

THE HADES

The Hades is a ruggedized GNSS receiver with integrated antenna and microcontroller designed to provide PVT data to an AUV navigation system. While at the surface, GNSS positions are transmitted in standard NMEA format via an RS-232 interface to the vehicle INU.

The Hades is fully submersible and has been rated to 7,500 m (11,000 m option available) below sea level. It is typically powered from the AUV power system or from an external battery, and can efficiently operate over a wide voltage range. The unit uses active power management to reduce power when under water. It includes an integrated electronic sensor and will quickly resume normal GNSS operation upon surfacing.

The Hades also includes a programmable high-intensity LED flasher to aid in recovery. A one pulse-per-second (1PPS) signal is also available for accurate GNSS time synchronization.

KEY FEATURES:

- Combination GNSS/Flasher
- Fit for full lifetime of asset deployment
- Full ocean depth rating (11,000 m) possible
- All Titanium enclosure
- Configuration via BlueTooth 4.0

*This product does not include Iridium capabilities, see the Apollo for more in Iridium beacons



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TECHNICAL SPECIFICATIONS*

Functionality

Base Function LED Flasher
GNSS location

Electrical

Supply Range 7V-30V

Current Consumption Idle: 325 uA (BT on), 245 uA (BT off)
LED pulse: 100 mA (50ms pulse width)
GPS acquisition: 15 mA (avg. 30 sec)

ON/OFF Controls Magnetic Reed Switch
Solid State Surface Detection

Data Interface RS232
NMEA
PPS

LED Technology

Power 3.0 W, single emitter type

Programmable Flashes: 1,2,3 or 4 per sec
Timer: Any interval, 1-60 sec

Enabled NMEA Strings

GGA Fix Information
GLL Lat/Lon Data
GSA Satellite Data
GSV Detailed Satellite Data
RMC Recommended Minimum Specific GNSS Data
VTG Course & Speed Over Ground

Environmental

Operating Temperature -40C to +60C

Depth Rating 7500 m (11000 m available)

Mechanical

Dimensions w/ connector 5.15" L x 2.0" D

Weight 370 g – In water, 557 g – Out of water

Material Grade 9 Titanium

Connector (6-pin) MCBH-6-FSTi (8-pin option available)

GNSS Module

GNSS Receiver Telit – Jupiter SE873Q5
QTI SiRFStarV (B02) based

Full GNSS Compliance GPS
GLONASS
Galileo
Beidou

Standards NMEA binary
48 GNSS channels

Satellite-Based Augmentation System (SBAS) WAAS
EGNOS
MSAS
GAGAN

Sensitivity Up to -167 dBm

Accuracy Position: <1.5 m, 95% typical
Velocity: 0.1 kt RMS steady state
Heading: 0.01 deg

Time to First Fix Hot start: 1s
Cold start: <27s

*Specifications subject to change without notice.

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