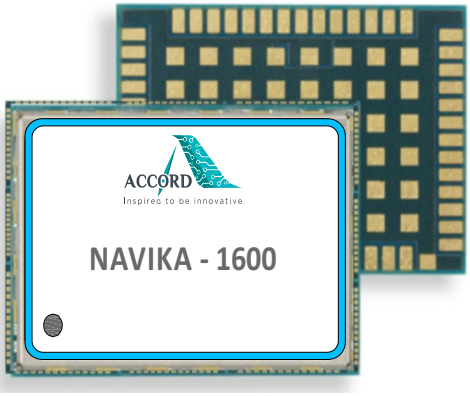
NAVIKA - 1600

GNSS Positioning Module

Features:

- Navika 1600 is a Multi GNSS Positioning Module
- Navika 1600 process signals from two GNSS frequency bands L1 and L5
- Supports 64 tracking and 52 acquisition channels
- All-in-view positioning
- Position update rate of 1 Hz to 10 Hz
- Integrated LNA for better sensitivity.
- Support antenna detection
- Support DGPS, (WAAS/EGNOS/MSAS/GAGAN)
- Supply Voltage Range 3.0V to 3.6V
- NMEA-0183 v4.11 message output
- Operating Temperature: -40^0 C to +85^0 C



17mmx22mm

Preliminary Document

Product Description:

Navika-1600 is a multi-constellation receiver that combines the advantages of GNSS L1 and L5 signals. Targeted specifically at the Indian and Global market, Navika-1600 provides navigation and timing for various applications.

With 52 acquisition channels, Navika-1600 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-1600 supports up to 16 interfering tone mitigation.Most land applications suffer from the deleterious effects of multipath. Navika-1600 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 GNSS Positioning Module

Performance Characteristics	
Receiver	GPS L1/Galileo E1 C/A: 1575.42 MHZ, GLONASS L1 C/A: 1602.5625 MHZ , L5(NAVIC)/SPS, BeiDou:1561.098MHZ

Sensitivity	
Acquisition	-147 dBm in Cold start
Reacquisition	-154dBm
Tracking	-165dBm

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

Ordering part number	
NAVIKA-1600 L1	GNSS module with L1 bands
NAVIKA-1600 L5	GNSS module with L1 and L5.

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

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