

PENLINK

Platform Stabilization

APPLICATION NOTE



Complete solutions for platform applications that require high precision with real-time information.

Together with our provider of Gyroscopes we can bring you the best when it comes to platform technology. We know the importance of stabilization and accuracy of said data. Take a look in this application note to learn more about which products we can provide you with and why you should choose Penlink.

Not only do we have our standard catalog of Gyroscopes but we can also offer modification and customization upon request. As well as integration with other products that we supply. Together we work out the best solution for you.

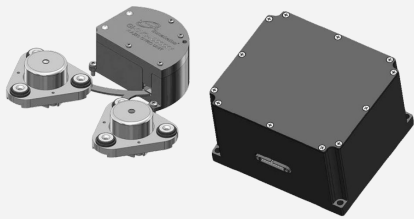
Contact us today to start your next project!



WORKING TOGETHER TO MAKE GREAT DESIGN

PLATFORM STABILIZATION

Our team at Penlink uses the most advanced tools to create, debug, maintain and support our customers in the most transparent, agile and effective way.



Transparent Documentation
& Version Control



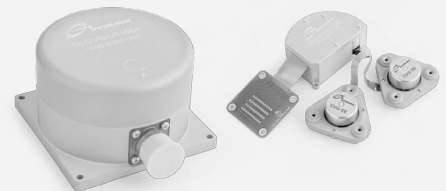
Agile Project Management
& Issue Tracking



World Standard Electronics
Design Software



Online and Offline
First-Class Support



WHY YOU SHOULD CONSIDER OUR GYROSCOPE SOLUTIONS

PLATFORM STABILIZATION



TRUE TACTICAL GRADE PERFORMANCE IN A SMALL, LIGHTWEIGHT PACKAGE

We offer a full range of different gyroscopes that all comes in a small package to fit any application. The gyroscopes is built with Coriolis technology to deliver true tactical grade performance. The key aspect with our gyroscopes are that our products are highly configurable and can withstand high pressure, this enables the gyroscopes to fit a wide range of different platform applications for both land and subsea operation. If required, the products can be integrated with a wide range of our other product groups.

ENVIRONMENTALLY RUGGED

To make sure that the product and application have a long life time span, which will minimize the downtime services, we design our solutions to be environmentally ruggedized. This also means that our products handles though environments which are almost always the case for offshore or subsea applications.



ADVANTAGES BY SWITCHING TO OUR GYROSCOPES

PLATFORM STABILIZATION

CUSTOMIZED SOLUTION FOR
LAND-BASED PLATFORM APPLICATION



TECHNOLOGICAL ADVANTAGES

We can offer both unoused and housed gyroscopes, it depends on your requirements and the placement of the gyroscope in your application. If you don't know which type of gyroscope you need that's not a problem.

Get in touch with us and our sales team will be happy to help you find the right gyroscope that'll fit your projects requirements.

If interested we can also offer modified or customized solutions, as well as integration of other products if needed.

FEATURES FOR OUR GYROSCOPES

- + Small packaging
- + Digital interface
- + Outstanding Short-term Stability
- + Excellent Angular Random Walk
- + Very High MTBF
- + Environmentally rugged
- + Long Life



APPLICATIONS THAT USE OUR GYROSCOPES

PLATFORM STABILIZATION



LAND APPLICATIONS

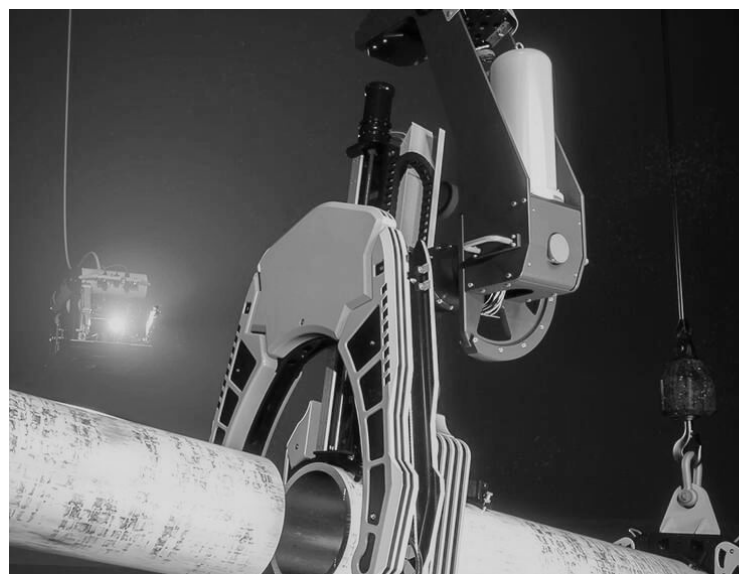
Are you interested in solutions for the defense & surveillance industry? We have gyroscopes that are ideal for land-based applications, such as:

- + Remote weapon station
- + Pan & Tilt
- + Stabilized electro-optics
- + Autonomous Vehicle

OFFSHORE & SUBSEA APPLICATIONS

Are you looking for solution within the marine and offshore industry? Our gyroscopes can handle harsh and deep sea environments, which makes them also ideal for these applications:

- Remotely Operated Vehicles (ROVs) +
- Active heave Winches +
- Offshore Cranes +



GYROSCOPES FOR STABILIZATION

PLATFORM STABILIZATION

UNHOUSED GYROSCOPES

This gyroscope is a part of the GI-CVG-2000 series. It is built with Coriolis technology to deliver the very best when it comes to true tactical grade performance in a small lightweight package. Due to this product being supplied without an external housing it makes it highly configurable to facilitate customised mounting solutions. The most significant aspect is the improved Angular Random Walk and an excellent short-term bias stability.

The analogue output family is suitable for a range of applications. Thanks to the tactical performance, very low noise and high MTBF, combined with the small size make this gyroscope family the ideal choice for platform stabilization.

AVAILABLE OUTPUTS

- + Digital output
- + Analog output

FEATURES

- + In run Bias stability (room temperature) $<0.22^\circ/\text{hr}$ (typical $0.07^\circ/\text{hr}$)
- + Very low output noise ($\leq 0.01^\circ/\text{s RMS @ 100 Hz}$)
- + Very High MTBF (500,000 hr)
- + Large bandwidth ($\geq 300 \text{ Hz}$)
- + Robust (800 g shock)



DID YOU KNOW?

Penlink's team have widespread experience with the products we provide and have worked with global leaders, provide services like design and deliver products of high quality to our customers.

GYROSCOPES FOR STABILIZATION

PLATFORM STABILIZATION

HOUSED GYROSCOPES

This is the GI-CVG-U2204D housed gyroscope, part of the GI-CVG-2000 series. Just as the unoused gyroscope they are built with Coriolis technology to deliver true tactical grade performance in a small housed lightweight package. This product is ideal for navel stabilization platforms and subsea missions as it is supplied with a rugged and hermetic housing, able to withstand the harshest environmental conditions.

AVAILABLE OUTPUTS

- + Digital output
- + Analog output

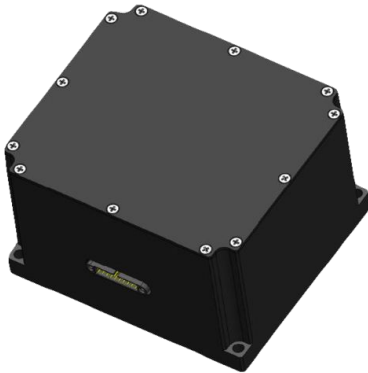
FEATURES

- + In run Bias stability (room temperature) <0.22 °/hr
- + Very low output noise (≤ 0.01 °/s RMS @ 100 Hz)
- + Very High MTBF (500,000 hr) Large bandwidth (≥ 300 Hz)
- + Robust (800 g shock) RS 422 interface



3 AXIS OUTPUT GYROSCOPE

PLATFORM STABILIZATION



3 AXIS DIGITAL OUTPUT GYROSCOPE

The B2300D is a 3 axis tactical grade gyroscope with digital output. The gyroscope is available in a rugged hermetically sealed housing.

This gyroscope is suitable for different industries, land-based, airborne and marine. The tactical performance, very low noise and high MTBF, combined with the small size make this 3 axis gyroscope the ideal choice for platform stabilisation. Especially when precision and position needs to be accurate and reliable.

- + In run Bias stability (room temperature) <math><0.3^\circ/\text{hr}</math>.
- + Very low output noise ($\leq 0.015^\circ/\text{s RMS @ 100 Hz}$).
- + Very High MTBF (500,000 hrs).
- + Large bandwidth ($\geq 300\text{ Hz}$).
- + Robust (800 g shock).
- + RS 422 interface.

MORE APPLICATIONS

The B2300D is particularly suited to the following applications:

- + Platform Stabilisation of optical systems and payloads, or other sensitive systems on Airborne, Land-based or Marine platforms.
- + Stabilization of Pointing and Directional systems.
- + Active Heave Compensation crane and winches.
- + Industrial control systems.
- + Short term navigation.
- + Satellite and Space system attitude control.



CUSTOM GYROSCOPE FOR LAND-BASED PLATFORMS

PLATFORM STABILIZATION

THE GI-CVG-B22XXD CUSTOM GYROSCOPE

Just as the other gyroscope models, the GI-CVG-B2205D is built with Coriolis technology to deliver true tactical grade performance all packed up in a small lightweight kit. With an improved Angular Random Walk and an excellent short-term bias stability, the GI-CVG-B2205D works perfect in Land-based platforms applications.

What's unique with this customized gyroscope is the ruggedized housing that handles vibration up to 1.45 g and 2.2 g, 5Hz-500Hz (AECPT 400, Method 401) and shock up to g, ms 15g for 10 ms and 250g for 1 ms, half sine (AECTP 400, Method 403). Which makes it one of the toughest gyroscopes on the market today.



KEY FEATURES

- + Small packaging
- + Digital interface
- + Outstanding Short-term Stability
- + Excellent Angular Random Walk
- + Very High MTBF
- + Environmentally rugged



PENLINK

Let's talk business!

WWW.PENLINK.SE

Get in touch with
us at Penlink!
No question is too
small or big.



EMAIL

info@penlink.se



PHONE

+46 8-551 158 90



HEADQUARTERS

Penlink AB, Vretensborgsvägen 28,
SE-126 30 Hägersten, Sweden



Engineering &
Product design



Inspection &
Quality management



Simulation &
Design verification



Assembly &
Testing



Advanced
Manufacturing



Value-Added
Products & Services