POS LVX

KEY FEATURES

Cost effective and high-performance position and orientation solution in a small form factor enclosure

Fully integrated, turnkey solution for efficiency and ease-of-use

Stable, reliable and repeatable positioning solution for land-based mobile mapping and guidance applications

POS LVX is a new configuration of POS LV designed for the smaller, modular mobile mapping system

For the same performance in an OEM offering, see the Applanix APX-15

Applanix IN-Fusion™ GNSS-Inertial and SmartCal™ compensation technology for superior position and orientation performance

Fully spported by POSPac MMS industry leading post processing software

POS LVX GNSS-INERTIAL SOLUTION FOR THE SMALLER, MODULAR MOBILE MAPPING SYSTEM

The Applanix POS LVX is a compact, fully integrated, turnkey position and orientation system, utilizing integrated inertial technology with survey-grade GNSS to generate a stable, reliable and repeatable positioning solution for land-based mobile mapping and guidance applications. Easily integrated with many types of sensors including optical, infrared, and lidar, the POS LVX delivers Inertially-Aided Real-Time Kinematic (IARTK) positioning in a small, lightweight form factor. The POS LVX is housed in a robust, rugged enclosure and can easily be incorporated into small vehicles, autonomous platforms and tight spaces of all types.

Performance You Can Trust

capture everything. precisely.

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TECHNICAL SPECIFICATIONS

- Advanced Applanix IN-Fusion™ GNSS-Inertial integration technology
- Solid-state MEMS inertial sensors with Applanix SmartCal™ compensation technology
- Advanced Trimble GNSS survey technology
- 336 Channels
  - GPS: L1 C/A, L2C, L2E, L5
  - GLONASS: L1 C/A, L2 C/A, L3 CDMA
  - BeiDou: B1, B2
  - Galileo[1]: E1, E5A, E5B, E5AltBOC
  - QZSS: L1 C/A, L1 SAIF, L2C, L5
  - SBAS: L1 C/A, L5
- High precision multiple correlator for GNSS pseudorange measurements
- Unfiltered, unsmoothed pseudorange 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
- 10 Hz real-time position and orientation output
- IMU data rate 200 Hz
- Navigation output format: ASCII (NMEA-0183), Binary (Trimble GSOF)
- Supported Reference input: CMR, CMR+, sCMRx, RTCM 2.1, 2.2, 2.3, 3.0, 3.1
- Support for POSPac MMS post-processing software (sold separatey)
- No export permit required

LAN INPUT/OUTPUT

All Ethernet functions are supported through dedicated IP address (Static or DNS) simultaneously.

TCP/IP and UDP	ASCII and Binary data streaming (Time tag, PPS sync, status, position, attitude, velocity, track and speed, dynamics, performance metrics, GNSS data)
HTTP	Web based Control software (GUI) for easy system configuration and low rate display. Support for all common browsers (IE, Safari, Mozilla, Google Chrome, Firefox)
LOGGING:	
Internal Logging	6 GByte Flash memory
External Logging	USB 2.0 Device port
Parameters	Time tag, status, position, attitude, velocity, track and speed, dynamics, performance metrics, raw IMU data (200 Hz), raw GNSS data (5 Hz).

SERIAL INPUT/OUTPUT

2 x RS232 ports

Parameters	ASCII and Binary data streaming (Time tag, PPS sync, status, position, attitude, velocity, track and speed, dynamics, performance metrics, GNSS data), reference input (CMR, CMR+, sCMRx, RTCM), configuration messages.

Other I/O

PPS(pulse-per-second)	Time Sync Pulse output
Event Input (2)	Two time mark of external event.
DMI Input	Quadrature pulse with reference voltage

PERFORMANCE SPECIFICATIONS[2] (RMS ERROR)

	SPS	DGPS	RTK[4]	Post-Processed[5]
Position (m)	1.5 - 3.0	0.5 - 2.0	0.02 - 0.05	0.02 - 0.05
Velocity (m/s)	0.05	0.05	0.02	0.015
Roll & Pitch (deg)	0.04	0.03	0.03	0.025
True Heading[3] (deg)	0.30	0.28	0.18	0.080

PHYSICAL CHARACTERISTICS

Board Set

Size. . . . . 149 L x 93 W x 43 H mm (nominal)
Weight . . . . . 0.66 kg
Power . . . . . Wide range input 5-28 V DC, typical power consumption of 3.5W at room temperature
Connectors . . . . . I/O: DA26
Antenna: TNC (Female)
GNSSAntenna LNA Power Input: Trimble 540AP included

ENVIRONMENTAL CHARACTERISTICS

Temperature: . . . . . -40 deg C to +75 deg C (Operational)
-55 deg C to +85 deg C (Storage)
Measurement Range: . . . . . +/- 6g[6], +/- 300 dps
Mechanical Shock: . . . . . +/- 75g Survival
Operating Humidity: . . . . . 5% to 95% R.H. non-condensing at +60 deg C
Maximum Operating Limits . . . . . 515 m/sec
18,000 m
IP rating:. IP67

(1) Developed under a License of the European Union and the European Space Agency
(2) Typical performance. Actual results are dependent upon satellite configuration, atmospheric conditions and other environmental effects
(3) Typical survey mission profile, max RMS error. Heading error will increase for low speed applications and when stationary.
(4) Requires base station and radio link, sold separately
(5) Post-Processed with POSPac MMS
(6) Sensor bandwidth (-3 dB amplitude) ~ 50 Hz

Specifications, current as of 10/13/15, are subject to change without notice.

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