

AP-NAVIGATOR® 700 ANTENNA

APG700

Complete AVL Solution for Motorola

The AP-Navigator® MOT is a 3-in-1 solution, ideal for Motorola ML910 users who want to have 700 MHz, WiFi and GPS. Since only 2 embedded wireless technologies can be passed through to a docking station, you need a way to do the third technology – GPS. Inside our low profile housing, we provide a Trimble GPS receiver, GPS antenna, 700 MHz antenna and WiFi antenna. So, all of your antennas and your GPS receiver are in this one unit.

Key Benefits:

Solves the Problem of How to do All 3 Wireless Technologies with embedded wireless inside the Motorola ML910

Now, you can embed the 700 MHz private radio and WiFi in your ML910, and then utilize the AP-Navigator® MOT to provide the GPS receiver 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® MOT 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 & WiFi Footprint and Faster Data Speeds. The AP-Navigator® MOT provides up



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

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® MOT has a low profile design. It withstands all of the natural elements, car washes, and being swept by tree branches.

Extra coverage gained with the AP-Navigator® 700 Antenna



AP-NAVIGATOR® 700 ANTENNA

(APG700)

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

Antenna

Electrical Specifications

Frequencies:
F1=746-803 MHz

VSWR: 1.5:1 or less at resonant point

Gain: 3.0 dB

Radiation Pattern:
OMNI Directional
Hemispherical (GPS)

Polarization:
Vertical

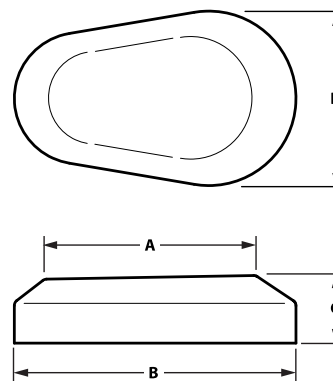
Mechanical Specifications

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
Description	Teardrop Shape
A	4.0 in (102 mm)
B	5.5 in (175 mm)
C	1.3 in (33 mm)
D	3.5 in (89 mm)