

STARLIGHT 1000 IRU

Inertial Reference Unit



OVERVIEW

The STARLIGHT 1000 IRU (previously known as IRU 24) employs the latest closed-loop fiber-optic gyro (FOG) technology. It is a space grade, ultra high performance strap-down Inertial Reference Unit (IRU), suited for satellites, space navigation applications, including EO SATS, COM SATS, line of sight stabilization, space-based radar and guidance applications.

SYSTEM HIGHLIGHTS

ARW: $<0.0002^{\circ}/\sqrt{\text{hr}}$.

Bias performance: $0.001^{\circ}/\text{hr}$.

- Extremely low ARW and bias
- Space proven in low earth orbit
- Versatile application usage

Operational in orbit

ITAR free

4-axes tetrahedral redundancy

Radiation Hardness Assurance (RHA)

STARLIGHT 1000 IRU

In the past decade Cielo has been deeply involved in the development of space qualified FOG systems together with veteran Israeli satellite manufacturers.

Cielo's responsive and experienced team are the key factor in the success of the complex integration and performance challenges involved in the development, qualification, delivery and support of space qualified inertial systems.

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| PARAMETER | UNITS | STARLIGHT 1000 IRU (IRU 24) |
|-----------------------------|------------|-----------------------------------|
| GYRO | | |
| Gyro Bias Stability | °/hr. | <0.001 |
| Gyro Angular Random Walk | °/√hr | 0.0002 |
| Gyro Scale Factor Stability | PPM | <2ppm 1σ |
| Gyro Dynamic Range | °/sec. | ±35 |
| Magnetic Sensitivity | °/hr/gauss | <0.001 |
| CHARACTERISTICS | | |
| Size – 2 box structure | mm | Optical pyramid – 200 x 240 x 240 |
| | | Electronics – 25 x 15 x 15 |
| Weight | Kg | <8.0 |
| Power Input | VDC | 30 to 48 |
| Power Consumption | W | up to 52 |
| Outgassing | Standard | ASTM E 595-93 |



CIELO INERTIAL SOLUTIONS LTD.

info@cielo-inertial.com | www.cielo-inertial.com

5 Nahum Hefzadi St., P.O.Box 34429, Jerusalem 9134302 Israel | Tel: +972.2.6595339 | Fax: +972.2.6541221

