PAN INDIA CONSULTANTS PVT. LTD.

PARTH 1000™

GNSS RECEIVER

PRECISE AND COMPACT RECEIVER FOR RUGGED, RELIABLE POSITIONING

SECURE AND EASY TO USE

The receiver is ideal for use as a GNSS DGPS/RTK. The **PARTH 1000** is comprised of an integrated GNSS receiver and radio plus a choice of external antenna.

MULTI CONSTELLATION GNSS

The **PARTH 1000** supports triple frequencies for the GPS and GLONASS constellations and dual frequencies from BeiDou and Galileo. As the number of satellites in the constellations grow the PARTH 1000 is ready to take advantage of the additional signals. This delivers the quickest and most reliable RTK initializations for 1–2-centimetre positioning. For applications that do not require centimeter accuracy the **PARTH 1000** integrated GNSS-Inertial engine delivers high-accuracy GNSS, and DGNSS positions in the most challenging environments such as urban canyons. Different configurations of the module are available. Choose the receiver that suits your application and price point. All features are password-upgradeable, allowing functionality to be upgraded as your requirements change. With the option of utilizing Omni STAR or RTX services, the PARTH 1000 delivers varying levels of performance down to centimeter-level without the use of a base station.

KEY FEATURES

- Onboard high accuracy inertial sensor package integrated with GNSS for precise position and orientation
- 336 channels for multiconstellation GNSS support
- Trimble RTX and OmniSTAR support
- Rugged IP67 enclosure
- Compact design for mobile applications
- Flexible RS232, USB and Ethernet interfacing
- Centimeter-level position accuracy
- Advanced RTK with data link

HIGH PERFORMANCE SENSORS

The **PARTH 1000** integrates the latest in precision inertial sensors in a compact package. With the **PARTH 1000**, you are buying a robust navigation solution, not just a GNSS receiver.

MAKE IN INDIA ISO SIDM SOCIETY OF INDIAN DEFENCE MANUFACTURERS MSME Ministry of MSME, Govt. of India

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PERFORMANCE SPECIFICATIONS

Receiver Name: **PARTH 1000™**

Base and Rover interchangeability: Yes

Rover Maxima Range From The Base Radio: 2-4 km (without radio repeater depends upon line of sight)

Warm Start: <10 seconds

Positioning Horizontal Accuracy: 8 mm + 1 ppm RMS (0.026 ft + 1 ppm RMS)

Vertical Accuracy: 15 mm + 1 ppm RMS (0.05 ft +1 ppm)

Centre Point RTX Accuracy

Horizontal Accuracy: 4cm

Vertical Accuracy: 9cm

PHYSICAL AND ELECTRICAL CHARACTERISTICS

Size: L224 x D188 mm x 65 mm

Power External: 9 VDC to 30 VDC

Internal: Removable internal battery 7.2 V, 2700 mA-hr., Lithium-ion 2.3 W (L1/L2 GPS + L1/L2 GLONASS)

Weight: 1.65kg

Connectors: I/O: 2 DB9

Lemo (Serial): 5-pin 0S Lemo, Serial

GNSS Antenna: TNC Female

UHF Antenna: TNC Female

Antenna LNA Power Input

Input Voltage: 3.3 VDC to 5 VDC

Maximum Current: 400 mA

Minimum Required Lna Gain: 32.0 dB

ENVIRONMENTAL CHARACTERISTICS

Temperature Operating: -40 °C to +75 °C

Storage: -55 °C to +85 °C

Vibration: JSS Penta 5 standard

Mechanical shock: JSS Penta 5 standard

Operating Humidity: 5% to 95% R.H. non-condensing, at +60 °C

ORDERING INFORMATION

Configurations available from L1 SBAS upwards.

COMMUNICATION

- 1 USB 2.0 Device port through DB9
- Integrated radios: Fully integrated, fully sealed internal 450 MHz (UHF) Tx/Rx
- 1 LAN Ethernet port through Db9
- All functions are performed through a single IP address simultaneously, including web GUI access and raw data streaming.
- Protocols: HTTP (web GUI), NMEA, CMR over TCP/IP, N Trip Caster, N Trip Server, N Trip Client
- GSM/GPRS: For Internet-based correction streams
- Bluetooth Wireless Technology: Fully integrated, fully sealed 2.4 GHz Bluetooth
- Wi-Fi: Client or Access Point. Receive or transmit corrections. Wi-Fi b/g
- Trimble Maxwell™ 7 Technology
- Trimble ProPoint™ positioning engine (optional)
- On-board Advanced MEMS inertial sensors

336 TRACKING CHANNELS:

- IRNSS: L5
- GPS: L1 C/A, L2E, L2C, L5
- BeiDou: B1, B2
- GLONASS: L1 C/A, L2 C/A, L3 CDMA13
- Galileo2
- E1, E5A, E5B, E5AltBOC
- QZSS: L1 C/A, L1 SAIF, L2C, L5
- SBAS: L1 C/A, L5
- MSS L-Band: OmniSTAR, Trimble RTX
- High precision multiple correlators for GNSS pseudo range measurements
- Trimble Everest Plus™ multipath mitigation
- Supports Trimble CenterPoint RTX, Trimble FieldPoint RTX (only with ProPoint Engine), and Trimble Range Point RTX (only with ProPoint Engine)14
- Advanced RF Spectrum Monitoring and Analysis
- Unfiltered, unsmoothed pseudo range measurements data for low noise, low multipath error, low time domain correlation, and high dynamic response
- Very low noise GNSS carrier phase measurements with <1 mm precision in a 1 Hz bandwidth
- Proven Trimble low elevation tracking technology
- Reference outputs/inputs:
- CMR, CMR+, sCMRx, RTCM 2.1, 2.2, 2.3, 3.0, 3.112, 3.2

NAVIGATION OUTPUTS:

- ASCII: NMEA-0183 GSV, AVR, RMC, HDT, VGK, VHD, ROT, GGK, GGA, GSA, ZDA, VTG, GST, PJT, PJK, BPQ, GLL, GRS, GBS
- Binary: Trimble GSOF, NMEA2000
- 1 Pulse Per Second Output
- Event Marker Input Support
- Supports Fault Detection & Exclusion (FDE), Receiver Autonomous Integrity Monitoring (RAIM)