SERVICE SHEET

These are the main characteristics of *magicGNSS* services:

- GPS, GLONASS, Galileo, BeiDou and QZSS supported

- Accurate GNSS Orbit and Clock determination for Real-Time and Post-Processing applications

- Precise Point Positioning for Real-Time and Post-Processing applications

- Up to 30-day GNSS accurate Ephemeris predictions

- Up to 100 simultaneous station monitoring

- Standard input data formats: RINEX, RTCM

- Standard output data formats: SP3, ERP, RINEX, ASCII, PDF, SNX, RTCM

CUSTOMIZATION AND EXTENSIONS

magicGNSS' services can be modified or tailored upon request for specific applications such as:

- Real Time Precise Orbit and Clock estimation based on a user Station Network

- Synchronization of remote clock networks

- A-GNSS service tailored for a requested format

- PPP service through a specific user API

- Customization for clock performance monitoring

For further information, please contact us through **magicgnss@gmv.com**

CHECK ALSO

The **magicGNSS** blog:

http://magicgnss.gmv.com/wordpress/

magicGNSS on Twitter:

http://tritter.com/magicGNSS

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PRECISE GNSS SERVICE SUITE
FOR THE GNSS USER COMMUNITY

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WHAT IS *magicGNSS?*

magicGNSS suite comprises a set of GNSS tools and services which have been developed and tailored by GMV throughout the years to cope with the needs of the wide variety of GNSS users, providing added-value services. Including multi-GNSS Precise Orbit and Clock Determination, Precise Point Positioning, GNSS Long-Term Ephemeris Predictions and Station Monitoring among others. *magicGNSS* suite implements state-of-the-art GNSS algorithms developed by GMV as a result of 25 years' experience in the field.

PRECISE ORBIT DETERMINATION AND TIME SYNCHRONIZATION

Multi-constellation precise product determination service based on the processing of GNSS measurements coming from a world-wide (or local) station network. It offers two different services:

- Post-processing service: Users can upload, store and manage RINEX files in the magicGNSS cloud system workspace, and estimate precise GNSS orbits and clocks based on a reference network of stations.

- Real-time service: Real-Time product service which generates precise GNSS orbits and clocks in real time to be used, for instance, by PPP applications.

RMS Accuracy VS IGS	Orbits (m) 1D RMS	Clocks (ns) Stdev
Post-processing	0.03	0.06
Real-time	0.04	0.12

PRECISE POINT POSITIONING

Multi-constellation single and double frequency precise point positioning service which uses measurements from a single multi-frequency GNSS receiver, together with detailed physical models and corrections, and precise GNSS orbit and clock products calculated beforehand. Four different services are provided:

- **Post-processing service:** Users can upload, store and manage RINEX files in the *magicGNSS* cloud system workspace, and compute the receiver's position.
- **E-mail service:** Users can access this free service via e-mail by sending their raw RINEX data files to **magicppp@gmv.com**, receiving a response email with the precise coordinates.
- **Real-time service:** Real-Time PPP service which uses RTCM ephemeris corrections which are received through the Internet.
- **Rapid PPP convergence service:** multi-GNSS real time regional corrections provision service for faster PPP convergence.

The PPP service can be used together with our PPP client, which implements state-of-the-art positioning algorithms and has been optimized for running in portable devices such as Android phones and tablets.

RMS Position Accuracy	Horizontal (m)	Vertical (m)
Post-processing	0.03	0.05
Real-time	0.05	0.08

LONG TERM EPHEMERIS PREDICTION

Multi-constellation High Accuracy prediction service which provides long-term GNSS orbit and clock predictions suitable for Assis-ted-GNSS (A-GNSS) applications. A built-in propagation module is used to predict the GNSS orbits and clock biases previously estimated. This propagation module has been finely tuned for optimizing the long-term predictions accuracy for GPS, GLONASS, BeiDou and Galileo constellations.
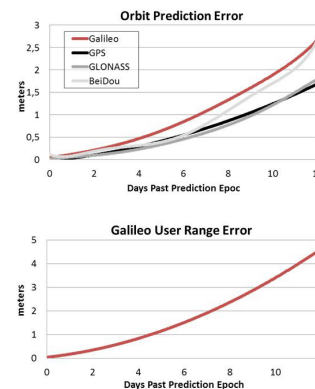
The GNSS orbits and clock predictions are updated in a regular basis to ensure that both the service accuracy and availability are maintained over time.

System constellation status (NANUs and Health Status) are automatically processed for flagging satellites with expected lesser performance without affecting the service availability.

Orbit Accuracy	1 day	1 week	2 weeks	1 month
Median Error [m]	0.2	2.1	8.4	25.4

This prediction service is flexible enough to be compatible with the existing standards for the delivery of A-GNSS information to mobile devices and at the same time it can be adapted to fulfil the requirements of any manufacturer's needs. It also supports SP3 and Clock RINEX format.

STATION MONITORING

Station network real-time monitoring service, which allows the monitoring of a GNSS network configured by users according to predefined KPIs related to:

- Data availability
- Data quality
- Position stability
- GNSS receiver clock stability
- Tropospheric Zenith Delay stability
- Iono Delays
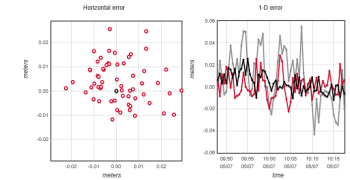
This monitoring service includes the possibility of generating alerts based on user defined, configurable, alarm limits.

For further service details please refer to **www.magicgnss.gmv.com/services** or contact us at **magicgnss@gmv.com.**