

ANS-420K

ASELSAN TACTICAL LAND INERTIAL
NAVIGATION SYSTEM

IN MOTION ALIGNMENT WITH GPS OR GNSS
WAYPOINT ALIGNMENT WITHOUT GPS OR GNSS
EMBEDDED RECEIVER GPS OR GNSS





ANS-420K

ASELSAN TACTICAL LAND INERTIAL NAVIGATION SYSTEM

ANS-420K is an integrated position and attitude determination system for land vehicles. ANS-420K provides linear acceleration, linear and angular velocity, position, attitude to the host vehicle systems continuously.

ANS420K consists of strapdown inertial measurement unit, system processor unit, power supply unit, Embedded GPS (SAASM)/GNSS Receiver (EGR) and chassis. ANS-420K is capable of using GPS (SAASM) or GNSS as embedded receiver. ANS-420K is also capable of using an external receiver.

The tightly coupled, embedded INS/GPS (SAASM) or GNSS and integrated odometer mechanization of ANS-420K provides improved performance for land platforms.

ANS-420K provides hybrid (inertial+ GPS/GNSS + Odometer) navigation solution and GPS/GNSS only navigation solution simultaneously. ANS-420K has the capability of providing high performance position and attitude with odometer update in case of lack of GPS/GNSS signals.

ANS-420K is a cost effective solution for all types of ground-based vehicles requiring position and pointing during their mission.

ANS-420K is an open architecture and hardware/ software flexible unit which can be adapted to various land platforms.

General Specifications

- Embedded Commercial (SPS) GPS receiver or GPS
- Hybrid, GPS Only Navigation Solution
- Odometer Update
- Zero Velocity Update
- UTM or Geographical Position Calculation
- True, Grid or Magnetic Heading Calculation
- Position Update
- Start-Up BIT, Periodic BIT
- Field Programmable Software
- No periodic maintenance

System Operational Modes

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

System Interfaces

- MIL-STD-1275D Electrical Power Interface
- High speed RS422 Asynchronous Serial Test Interface
- RS422 Asynchronous Serial User Interface
- Spare RS422 Asynchronous Serial Interfaces
- Ethernet User Interface
- Active and Passive RF Antenna Interface
- Discrete Interfaces

Navigation Performance

Parameter	Performance Specification
Heading (RMS) (With GPS(SAASM)/GNSS Aided or Waypoint Alignment)	7 mils (1 sigma)
Attitude (Roll and Pitch) (RMS)	4 mils (1 sigma)
Horizontal Position (CEP)	
Inertial + Odometer	% 1.0 x distance travelled
Inertial+Odometer+GPS/GNSS	10 m
Vertical Position (PE)	
Inertial + Odometer	% 0.4 x distance travelled
Inertial+Odometer+GPS/GNSS	15 m

Alignment Modes and Durations

Gyrocompass Alignment Mode (Coarse Alignment)	GPS (SAASM)/GNSS In-Motion Alignment Mode (Full Alignment)	Stored Heading Alignment
180 sec	300 sec	30 sec

Environmental Conditions

- MIL-STD-810

Electromagnetic Environmental Effects

- MIL-STD-461 / DO-160E

Dimensions and Weight

- ~ 26cm x 19cm x 12.5 cm (konektörler dahil)
- < 5 kg (uydu alıcısı dahil)

