

PERFORMANCE SPECIFICATIONS

POS AV Absolute Accuracy Specifications¹ (RMS)

POS AV	610 SPS	610 RTX ²	610 PP-RTX ^{4,5}	610 SmartBase Post-processed ⁴
Position (m)	1.5 H	0.05 H	0.03 H	0.02 H
	3 V	0.1 V	0.06V	0.05 V
Velocity (m/s)	0.030	0.030	0.005	0.005
Roll & Pitch (deg)	0.005	0.005	0.0025 ⁶	0.0025 ⁶
True Heading ² (deg)	0.030	0.020	0.005	0.005

POS AV Relative Accuracy

POS AV	610
Noise (deg/sqrt(hr))	0.005
Drift (deg/hr) ⁷	< 0.010

SYSTEM SPECIFICATIONS

Computer System

Component	Dimensions (L x W x H) mm	Weight kg	Power (incl IMU)	Temperature c	Altitude ⁸ m
PCS Standard	169x186x68	2.4	18-34 Vdc, 59 W Max	-20 to +55	0 to 7,620

Inertial Measurement Unit (IMU)

Type	Range	Dimensions (L x W x H) mm	Operational Temperature c	Weight kg
IMU-57 ⁹	+/- 10g, +/- 490 dps	179 x 126 x 127	-40 ¹¹ to +55	2.6

Global Navigation Satellite System (GNSS)

Option	Signals	Data Rate
GPS-19	GPS: L1 C/A, L2C, L2E, L5 GLONASS: L1 C/A, L2 C/A, L3 CDMA ¹² GALILEO ¹⁰ : E1, E5A, E5B, E5A/B/C, E6 ¹² BeiDou: B1, B2, B3 ¹³ QZSS: L1 C/A, L1S, L1C, L2C, L5, LEX IRNSS: L5 SBAS: L1 C/A and L5 MSS L-Band: Trimble CenterPoint RTX	5 Hz (raw)

ETHERNET INPUT/OUTPUT

Parameters: Time tag, status, position, attitude, velocity, track and speed, dynamics, performance metrics, raw IMU data (at IMU rate), raw GNSS data
 Display Port: Low rate (1 Hz) UDP protocol output
 Control Port: TCP/IP input for system commands
 Primary Port: Real-time (up to 200 Hz) TCP/IP protocol output
 Secondary Port: Buffered TCP/IP protocol output for data logging to external device

LOGGING

Parameters: Time tag, status, position, attitude, velocity, track and speed, dynamics, performance metrics, raw IMU data (at IMU rate), raw GNSS data
 Media: External: Removable 8 Gbyte Flash Disk (2 supplied)
 Internal: Embedded 4 Gbyte Flash Disk for redundant logging

RS232 NMEA ASCII OUTPUT

Parameter: NMEA Standard ASCII messages:
 Position (\$INGGA), Heading (\$INHDT), Track and Speed (\$INVTG), Statistics (\$INGST)
 Rate: Up to 50 Hz (user selectable)

RS232 HIGH RATE BINARY OUTPUT

Parameter: User selectable binary messages:
 Time, position, attitude, speed, track, PAV30 output, Yaw Drift Correction
 Rate: Up to IMU Data Rate (user selectable)

RS232 INPUT INTERFACES

Parameter: Gimbal encoder input, AUX GPS Input (RTK, NavCom), RTCM104 DGPS Corrections Input
 Rate: 1 to IMU Data Rate

OTHER I/O

1PPS: 1 pulse-per-second Time Sync output, normally high, active low pulse
 Event Input (6): Six time mark of external events. TTL pulses > 1 ms width, max rate 100 Hz

USER SUPPLIED EQUIPMENT

PC for POS Controller and Operator Client Ssoftware

- Atom 1.6 GHz or equivalent (minimum)
- Intel Graphics media accelerator 500 or equivalent (minimum)
- 2 GB RAM, 32 GB HDD (minimum)
- Ethernet adapter (RJ45 100 base T), USB Port
- Windows 7

PC for Mission Planning and optional POSpac Post-processing

- Pentium 4 (32 bits) at 2 GHz or equivalent (recommended minimum)
- 1 GB RAM, 100 GB Free disk space (recommended minimum)
- 2 X USB 2.0 ports for security keys
- Internet Access (for installation, DEM download, optional SmartBase processing)
- Windows 7

¹Typical performance. Actual results are dependent upon satellite configuration, atmospheric conditions and other environmental effects

²Typical mission profile, max RMS error

³Trimble RTX service, typical airborne results, subject to regional coverage. Subscription sold separately

⁴POSPac MMS

⁵Post-processed CenterPoint RTX, typical mission performance. Subscription sold separately

⁶May require local gravity model to achieve full accuracy

⁷Attitude will drift at this rate up to a maximum error defined by absolute accuracy in table above

⁸Unpressurized operation

⁹These IMUs are exportable worldwide subject to statutory export declarations, and standard restrictions relating to certain international destinations. Contact your Applanix representative for further information

¹⁰Developed under the License of European Union and European Space Agency

¹¹IMU must be at -20 deg C or higher at power-on

¹²There is no official version GLONASS L3CDMA or Galileo E6 ICD. The current tracking capability is based on publicly available information. Full receiver compatibility cannot be guaranteed

¹³The firmware of this product is designed for BeiDou B3 compatibility (trial version) and its firmware will be enhanced to fully support such new signal as soon as official ICD becomes available