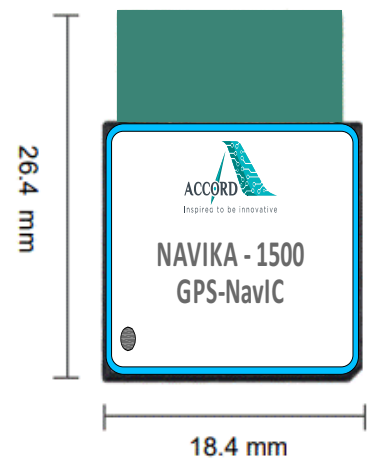


# NAVIKA - 1500

## GNSS Positioning Module

### Features:

- Navika 1500 is Multi GNSS Positioning Module
- Navika 1500 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
- Supports both embedded patch antenna and active antenna
- Support antenna detection
- Support DGPS, (WAAS/EGNOS/MSAS/GAGAN)
- Supply Voltage Range 3.0V to 3.6V
- On-board LNA for passive antenna designs
- NMEA-0183 v4.11 message output
- Operating Temperature: -40° C to +85° C



### Product Description:

Navika-1500 is a multi-constellation receiver that combines the advantages of L1 and L5 signals. Targeted specifically at the Indian and Global market, Navika-1500 provides positioning, navigation and timing for various applications.

With 52 acquisition channels, Navika-1500 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-1500 supports up to 16 interfering tone mitigation. Most land applications suffer from the deleterious effects of multipath. Navika-1500 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	GPS L1/Galileo E1 C/A: 1575.42 MHz, GLONASS L1 C/A: 1602.5625 MHz, L5 (NAVIC)/SPS, BeiDou: 1561.098 MHz
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### 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 (without almanac, 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	
Position Update Rate	1Hz/10Hz

### PC / Host Communication

Interface	UART
Baud Rate	4800bps to 115200bps
Message Formats	NMEA0183 Ver.4.1 ASCII, as well as proprietary messages

### Environmental Characteristics

Operational Temperature Range (Ambient)	-40°C to +85°C
Storage Temperature Range	-40°C to +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
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### Ordering part number

NAVIKA-1500A	U.FL connector with active antenna support
NAVIKA-1500P	With Patch Antenna

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

