

Teledyne Marine Compact Navigator

Next generation navigation solution

Teledyne Marine's Compact Navigator is high performing, small in size and a fully integrated autonomous navigation solution.

Extreme optimization in size, weight, power, performance, and functionality, makes the Compact Navigator a differentiator for small vehicles, enabling inspection and survey applications not previously achievable.

Unmatched Performance

The Compact Navigator delivers unmatched performance, not only within its form-factor, but also compared to much larger navigation solutions. This empowers small ROVs and AUVs to perform high-accuracy structure inspections, hydrographic surveys and MCM missions in deeper waters, not previously possible.

Robust and unparalleled DVL bottom track range up to 420m allows for subsea vehicles to operate in the littoral zone independently of USBL while maintaining accurate navigation and significantly reducing ROV and AUV deep water dive errors.

In GNSS challenged areas like harbors, in-land waterways and offshore wind-farms, surface vessels can now navigate accurately. Additionally, safe navigation is also ensured in areas where GNSS is actively denied or spoofed.

Premium and Compact Design

Constructed in a durable titanium housing, its compact size (Ø114mm x 135mm) brings survey grade navigation to even the smallest vehicles.

The unique flat design of the phased array DVL allows flush integration on AUVs and surface vehicles where optimal hydrodynamics is critical. The Compact Navigator is insensitive to speed of sound, which eliminates the need for integrating an external sound velocity sensor.

The comprehensive connectivity includes two triggers; this allows time synchronization and DVL triggering for managing multiple acoustic sensors - Making the Compact Navigator a true survey solution.

The Compact Navigator is transforming the capabilities of small marine vehicles, enabling them to tackle increasingly demanding tasks with ease.



US and EU production and support

Easy to export due to ITAR free

Gyrocompass grade

Factory calibrated

Battery backup option

7W nominal



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SPECIFICATIONS

Performance¹:

DVL-aided²

Straight line ³ (error after 1km)	0.30% (3m)
Survey ⁴ (error after 1km)	0.05% (0.5m)
GNSS / USBL	5x improvement
Heading (sec lat)	0.10°
Pitch/Roll	0.02°
Altitude ⁵	0.15m to 150m 0.30m to 420m (available on request)
Depth	0.01% FS

Interface:

Ethernet	100mbps TCP/IP/UDP
Serial	Main Connector 1x RS232 / RS422
	AUX Connector 1x RS232
Triggers	Main Connector 2x triggers
	AUX Connector 1x trigger
External Aiding	GNSS, USBL, SV

Physical Characteristics:

Material	Titanium
Dimensions	300m Ø114mm x 135mm
	4,000m Ø114mm ⁶ x 160mm
Weight (air/water)	300m 2.3kg/0.9kg
	4,000m 3.8kg/2.4kg

Operational and Environmental:

Power Supply	24VDC +/-10%
	7W
Operating and Storage Temp	-5°C to 50°C / -30C to 60°C

Compliance:

Standards	Meets or exceed IEC 60945
Export	Compact Navigator is listed on EU dual-use list as 7A008, ref Appendix 1 of the EU-regulation 2021/821

¹CEP50, ²With DVL bottom lock, ³Distance, ⁴Distance Travelled, ⁵60W PSU required , ⁶Excluding connector

Higher performance option available.

Get in touch.