

AP-NAVIGATOR™ CELLULAR ANTENNA

APG100

Track and Communicate Intelligently

The AP-Navigator™ Antenna is the new 3-in-1 low profile antenna that has an embedded Trimble 12 channel GPS receiver, GPS antenna, and 3 dB gain cellular 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™ 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™ 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™ has a low profile design. It withstands all of the natural elements, car washes, and being swept by tree branches.

To Purchase Contact:

Bob Meeker
Preferred Communications, Inc.
410 Central Ave.
Butner, NC 27509

919-575-4600
800-300-6020



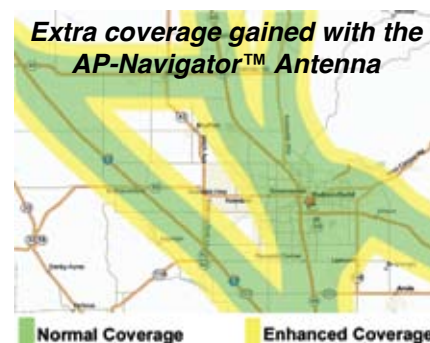
Antenna Plus Connects to . . .

Wireless Data Cards:

Sierra Wireless AirCard 597 Compass USB, AirCard 595, AirCard 597E, AirCard 580, USB Connect Mercury, AirCard 881, USB Connect 881, AirCard 875, AirCard 860; NovAtel S720, S620, V620, USB727, EX720, Ovation U727, V640; Kyocera KPC650; Option GT Max, GT Max Ultra, GT Max Ultra Express; UM150, UM175, PC5750 (with adapter from Verizon), Sony GC86

Rugged Computers with Embedded Wireless:

Panasonic Toughbooks, Itronix GoBooks
Docking Stations: Gamber Johnson, LedCo, PMT, Panasonic, and Kodiak



AP-NAVIGATOR™ CELLULAR ANTENNA (APG100)

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 g²/Hz 5 Hz to 20 Hz
 0.05 g²/Hz 20Hz to 100 Hz
 -3 dB/octave 100Hz to 900Hz
Operating Humidity 5% to 95% R.H. Non-condensing, at +60°C

Tri-Band Antenna

Electrical Specifications

Frequencies:

F1=824-896 MHz
 F2=1850-1995 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

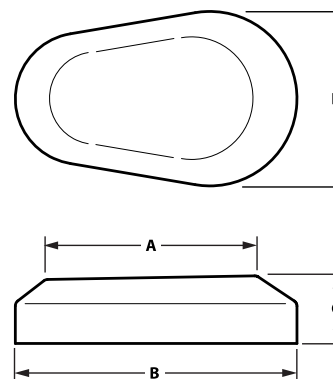
Cable Length:

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

Connectors:

Contact factory for connector options.

Dimensions
(APG100)



Mount	Adhesive, Magnet or Bolt
Description	Teardrop Shape
A	4.0 in
B	5.5 in
C	1.3 in
D	3.5 in