 2.4 GHz 3dBi (#94150) antenna





Centurion Wireless  
Technologies, Inc.  
Omnidirectional  
2.4–2.5 GHz 3dBi  
CAF94150 021112

Centurion 2.4 GHz 5dBi (#94149) antenna

