Navigation, communication & Power Board

An OEM navigation solution for land & marine applications

NAVIGATION BOARD

Performance

The Navigation Communication & Power board (NCPB) is designed to suit all navigation needs whether in air, land or at sea. It includes on board mounted GNSS, INS & a computer in a compact size. It easily enables the navigation for your OEM. The NCPB provides highly accurate navigation solutions for your vehicle (typical applications: bathymetry applications, environment monitoring...).

This NCPB is composed of the state-of-the-art technologies:

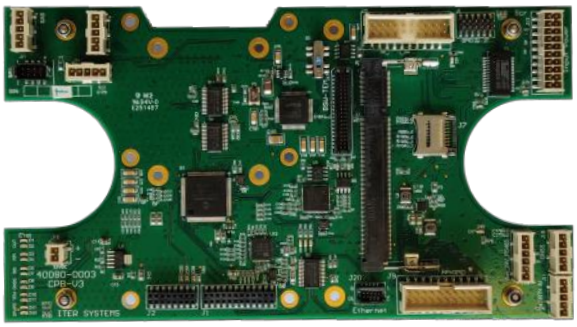
- Embedded computer,
- GNSS Receiver,
- Inertial Navigation System (INS)
- Power supply & communication hub for user devices (Ethernet, Serial, GPIO...).



OEM NAVIGATION SOLUTION

Adaptability

This NCPB is design to make your integration easier. The field applications are varied. Its compact design makes it suitable for any confined space (e.g. AUV, USV...). It is designed for low-power requirements for long duration uses at remotely accessible areas.



NCPB CONFIGURATION

Navsight Processing Module

For Ekinox grade or Apogee Grade IMUs
(refered to technical specifications below)

IMU
SBG Systems©

Specific cable

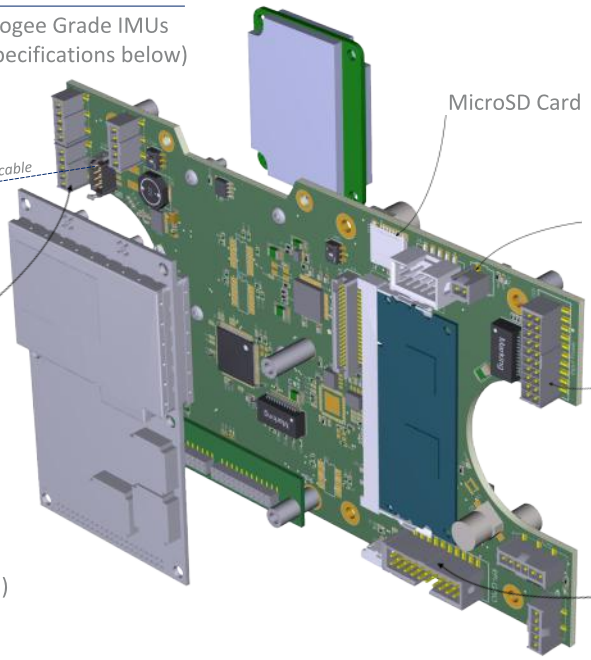
Ekinox, Apogee,
Ellipse range

2 User devices

- +12 VDC Output
- RS232 serial

Communications

- Ethernet 100/1000MBps
- 4 Serial ports (RS232/RS485)
- 1 USB
- 17 GPIOs
- Input power supply range 9 - 36 VDC



MicroSD Card

12 VDC for fan

User device

- Ethernet
- +12VDC @ 3A Output
- Sync IN - sync OUT
- PPS

Input Connector

- 9-36 VDC INPUT
- Ethernet
- Sync IN/OUT

User device

- RS232/RS485
- +24VDC @ 4A Output

Raspberry Pi 3+

- On board communication management
- Linux OS
- Storage for data acquisition
- Configurable for full autonomy
- Accessible GPIOs

GNSS OEM Receiver

Supported models indicated in
technical specifications below

TECHNICAL SPECIFICATIONS

Configuration options & Technical specifications

GNSS:	▪ *Hemisphere H328 or Vega™ 40 GNSS Compass board.*	GPS, GLN, GAL, QZSS, BDS, L-Band (Atlas), IRNSS (Vega™ 40 only) heading (0.04°@ 2m baseline), L1/L2, RTK 1cm, rover, 20 Hz (option), 0.5° pitch & roll (Vega™ 40) / 1° pitch & roll (H328).
	▪ *Trimble BD992 Dual Antenna, positioning & heading with RTK omniSTAR support.*	GPS, GLN, GAL, BDS, L-Band (Omnistar), heading (0.09° @ 2m baseline), L1/L2/L5/E6, RTK 1cm, rover, 50 Hz.
	▪ *Trimble BD992-INS.*	GPS, GLN, GAL, BDS, L-Band (Omnistar), heading (0.09° @ 2m baseline), L1/L2/L5/E6, RTK 1cm, rover, 100 Hz, 0.1° pitch & roll.
INS/IMU:	▪ *Ellipse Series*	0.1° pitch & roll, 1° heading (magnetometer), 5 cm real-time heave.
	▪ *Navsight Ekinox Series*	0.02° pitch & roll, 0.05° heading (w/ GNSS), 5 cm real-time heave.
Computer:	▪ *Raspberry Pi CM3+*	32 Gb eMMC, 1Gb SDRAM (+32Gb SD card), Cortex A53 (ARM) 64-bits.
Power supplies:	▪ *Communications:*	Ethernet 100BASE-T and 1000BASE-T.
	▪ *Input power range: +12 to 36 VDC*	
	▪ *Power requirement:*	Operating temperature 0° to 70°C 20 W INS + GNSS solutions.
	▪ *Power outputs:*	+12 VDC @ 3A (All outputs combined) +24 VDC @ 4A (Isolated power supply).

FROM A TO Z

Systems design engineering.

Software development for our own products or for new interfaces with customers systems.

Remote technical support.

A WIDE RANGE OF APPLICATIONS

Marine services

Research

Environment

Natural Ressources

Archeology

Military REA

ITER Systems

ITER Systems is a highly experienced team of engineering and expertising in underwater surveying equipment. The company provides innovation, quality product at an affordable price, for the international market with high quality technical support.

A team of specialized engineers are located in France and England to answer all your needs.

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