



SafePilot CAT ROT & CAT I Portable Piloting Units

SAFEPILOT CAT ROT

Trelleborg’s CAT ROT is a small and compact pilot unit primarily designed to connect to a ship’s AIS pilot plug and transmit data via Wi-Fi to the iPad with SafePilot.

AIS is primarily intended for information, but not navigation. The AIS data format available from the pilot plug does not provide sufficient resolution in heading, nor in rate of turn. These parameters is, however, vital from a navigational perspective. In particular, if quality predictions are of the essence.

The CAT ROT is designed to overcome the shortcomings of the AIS pilot plug data format by generating an accurate real-time rate of turn and providing the missing decimal readings to the heading data via an integrated rate sensor, intelligent processing and advanced Kalman filter integrated into the unit.

All the data collected are transmitted to the pilot’s display via Wi-Fi connection, which ensures a stable long range.



SAFEPILOT CAT I

Trelleborg’s CAT I supplements our CAT ROT with highly accurate speed measurements and independent GNSS positioning.

A ship’s AIS data can be compromised due to the quality of the ship’s instruments or human errors. In order to ensure the most reliable data for piloting, our CAT I provides GNSS positioning, which is independent from the ship’s instruments.

The CAT I tracks all four GNSS constellations and supports SBAS as well as NTRIP RTK corrections for position accuracy to within 1cm.

CAT ROT / CAT I combination provides:

CAT ROT	CAT I
Heading with decimal degrees	Speed 1 cm/sec (RMS)
Rate of Turn <0.5 deg	Position Accuracy: RTK: 1 cm + 1ppm DGPS: 0.4m SBAS: 0.6m Stand-alone: 2m
AIS targets	IP67



FEATURES

- Rate sensor
- Navigation processor
- Intelligent filtering
- Decimal degree on heading
- Reliable, real-time Rate of Turn
- Receive AIS targets from pilot plug
- Light weight
- Pocket size
- Wireless charging
- USB-C charge
- CAT I spoofing / jamming detection
- Autopolarity conversion (APC) - CAT ROT only
- Magnets in bottom plate for easy mounting on steel structure
- Over the Air (OTA) firmware update via SafePilot



SPECIFICATIONS	CAT ROT	CAT I
Weight	325g	410g
Dimensions	138 x 100 x 25 mm	138 x 100 x 25 mm
Heading resolution	0.1 deg	–
Rate of Turn	<0.5 deg/min	–
Integrated rate sensor	Yes	–
Charge time	3 hours	3 hours
Battery capacity	30 hours	30 hours
GNSS	N/A	Multi GNSS L1/L2 supporting all constellations. (GPS, GLONAS, GALILEO, BEIDOU)
Wi-Fi link to pilot's display (connection to multiple displays allowed)	Yes	Yes
Wi-Fi range	200m line of sight	200m line of sight
Fast-charging via USB-C	Supports wireless charging	Supports wireless charging
AIS targets	from ship's AIS	–
Speed accuracy	from ship's instruments	1cm/sec (RMS) or from ship instruments
Position Accuracy	–	RTK: 1cm + 1ppm DGPS: 0.4m SBAS: 0.6m Stand-alone: 2m
Option for ships shore link (GPRS or (UMTS)	SafePilot	SafePilot

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