MobileMapper® 300

NEW
FOR **2015**

High Accuracy GIS for Smart Phones and Tablets

FLEXIBLE
RTK GARANTIE
PRODUCTIF

MULTI GNSS

SPECTRA
PRECISION

MobileMapper 300

The MobileMapper 300 is a smart antenna designed to be used in combination with a wide variety of mobile devices, including smart phones, tablets, and notebook computers. The MobileMapper 300 solution is compatible with Android mobile devices and is ready to work with any GIS application, without any need of integration or development. When MobileMapper 300 is synchronized with a specific mobile device, this device and the application running on it (could be Spectra Precision, Trimble or any third party application) will benefit from the position provided by the MobileMapper 300 with accuracies much greater than those from the internal GPS.

The MobileMapper 300 solution, offers to GIS users the ability to use their preferred GIS application and run it on their preferred mobile device, whatever it is, and still benefit from the best of Spectra Precision GNSS technology.

To facilitate the integration of a professional GNSS receiver with those mobile devices and the Android world, the MobileMapper 300 solution includes a control application which manages all the communication and GNSS settings: **space** (Spectra Precision accuracy enabler). With MobileMapper 300, consumer devices are no longer limited by their internal GPS and can attain mapping grade or even survey grade accuracy levels. The **space** application also facilitates integration with third party GIS applications avoiding the need for any integration or development efforts.

Open solution

- Accuracy on many mobile devices
- Compatible with Android from version 4.2
- Straight forward integration with any GIS application

High accuracy GIS

- Scalable from mapping grade to full RTK accuracy
- Trimble RTX support (CenterPoint over IP)

Ready to use

- Compact, light weight and configuration-free GNSS receiver
- **space** control application for all required GNSS settings (free of charge)

A New Approach to GIS Efficiency

The MobileMapper 300 concept is to leverage, as much as possible, all mobile devices capabilities in terms of interface, memory, computing power and communication, to make the GNSS portion more optimized for easy handling (light weight, lower consumption,..) and to provide the best cost to performance ratio. By only using a Bluetooth connection to the smart phone, the MobileMapper 300 has been designed to make the GIS user's life easy. For accurate mapping, simply switch on the receiver and go. Several accuracy levels are available depending on requirements; from mapping grade (sub foot) to centimeter RTK.

Spectra Precision
Accuracy Enabler space

To facilitate the integration of a professional GNSS receiver with mobile devices and the Android world, the MobileMapper 300 solution includes a control application which manages all the communication and GNSS settings: **space** (Spectra Precision accuracy enabler).

This application can be loaded for free on Google Play. Using this combination, GIS users can benefit from Spectra Precision GNSS capabilities on their preferred devices.

With Mobile Mapper 300, consumer devices are no longer limited by their internal GPS and can reach mapping grade or even survey-grade accuracy levels. This solution is also open to any application needing to get an accurate position. The **space** application makes integration immediate and straightforward.

With MobileMapper 300 it is now possible to have accurate positions on a Android consumer smart phone or tablet.

General
- Three accuracy levels available from mapping grade to RTK
- Ready to use solution for Android devices
- 220 channels receiver L1/L2 GPS/ GLONASS
- Configuration-free, very light weight and compact

GNSS Characteristics
- 220 GNSS channels
  - GPS L1C/A, L2P and L2C
  - GLONASS L1C/A and L2C/A
  - SBAS: code and carrier (WAAS/EGNOS/ MSAS/GAGAN)
- Very low noise GNSS carrier phase measurements
- Proven low elevation tracking technology
- Supported data formats: RTCM 2.0, 2.1, 2.3, 3.0 and 3.1, CMR, CMR+
- RTK networks: VRS, FKP, MAC

Real-Time Accuracy (RMS) [1] [2]
SBAS (WAAS/EGNOS/MSAS/GAGAN)
- Horizontal < 50 cm (1.64 ft)
- Vertical < 85 cm (2.79 ft)

Advanced accuracy modes (need correction service)
- 30/30
  - Horizontal 30 cm
  - Vertical 30 cm
- 7/2 (Firmware option needed)
  - Horizontal 7 cm
  - Vertical 2 cm
- Full RTK (Firmware option needed)
  - Horizontal 10 mm + 1ppm
  - Vertical 20 mm + 1 ppm
- RTX (Firmware option needed)
  - 4 cm after 30 mins

Real-Time Performance
- Initialization time: typically < 10 sec (for baselines < 20 km)
- Initialization reliability: > 99.9%

Post-Processing Accuracy (RMS) [1] [2]
Static, Rapid Static
- Horizontal 5 mm (0.016 ft) + 0.5 ppm
- Vertical 10 mm (0.033 ft) + 0.5 ppm

High-Precision Static[3]
- Horizontal 3 mm (0.009 ft) + 0.5 ppm
- Vertical 6 mm (0.019 ft) + 0.5 ppm

Post-Processed Kinematic
- Horizontal 10 mm (0.033 ft) + 1 ppm
- Vertical 20 mm (0.065 ft) + 1 ppm

Data Logging Characteristics
Recording Interval
- 1 - 60 seconds

Physical Characteristics
Size
- Unit: 20.5x20.5x6.2 cm (8.1x8.1x2.4 in)

Weight
- GNSS receiver: 650 g (1.4 lb)

I/O Interface
- 9-16 V DC input power
- RS232 serial link
- Bluetooth 2.0 class 2 (SPP profile)

Memory
- 6 MB internal memory (expandable through data collector memory)
- Up to 100 hours of 15 sec. raw GNSS data from 18 satellites

Operation
- RTK network rover: VRS, FKP, MAC
- NTRIP, Direct IP, RTX

Environmental Characteristics
- Operating temperature: -30° to +65°C (-22° to +149°F) [4]
- Storage temperature: -40° to +70°C (-40° to +158°F)
- Humidity: 100% condensing
- IP67 waterproof, sealed against sand and dust
- Shock: ETS300 019
- Drop: 2 m pole drop on concrete

Power Characteristics
- Li-Ion battery, 5000 mAh
- Battery life time: 10 hrs
- Nominal voltage: 3.7 V
- External DC power: 9-16 V with reverse polarity protection (ISO 7637)

Standard System Components
- MobileMapper 300 receiver
- Power cable
- AC/DC adapter
- CLA adapter
- Soft bag

Optional System Components
- RS232 to USB adapter kit
- Field brackets for 7" and 10" tablets

Application

MobileMapper 300 is delivered with **SPace** utility for easy configuration and straight forward integration with third party GIS application. **SPace** is available for free on google play

SPace Main Functionality:
- Compatible with Android (after version 4.2) platforms
- Bluetooth connection between MobileMapper 300 and third party device
- Correction service setup
- Position quality details
- Satellite sky plot
- Make accurate position available to any 3rd party application

[1] Accuracy and TTFF specifications may be affected by atmospheric conditions, signal multipath, satellite geometry and corrections availability and quality.

[2] Performance values assume minimum of five satellites, following the procedures recommended in the product manual. High multi-path areas, high PDOP values and periods of severe atmospheric conditions may degrade performance.

[3] Depending on baselines, precise ephemeris and long occupations up to 24 hr may be required to achieve the high precision static specifications.

[4] At very low temperature, the unit will start, and will operate after a short warm-up time.

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