ISR - NS

INTEGRATED NAVIGATION SYSTEM

- High accuracy
- High reliability and noise immunity
- Open architecture
- Gyro, Accel and GPS Range Options
- No Calibration Required
- Self-Test

Applications:

- Vehicle Safety Systems
- Vehicle Testing

The ISR-NS is a high performance low-cost, low-power solid-state six degree-of-freedom (6DOF) Integrated Navigation Systems intended for Safety Systems of Vehicles and Vehicle Testing.

Basic elements of system are strap-down inertial measurement unit (IMU) and GPS receiver.

The IMU series product builds on the silicon MEMS accelerometers and gyros with lower noise and improved stability.

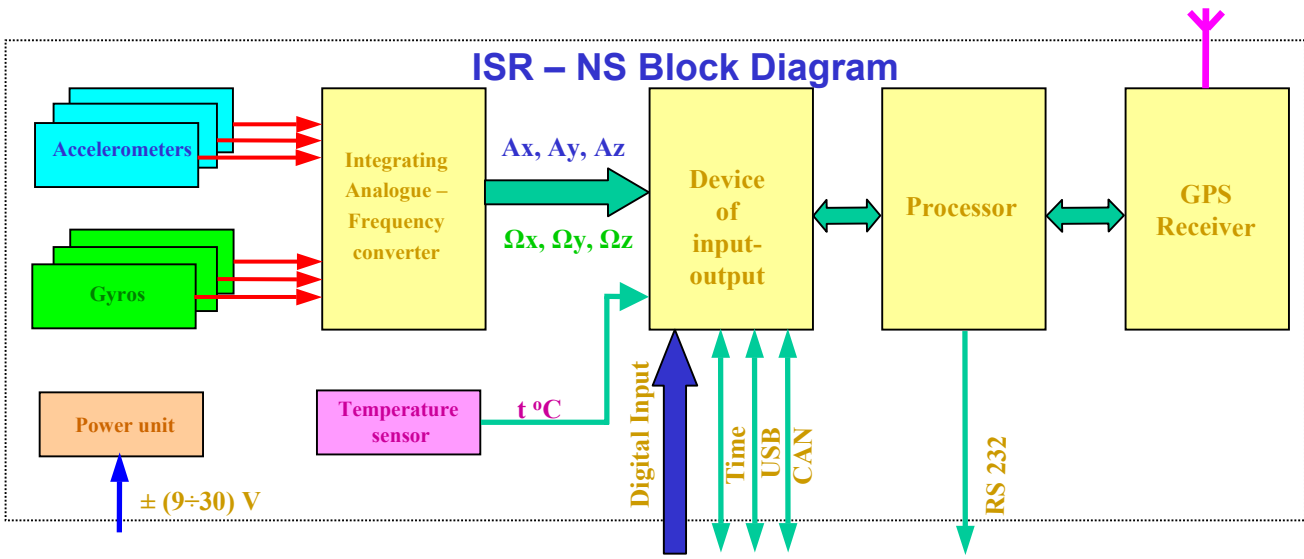
The ISR-NS achieves its excellent performance in integrate navigation system by self-test and original "Dynamic Calibration" software.

The ISR-NS includes a self-test feature that actuates each of the sensing structures and associated electronics in the same identical manner as if subjected to angular rate and acceleration.

The "Dynamic Calibration" software calibrates and corrects IMU errors for the disturbing factors (aging, temperature, vibration, EMI, angular rate and linear acceleration etc.) during motion vehicle. It uses correcting information from GPS, ABS and another information in vehicle.

Due to calibration IMU during motion vehicle it has high accuracy when sources of adjusting information don't work.

Each ISR-NS comes with User's Manual offering helpful hints on programming, installation, and product information. In addition, ISR-NS-VIEW software is included to assist you in system development and evaluation, and allows you to perform data acquisition.



ISR – NS Specifications

Specifications	Value
Performance	
Update Rate (Hz)	> 100
Start-up Time Valid data (sec)	< 1
Errors	
Coordinates	< 0.1 m (< 0.30 m at 5 s Outages of GPS)
Velocity (m/s)	< 0.1
Orientation (deg)	< 0.5
Angular Rate	
Range Roll, Pitch, Yaw (°/sec)	± 150
Bias: Roll, Pitch, Yaw (°/sec)	<± 1.0
Scale Factor Accuracy (%)	< 1
Non-Linearity (% FS)	< 0.1
Resolution (°/sec)	< 0.08
Bandwidth (Hz)	> 10
Random Walk ($^{o}/s/Hz^{1/2}$)	<0.05
Acceleration	
Range X/Y/Z (g)	± 2
Bias: X/Y/Z (mg)	<± 10.0
Bias: X/Y/Z (mg)	<± 10.0
Scale Factor Accuracy (%)	< 1
Non-Linearity (% FS)	< 0.2
Resolution (mg)	< 0.25
Bandwidth (Hz)	>10
Random Walk ($mg/Hz^{1/2}$)	< 0.2
Environment	
Operating Temperature (°C)	-40 to +71
Non-Operating Vibration (g rms)	6
Non-Operating Shock (g)	1000
Electrical	
Input Voltage (VDC)	9 to 30, 3 W
Output	USB,CAN,RS232
Physical	
Size (cm)	7.62x8.38x 9.53
Weight (kg)	< 0.60