

Navicom Dynamics introduce a special PPU called the **GyroPilot STS**. It is designed to assist Ship-to-Ship transfers and Lightering operations by providing situational awareness of the dynamics of both vessels (approaching vessel and main vessel) to the user.

It is based on our popular PPU, the **GyroPilot**, which interfaces with the ships Pilot Plug to transmit AIS position while also adding independent Rate of Turn (from its internal gyro) and smoothing Heading Data.

The **GyroPilot STS**, is a hybrid version of this sensor. It is plugged into the Pilot Plug of the approaching tanker to obtain feedback on HDG, ROT, COG and SOG of the main vessel or tanker while also reporting the AIS Position, HDG, ROT, COG and SOG of the approaching tanker. This data (from both vessels) is then displayed on a customised version of *SEAiq* on an iPad which is with the pilot on-board the approaching tanker.

Once *SEAiq* is placed in docking mode, it will display approach vectors and closing distances from forwards and aft shoulders of the approaching tanker. This allows the pilot to have situational awareness of both the approaching tanker and the main vessel/tanker, allowing for a more accurate and safer operation to take place.

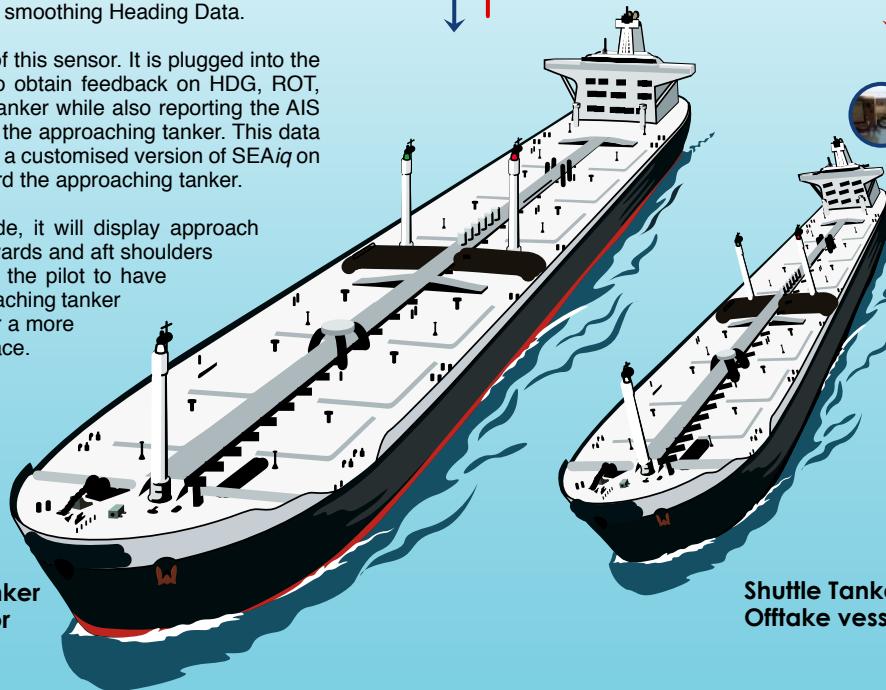
AIS Interrogation Messages

Data HDG, COG, SOG, ROT

Main Vessel or Tanker
[either at anchor
or underway]

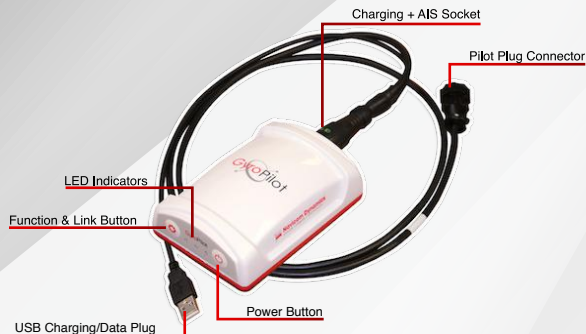
**Shuttle Tanker/
Offtake vessel** → [Approaching
the Main vessel]

SHIP TO SHIP TRANSFER OPERATION



GyroPilot - Product Features & Specifications

Wireless Pilot Plug data repeater with built-in gyro for ROT data and heading smoothing.
All in a light-weight and rugged case that fits in the palm of your hand!



Performance Features & Usability

Quick start up	: AIS available immediately and ROT after calibration (30 sec).
Auto detect	: Auto detects and corrects Pilot Plug pin configuration and data rate.
Accurate	: On-board pitch and roll sensing to improve Heading accuracy. (available soon and user upgradable)
Leave-behind Alarm	: Activates 30 sec after GyroPilot is no longer connected to the laptop/tablet.
Backup mGNSS	: Should AIS fail, GP provides position and course over ground for emergency use.
Multi-Connect Ability	: Compatible with both BT & Wi-Fi devices. Can connect multiple devices at a time to share information.

Physical Specifications

Dimensions	120 x 75 x 40mm [4.7" x 2.9" x 1.6"]
Weight	300g [0.66 lbs]
Battery	Li-Ion rechargeable
Indicators	Battery status, Communication link status, GNSS status, AIS status
AIS cable	1.5m Combined AIS & charging cable (other lengths available on request)

Technical Specifications

Position source	Primary - AIS Back up - mGNSS
Rate of Turn (ROT)	ROT Accuracy < 0.5° ROT Precision : 0.1°/min
Heading (HDG)	HDG Accuracy < 0.5° HDG Precision : 0.1°
Data output	All AIS messages, GPHDT, GPROT, battery status
Wireless	Wi-Fi. Back-up operation by USB cable
Backup GPS	33-channel GPS/GLONASS receiver with SBAS. GPGBA, GPVTG, GPGSV
Firmware	User upgradable

SEAIq

SEAIq Pilot is the most powerful navigation software available, designed specifically for use by pilots. It is widely adopted in ports and pilotage areas around the world. It combines a complete set of piloting features with unparalleled ease-of-use.

Compatible with iPads/iPhones, Windows, MacOS, Android



Standard ECS Features

- Chart formats: S-57, S-63, iENC, BSB/KAP
- Adherence to IHO standards
- Routes, Waypoints, Tracks, VRM, EBL, Fenders
- Mariner's Notes
- Dusk/Night color modes
- NMEA/AIS support

Pilot Oriented Features

- Powerful true-scale vessel display: Predicted course, predicted vessel position, swept path, AIS vessel types, estimated squat and pivot point.
- Docking Aids - Show distance and speed to user selected fenders and single point moorings. Both graphical and textual displays.
- Collision Avoidance: graphical CPA, BCD, meeting points, trial ROT, trial SOG, alarms.
- Route planning: ETAs, goal times, speed limits, passing restrictions, meeting points, scheduling
- Grounding Avoidance: depth contours, tidal adjustment, hi-res bathymetric ENC's.
- AIS Record/Playback - Automatically record all vessel movements and playback later at normal or 10x speed
- Pilot Log Book - Record events during pilotages. Automatically saves time, own-ship status, route, and nearby AIS targets. Add camera images and screenshots. Print logbook from iPad or archive via email and other methods.
- Mariners Tools with VRM, EBL, clearing lines, and mariners notes. Mariners notes have choice of over 50 symbols. Lines or polygons in user-selected colors and styles.

Screenshots of SEAIq in use across the world.



LNG Carrier in Japan



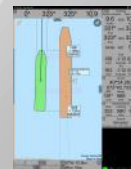
Docking in Skagway, AK



Docking on Humber River, UK



LNG Carrier on Parana R, Argentina



STS operations in SEAiq



Data of both vessels