



TRELLEBORG'S SAFEPILOT CAT II / CAT III DGPS GNSS

Trelleborg's SafePilot CAT II / CAT III solution is developed for the high positioning accuracy required applications, for instance, piloting in confined waters, offshore operations, and so on.

Our CAT II / CAT III is an all-in-one dual antenna solution consisting of a heading and positioning sensor (the central part) and two antennas. The system is completely autonomous and does not rely on the ship's instrumentation. The antennas can be extended to a 4 meter baseline, which provides accurate heading.

The CAT II / CAT III communicates with the pilot's display via Wi-Fi, ensuring a stable and long range connection.

For piloting, speed accuracy is key. Both our CAT II and CAT III deliver a speed accuracy down to 1 cm/s, allowing the system to be used for the most challenging operations, for instance ultra large container vessels (ULCV) and LNG ships.

The built-in Rate-of-Turn sensor offers precise and independent Rate-of-Turn, allowing for very accurate predictions when doing turns.

With the integrated AIS, our CAT II / CAT III provides an AIS feed for monitoring the surrounding vessels movements.

UHF/VHF integration allows the communication of data from Shore, and RTK corrections to the CAT III.

Additional data can be interfaced to the CAT II / CAT III system. The following are some examples in offshore operations:

- Environmental data
- Hawser load
- Product data (flow, temperature, etc.)
- ESD

CAT II



CAT III



Specification and Performance Data



SPECIFICATIONS (RMS)	CAT II	CAT III
	DGPS, L1	GPS L1/L2 RTK
	GLONASS, L1	GLONASS, L1/L2 RTK
	Galileo, BeiDou prepared	Galileo, BeiDou prepared
	SBAS (EGNOS, WAAS, MSAS, GAGAN)	SBAS (EGNOS, WAAS, MSAS, GAGAN)
	Inertial gyro	Inertial gyro
	Cable less, Wi-Fi	Cable less, Wi-Fi
Operating temperature range	-25° C to +55° C	-25° C to +55° C
Electronic encapsulation	IP65	IP65
Base line	3-4 m	3-4 m
Humidity	100%	100%
Weight	3750 g	3750 g
Size	380 x 145 x 95 mm	380 x 145 x 95 mm
Battery capacity	9 hours	7 hours
Antenna	VHF / UHF Integrated	VHF / UHF Integrated
AIS Receiver	Optional	Optional
Speed	1 cm/sec = (0.025 Kn)	1 cm/sec
ROT	0.5 deg/min	0.3 deg/min
Heading accuracy	DGPS dual antenna <0.05 deg RMS (4m baseline)	RTK/DGPS dual antenna <0.05 deg (4m baseline)
Heading precision	0.01 deg (based on L1/L2)	0.01 deg
Roll and Pitch Sensor	N/A	Integrated pitch (optional) Integrated roll (optional)
Roll precision	N/A	0.1 deg
Pitch precision	N/A	0.1 deg
Heave precision	N/A	3-5 cm

POSITION ACCURACY	CAT II	CAT III
DGPS	0.40 m	0.40 m
SBAS mode	<0.60 m	0.60 m
Stand-alone	<1.50 m	1.20 m
RTK	N/A	1 cm + 1 ppm