

# AP-NAVIGATOR®-CELL/LTE/GPS ANTENNA



AP-NAV-CG

## Track and Communicate Intelligently



Available colors: Black or White

**The AP-Navigator®Cell/LTE/GPS Antenna** is the new low profile housing that has an embedded Trimble 12 channel GPS receiver, GPS antenna, and 3 dBi gain cellular/PCS/LTE antenna for use Wireless Data Cards on the cellular networks. 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®Cell/LTE/GPS 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®Cell/LTE/GPS 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®Cell/LTE/GPS 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.

**Docking Stations:** Havis LEDCO, Gamber Johnson, Panasonic, PMT, Kodiak, First Mobile Technologies.

**Wireless Trunk and Mobile Access Routers from:** Sierra Wireless, AirLink, Sixnet, Utility Associates, Junxion, Cisco MAR, In Motion and many others.



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# AP-NAVIGATOR® CELL/LTE/GPS

## 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 dBi/octave 100Hz to 900Hz  
**Operating Humidity** 5% to 95% R.H. Non-condensing, at +60°C

## Antenna

### Electrical Specifications

#### Frequencies:

Cellular/LTE = 824-896 MHz; 1850-1995 MHz;  
698-798 MHz; 1710-1770 MHz;  
2110-2170 MHz; 2570-2620 MHz

GPS = 1575.42 MHz

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

**Gain:** 3.0 dBi

#### Radiation Pattern:

OMNI Directional  
Hemispherical (GPS)

#### Polarization:

Vertical

### Mechanical Specifications

#### Radome:

Glass Filled Polypropylene

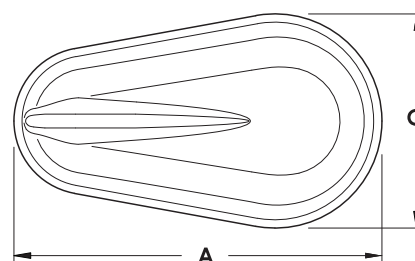
#### Cable Length:

15 feet (Adhesive and Bolt Mount)  
10 feet (Magnetic Mount)

#### Connectors:

Contact factory for connector options.

### Dimensions



A	7.475 in (190 mm)
A	6.938 in (176 mm) Antenna Without Gasket
B	2.000 in (051 mm)
C	4.625 in (117 mm)
C	4.063 in (103 mm) Antenna Without Gasket