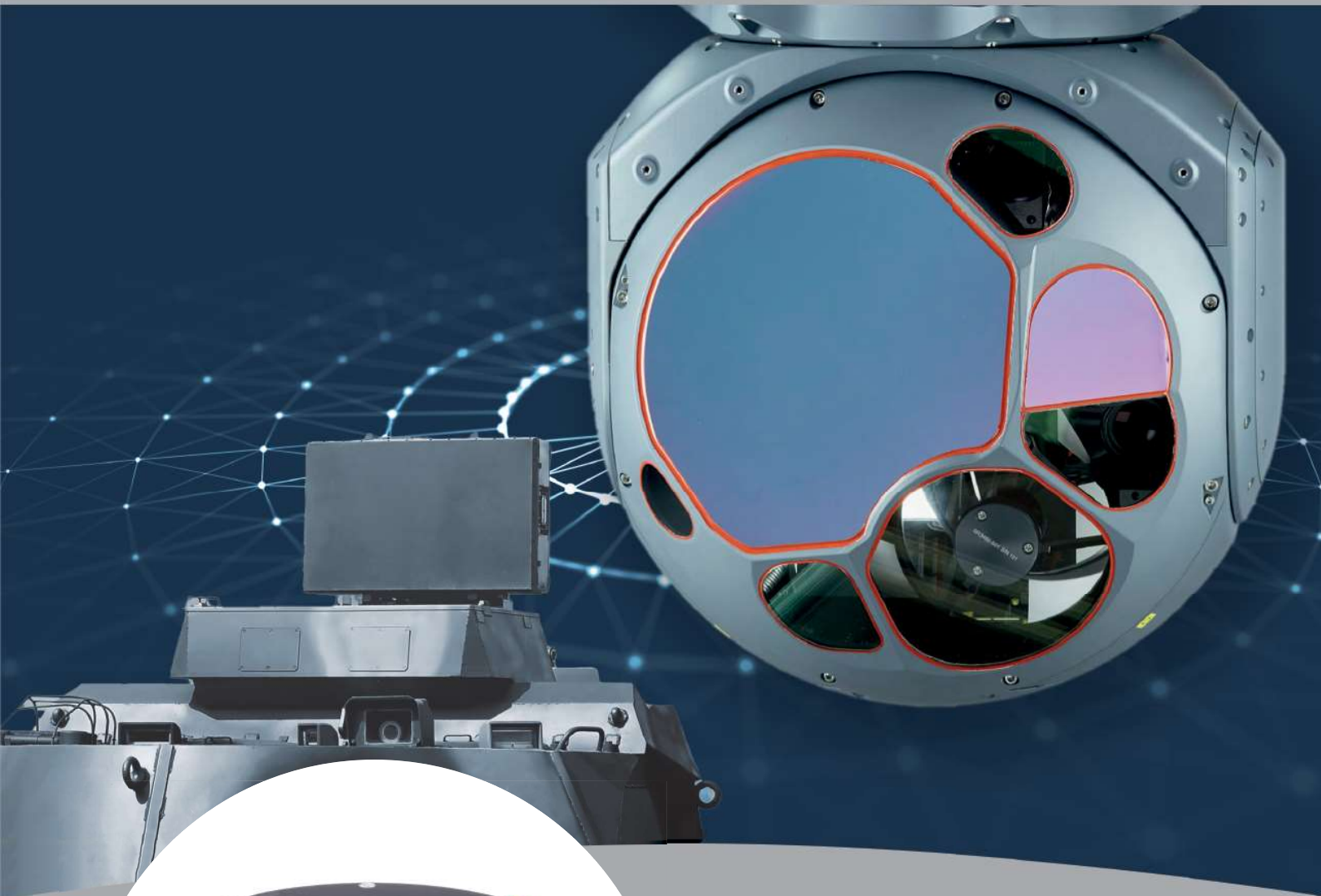


KRIO

Gyrocompass Navigation for Special Missions



EGI/AHRS/IMU

Gyrocompass and Stabilization

KRIO

Fiber Optic Gyro EGI/AHRS/IMU

KRIO is Civitanavi Systems' response to the requirement for a dual use, ITAR free Inertial Measurement Unit for commercial, defence and industrial applications providing customers with greater flexibility in its use, system accuracy and function.

The fully flexible design provides for a multiple range of capabilities from tactical through to a complete gyrocompassing AHRS function, weighing a mere 1.4Kg and consuming less than 4 Watts of input power, it is the world's lightest, smallest and lowest power consuming Inertial Measurement Unit available in the market today.

The EGI/AHRS version of the **KRIO** is capable of meeting the very demanding and precise navigation capability required by airborne applications.

All **KRIO** configurations can be installed with variations of software, including:

- Embedded GNSS INS (EGI)
- Attitude and Heading Reference System (AHRS)
- Motion Compensation
- Radar Stabilization
- Guidance
- Flight Control Software
- EO Stabilization

EGI /AHRS/IMU Gyrocompass capable

Heading accuracy (1 σ): 0.2 deg seclat

Roll/Pitch (1 σ): 0.1 deg

Embedded aiding source: GNSS (RTK optional)

IMU GYROSCOPES

Type: Closed loop FOG

Bias stability (1 σ): < 0.006 deg/h

Bias repeatability (1 σ): 0.05 deg/h

ARW: < 0.0055 deg/sqrt(h)

Scale factor accuracy (1 σ): 25 ppm

Scale factor linearity (1 σ): 10 ppm

Range: ± 400 dps

Bandwidth (-3dB): > 500 Hz (optional > 1k Hz)

IMU ACCELEROMETERS

Type: Quartz

Bias stability: < 10 ug

Bias repeatability (1 σ): 500 ug

Scale factor accuracy (1 σ): 100 ppm

VRW: < 25 ug/sqrt(Hz)

Range: ± 60 G

Bandwidth: > 500 Hz

POSITION PERFORMANCES

Horizontal Accuracy (GNSS aided): 2m CEP50

Vertical Accuracy (1 σ): 2m

INTERFACES

1 Full duplex RS-422 and optional SDLC

ENVIRONMENTAL

Operating Temperature: -40°C to 71°C

EMI/Vibration/Shock: DO-160G

PHISICAL

Size (WxHxD): 130x88x130 mm

Mass: < 1.4 Kg

POWER SUPPLY

Power Consumption: < 4W

Operative Voltage: 18 $\div$ 36 VDC

