MobileMapper 300

- High accuracy on any Android device
- Ready to be used with any GIS application
- Compact, light weight and configuration-free GNSS receiver
- SPace control application for all required GNSS settings

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. MobileMapper 300 solution is compatible with Android mobile devices and ready to work with any GIS application. When MobileMapper 300 is synchronized with a specific mobile device, this device and the application which is running on it (could be Spectra Precision, Trimble or any 3rd party application) will benefit from the position available from MobileMapper 300 which is much greater than the one provided by the internal GPS. Several accuracy levels are available depending on job requirements from mapping grade (sub foot) to centimeter RTK.

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 Precison accuracy enabler). This application could be loaded for free on google play and is also available on www.spectraprecision.com.

With this combination, GIS users can benefit from Spectra Precision GNSS capabilities on their preferred devices. With MobileMapper 300 consumer devices are no more limited by their internal GPS and can reach mapping grade or even survey grade accuracy levels. This solution is also open to any applications that need to get an accurate position, the SPace application will make this really plug and play, and doesn't require any integration effort or development.

GENERAL

- Three levels of accuracy 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

GIS Mobile Mapping

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

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)

- 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)

STANDARD SYSTEM COMPONENTS

- MobileMapper 300 receiver
- Power cable
- AC/DC adaptor
- CLA adaptor
- Soft bag

OPTIONAL SYSTEM COMPONENTS

- RS232 to USB adaptor kit
- Field brackets for 7" and 10" tablets

APPLICATION

MobileMapper 300 is delivered with SPace utility for easy configuration and straight forward integration with 3rd party GIS application. SPace is available for free on google play or www.spectraprecision.com

SPace MAIN FUNCTIONALITIES:

- Compatible with Android (after version 4.2) platforms
- Bluetooth connection between MobileMapper 300 and 3rd party device
- Correction service setup
- Position quality details
- Satellite sky plot
- Feed location service of 3rd party device

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 short warm-up time.