

IRNSS Dongle Receiver



Features

- IRNSS Receiver in a USB dongle form-factor
- Suitable for plug-and-play applications for IRNSS navigation including Research and development
- Supports 7 channel L5-IRNSS signal
- Active port for external antenna interface
- Powered by USB 2.0/3.0 compatible devices
- Type 18 message decoding from each IRNSS satellite
- Antenna supply of 5V DC
- Message and maintenance over USB using UART protocol through GUI
- Supports similar to NMEA message protocol for IRNSS



IRNSS Dongle Receiver

Few of other products realized by ACCORD



Specifications of IRNSS Dongle Receiver

Performance

Channels	7 Channels IRNSS L5 frequency (1175.46 MHz)
Cold Start TTFF* (without almanac, time, or position)	75 s (typical), open sky <small>*TTFF depends on the availability of Satellites</small>
Combined Position Accuracy (Horizontal)	20 m, 1 σ
Combined Velocity Accuracy	0.3 m/s, 1 σ
Update rate	1 second
Dynamics	Velocity: 200 m/s Acceleration: 2g Jerk: 1 m/s ³

Electrical

Supply Current (@ 5.0V)	< 300 mA
Antenna Current (@ 5.0 V)	10 mA to 450 mA

Software Upgrade Features

Firmware Upgrade	Upgrade through GUI
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Environmental

Operating Temperature	-20° C to +55° C
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Mechanical

Dimensions	80 mm x 24 mm x 12 mm (with enclosure)
Weight	15 gms (approximate)
Power and Message Interface connector	USB Type A male plug

Host Communication

Configuration	USB-UART through FT232 bridge
UART Baud Rate	115200 bps
Settings	8 data bits, no parity, 1 start, 1 stop
PC Configuration	Windows XP, 7

Messages Format

Similar to NMEA 0183 modified for IRNSS	User Date, Time, Latitude, Longitude, Altitude, Speed, Heading, Satellite Elevation and Azimuth, C/N, HDOP, PDOP, GDOP Type 18 message extracted from each satellite
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Antenna

Type	Active antenna
Dimensions	37 mm x 40 mm x 11 mm
Cable Length	3 m (standard)



IRNSS L5 Antenna



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