

# AP-NAVIGATOR® WiFi ANTENNA

APG100/24

## WiFi and AVL Mapping with Confidence

The AP-Navigator® WiFi Antenna is a 3-in-1 low profile antenna that has an embedded Trimble 12 channel GPS receiver, GPS antenna, and 3 dB gain WiFi antenna for use with WiFi modems that have an RF passthrough. This antenna is typically used by public safety and field forces who need better wireless coverage and want to use AVL or Mapping solutions to track and intelligently dispatch their field teams.

### Key Benefits:

#### Mapping and Automatic Vehicle Location Technologies

The AP-Navigator® WiFi Antenna is a full 2 way communicating GPS receiver, able to provide 10 foot accuracy. GPS protocols include TSIP, TAIP, TRCM, and NMEA. This means that every AVL software and Internet Mapping solution will work with this GPS receiver.

#### Bigger Wireless Footprint

The AP-Navigator® WiFi Antenna provides up to 25% more wireless coverage, depending on the geography you travel in.

#### Faster Data Speeds

Better reception translates to faster speeds. The data gets through the first time, correctly.

#### Long Product Life — Low Profile Design

The AP-Navigator® WiFi Antenna has a low profile design. It withstands all of the natural elements, car washes, and being swept by tree branches.

**Connects to All Major Brands of Wireless Data Cards with external antenna ports: AirCard 881, USB Connect Mercury, Option GT Ultra, GT Ultra Express, USB760, UM175 USB, PC5750\*, PC770 Express, UMW190, AD3700 Global USB, USB100, AirCard 402, AirCard 597E, AirCard 598U, Ovation U760, Merlin C777, EC360, KPC680 and all older wireless data cards with external antenna ports**  
(\* With adapter cable from Verizon)



Available in Adhesive or Magnet mount.  
Adhesive mount shown. Colors: black or white

**Docking Stations:** Havis LEDCO, Gamber Johnston, Panasonic, PMT, Kodiak

**Wireless Trunk and Mobile Access Routers from:** Sierra Wireless, AirLink, BlueTree Wireless, Utility Associates, Junxion, Cisco MAR, and many others

### Extra coverage gained with the AP-Navigator® WiFi Antenna



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# AP-NAVIGATOR® WiFi ANTENNA

(APG100/24)

## GPS Receiver

### Key Features

- 12-channel simultaneous operation
- Ultra-low power consumption: less than 90 mW (27 mA) @ 3.3 V
- Dual sensitivity modes with automatic switching
- Aided BPS through TSIP
- Trimble GPS Engine

### Performance Specifications

**General** L1 (1575.42 MHz) frequency, C/A code, 12 channel, continuous tracking receiver

**Update Rate** TSIP @ 1Hz; NMEA @ 1 Hz; TAIP @ 1 Hz

**Accuracy** Horizontal: < 5 meters (50%), < 8 meters (90%)  
Altitude: < 10 meters (50%), < 16 meters (90%)  
Velocity: 0.06 m/sec  
PPS(static): +50 nanoseconds

**Acquisition** (Autonomous Operation in Standard Sensitivity Mode)

Re acquisition: < 2 sec. (90%)  
Hot Start: < 10 sec. (50%), < 13 sec (90%)  
Warm Start: < 38 sec. (50%), < 42 sec (90%)  
Cold Start: < 50 sec. (50%). < 84 sec (90%)

(Cold start requires no initialization, Warm start implies last position, time and almanac are saved by backup power.)

(Hot start implies ephemeris is also saved.)

### Optional (COCOM) Limits

Altitude: 18,000 m  
Velocity: 515 m/s  
Either limit may be exceeded but not both

### Interface Characteristics

**Connector** USB  
**Protocols** TSIP, TAIP, NMEA 0183 v3.0, TRCM SC-104  
**NMEA Messages** GGA, VTG, GLL, ZDA, GSA, GSV and RMC  
Messages selectable by TSIP command  
Selection stored in flash memory

### Electrical Characteristics

**Prime Power** +3.0 VDC to 3.6 VDC (3.3 V typ.)  
**Power Consumption** less than 90 mW (27 mA) @ 3.3 V  
**Backup Power** +2.5 VDC to +3.6 VDC (3.0V typ.)  
**Ripple Noise** Max 60 mV, peak to peak from 1Hz to 1 MHz

### Environmental Specifications

**Operating Temperature** -40°C to +85°C  
**Storage Temperature** -55°C to + 105°C  
**Vibration** 0.008 g<sup>2</sup>/HZ 5 Hz to 20 Hz  
0.05 g<sup>2</sup>/Hz 20Hz to 100 Hz  
-3 dB/octave 100Hz to 900Hz  
**Operating Humidity** 5% to 95% R.H. Non-condensing, at +60°C

## WiFi Antenna

### Electrical Specifications

**Frequencies:**

F1= 2400-2484 MHz

**VSWR:** 1.5:1 or less at resonant point

**Gain:** 3.0 dB

**Radiation Pattern:**

OMNI Directional  
Hemispherical (GPS)

**Polarization:**

Vertical

### Mechanical Specifications

**Radome:**

Glass Filled Polypropylene

**Cable Length:**

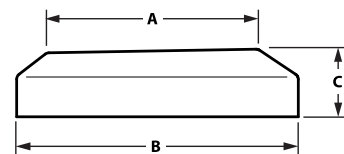
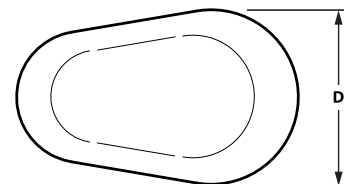
15 feet 4.5 m (Adhesive Mount)

10 feet (3 m) (Magnetic Mount)

**Connectors:**

Contact factory for connector options.

### Dimensions



Mount	Adhesive, Magnet or Bolt
<b>Description</b>	Teardrop Shape
<b>A</b>	4.0 in (102 mm)
<b>B</b>	5.5 in (140 mm)
<b>C</b>	1.3 in (33 mm)
<b>D</b>	3.5 in (89 mm)