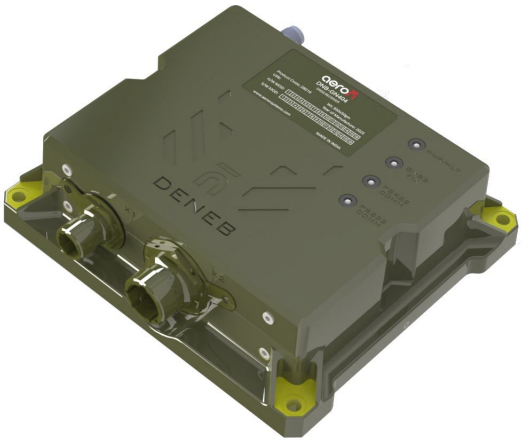
GNSS Receiver

Features



- Multi-Frequency, Multi-constellation GNSS L1/L2/L5 RTK GNSS receiver
- Ruggedized for Mechanical Shock
- Real-time position outputs.
- Centimeter level position accuracy in RTK mode
- High Accuracy 1 PPS output
- Multiple interfaces: RS232, RS422, and Ethernet
- Rugged IP65 enclosure for harsh environments
- Power/ Health, GNSS FIX, and Communication LED Indicators

Applications

- Autonomous Ground Vehicle (AGV)
- Unmanned Ground Vehicle (UGV)
- Surveying and Mapping
- Precision Agriculture
- Armoured Vehicles
- Robotics
- Precise Time Synchronisation
- Artillery Guns

Description

The DENEB, DNB-GN404 is a robust, high-performance multi-frequency, multi-constellation GNSS receiver that delivers precise position in standalone and centimeter level position accuracy in Real Time Kinematic (RTK) mode. The DNB-GN404 rugged design meets the operational requirements of applications such as robotics and autonomous vehicles.

The DNB-GN404 design withstands extreme shock which continuously providing accurate position information in most high vibration environments. Military-grade environmental, EMI/EMC, and power compliance ensures reliable operation in extreme conditions and electromagnetically contested environments.

The DENEB, DNB-GN404 is a multi-frequency L1/L2/L5 GNSS receiver with GPS support. It provides UTC synchronized 1PPS output. The multi-constellation high gain GNSS antenna assures an uninterrupted satellite signal making the DNB-GN404 a right choice for high precision positioning and surveying applications.

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Technical Specifications

Parameter Name	Parameter Value	Unit	Confidence Band/Condition
Accuracy			
Horizontal Position[1]	1	cm	CEP with RTK
	1.5	m	CEP in Standalone mode
Vertical Position[1]	1	cm	CEP with RTK
	2	m	CEP in Standalone mode
Dynamic Heading Accuracy[2]	0.3	deg	-
Velocity Accuracy[2]	0.1	m/s	-
GPS/GNSS			
Type	Multi-Frequency GPS, GLONASS, BeiDou, Galileo, QZSS, NavIC (IRNSS)	-	-
Signals Received	GPS L1CA/L1P/L1C/L2P/L2C/L5 GLONASS G1/G2/G3, P1/P2 BeiDou B1i/B2i/B3i/B1C/B2a/B2b GALILEO E1BC/E5a/E5b/E6BC QZSS L1CA/L2C/L5/L1C/L6 NavIC (IRNSS) L5	-	-
Channels	1100+	-	-
TTFF Cold Start	60	sec	Time to First Fix
Reacquisition Time	15	sec	-
Antenna Type	Multi-Constellation GNSS Antenna	-	-
Antenna Connector	TNC Female Connector (Amphenol make P/N: 122210)	-	-
Communication Interface			
RS-232 (isolated)	Data Output (NMEA) / GUI interface	-	RTK Output from 9600 to 921600 baudrate
	RTK Output		
RS-422 (isolated)	Data Output / GUI interface	-	From 4800 to 921600 baudrate
Ethernet (isolated)	Data Output (NMEA)	-	100 Mbps
Output	PPS from GNSS, Position, Time, GNSS parameters, Health status	-	-
Output Data Protocols	NMEA 0183 (v2.3 - v4.1) and RTCM (v3)	-	-
Input Data Protocols	RTK Correction: RTCM v3	-	-
Built-In Tests	PBIT, CBIT	-	-

1 - Open sky conditions
2 -50% at 30m/s for dynamic operation

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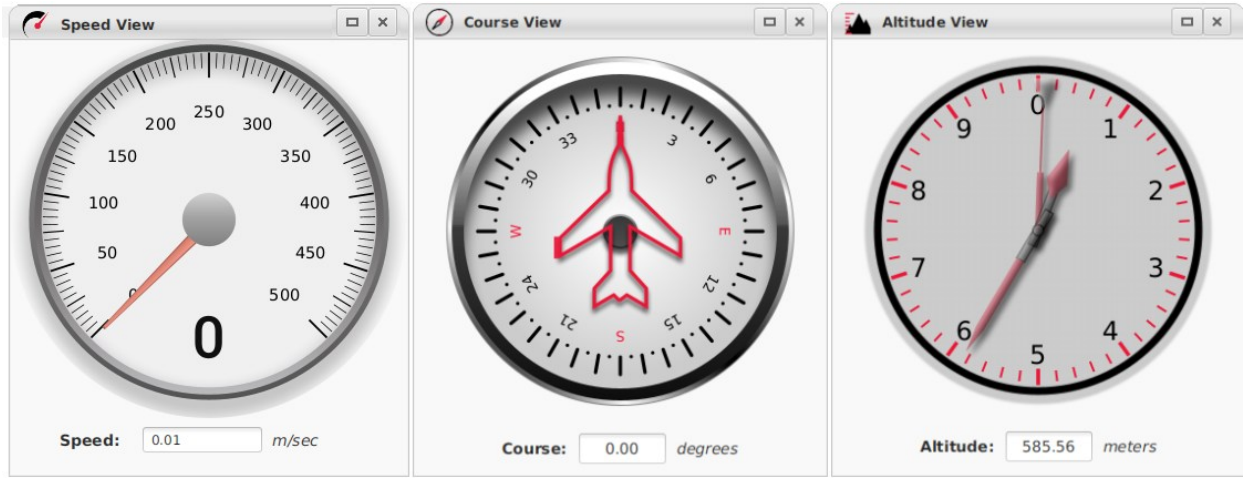
Technical Specifications

Parameter Name	Parameter Value	Unit	Confidence Band/Condition
Communication Interface			
Update Rate	10	Hz	Navigation parameters (factory upgradable)
PPS Accuracy	20	ns	-
LED Indicators	Power, Health, GNSS Fix and Communication	-	-
Mechanical			
Weight	1.1	kg	Tolerance ± 50 grams
Dimensions	171.5 (L) x 151.8 (W) x 48.6 (H)	mm	Tolerance ± 0.5 mm
Connectors	3 Pin and 22 Pin	-	-
Electrical			
Input Voltage	12 to 32	V DC	-
Power Consumption	2.9	Watts	Tolerance ± 0.5 W
Environment Compliant			
Operating Temperature	-40 to +71	°C	-
Storage Temperature	-55 to +85	°C	-
Survival Shock	Upto 500	g	As per MIL-STD-810G
Ingress Protection	IP65	-	-
Humidity	10 - 90	%	-
Power Supply Protection	As per MIL-STD-1275F	-	-
EMI/EMC	As per MIL-STD-461F , JSS55555	-	-
Environmental Tests	As per MIL-STD-810G and MIL-STD-704D	-	-

Deneb Software Utility

The DNB-GN404 Receiver is accompanied with Deneb Software Utility for device configuration, data display, and data logging.

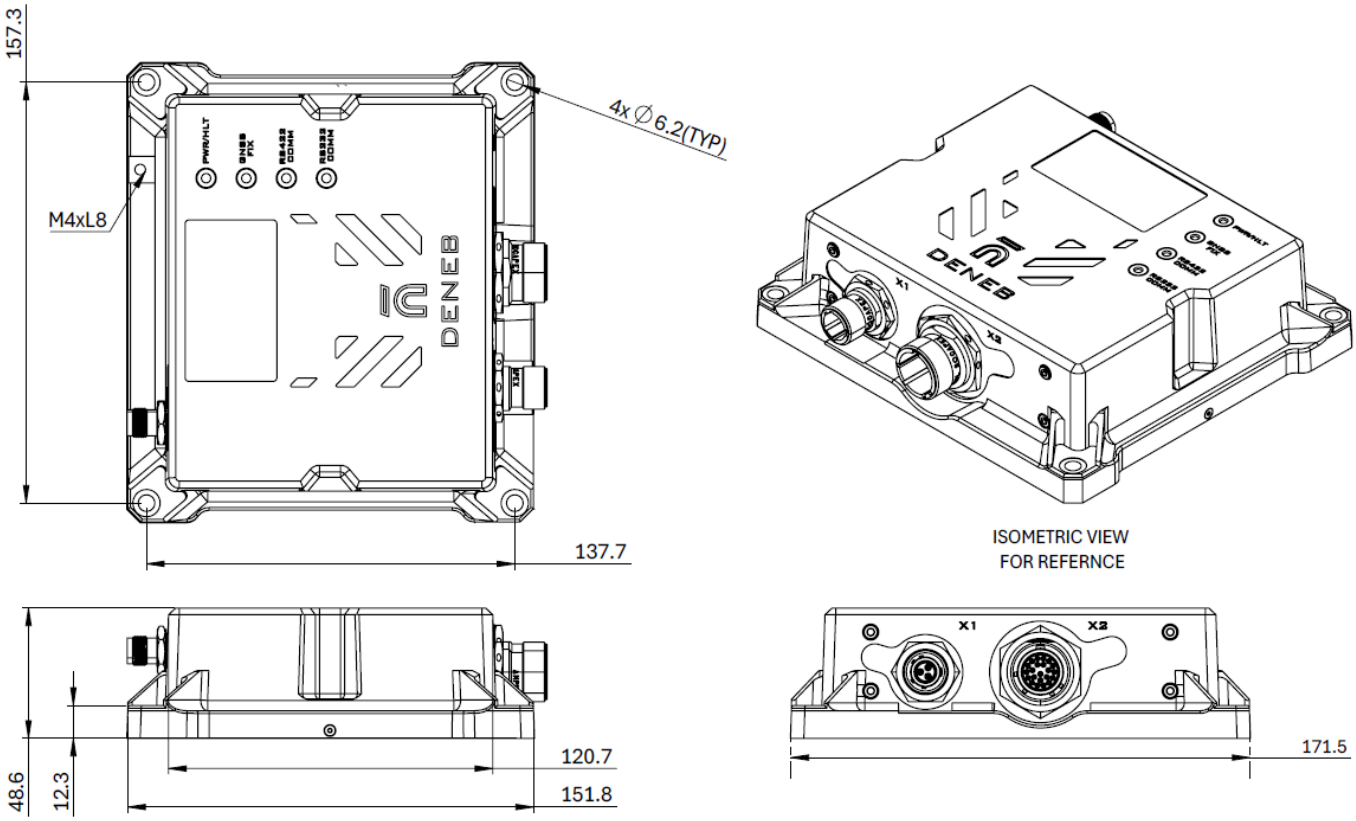
Note: *The following images of the Deneb Software Utility is for reference purpose only.*



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Mechanical Dimensions

All the dimensions in mm.



Ordering Information

Device / Accessories	Product Code
DNB-GN404	28019
Data/Configuration Cable Harness for DNB-GN404	74385
Power Cable Harness for DNB-GN404	74392
GNSS Antenna (V3-Novus GGI-103)	76076
GNSS Antenna Cable Harness	74263
Carry Case for DNB-GN404	73210