



**APG500**

## ***Tracking with Versatility***

**The AP-Navigator® GPS** is a simple and easy to install solution that includes a Trimble 12 channel GPS Receiver and GPS Antenna, both inside our patented low profile antenna design. The AP-Navigator™ GPS is ideal for users who want to add on GPS and AVL functionality to their fleet of vehicles. So, all of your antennas and your GPS receiver are in this one unit.

### **Key Benefits:**

#### ***Bring Mapping and Automatic Vehicle Location Technologies to your fleet of vehicles.***

The AP-Navigator® GPS is a full 2 way communicating 12 channel 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.

#### ***Long Product Life – Low Profile Design***

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

#### ***Make Your Investment Last***

By keeping the GPS receiver separate from your computer, you ensure longer product life. When it comes time to refresh your computer, you do not need to re-purchase GPS. The AP-Navigator® GPS will last you many years.



#### ***Very Simple Install – only one unit for everything***

You will only need to drill one hole and feed the cable assembly through to your computer or docking station. Here, the AP-Navigator® GPS connects via USB. If you ever need to move this to another vehicle, the take out and re-install will take minutes. Keep all your GPS system even after you upgrade your laptop or vehicle.

# AP-NAVIGATOR® GPS ANTENNA

(APG500)

## 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

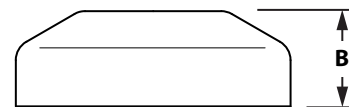
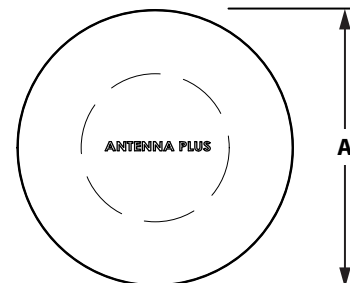
### Electrical Characteristics

**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

### Dimensions



Mount	Adhesive or Magnet
A	3.2 in (81 mm)
B	1.1 in (33 mm)