AD NAVIGATION

ADX

Portable Pilot Unit

One Button. Millions of Signals.

Specialists in Precise GPS Navigation

www.adnav.com

ADX

Portable Pilot Unit

for Ultra Precise Approach and Docking Manoeuvres

The ADX PPU System provides the highest possible level of accuracy and reliability. Operated independently, the ADX performs even better than most ship-installed gyros, ROT sensors, and speed logs.

To meet the demands of navigating and docking large vessels, the measurement of low speeds, precise heading and Rate of Turn is of utmost importance to the pilot. The ADX system derives these measurements using "state of the art" GPS/GLONASS Real Time Kinematic (RTK) techniques along with Fiber Optic Gyro sensors. ADX is a wireless PPU system which communicates with the Pilot's portable ECS system via standard WLAN. The technology is mounted in a small, ruggedized suitcase, ideal for transportation and operation in extreme conditions.

Unique Combination of GPS and GLONASS Positioning Signals

The ADX PPU System utilites combined GPS/GLONASS technology. GLONASS is the Russian positioning system equivalent to the American GPS, and the ADX PPU System seamlessly makes use of the additional GLONASS positioning satellites.

ADX is able to track 50-60% more satellites compared to a regular GPS based system. Combining GPS and GLONASS improves all aspects of satellite navigation, particularly during docking scenarios.

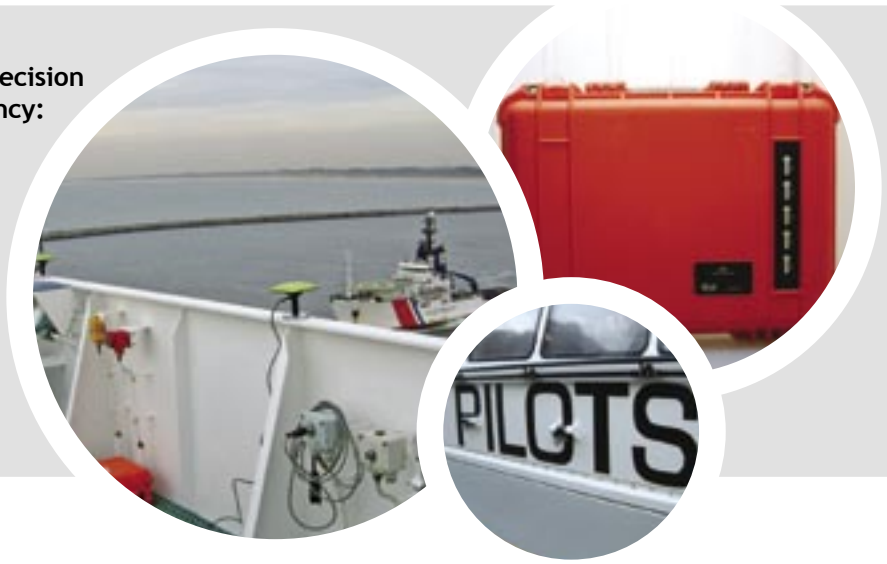
The ADX PPU System:

- For maximum efficiency and safety during challenging jetty manoeuvres and navigating in confined and tidal waters
- Installed and operational within only 1-2 minutes
- AIS and VTS traffic image available via wireless AIS and broadband internet connections
- Fully compliant with the IPPA standard
- Fully tested and approved by the Dutch Pilot Organisation
- Certified by Dutch Government for harbour approach
- Perfectly suitable for piloting as well as FSPO and SPM applications

Let the waves rock your boat ... not your GPS

ADX offers the following real-time precision in dynamic mode (RMS), with no latency:

- Bow and stern speed: 1 cm/sec (0.02 knots)
- Position: 1-2 cm
- Vertical/Squat: 2-3 cm
- Heading: 0.05 deg
- ROT: 0.1 deg/min



Dutch Pilots Choose ADX as Standard System

In ports around the world, harbour management is growing more challenging as ship traffic and ship size increase. At the same time, the focus on efficiency and safety has intensified.

The Dutch Pilot Organisation realized at an early point that the modern pilot must be equipped with innovative, portable navigation technology to alleviate the increasing complexity of his daily work. Consequently, they have evaluated different PPU systems during the past years to find the optimal solution for assisting pilots during approach and docking. Their evaluation guidelines were as follows:

- Highest possible precision
- Stability and reliability of navigation data, even under gantry cranes and unfavourable ship-installations
- Portability, easy to install and use
- Robustness of the system

In order to quantify the performance and features of the PPU, the Dutch Pilot Organisation developed a detailed Site Acceptance Test (SAT) protocol. The SAT is based upon the guidelines above, and the knowledge of GPS and gyro technology capabilities. The SAT contains the following criteria:

- Precision and reliability of the PPU in dynamic mode for position, speed, heading and Rate of Turn components
- Latency of the calculated position, speed, heading and Rate of Turn components
- Performance under gantry crane operations
- Performance passing bridges and entering locks
- Compass safe distance
- Battery life and indication stability
- Wireless connection performance
- Watertight

The ADX PPU system from AD Navigation was tested with success through nearly 1000 hours in all kinds of test and “real-life” operation scenarios. The system is 100% compliant with the SAT protocol. As a result, the Dutch Pilot Organisation has chosen the ADX PPU as its standard system.

The New Generation of of High Precision Satellite Navigation Equipment is here!

AD Navigation ADX Features:

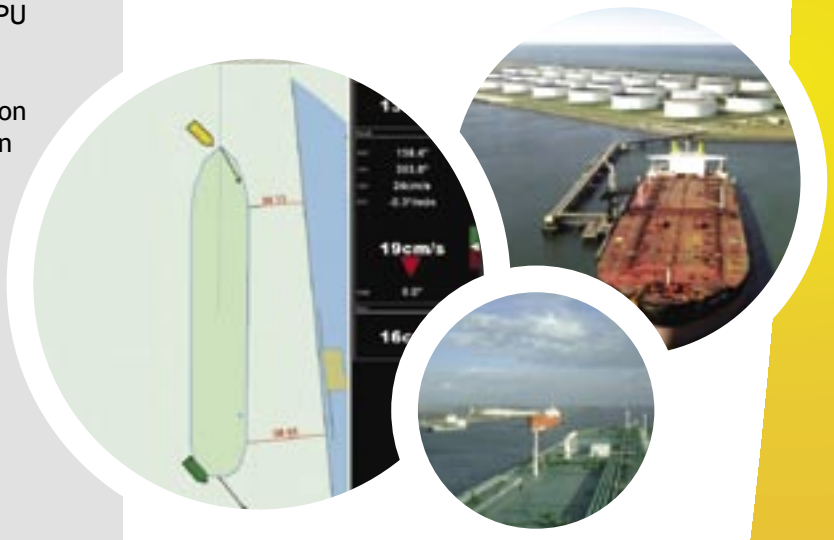
Wireless standard: WLAN 802.11b
WLAN Range > 100 m
Battery life: 12 hours
Integrated power management and charger intelligence
Power input. 6-28 VDC
Space reserved for pilot laptop
Weight: 12 kg

ADX
Portable Pilot Unit

The QASTOR Pilot Software

The ADX PPU System was developed to work in conjunction with the world leading QASTOR Pilot Software from QPS. The pilot can use the QASTOR software on a laptop along with S57 ENC to visualize the navigation data from the ADX PPU hardware.

Since 2000 QPS has been active in the production of portable electronic chart and navigation systems for pilots. QASTOR is designed in compliance with IHO, IMO and IEC standards. The program is also designed with ease of use in mind. The job of the pilot cannot be cluttered with time-consuming operations behind a computer. Some input will be required under certain circumstances, and many options are available for configuring the program according to the pilot's wishes.



Advanced Kalman Filtering

Although QASTOR is an open software, the latest version is exclusively developed and optimised to run with ADX data. The integrated "Advanced Kalman Filter" is implemented to provide unsurpassed accuracy in position, heading, rate of turn and velocity results even under the most difficult circumstances.

Note: Specifications subject to change without notice. For detailed product information, case studies, news and more, please visit our website.

www.adnav.com

AD NAVIGATION

AD NAVIGATION AS
SANNESUNDVEIEN 6 - POBOX 399
N-1702 SARPSBORG - NORWAY
PHONE: +47 69 15 00 14
FAX: +47 69 12 55 47
EMAIL: INFO@ADNAV.COM

HITT nv

AD NAVIGATION AS IS A PART OF THE NETHERLANDS-BASED HITT N.V GROUP OF COMPANIES

Specialists in Precise GPS Navigation