

ELECTRONICS & DEFENSE



SIGMA 40

ATTITUDE & HEADING REFERENCE SYSTEM
INERTIAL NAVIGATION SYSTEM

- The best-selling naval INS
- High reliability
- Combat proven
- In service in 40 navies worldwide

SIGMA 40

Attitude & Heading Reference System Inertial Navigation System

Designed for surface ships, SIGMA 40 is both an Attitude and Heading Reference System (AHRS) and an Inertial Navigation System (INS). Its high level of performance meets both navigation and weapon stabilization requirements.

Based on Safran Electronics & Defense's state-of-the-art strapdown digital ring-laser-gyro technology, SIGMA 40 is perfectly suited for all types of carriers, from off-shore patrol vessels, up to aircraft carriers, through frigates and minehunters.

Easy to integrate with a Combat Management System, SIGMA 40 optimizes the efficiency of weapons and self-defense systems.

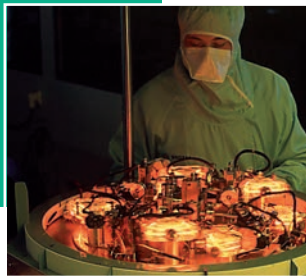
Immune to severe environmental conditions, SIGMA 40 provides accurate data, even in harsh combat situation:

- Heading, roll and pitch
- Angular velocity
- Position and heave
- Horizontal/vertical velocity & acceleration

European leader in inertial navigation

The SIGMA 40 family capitalizes on Safran Electronics & Defense's 70-year experience in inertial technologies. Safran's navigation systems are used in simplex, duplex or triplex configuration on more than 600 ships in service in 40 navies worldwide, including surface vessels and conventional, nuclear and air-independent propulsion submarines which require extended performances.

- The most compact & lightweight inertial navigation system in the world
- AHRS+INS in a single unit
- Fast settling time
- Strapdown solid state solution
- Low-life-cycle cost



Technical specifications

SWaP

- Size: 253 x 262 x 360 mm
- Weight: 19 kg
- Power: < 70 VA (24 VDC)

Maintenance

- MTBF: >56,000 hours
- Proven by > 20 million operational hours at sea on SIGMA 40 family
- MTTR: less than 30 minutes

Interfaces

- Digital interfaces:
 - RS422: 7 outputs/4 inputs
 - Ethernet
- Optional synchro interfaces: heading, roll & pitch

Settling time

- Data availability: 6 minutes after switch-on
- Full attitude performances: 20 minutes after switch-on

Environment

- Military naval standards

European in-house technology



IMO certified

Performances	SIGMA 40-8	SIGMA 40-12	SIGMA 40-24
POSITION (TDRMS)	1Nm/8h	1Nm/12h	1Nm/24h
HEADING (seclat RMS)	0.03 deg	0.01 deg	0.01 deg
ROLL & PITCH (RMS)	0.01 deg	0.01 deg	0.01 deg
DATA LATENCY	1 ms	1 ms	1 ms

Safran Electronics & Defense
Arcs de Seine - 18/20 quai du Point du Jour - 92659 Boulogne-Billancourt Cedex - France
Tel.: +33 1 55 60 39 96 - Fax: +33 1 55 60 38 95
safran-electronics-defense.com

