

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Visit our website - *Click HERE*

IMU-µIMU-IC

High performing MEMS IMU combines with SPAN GNSS+INS technology from Hexagon | NovAtel to provide 3D position, velocity and attitude solution



World-leading GNSS+INS technology

SPAN GNSS+INS technology brings together two different but complementary technologies: Global Navigation Satellite Systems (GNSS) positioning and inertial navigation. The absolute accuracy of GNSS positioning and the stability of Inertial Measurement Unit (IMU) gyro and accelerometer measurements are deeply coupled to provide an exceptional 3D navigation solution that is stable and continuously available, even through periods when satellite signals are blocked.

Overview

The µIMU features Northrop Grumman Litef GmbH's proven inertial measurement technology offering exceptional performance when paired with a NovAtel SPAN enabled receiver. The µIMU interfaces with receivers from NovAtel through a highly reliable IMU interface. IMU measurements are used by the SPAN enabled receiver to compute a blended GNSS+INS position, velocity and attitude solution at up to 200 Hz. Small size, low weight and power consumption makes the µIMU ideal for heading reference, flight control and stabilization applications.

The IMU-µIMU-IC is available as a complete assembly in an environmentally sealed enclosure that can be easily paired with a SPAN enabled GNSS receiver. The µIMU is also available as a stand alone OEM product.

Improve IMU-µIMU accuracy

SPAN GNSS+INS technology provides your choice of accuracy and performance, from decimetre to RTK-level positioning. For more demanding applications, Waypoint Inertial Explorer post-processing software can be used to post-process real-time data to offer the highest level of accuracy with the system.

Benefits

- High performance IMU
- Optimal for aerial, hydrographic survey and industrial applications
- Easy integration with SPAN capable GNSS+INS receivers from NovAtel
- Commercially exportable
- Rugged design ideal for challenging environments
- Ideal for a control reference system

Features

- MEMS gyros and accelerometers
- Stationary INS alignment capable
- IMU data rate: 200 Hz
- Enclosure comes with optional wheel sensor input
- SPAN GNSS+INS capability with configurable application profiles

IMU performance[1]

Gyroscope performance

Technology	MEMS
Dynamic range	499 °/s
Bias instability[2]	0.1 °/hr
Angular random walk[2]	0.12 °/√hr

Accelerometer performance

Technology	MEMS
Dynamic range	15 g
Bias instability[2]	0.015 mg
Velocity random walk[2]	0.024 m/s/√hr

Physical and electrical

Dimensions 130 x 130 x 115 mm

Weight 2.57 kg

Power

Input voltage	+10 to +34 VDC
Power consumption	11 W (typical)

Connectors

Power	SAL M12, 5 pin, male
Data	SAL M12, 4 pin, female
Wheel sensor	SAL M12, 8 pin, male

Communication interface RS-422 UART

Connection to receiver Receiver serial port

Data rate

IMU raw data rate	200Hz
INS solution	Up to 200 Hz

Environmental

Temperature

Operating	-40°C to +55°C
Storage	-40°C to +80°C

Humidity MIL-STD-810G(Ch1), Method 507.6

Random vibe MIL-STD-810G(CH1), Method 514.7 (2.0g)

Environment MIL-STD-810G(Ch1), Method 512.6 (IEC 60529 IP67)

Compliance

FCC, ISED, CE

Included accessories

- Power cable
- Communication cable
- Wheel sensor cable

Optional accessories

- Mounting plate

Performance during GNSS outages[3, 4, 5]

Outage duration	Positioning mode	Position accuracy (m) RMS		Velocity accuracy (m/s) RMS		Attitude accuracy (degrees) RMS	
		Horizontal	Vertical	Horizontal	Vertical	Roll/Pitch	Heading
0 s	RTK[6]	0.02	0.03	0.015	0.010	0.010	0.030
	TerraStar-C PRO PPP	0.025	0.05				
	Single point	1.00	0.60				
10 s	RTK[6]	0.12	0.11	0.035	0.015	0.017	0.038
	TerraStar-C PRO PPP	0.12	0.13				
	Single point	1.10	0.68				
60 s	RTK[6]	3.50	0.78	0.165	0.022	0.025	0.050
	TerraStar-C PRO PPP	3.50	0.80				
	Single point	4.50	1.35				
	RTK with Land profile and DMI	2.50	0.78	0.115	0.022	0.025	0.050
0 s	Post-Processed using Inertial Explorer	0.01	0.02	0.010	0.010	0.004	0.015
10 s		0.01	0.02	0.010	0.010	0.004	0.015
60 s		0.16	0.04	0.020	0.010	0.005	0.016

1. *Supplied by IMU manufacturer.*
2. *Typical mean values from room temperature Allan variance method.*
3. *Performance may be impacted in conditions with unmitigated vibration or significant temperature variations.*
4. *Performance with one antenna, no DMI, and default SPAN profile unless otherwise specified.*
5. *Typical. Based on mixed urban road vehicle dynamics and benign GNSS conditions.*
6. *1 ppm should be added to all values to account for additional error due to baseline length.*

Contact Hexagon | NovAtel

sales.nov.ap@hexagon.com 1-800-NOVATEL (U.S. and Canada) or 403-295-4900 | China: 0086-21-68882300 | Europe: 44-1993-848-736 | SE Asia and Australia: 61-400-883-601.
For the most recent details of this product: novatel.com

This document and the information contained herein are provided AS IS and without any representation or warranty of any kind. All warranties, express or implied, are hereby disclaimed, including but not limited to any warranties of merchantability, non-infringement, and fitness for a particular purpose. Nothing herein constitutes a binding obligation. The information contained herein is subject to change without notice.

Inertial Explorer, NovAtel, OEM7, SPAN, TerraStar and Waypoint are trademarks of Hexagon AB and/or its subsidiaries and affiliates, and/or their licensors. All other trademarks are properties of their respective owners.

© Copyright 2016 – 2025 Hexagon AB and/or its subsidiaries and affiliates. All rights reserved.

D21489 Version 6 | 17 December 2025 | Printed in Canada

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP