POS AV™ 410 Specifications

1. Performance

The following tables show performance for real-time and post-processed solutions (all values RMS):

POS AV 410 Absolute Accuracy Specifications

	C/A GPS	DGPS	Post-Processed[1]
Position (m)	4.0 - 6.0	0.5 - 2	0.05 - 0.3
Velocity (m/s)	0.05	0.05	0.005
Roll & Pitch (deg)	0.015	0.015	0.008
True Heading[1] (deg)	0.080	0.050	0.015

[1] typical mission profile

POS AV 410 Relative Accuracy Specifications

Noise (deg/sqrt(hr))	0.07
Drift (deg/hr)[1]	0.5

[1] Attitude will drift at this rate up to a maximum error defined by absolute accuracy in table above.

2. Physical

Size:	IMU	8.9 cm X 8.5 cm high
	PCS	19" rack mount, 2.5U, 33.5 cm x 48.3 cm x 11.1 cm
Weight:	IMU	0.7 kg
	PCS	7.7 kg
Power:	PCS	28 VDC 100 W (max) (PCS supplies IMU)
Temp. Range:	IMU	-54 deg C to +85 deg C
	PCS	0 deg C to +60 deg C
Humidity:	PCS	5 to 95% RH non-condensing

3. General - Sensors

IMU

- Reliable high performance sensors

GPS

- 12 channel dual frequency (L1/L2), low noise, DGPS ready

4. Ethernet Input/Output

Parameters	Time tag, status, position, attitude, velocity, track and speed, dynamics, performance metrics, sensor data
Display Port	Low rate (1 Hz) UDP protocol output
Control Port	TCP/IP input for system commands
Data port	High rate (up to 200 Hz) UDP protocol output

5. SCSI Logging Output to Removable PC-card Disk Drive

Parameters	Time tag, status, position, attitude, velocity, track and speed, dynamics, performance metrics, sensor data (200 Hz)

6. RS232 NMEA Output Interface (DB 9 male)

Parameters	NMEA Standard ASCII messages Position ($INGGA), Heading ($INHDT), Track and Speed ($INVTG), Statistics ($INGST)
Rate	Up to 50 Hz (user selectable)
Baud	4800 to 115200 (user selectable)
Protocol	User selectable

7. RS232 High Rate Digital Output (DB 9 male)

Parameters	Time tag, roll, pitch, true heading, latitude, longitude, altitude Time of Validity pulse (200 Hz)
Rate	Up to 200 Hz (user selectable)
Baud	19200 to 115200 (user selectable)
Protocol	User selectable

8. RS232 Input Interface (DB 9 male)

Parameter	Gimbal encoder input
Rate	20 to 200 Hz
Baud	19200 to 115200 (user selectable)
Protocol	User selectable

9. Analog Output (optional)

Parameters	Roll, Pitch, Heading, Platform Drift Control
Resolution	0.0003 deg
Voltage output	±10 volts

10. Other I/O

1PPS	1 pulse-per-second Time Sync output, normally high, active low pulse where the falling edge is the reference
Event Input	Two input discretes used to mark external events. Discretes are TTL pulses > 1 msec width where rising or falling edge is time-tagged and logged (Max rate 100 Hz).

11. User Supplied Equipment

11.1 PC for POS™ Controller

- Pentium 90 processor (minimum)
- 16 MB RAM, 1 MB free disk space
- Ethernet PCMCIA card or parallel port Ethernet adapter (RJ54 10 base T)
- Windows® NT/2000 or 95/98/Me

11.2 PC for POSPac™

- PC with Windows® NT/2000 or 95/98/Me
- Minimum of 500 MB disk space (12 MB of RAM)
- PCMCIA Type III reader