

RESOLUTE PIN

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The system is capable of outputting real time < 1 cm accuracy positions, or filtered and averaged < 1 mm accuracy positions. The Resolute Pin system can be used as the primary deformation detection equipment on site, or as an augmentation to systems with integration drift.

FEATURES

- L1, L2, L5, All constellations
- 448 Channels
- Less than 1.2 Watts Standard
- 2 x 4GB SD Cards
- Radio telemetry standard, Iridium SBD or cellular optional
- Flexible Data Formats
- Small 6" x 6" x 3" Form Factor
- -40° C to + 60° C
- 28 Rovers per Base



TELEMETRY OPTIONS



TECHNICAL SPECIFICATIONS



Resolute Pin

GNSS Technology	
GNSS Signals	GPS: L1C, L1P(Y), L2C, L2P(Y) L5 • GLONASS: L1, L2, L3 • Galileo: E1, E5a, E5b, AltBoc • BeiDou: B1, B2 1 • SBAS: EGNOS, WAAS, GAGAN, MSAS, SDCM (L1, L5) • IRNSS: L51 • QZSS: L1, L2, L5 (Some signals optional)
Number of Channels	448 hardware channels
Sample Rate	Up to 20 Hz (100Hz Option)
Time to first fix	< 20 s warm; < 45 s cold; < 1 s Re-acquisition
C/No Threshold	Tracking: 20 dB-Hz; Acquisition: 33 db-Hz
RTK Accuracy	Horizontal: 0.6cm + 0.5 ppm Vertical: 1 cm + 1 ppm (optional)
Smoothed & Filtered Positions	Horizontal: < 1mm, Vertical: 1 mm
Velocity Accuracy	3 cm/s
Latency	<10ms
Feature Rich GNSS	Lock + for robust tracking during high vibrations, APME+ multipath mitigation, Iono+ advanced ionospheric disturbance protection

Electrical and Mechanical	
Power Supply	11-28V DC
Power Consumption	1.2 W Typical (12V)
Operating Temperature	-40 °C to +60 °C (-55 °C optional)
Dimensions and Weight	6"x6"x3", 2.8lbs
Drop	1 m onto a hard surface

Connectors	
Power, Ethernet	Souriau Circular MIL Spec 12E 10P Female
GNSS Antenna	Type N female
Serial 232, 485, SDI 12	Souriau Circular MIL Spec 12E 14P Female
USB	USB Mini B
900 MHz Radio	TNC female (optional)
Iridium	TNC female (optional)
Cellular	TNC female (optional)
Grounding	Grounding Stud (2 BA Thread)

General	
Interface	Button, Status LEDs, Programmatic Commands, Web Interface, XeosOnline™
Data Logging	Dual 4 GB Removable SD Card. 4 Parallel Logging Sessions (GNSS) SBF (Convertible to NMEA 0183, v2.3, v3.01, v4.0; RINEX v2.x, 3.x), External Digital Sensors (independent sessions)
Data Streaming	RS 232, 485, 900Mhz Radio, Iridium RUDICS, Iridium SBD, Cellular LTE, Cellular SMS (some optional)

Feature	Resolute Reference	Resolute Pin	Resolute Polar
Standard Update Rate	Up to 20Hz	Up to 20Hz	Up to 20Hz
On-Board Storage	1 x 8 GB or 1 x 4 GB Micro SD	1 x 8 GB or 1 x 4 GB Micro SD	1 x 8 GB or 1 x 4 GB Micro SD
Operating Temperature	-40 °C to +60 °C	-40 °C to +60 °C	-55 °C to +60 °C
GPS L1, L2, L5; Glonass G1, G2, G3	✓	✓	✓
All Signals	0	0	0
RINEX v2.x, 3.x	✓	✗	✓
SBF	✓	✓	✓
RTK (RTCM v2.x, 3.x CMRv2.0 and CMR +)	0	✓	0
Position Monitoring	✓	✓	✓
900 MHz Radio	✗	✓	✗
Cellular LTE Modem	0	0	0
Iridium SBD (9523)	0	0	✓
Iridium RUDICS (9523)	0	0	✓
External Sensor Logging	0	0	0
192 KB RAM	✓	✓	✓
2 MB External RAM	0	0	0
2MB Flash Memory	0	0	✓

✓ = Included 0 = Optional ✗ = Not Included