MIMU-M
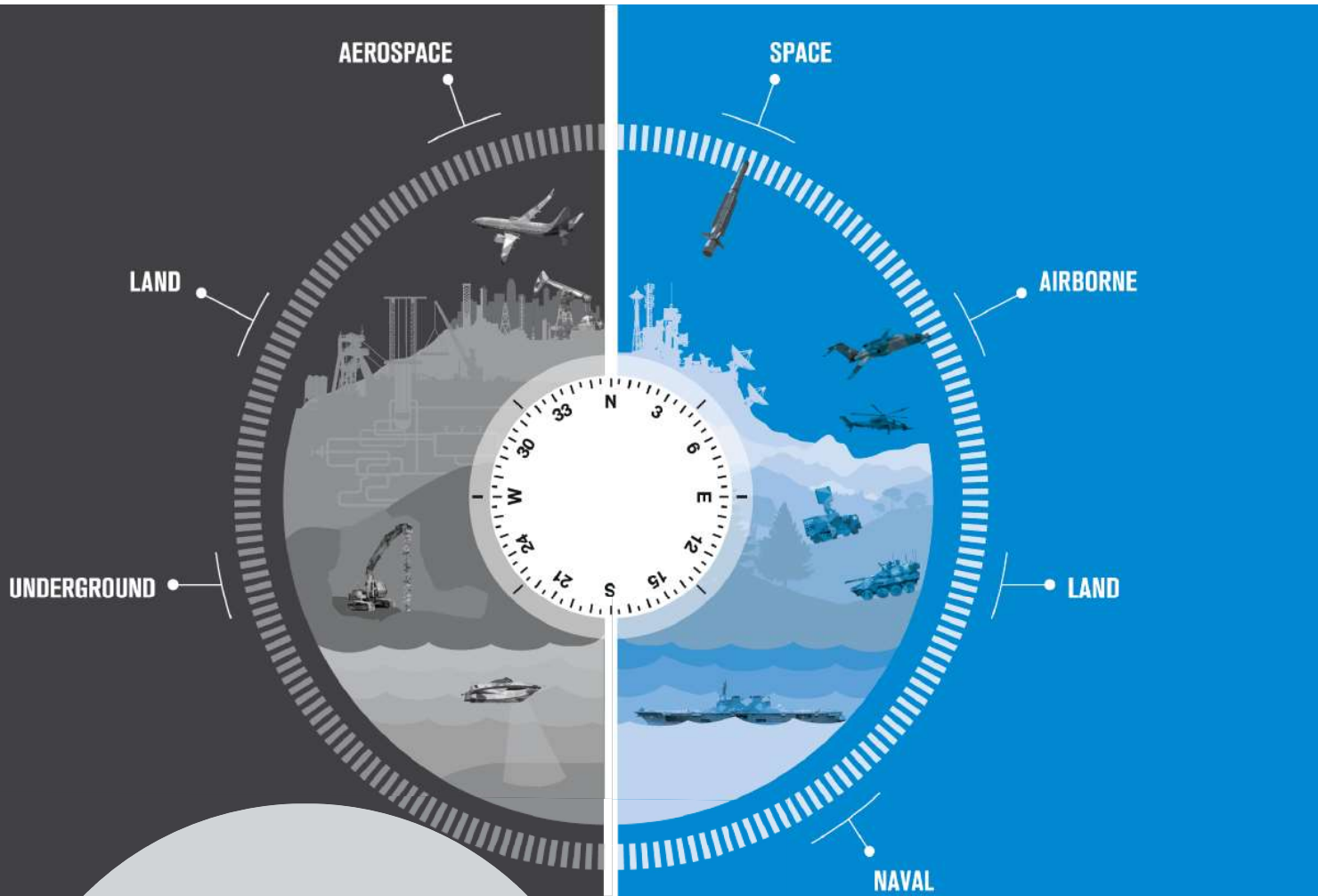
World Smallest High Performance MEMS GNSS INS
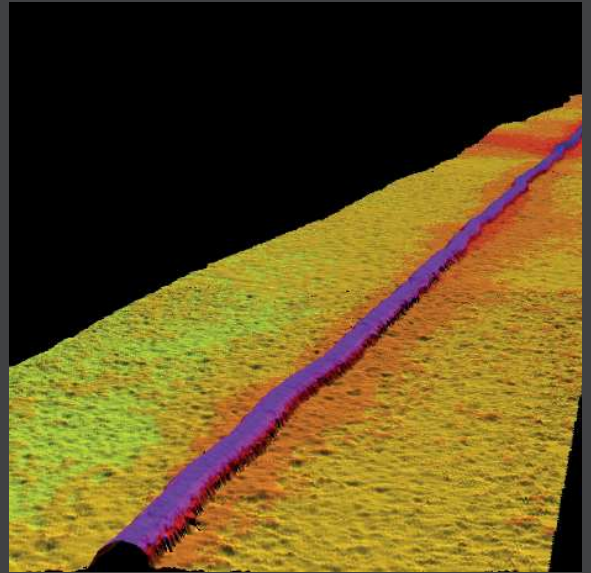
All domains GNSS INS - Navigation and Stabilization System

CIVITANAVI SYSTEMS®
by HONEYWELL

MIMU-M

World Smallest High Performance MEMS GNSS INS

The **MIMU-M** is an INS and AHRS, Navigation and Stabilization System, based on highest performing MEMS inertial sensor coupled with embedded GNSS receiver, magnetometer and barometer. It is engineered to deliver maximum accuracy and reliability at minimal size and total cost of ownership. The state-of-the-art INS and AHRS (Attitude Heading Reference Systems) solutions offer outstanding navigation and stabilization capabilities, thanks to the advanced state estimation techniques based on Kalman Filter algorithm and the innovative integration of in-house designed and manufactured ITAR-free inertial sensors, which can be coupled to GNSS or magnetic heading input (both through standard NMEA sentences) for automatic initialization and highly calibrate hybrid data output. The **MIMU-M** provides maintenance-free, robust, lowest weight, compact volume inertial navigation solutions without compromising performance in all operational environments.

MEASUREMENT RANGE

Roll range: ±180°
Pitch range: ±90°
Heading Range: ±180°
Latitude Range: ±90°
Longitude Range: ±180°

Velocity Range: ±400m/s
Altitude range (with GNSS): 30000ft
Body angular rate range: ±490°/s
Body acceleration range: ±16g

PHYSICAL CHARACTERISTICS

Dimensions: 60mm x 75mm x 45mm
Weight: < 160gr
Power Supply: 22-30.3 VDV
Power consumption typical: < 3W
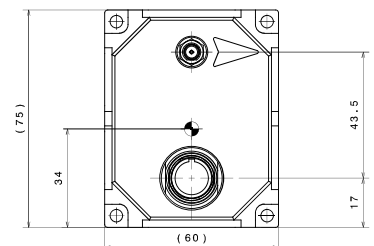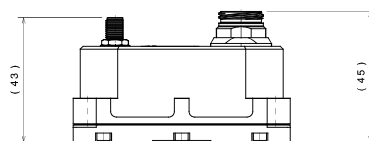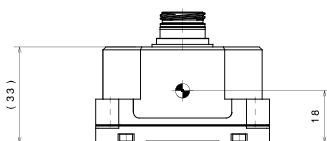Input/Output interface: RS-422
Operating Temperature Range: -40° to +70°C

ENVIRONMENTAL AND EMC QUALIFICATION (DO-160G)

PERFORMANCE (1σ)	GNSS aided *	GNSS unaided **
Roll / Pitch	0.14°	0.5°
True Heading	1°	N/A
Directional Gyro Mode	N/A	15° in 1hour
Vertical Speed	60 ft/min	2 m/s in 30 sec
Ground Speed	0.4 m/s	2 m/s in 30 sec
Horizontal Position	3 m CEP50	30 m in 30 sec
Vertical Positon	3 m CEP50	30 m in 30 sec

*with full accurate GNSS data
**after a navigation period with full-accurate GNSS data and dynamic maneuvers with accurate heading in input
Note: Vertical channel will be invalidated after few minutes without GNSS

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