GeoS-1 & GeoS-1M – combined GLONASS/GPS receivers for mass-market
The modern and competitive GLONASS/GPS receivers available for OEM/ODM companies shall become a key milestone on the way to create a real commercial market out of GLONASS.

For now the existing GLONASS/GPS receivers are not able to meet the needs of consumer devices manufacturers.

The leaders (like U-Blox, SiRF, ..) have not yet shown their interest to the mass market for devices with GLONASS.

Commercial market needs a range of GLONASS/GPS receivers designed for specific applications.
Navigation market triggers

For GPS and for GLONASS:

- The cost of chip-sets
- Dimensions of chip-sets
- Power consumption of chip-sets

Only for GLONASS:

- Openness and accessibility of the technology
- "Free" export for GLONASS technology and for the products with GLONASS
- Be comparable with GPS equipment in performance, key features and price.
- Promotion of the GLONASS system and the real feasible advantages which it brings to the GNSS market and for the final customers.
GeoS-1

GeoS-1 (OEM): Combined GPS/GLONASS receiver

- 24 channels
- Short TTFF
  - 36 sec in «cold» start, 29 sec in «warm» start,
  - 4 sec in «hot» start, 1 sec Reacquisition
- High Positioning Accuracy
  - < 3 m (horizontal), < 5 m (vertical)
- High Sensitivity
  - Up to -180 dBW in tracking
- Programmable Output Data Rate
  - Up to 5 Hz
- Low Power Consumption
  - 400 mW in active mode, 20 uW in battery mode

- Market price (w/s) – 80$
- Certified («BOEHTECT» "32 State Scientific and Research Institute of Measurements" (FGU "32 GNIII))
- In serial production
- Applications: automotive tracking and tracing systems
GeoS-1 key competitive advantages

- GEOS-1 has no analogues in Russia and abroad on the set of parameters in the category of mass GLONASS / GPS navigation receivers (L1).
- GEOS-1 can be produced in 8 (eight) modifications in order to fit in the maximum number of possible applications.
- GEOS-1 was designed with the active participation of "M2M telematics“ company – the manufacturer of telematics equipment and one of the largest consumers of GLONASS / GPS navigation receivers in Russia. M2M experience and expertise in running telematics systems on the whole territory of Russia were critical for testing and debugging of the GeoS-1 firmware.
- Serially produced.
- Many companies across the world with special interest to GLONASS are testing GeoS-1. We have test customers in UK, Canada, China, Taiwan, Israel, Germany, New Zealand, France.
- GeoS-1 was exhibited at Cebit’09 and Navitech’09 (Russia). The results of the fairs are receiving over 70 direct requests for the samples purchase (30% of requests came from foreign companies). After the testing, clients made repeat orders.
- Selected for the GEOS-1 form factor as a separate module allows developers to reduce the costs of integration for niche applications.
The method we use for GEOS-1 laboratory and field tests

- Test on a GLONASS / GPS simulator
- Dynamic test w.o. filtration in a car together with the standard reference GPS and competitive GLONASS/GPS receivers
- Days-long tests in static under adverse receiving conditions.
GEOS-1 Test Kit

Navigation receiver GEOS-1

Technical support:

• WEB site in Russian, English and Chinese.
• Potential customers can view the complete set of the documentation before purchasing GEOS-1 both in Russian and English languages.
• The site contains information on the GLONASS system and explains the advantages of GLONASS / GPS technology.
80% of the total market now are closed for GLONASS due to the absence of the proper components for integration in the most popular segments of portable electronics.
In September 2009 GEOSTAR navigation presented another product - GLONASS/GPS receiver GEOS-1M, which is a modification of GEOS-1 but has important improvements in the key characteristics:

- Dimensions 35x35x3 mm
- Power consumption 350 mW
- SMD – one side mounting.
- Price w.s. 60$
- Applications: automotive tracking and tracing systems, portable radio transmitters, PND
Key development priorities for GeoS combined multi-GNSS receivers

- Power consumption reduction, flexible power saving modes, additional functionality: SBAS, Galileo, Compass
- Sensitivity increase in detection and in tracking modes
- Further improvement of reliability and quality of the positioning in adverse receiving conditions
- Dimensions reduction
- Technological readiness for high volume production
- Economical and technological justification for GPS/GLONASS vs. GPS.