X-CONNECT®
DIGITAL PLATFORM FOR MARINE AUTOMATION, CONTROL AND MONITORING SYSTEMS
MARINE AUTOMATION

ULSTEIN.COM/MARINE-AUTOMATION
X-CONNECT®
Automation made easy

X-CONNECT® is a universal digital platform for marine automation, control and monitoring. The platform is a brilliant tool for any system integrator working with marine automation. All functionality in the system is predefined and configurable supporting the work philosophy; configure, plug and play. With the X-CONNECT® Tooling you have a dozen opportunities to customize your product to any specific job.

**Why X-CONNECT®?**
Ulstein's X-CONNECT® platform is designed for reducing complexity in delivery projects. Changes are easy to manage. X-CONNECT® provides efficiency and a modern and improved user experience. As a system integrator, you can configure to order with predefined functionalities.

**Save time and work smart**
X-CONNECT® is a brilliant tool for any system integrator working with marine automation. You can choose to join the platform as a solution, performance or reseller partner.

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**One platform - proven products**
The platform is the backbone for a range of products such as:
- ULSTEIN AMS™ - Alarm and Monitoring System
- ULSTEIN IAS™ - Integrated Automation System
- ULSTEIN PMS™ - Power Management System
- ULSTEIN CLOUD™ – Ship to cloud system

Due to the flexibility and scalability of X-CONNECT®, all products suit different ship types and sizes.

**New products and functionality in the pipeline**
- Energy management system (EMS)
- Functionality based on input from the market.

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### Digitalisation/Autonomous Systems

<table>
<thead>
<tr>
<th>ULSTEIN AMS™</th>
<th>ULSTEIN IAS™</th>
<th>ULSTEIN PMS™</th>
<th>ULSTEIN CLOUD™</th>
<th>ULSTEIN EMS™</th>
</tr>
</thead>
</table>

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![X-CONNECT®](image)

**Data logs**
**Operator stations**
**Watch call panels**
**Printers**
**Remote service**
**Ship to cloud**

**Power**
**Ship systems**
**Internal diagnostics**
**Propulsion**
**Engine**
**Cargo**
**Stability**
**Cooling**

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**X-CONNECT® - One integrated system**

- Standard marine approved industrial hardware
- Hardware independent software with standardized configurable functionality
- Efficient event based and seamless data distribution based on standard Ethernet network
- Multigateway configurable IO interface system
- High definition monitors with rich intuitive user friendly graphical user interface
- Data log for data analysis and trending
- Tooling for efficient product configuration and deployment
- Local or remote service

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**Distributed system**

Products built on the X-CONNECT® platform have a distributed system design enabling very flexible and scalable products.

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**Multi gateway IO system**

The configurable IO interface system supports standard hardwired IO and fieldbuses such as NMEA, NMEA 450, ModBus RTU, ModBus UDP, ModBus TCP and CAN solutions.
Pick ‘n’ mix functionality

The X-CONNECT® library already consists of several standardised, components with configurable functionalities. X-CONNECT® system integrators can easily pick ‘n’ mix between these fully configured assets.

Predefined functionalities

- Alarm system
- Signal system
- Extension alarm system
  - Dead man
  - Engineer alarm
  - Watch transfer
- Internal alarm system
- Network diagnosis
- Signal and alarm history and trending
- Printing
- PDF reading
- Command transfer
- Tank sounding
- Tank summary
- Running hours
- Ballast heeling system
- SI and imperial units
- Local time zone
- Configurable BWTS interfaces
- Custom system components
  - Starters
  - Valves
  - Tanks
  - Meters
  - Breakers
  - Generators
  - Power plant
  - Engine
  - Thruster
- Auto functions
  - Logical and math components
  - Custom logic components
Award winning graphics

X-CONNECT® integrates a user centric and consistent interactive graphical user interface that supports efficient and use of a system that puts safety first. The design received the DOGA award in 2017 (developed together with Eggs Design), stating that X-CONNECT® is a world-class software application in its genre.

Mega menu

Alarm view

Alarm history list & Lab

Signal list & Lab

Engine mimic

Propulsion mimic

Cargo mimic

Network diagnostic mimic
X-CONNECT® Tooling

The X-CONNECT® Tooling makes a difference for saving time and working smarter. The tools in the platform let you work efficiently with what used to be repetitive and time-consuming procedures that earlier fed on available resources or budgets.

**Configuration Tool**
The whole system delivery including hardware and software is defined and arranged in the configuration tool. With the configuration tool it is easy to set up delivery projects from scratch. It is possible to import content from IO lists.

Changes to a project is easy to manage whenever needed. It is straightforward to add or remove content, or change parametrics of components and content of systems and mimics.

**Mimic Editor**
The mimic editor is used for arranging the visual content of custom mimics and drawing animated pipes.

**Deploy Tool**
The Deploy tool is used for deploying the configured system to the system hardware and for starting up the system. The tool is easy to use and makes the process setting up and running a system a few-step process.

For existing running system the Deploy tool can be used to read back the running configuration.
Become an X-CONNECT® certified partner

Different partner levels and business models are provided. The partner can decide whether taking the whole project or sharing the value chain. A product pricelist makes it easy and fast to calculate and contract new projects.

### Partner levels

<table>
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<tr>
<th>Service</th>
<th>Scope</th>
<th>Solution</th>
<th>Performance</th>
<th>Reseller</th>
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</thead>
<tbody>
<tr>
<td>Project owner</td>
<td>Contract holder to end customer</td>
<td>Partner</td>
<td>Partner</td>
<td>Ulstein</td>
</tr>
<tr>
<td>Detail engineering</td>
<td>IO list, wiring and cable diagrams, system topology</td>
<td>Partner</td>
<td>Ulstein</td>
<td>Ulstein</td>
</tr>
<tr>
<td>Software engineering</td>
<td>Configuring the software</td>
<td>Partner</td>
<td>Partner</td>
<td>Ulstein</td>
</tr>
<tr>
<td>Production</td>
<td>Purchase and hardware assembly and installation</td>
<td>Partner</td>
<td>Partner</td>
<td>Ulstein</td>
</tr>
<tr>
<td>Commissioning</td>
<td>Verify signal and system interfaces, system startup</td>
<td>Partner</td>
<td>Partner</td>
<td>Ulstein</td>
</tr>
<tr>
<td>Aftermarket</td>
<td>Replace parts, software and configuration updates</td>
<td>Partner</td>
<td>Partner</td>
<td>Ulstein</td>
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</table>

#### SOLUTION PARTNER
- X-CONNECT® Product software
- Get access to the X-CONNECT® software – including X-CONNECT® Tooling
- Configure, produce and commission your way
- Membership in X-CONNECT® Solution partner program
- Solution Certification and training
- 24/7 Technical support

#### PERFORMANCE PARTNER
- X-CONNECT® Product software and Detail engineering
- Software and detail engineering from Ulstein
- Production and commissioning your way
- Membership in X-CONNECT® Performance partner program
- Performance Certification and training
- 24/7 Technical support

#### RESELLER PARTNER
- Complete turnkey product
- Detail engineering, production and commissioning provided by Ulstein
- Membership in X-CONNECT® Reseller partner program
- Reseller Certification and training
- 24/7 Technical support
REFERENCES

A new standard of marine automation

Ulstein Group is a family owned company offering a wide range of ship designs, equipment packages, shipbuilding and maritime solutions like marine automation.

Since the establishment of the company in 1917, we have built a solid standing in shipbuilding, and are renowned for punctual deliveries of high-quality vessels to the agreed price.

Besides our engagement in delivering top of the line vessels, we also look into the crucial jobs our customers need to get done. One of them is controlling the ship in a safe and efficient manner. With the mind on future operations, we have developed a marine digital platform that will help ship operators controlling the ship with the latest technology in marine automation, perfectly wrapped up with award winning graphical user interfaces.

The X-CONNECT® platform is a new standard for setting up any automation, control and alarm systems, serving system integrators brilliant tools for effective and smart set up.

The X-CONNECT® backbone also enables data collection from any sensors, actuators and information source, transferring valuable data via the cloud to land.

X-CONNECT® - connects ship operators, system integrators and onshore operators through a fully integrated automation platform. Letting you work smartly and efficiently on a new standard of marine automation.

Marine automation built on X-CONNECT®

• Jan de Nul 'Adhémar de Saint-Venant', ULSTEIN IAS, 2017
• Acta Marine 'Acta Auriga', ULSTEIN IAS, 2018
• Yacht, ULSTEIN IAS, 2018
• 13 Tugs, ULSTEIN AMS, 2018