

ANS | 530-L

LAND INERTIAL NAVIGATION SYSTEM

#Navigation



1 MIL POINTING ACCURACY
MIL-PRF-71185 PERFORMANCE SPECIFICATION
EMBEDDED GPS RECEIVER GPS OR GNSS



aselsan

ANS | 530-L

LAND INERTIAL NAVIGATION SYSTEM

ANS 530-L is an integrated position and attitude determination system for land vehicles specifically for high-shock artillery gun systems. ANS 530-L supplies linear acceleration, linear and angular velocity, position, attitude to the host vehicle systems continuously.

ANS 530-L has an open architecture and hardware/ software flexible unit which can be adapted to various land platforms.

ANS 530-L consists of strap down inertial measurement unit, system processor unit, power supply unit, Embedded GPS (SAASM) or GNSS Receiver and chassis. It is capable of using SAASM compliant receiver as embedded GPS (SAASM) or GNSS receiver. ANS-530K is also capable of using external GPS receiver.

The tightly coupled, embedded INS/GPS (SAASM) or GNSS and integrated odometer capability of ANS-530K provides improved performance for land platforms.

ANS 530-L provides both a hybrid (inertial + Receiver + Odometer) navigation solution and also inertial only navigation solution or a GPS (SAASM)/GNSS only navigation solution simultaneously. It has the capability of providing high performance position and attitude with odometer update in case of lack of receiver signal.

General Specifications

- Embedded GPS (SAASM) or GNSS Receiver
- Hybrid, Free Inertial, GPS (SAASM)/GNSS Only Navigation Solution
- Odometer Update
- UTM or Geographical Position Calculation
- True, Grid or Magnetic Heading Calculation
- Position Update
- Start-Up BIT, Periodic BIT, Initiated BIT
- Field Programmable Software
- Zero Velocity Update (ZUPT)
- No Periodic Maintenance

System Interfaces

- MIL-STD-1275D Electrical Power Interface
- High Speed RS422 Asynchronous Serial Test Interface RS422 Asynchronous Serial User Interface
- Spare RS422 Asynchronous Serial Interface
- External GPS Interface (ICD-GPS-153)
- Have Quick ve 1PPS Interface (ICD-GPS-060)
- KYK-13 Interface
- Active ve Passive GPS/GNSS Antenna Interface
- Discrete Interfaces



System Operational Modes

- Leveling
- Alignment
 - Gyro Compass (GC) Alignment
 - In Motion Alignment with Internal/External
- GPS (SAASM)/GNSS Navigation
 - Stored Head Alignment
- Navigasyon
 - Hybrid Navigation (HNAV)
 - Inertial Navigation (INAV)
- Initiated Built In Test (IBIT)

Navigation Performance (in compliance with MIL-PRF-71185)

	Horizontal Position (CEP)	Vertical Position (PE)
Inertial + ODO + Receiver	10 m	10 m
Inertial + ODO (with ZUPT every 60 minutes)	0.0025 x (Distance Travelled > 4 km)	0.00067 x (Distance Travelled >10 km)
	10 m (Distance Travelled <4 km)	6.7 m (Distance Travelled <10 km)
Free Inertial (with ZUPT every 4 minutes)	18 m	10 m
Azimuth	1 mils RMS (<0.2 mils RMS, when adequate maneuvers are performed with internal GPS/GNSS)	
Roll, Pitch	0.5 mils RMS (<0.2 mils RMS, when adequate maneuvers are performed with internal GPS/GNSS)	

Alignment Modes and Durations

Ground (Gyro Compass) Alignment Mode	GPS(SAASM)/GNSS In-Motion Alignment Mode	Stored Heading Alignment Mode
15 min.	10 min.	30 sec.

Environmental Conditions

- MIL-STD-810

Electromagnetic Environmental Effects

- MIL-STD-461

Dimensions and Weight

- Dimensions (HxDxW) : 332 x 304 x 198mm (including connector)
- 12.5 kg with GPS/GNSS Receiver Installed

Specifications are subject to change without any notice. | All tolerances are within ±10%.