



Commercial MEMS IMU Integrated with SPAN™ Technology Delivers 3D Position, Velocity & Attitude

Benefits

Economical

High performance

Non-ITAR IMU

Ideal for size constrained applications

Easy to integrate with SPAN GNSS receivers

Features

Ultra low noise commercial grade gyros and accelerometers

Small size and light weight

10 – 30 VDC power input

100 Hz data rate

Long MTBF

Ultra Low Noise Commercial MEMS

The LandMark™ 40 is a high performance Micro Electromechanical System (MEMS) inertial measurement unit (IMU) from Gladiator Technologies. It features ultra low noise gyros and accelerometers in a small, light weight and rugged, environmentally sealed enclosure. The LandMark™ 40 enables precision measurements for demanding dynamic applications that require high performance in a small size. When integrated with NovAtel's SPAN technology, this IMU is ideal for airborne and ground applications that require accurate 3D position, velocity and attitude data.

About SPAN: World-Leading GNSS+INS Technology

SPAN technology brings together two different but complementary technologies: GNSS positioning and inertial navigation systems (INS). The absolute accuracy of GNSS positioning and the stability of inertial measurement unit (IMU) gyro and accelerometer measurements are tightly coupled to provide an exceptional 3D navigation and attitude solution that is stable and continuously available, even through periods when satellite signals are blocked.

Combining SPAN & MEMS Technology

A proprietary NovAtel MEMS Interface Card (MIC) couples the LandMark™ 40 with SPAN receivers, offering a unique, powerful GPS/INS system for weight and size constrained applications. Designed as a board stack configuration for ease of integration, the MIC interfaces directly with NovAtel's small form factor OEMV1-DF SPAN receiver.

The LandMark™ 40 is also available as a stand-alone product so that integrators can easily pair it with an existing SPAN receiver such as a SPAN-SE™ or SPAN-MPPC™.

Require Higher Accuracy?

NovAtel's AdVance® RTK, OmniSTAR or SBAS can be used to improve real-time performance and accuracy. For the most demanding applications, Inertial Explorer® (IE) post-processing software from our Waypoint® products group offers the highest level of accuracy.

If you require more information about our SPAN products, visit novatel.com/products/span-gnss-inertial-systems

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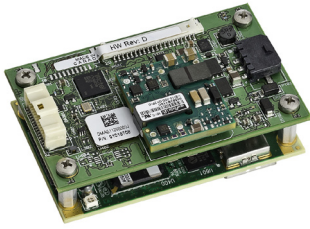
China 0086-21-54452990-8011

Europe 44-1993-848-736

SE Asia and Australia 61-400-833-601



PRELIMINARY
ALL SPECIFICATIONS SUBJECT TO CHANGE



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MIC SPECS: Physical and Electrical

Dimensions	74.9 x 45.8 x 19.5 mm
Weight	<50 g
Power	
Input Voltage	10 VDC – 30 VDC

Communication Ports

- 1 LV-TTL COM port to interface to NovAtel GNSS receiver
- 1 IMU port
- 1 pass through USB port³

Connectors

- 20 pin OEMV1-DF mating connector
- 3 pin locking power connector
- 30 pin locking communication connector
- 20 pin locking IMU connector

Environmental

Temperature

- Operating -40°C to 75°C
- Storage -50°C to +90°C

Vibration

- Random Vibe : MIL-STD 810G (Cat 24, 7.7 g RMS)
- Sine Vibe: IEC 60068-2-6

Bump

- IEC 60068-2-6 40g

Shock

- MIL-STD-810G (40g)

IMU Performance

IMU-LM40²

Gyro Input Range	±100 deg/sec
In-run Gyro Rate Bias Stability	10 deg/hr
Gyro Rate Scale Factor	500 ppm
Angular Random Walk	0.12 deg/√hr

Accelerometer Range	±10 g
Accelerometer Scale Factor	5000 ppm
In-run Accelerometer Bias Stability	0.1 mg

IMU Size	50 x 45 x 32 mm
IMU Weight	< 103g
Power Consumption	< 430mW



Preliminary 0b - Specifications subject to change without notice.

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¹ Stacked configuration shown, with OEM-V1DF receiver. OEM V1DF Sold Separately

² At Constant Temperature

³ OEM-V1DF USB port in stack configuration

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