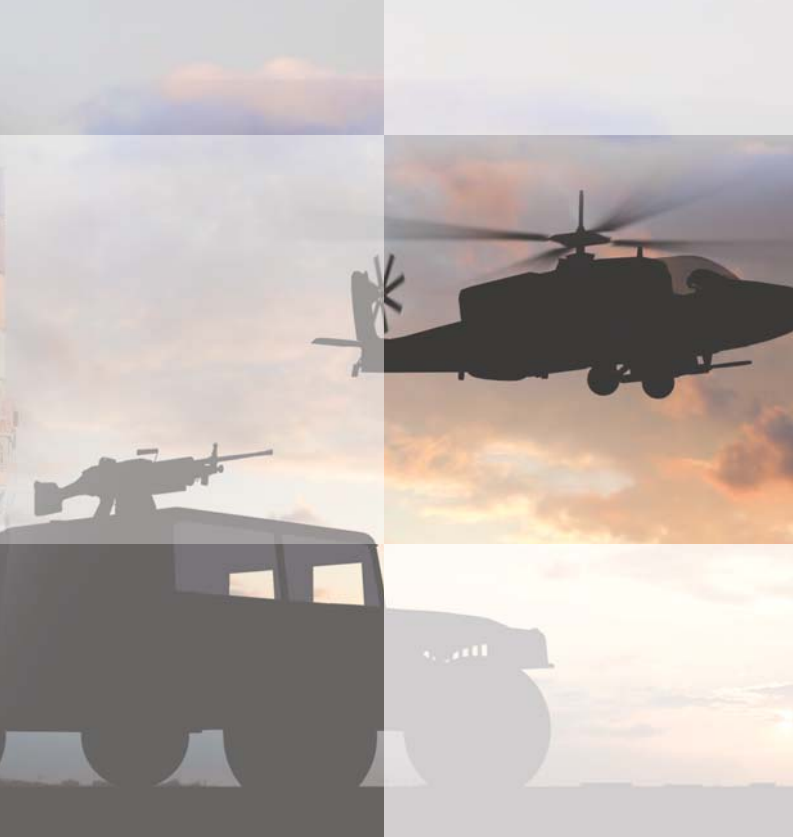




SPACE, AIR, LAND, MARINE
Precision, Accuracy, Reliability every time

InnaLabs® Inertial Sensors

**Quartz Servo Accelerometers
and 2000 Series Gyroscopes**



| Parameter | AI-Q-2030 | AI-Q-2020 | AI-Q-2010 | AI-Q-1410 | AI-Q-710 | AI-Q-550 |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Input Range, g | ±60 | ±60 | ±60 | ±60 | ±30 | ±80 |
| Bias, mg | <4 | <4 | <4 | <5 | <8 | ≤4 |
| Bias One Year Repeatability, µg | 160 | 220 | 550 | 1000 | 1200 | ≤1000 |
| Bias Temperature Sensitivity, µg/°C | <30 | <30 | <30 | <90 | <70 | ≤50 |
| Scale Factor, mA/g: | 1.20 - 1.46 | 1.20 - 1.46 | 1.20 - 1.46 | 1.20 - 1.46 | 1.23 - 1.43 | 0.65 - 0.85 |
| One Year Repeatability, ppm | <310 | <500 | <600 | <1000 | <1200 | <600 |
| Temperature Sensitivity, ppm/°C | <180 | <180 | <180 | <180 | <200 | ≤100 |
| Axis Misalignment µrad: | <2000 | <2000 | <2000 | <7000 | <2000 | ≤1500 |
| Operating Temperature, °C: | -55 to +96 | -55 to +96 | -55 to +96 | -55 to +96 | -55 to +96 | -55 to +105 |
| Bandwidth, Hz : | >300 | >300 | >300 | >300 | >300 | ≥300 |
| Input Voltage, VDC: | ±13 to ±28 | ±13 to ±28 | ±13 to ±28 | ±13 to ±28 | ±13 to ±28 | ±13 to ±18 |

Products

InnaLabs® Quartz Accelerometers

InnaLabs® AI-Q-Series Quartz Servo Accelerometers provide navigation, control and measurement solutions across all market segments and support a number of platforms across a global customer base. Based on proven quartz servo technology they provide high accuracy, repeatability and stability even in the harshest of environments.

Features

- Navigation and tactical grade performance
- High input range (up to ±80g measurement range)
- Analogue current output
- Compact, rugged design
- High stability under temperature changes
- High reliability
- Internal temperature sensor for thermal compensation
- Dual built-in self-test
- ITAR-Free



Applications

- Inertial Navigation Systems (INS)
- Inertial Measurement Units (IMU)
- Attitude and Heading Reference Systems (AHRS)
- Commercial and military aircraft
- Unmanned systems and helicopters
- Land and marine vehicles
- Train and rail measurement systems
- Robotic systems control

| Parameter | GI-CVG-U2X00A/D | GI-CVG-N2X00A/D | GI-CVG-B2205D |
|--|-----------------------------|-----------------------------|----------------|
| Number of Axes | 1 or 2 | 1 or 2 | 2 |
| Interface | Analogue/ Digital RS-422 | Analogue/ Digital RS-422 | Digital RS-422 |
| Housing | Packaged | Unpackaged | Packaged |
| In Run Bias stability (room temp. 40 sec, 1 σ) °/hr | <0.22 | <0.22* (note 1) | ≤ 0.3 |
| Bias stability, full temperature range 1 σ | <10 | <10 | ≤20 |
| Bandwidth (-3dB) Hz | ≥300 | ≥300 | ≥300 |
| Angular Random Walk (steady conditions) °/√hr | 0.01 typical | 0.01 typical | 0.03 |
| Shock | 800 g | 800 g* (note 1) | 800 g |
| Quiescent noise (1 - 100 Hz), RMS, deg/sec | ≤0.01 | ≤0.01 | ≤0.02 |
| MTBF, (MIL-HDBK 217F) hours | >500,000 | >500,000 | >500,000 |

Note #1: Only applicable when the unit is rigidly fixed in appropriate housing

Products

InnaLabs® CVG Tactical Grade Gyroscopes

InnaLabs® 2000 Series Gyroscopes provides <10°/hr tactical grade performance in a variety of compact, robust form factors. Combining exceptional performance in bias stability, scale factor and angle random walk with the highest MTBF (500,000 hrs) on the market, very low noise (≤0.01°/s RMS at 100 Hz) and excellent shock (800g) they provide ideal solutions for air, land or sea stabilisation and pointing applications.

Features

- Single and dual axis variants
- Bias <10deg/hr 1 σ , -40°C to +85°C at 2degc/min.
- High MTBF >500,000 hrs – typically x10 greater than FOG and DTG solutions
- ARW <0.01°/√hr
- Rate range selectable up to 250deg/s
- Bandwidth selectable 300Hz or 100Hz (-3dB)
- Shock tested up to 850g/0.6ms with no detrimental effect on performance
- Vibration <5deg/hr/grms bias offset under random vibration



Applications

- Platform stabilisation of optical systems and payloads, or other sensitive systems on airborne, land-based or marine platforms
- Stabilisation of pointing and directional systems
- Industrial control systems
- Rail measurement and rail-tilt compensation systems



InnaLabs® high-performance accelerometers and gyroscopes meet the stringent requirements of our customers for precision guidance, stabilisation, navigation and orientation applications. InnaLabs® provides high-quality robust solutions to industrial, oil and gas, marine, subsea, aerospace, land, civil engineering, transportation and space applications.

Production Facilities

Our best in class production facility consists of 6000m2 plant room with four separate foundations containing ISO- Class 7 and ISO - Class 5 clean rooms. We have invested in state-of-the-art equipment including rate tables, temperature & pressure chambers, shakers, high precision soldering and etching machines to ensure our finished products are manufactured and tested to the highest quality.

Quality Policy

InnaLabs® Ireland is world class in everything we do: including product quality, customer fulfilment, ease of doing business and value to our customers.

Our primary goal is continual improvement in quality, cost, delivery and customer satisfaction.

We achieve this by:

- Every individual is responsible for the quality of their work, following basic principles and striving for defect-free product quality.
- Creating a culture to continually meet and exceed our customers current and future expectations.
- Pursuing sensor design and manufacturing excellence in a safe, healthy and enjoyable environment.

The InnaLabs® Quality Management System is certified under the ISO 9001 standard for the design and manufacture of precision electromechanical sensors.

Our quality system has been independently audited by NSAI (National Standards Authority of Ireland). NSAI is a member of IQNet (the International Certification Network) based in Bern, Switzerland which gives NSAI certification worldwide recognition. Quality is a top strategic priority for InnaLabs® and ISO 9001 certification as an internationally recognised standard for quality management systems help us to strengthen our leadership in this area. The certification reflects our continued efforts to improve and our commitment to on-going investment in technology, development and process maturity.

Why choose InnaLabs®

European Supplier

ITAR-free Products

Value

Competitive pricing and supply chain flexibility

Quality

Independently audited by NSAI with worldwide IQNet worldwide recognition

Support

Excellent pre and post sale customer support

Flexibility

Custom solutions to meet your project needs

Innovation

Highly skilled and experienced engineering team committed to ongoing research and development

