Navi-2M

MEMS/GNSS navigation system

Navi-2M is a compact GNSS-aided inertial navigation system. The system incorporates a set of MEMS sensors (3 rate sensors and 3 accelerometers), solid state magnetometer, barometric altimeter and built in GNSS(GPS+GLONASS) receiver. Integration of GNSS and inertial data guarantees continuous navigation during GNSS gaps and dynamic navigation solution without time lags regardless of motion conditions/

Navi-2M outputs full navigation solution: accelerations, angular rates, attitude angles, position coordinates and velocities. Meeting customer requirements any type of GNSS receiver, either single system or multi-system, can be applied.

The system is supplied with advanced data visualization software, compatible with all Optique navigation systems. The software provides real-time navigation data display and post-mission data analysis. Data can be displayed in numeric form, in multifunctional display or as data plots. The vehicle trajectory is displayed in a moving map. The vehicle attitude change is visualized by a 3D moving model. Software maintains simultaneous display of several motion tracks to enable data comparison and analysis.

- ✓ navigation, orientation and positioning
- ✓ no maintenance required
- ✓ reliable navigation solution during GNSS outages
- ✓ suitable for land, aerial and marine applications
- ✓ can incorporate air data system (ADS) or odometer data

Technical specification

Accuracy*	**INS/GNSS**	**GNSS Off**	**INS/ADS**
Attitude(roll, pitch)			
straight flight	0.2°~0.3°	0.3°~0.5°	0.3°~0.5°
maneuver	0.4°~0.6°	0.7°~1°	0.6°~0.7°
Heading	0.4°	3° **	3° **
Altitude	2~4 m	6 m	6 m
Horizontal velocities	0.2 m/s	5 m/s **	1 m/s
Vertical velocity	0.28 m/s	0.5 m/s	0.5 m/s
Position	5 m	600 m**	50 m**

Performance		**Operating ranges**	
Output data rate	50 Hz	Angular rate	±250º/s
Cold start	30 s	Acceleration	±6 g
Interface	RS232, RS422 (optional)	Heading	0~360°
Electrical		Pitch / Roll	± 90° / ± 180°
Voltage	10~30 VDC	Altitude	6,000 m
Power	1.5 W (at 12 VDC)	Velocity	up to 1,500 km/h
Input current	1.2 A (at 12 VDC)	Operation temperature	-50ºC~+75 ºC
Physical		Storage temperature	-60ºC~+85 ºC
Size	125 x 80 x 57 mm (4.9 x 3.1 x 2.2 in)		
Weight	0.7 kg (1.54 lbs)		

* all accuracy data are RMS values

** 5 min GNSS gap

Specification subject to change without notice.