NAVIKA - 1100

GNSS + NavIc Module

Features:

○ Navika 1100 is Multi GNSS Positioning Module

○ Navika 1100 process signals from two GNSS frequency bands L1 and L5

○ Supports 36 tracking and 52 acquisition channels

○ All-in-view positioning

○ Position update rate of 1 Hz to 10 Hz

○ Support antenna detection

○ Support DGPS, (WAAS/EGNOS/MSAS/GAGAN)

○ Supply Voltage Range 2.7V to 3.3V

○ On-board LNA for passive antenna designs

○ NMEA-0183 v4.11 message output

○ Operating Temperature: -40^0 C to $+85^0$ C

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17mmx22.4mm

Product Description:

Navika-1100 is a multiband GNSS receiver that combines the advantages of GPS L1 and NavIC L5 signals. Targeted specifically at the Indian and Global market, Navika-1100 provides navigation and timing for various applications.

With 52 acquisition channels, Navika-1100 supports fast satellite searches in all receiver modes. The module outputs the navigation data over UART in the NMEA 0183 data format. For applications needing more than one navigation record per second, the module can compute up to 10 PVT records in a second.

In environments prone to unintentional jamming or in applications that require GNSS to be co-located with high power transmitters (e.g. 4G modems), Navika-1100 supports up to 16 interfering tone mitigation. Most land applications suffer from the deleterious effects of multipath. Navika-1100 includes multipath mitigation techniques to improve the location accuracy under such conditions.

Applications:

- Vehicle / Asset Tracking Devices
- Fleet Management
- Telematics / Infotainment
- Marine Navigation
- Drones / UAV's
- Portable units

Specifications of NavIC+GPS Module

Performance Characteristics

Receiver	L1 C/A GPS, L5 SPS NavIC, 36 Tracking and 52 Acquisition Channels

Sensitivity

Acquisition	-147 dBm in Cold start
Reacquisition	-152dBm
Tracking	-160dBm

Time to First Fix

Hot Start (with valid ephemeris, almanac, position and time estimate	1-2s (typical, under open sky conditions or at -130 dBm signal power)
ColdStart (withoutalmanac, time,or position)	30s (typical,under open sky conditions or at -130 dBm signal power)

Accuracy

Position (Horizontal)	1.5m (CEP50)
Velocity	0.1m/s(RMS)

Reacquisition

Signal	1s
Position	1s
Blockage Time	1 minute

Navigation Solution

PVT	
PositionUpdateRate	1Hz/10Hz

PC / Host Communication

Interface	UART
Baud Rate	4800bps to 115200bps
Message Formats	NMEA0183Ver.4.11ASCII, as well as proprietary messages

Environmental Characteristics

Operational Temperature Range (Ambient)	-40°C to +85°C
Storage Temperature Range	-40°Cto+85°C
Humidity	95%RH
Altitude	18000m

Output Messages

NMEA	GGA, GSA, RMC, GLL, GSV, VTG, ZDA
ASCII	Version, Receiver Configuration

Input Messages

ASCII	NMEA message control and configuration, Elevation mask, DOP settings, Factory reset, Restart

* Information mentioned in this document is subject to change. Please contact us for more details.