

PETRA

Land Inertial Navigation Family



INS/GNSS

Navigation and Stabilization System

The PETRA FAMILY

The **PETRA** family of Land Inertial Navigation Systems (INS) best exploits the strapdown Fiber Optic Gyro (FOG) technology for high-precision pointing, localization and navigation achieving optimal performance.

Thanks to innovative integration of ITAR-free inertial sensors, designed and manufactured in Italy, with advanced state estimation techniques based on Kalman Filter algorithm, completely developed and tuned in-house, the **PETRA** family provides the end user with superior pointing accuracy in GNSS denied environment. Aimed to withstand harsh operational conditions, **PETRA** is ideally suited for new and retrofit land vehicles programmes.

The **PETRA** products family provides maintenance-free, robust, low weight, compact volume land inertial navigation and pointing solutions without compromising performance in all operational environments.



CHARACTERISTICS	PETRA 2000	PETRA 1000
Heading (RMS)	< 1 mils secant latitude	< 5 mils secant latitude
Roll / Pitch (RMS)	< 0.3 mils	< 1 mils
Horizontal Position with VMS	0.25 % DT	0.6% DT
Vertical Position with VMS	0.1% DT	0.6% DT
Horizontal Position with GPS (RMS)	< 10 m	< 10 m
Vertical Position with GPS (RMS)	< 10 m	< 10 m
Alignment time (Static)	2 minutes	2 minutes
Alignment time (full accuracy)	15 minutes	15 minutes

SYSTEM CHARACTERISTICS

Interfaces

RS422/RS232
Ethernet
CAN Bus
Pulsed Odometer
Data Output Rate: up to 500 Hz

Environmental and Reliability

Operating Temperature: -32°C to +65°C
Storage Temperature: -40°C to +71°C
EMC/EMI: MIL-STD-461F/IEC 61000-6-4
Vibration: MIL-STD-810F/IEC 60068-2-6
MTBF: > 40000 hours

Dimensions

WxHxD: 151x161x286

Weight

8.5 Kg

Power requirements

28VDC (18-36VDC): <15 W