

ANS | 630-L

TACTICAL LAND INERTIAL NAVIGATION
SYSTEM

#Navigation



1 MIL POINTING ACCURACY
MIL-PRF-71185 PERFORMANCE
EMBEDDED RECEIVER GNSS



aselsan

ANS | 630-L

TACTICAL LAND INERTIAL NAVIGATION SYSTEM

ANS 630-L is a fiber optic gyroscope-based navigation grade land inertial navigation system with embedded receiver which is intended for application to military land vehicles specifically for high-shock artillery gun systems. ANS 630-L supplies linear acceleration, linear and angular velocity, position, attitude to the host vehicle systems continuously. ANS 630-L, has an open architecture and hardware/software flexible unit which can be adapted to various land platforms.

ANS 630-L, consists of strap down inertial measurement unit, system processor unit, power supply unit, Embedded GPS/GNSS Receiver and chassis. It is also capable of using external GPS/GNSS receiver. Embedded INS/GPS or GNSS and integrated odometer capability of ANS 630-L provides improved performance for land platforms.

ANS 630-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/GNSS Receiver
- Hybrid, Inertial, GPS/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 Operational Modes

- Initialization
- Alignment
 - Gyro Compass Alignment
 - In Motion Alignment with Internal/External GPS /GNSS Navigation
 - Waypoint Alignment
 - Stored Heading Alignment
- Navigation
 - Hybrid Navigation
 - Inertial Navigation
- Initiated Built in Test (IBIT)



System Interfaces

- MIL-STD-1275 Electrical Power Interface
- High Speed RS422 Serial Test Interface
- RS422 Serial User Interface
- RS422 and 5V TTL Odometer Interface
- Spare RS422 Serial Interface
- External GPS Interface
- Have Quick and 1PPS Interface
- Active and Passive RF Antenna Interface
- Discrete Interfaces

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

	Horizontal Position (CEP)	Vertical Position (PE)
Inertial+ ODO + GPS/GNSS	10 m	10 m
Inertial + ODO (with ZUPT every 60 minutes))	0.0025 x Distance Travelled (Distance Travelled > 4 km)	0.00067 x Distance Travelled (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	
Rol, Pitch	0.5 mils RMS	
1-Below +/- 65 degree Latitude and full performance achieved		

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

Alignment Modes and Durations

Ground Alignment Mode	GPS/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 mm x 304 mm x 198 mm (including connector)
- Less than 15 kg with GPS/GNSS receiver installed