

AP-NAVIGATOR® 4x ANTENNA - EUROPE

APG200/90/17/21/24

Complete AVL Solution and Enhanced Communications

Solves the Problem of How to do All 3 Wireless Technologies with embedded wireless inside Panasonic

Now, you can embed the Cellular and WiFi in your ToughBook, and then utilize the AP-Navigator® 4x Antenna to provide the GPS and all of your external antennas.

Very Simple Install – only one unit for everything

All three of your antennas and the GPS receiver are in our low profile housing. You will only need to drill one hole and feed the cable assembly once. If you ever need to move this to another vehicle, the take out and re-install will take minutes. Keep all your antennas and GPS system even after you upgrade your laptop or vehicle.

Mapping and Automatic Vehicle Location Technologies

The AP-Navigator® 4x 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 Cellular & WiFi Footprint and Faster Data Speeds

The AP-Navigator® 4x Antenna provides up to 25% more wireless coverage, depending on the geography you travel in. Better reception translates to faster speeds. The data gets through the first time, correctly.

Long Product Life – Low Profile Design

The AP-Navigator® 4x Antenna has a low profile design. It withstands all of the natural elements, car washes, and being swept by tree branches.



Antenna Plus Connects to:
Docking Stations and Wireless Data Cards

Extra coverage gained with the AP-Navigator® 4x Antenna



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ANTENNA PLUS
www.antennaplus.com

AP-NAVIGATOR® 4x ANTENNA (APG200/90/17/21/24)

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

RoHS Compliant

Antenna Specifications

Electrical Specifications

Frequencies:

F1 = 890-950 MHz
 F2 = 1710-1880 MHz
 F3 = 2110-2170 MHz
 F4 = 2400-2485 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

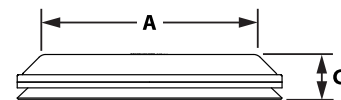
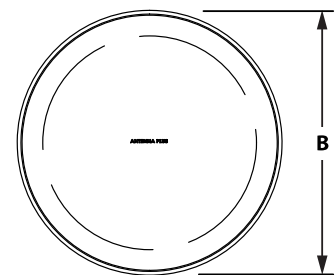
Cable Length:

15 feet / 4.5 meter (Adhesive Mount)
 10 feet / 3 meter (Magnetic Mount)

Connectors:

Contact factory for connector options.

AP-NAVIGATOR® 4x Antenna Dimensions (APG200/90/17/21/24)



Mount	Adhesive or Bolt
A	5.5 in
B	6.9 in
C	1.3 in