

## About Qastor (v3)



**Qastor.** | Precise piloting.  
Let us guide you.

**Qastor** is a precise navigation software package for piloting and docking. With under keel clearance capability and real-time information updates, it is the ultimate in maritime safety. Qastor displays reliable and accurate position and orientation data, for optimal planning, situational awareness, and safety in support of any near maritime operation—piloting, docking, ship trials, oil rig positioning, inland river barges, ferry operations, oil and gas tanker approaches and docking, patrol vessels, tugboat operations, and more. There are also modes customized for tandem, side-by-side, and single point mooring.

Real-time information via the Connect Server increases situational awareness with updated tides, currents, wave heights, wind and validated traffic information coming from the VTS center.

Qastor is platform independent, and can be used on desktop, tablet, or mobile, with Windows or iOS. Wired or wireless operations are supported, and data may be output via Wi-Fi to mobile devices for optimal client flexibility.

The Qastor real-time display includes vessel speed, heading, course over ground, and rate of turn. ENC formats include: S-57, Primar, C-MAP, ARCS, DENC and bENC. Vessel path prediction is based on a user-defined period based on speed, course over ground, and heading. The closest point of approach for all VTS and AIS targets is displayed. With under keel clearance, vessel-based route planning, and high-resolution ENC support to safely expand navigable waters, master the situation better than ever with Qastor.

### Qastor

*Navigation display showing the vessels position for navigation with course over ground speed vector and path prediction which is interactive with the loaded chart. ENCs automatically update based on vessels draft and under keel clearance. Qastor allows to connect to an AIS data source for AIS visualization and interaction.*

### Docking add-on

Available as add-on with:

- Qastor

*The Docking add-on allows to switch the display in docking or lock approach mode, with speed vectors being shown from the bow and stern as well as distances towards quay walls or locks and speed indicators from the bow and stern shoulders.*

### Connect Server

*The Connect Server allows to connect the pilot via the internet with instant information to enhance the situational awareness of the pilot. A standard function for the Connect Server is the sharing of information such as annotation files and the latest ENC updates provided by the port of hydrographic office.*

### DUKC add-on

Available as add-on with:

- Connect Server

*The DUKC add-on is allows to accurately visualise go and no-go areas based on the vessel's Dynamic Under Keel Clearance. This add-on works in conjunction with OMC DUKC® software which takes speed and vessel type and size in account.*

**Hydro/Meteo add-on**

Available as add-on with:

- Connect Server

The Hydro/Meteo add-on displays LIVE hydro- and meteorological information such as wave height, current direction and speed, wind direction and speed, etc. The properties being displayed depends on the sensors that are interfaced with the Connect Server.

**Live Data add-on**

Available as add-on with:

- Connect Server

The Live Data add-on allows real-time visualization of a validated traffic image provided by the VTS center. This information will be displayed as AIS targets in Qastor and allows for a comparison between AIS and VTS target information.

**Track and Trace add-on**

Available as add-on with:

- Connect Server

The Track and Trace add-on allows for fleet management. The user can create and share itineraries with its fleet of vessels. Additionally, it allows for providing real-time information from the vessels, such as position, surrounding AIS coverage, vessel system information.

The add-on also comes with a comprehensive route alert function that can send alerts to different recipients at different stages.

Qastor features list	Qastor 3
Multiplatform support (Windows 64 bit, iOS, Mac)	✓
Touch screen support	✓
Retractable settings page	✓
North up, heading up, route up display	✓
Forward and backward looking (heading or COG based)	✓
Automatically reset to vessel center	✓
Free panning in map for route creation	✓
Display of heading, SOG, COG and ROT	✓
Night, dusk and day palette	✓
Automatic switching between night, dusk and day palette	✓
Dark mode support	✓
Multi language support	✓
Automatic recording of voyage in Qastor	✓
VDR (voyage data recording) option through computer microphone	✓
S-57, S-63, bENC Vector charts	✓
Support for high contour resolution (5 cm) ENCs	✓
Real time and manual tide support	✓
Safety contour updates based on vessel draught + UKC and tide	✓
Tide interpolation (weighted average) based on vessel position along river or channel	✓
Support for AD Navigation interface protocol	✓
Support for Navicom Dynamics interface protocol	✓
Support for NMEA interface protocol	✓
System dependent display and functionality availability	✓
Safety radius	✓
Pitch and/or roll compensated speed vector	✓
AIS support	✓
VTS target support	Connect Server
Select AIS/VTS target as own vessel (virtual boarding)	✓

Filter options for AIS/VTs target display	✓
AIS AtoN (Aids To Navigation)	✓
Scaled AIS targets	✓
Drop range marker on fixed location and moving AIS/VTs target	✓
Customizable target list	✓
Display AIS location selected from list on map	✓
CPA calculation incl. bow crossing range, based on line of sight or selected route	✓
Navigation and heading time out alert alerts	✓
Customizable favourite settings	✓
Docking mode	add-on
Lock approach mode	add-on
Distance indicators from bow and stern shoulders to quay wall, jetty and lock corridor	add-on
Lateral speed indicators for bow and stern	add-on
User profiles	✓
Enhanced prediction	✓
Sliders to set vessel dimensions (length, width, draught, air draught, bridge position)	✓
Connect Server support	Connect Server
Manual creation of routes	✓
Automatic route synchronization through Connect Server	Connect Server
Comprehensive chart presentation options	✓
Metric and Imperial unit support	✓
Connect Server hydro and meteo overlay	Connect Server
GRIB overlay	✓

Connect Server features list	Connect Server
Chart synchronization and update	✓
Annotation sharing	✓
Route sharing	✓
Handle incoming APSS messages.	add-on
Manage Areas for the Connect application.	add-on
Manages and communicate the available resources to Qastor.	✓
Meteo data from CSV files.	add-on
Meteo data from external providers	add-on
Meteo data from NOAA.	add-on
Meteo data from an OMC server.	add-on
Meteo weather data from a web service.	add-on
Generates DUKC overlays.	add-on
Send keep alive messages to clients.	✓
Display the versions of the clients connected to Connect.	✓
Handle system status and warnings, such as currently free disk space.	✓
Handle tide interpolation.	add-on
Handle vessel track data.	add-on
Handle traffic from AIS sources.	add-on
Communicate positions vessels between Qastor clients.	add-on
Handle traffic from DataServer sources.	add-on

<i>Handle traffic from VTS data sources, e.g. IVEF and ISIS.</i>	add-on
<i>Handle subscriptions to traffic within a specified window.</i>	✓
<i>Manage Route/Area data.</i>	add-on
<i>Manages vessel data within Connect.</i>	add-on
<i>Manages shared settings for the primary vessels.</i>	add-on
<i>Allow for API access to vessel and route data.</i>	✓
<i>Manages the creation of Itineraries for the primary vessels.</i>	add-on
<i>Allow for the creation of Qastor replay data.</i>	add-on
<i>Show various map data and the available vessel info/area info/route info/feed info/route alerts.</i>	add-on
<i>Shows various alerts for vessels and can send emails upon an alert occurring.</i>	add-on

## Connect Server Installation

QPS has the ability to do Connect Server installations remotely. This can be done within one working day, but this has several dependencies. For QPS to install the Connect Server remotely within a working day, we require the following:

- 1) Windows server 2012 or newer with the latest updates installed.
- 2) In case a VM is used there needs to be the possibility to install locally a USB key, this could be done with USB Anywhere software or similar.
- 3) The following TCP ports should not be affected by the firewall and must have clear communication with the Connect server.
  - Port 10001 (Connect Live endpoint Qastor)
  - Port 3690 (Subversion Connect Client)
  - Port 10101 (Connect Client for chart updates)
  - Port 80 (website external access and big data transfers)
- 4) Tested data connections such as traffic and meteorological information that needs to be connected to the Connect Server.

QPS.