DanelecConnect
Ship-2-shore data solution
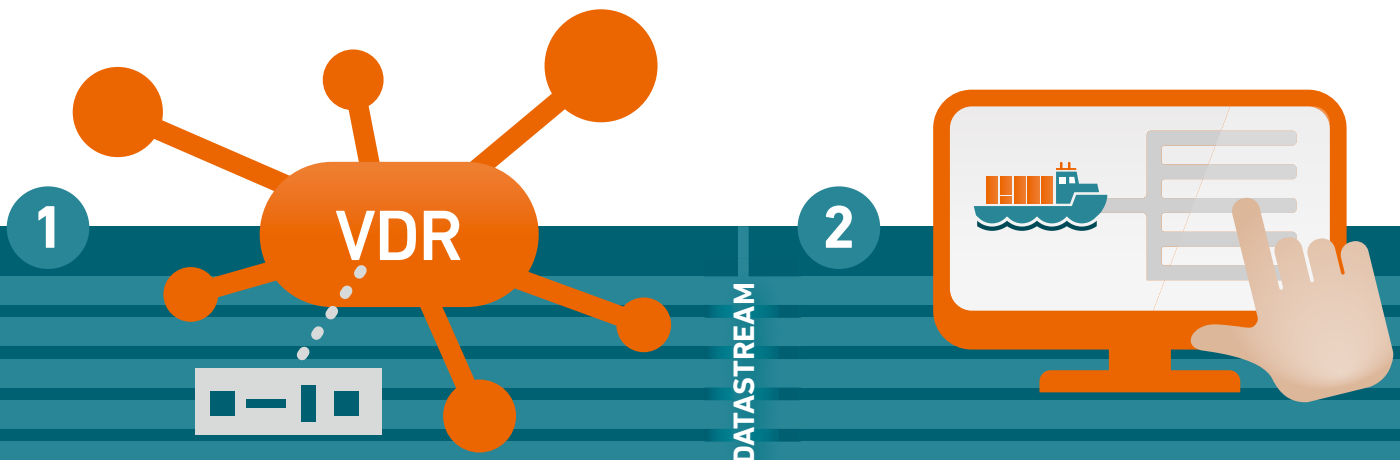
Anemometer   Bridge audio
Inclinometer   Main alarms
Gyro compass   GPS
Radar   AIS
ECDIS   VHF

Radar

CARGO LINE

Hull openings   Engine/propeller
Rudder   Watertight & fire doors

Echo sounder   Thrusters
Speed log

Danelec systems
Solid · Safe · Simple

- **Cost efficient IoT infrastructure**
- **Secure VDR access from shore**
- **Data for efficient asset management**
- **Advanced data analytics solutions**

Discover the Danelec difference...

Danelec
Value from maritime data

DanelecConnect Intelligent and cost efficient ship-2-shore data solutions

1

VDR

DATASTREAM

2

1. COLLECT

An Internet-of-Things (IoT) infrastructure collects data onboard via a Vessel Remote Server module (mini VDR)

2. SELECT

Data is pre-processed on board and can be managed and customized from shore

Connectivity modules
Cost efficient IoT infrastructure

Danelec's ship-2-shore data solutions are powered by our connectivity Hardware modules. Developed using our decades of expertise with VDR (Voyage Data Recorder) technology and supported by our worldwide service network for installation and maintenance, these hardware modules provide the basic building blocks of a cost efficient internet-of-things (IoT) infrastructure onboard vessels.

Remote Data Interface modules pick up analog, digital or serial sensor data throughout the ship for on-board data collection, while the Vessel Remote Server module connects to the vessel's existing network/communication infrastructure for data transfer to shore.

Danelec connectivity modules work with existing Danelec VDR installations or any other VDR make and model, and can even be applied on vessels without a VDR on board.
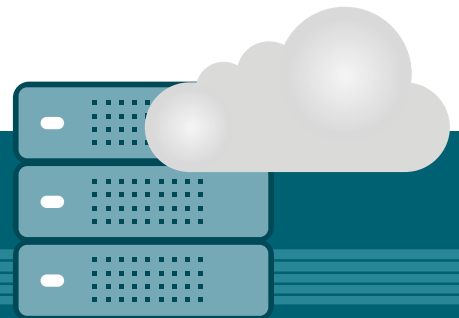
DATASTREAM

3. TRANSFER

Less than 1MB data per day is transferred to shore at fixed intervals or if triggered by special events

4. STORE

Data is stored on a Danelec server (Danelec Cloud solution)

Remote Management Tool
Secure VDR access from shore

Danelec's Remote Management Tool enables instant access to the vessel's VDR (Voyage Data Recorder) from a PC on shore for transfer and replay of recorded VDR data in case of an incident or emergency situation.

For the mandatory VDR Annual Performance Tests (APT) access can be provided to a VDR service technician in order to perform diagnostics of the system or to run a pre-APT test while the vessel is at sea, speeding up the actual APT when the ship arrives in port.

If extended access to the VDR is enabled by the vessel's crew, even remote configuration of the system is possible from shore, without physically attending the vessel

Danelec
Value from maritime data

5

5. EXTRACT

The ship manager assigns data access to authorized users

DATASTREAM

6

6. ANALYZE

User creates customized views in Danelec Connect dashboard or may use data in Remote Management application for:

• Monitoring and performance optimization
• Safety and Bridge Operating Quality Assurance (BOQA)
• Remote maintenance (Pre-APT, alarm diagnostics and configuration)

DanelecConnect dashboard
Data for efficient asset management

Irrespective of whether the vessel is equipped with a VDR (Voyage Data Recorder) or not, the DanelecConnect dashboard provides a gateway to all vessel-related data measurements from shore.

Forget about the hassles of noon-reports. The ship operations team on shore can request data from specific sensors or set up a schedule of regularly recorded serial, analog and digital data downloads from each connected sensor. The data is pre-processed and compressed, allowing for the use of narrowband satellite channels and resulting in less than 1 MB of data transfer per day.

Data can be displayed in customizable dashboards for monitoring of various vessel parameters from shore (such as position, speed, RPM, etc.), as well as trends within the data over time. The collected data can also be applied in advanced analytics solutions such as vessel performance and fuel optimization applications.

DanelecConnect service - Apps and solutions

With the DanelecConnect service, you have access to high-quality software apps and solutions from our partners. These are integrated with DanelecConnect which ensures fast and seamless plug'n'play integration with the vessel data and enables deep insight into data covering Performance analysis, Automatic noon-report, MRV and BOQA (Bridge Operating Quality Assurance).

MRV	Performance analysis	BOQA	Automatic noon-report

Apps and solutions

Advanced data analytics solutions

The data collected through Danelec's ship-2-shore data platform can also be applied in advanced software analytics solutions supplied by 3rd parties which are dependent on accurate and efficient data collection, transmission and storage, such as performance / fuel optimization applications.

The seamless interaction between DanelecConnect ship-2-shore data platform and advanced analytics tools, provides decision support for shipowners and operators in order to analyze vessel and fleet performance and improve operational efficiency.

Various performance optimization dashboards using data collected through Danelec systems enables benchmarking and trend analysis on key performance indicators related to fuel consumption and vessel operations.

Visit **www.DanelecConnect.com** for more information.

WE PROVIDE THE MOST EFFICIENT PRODUCT AND SERVICE SOLUTION TO THE MARITIME INDUSTRY

SAFETY FIRST
Safety at sea is priority #1

OPTIMIZATION OF OPERATIONS
Enhance fleet operational efficiency

TOTAL COST OF OWNERSHIP
Maximize return on investment

SOLID

PRODUCT DESIGN

- **Dependable operation** | *Equipment that is built to be at sea*
  Danelec products are based on an application-specific design to ensure extreme reliability. Fewer components mean fewer points of failure, resulting in the highest MTBF in the industry.

- **Future proof** | *Never obsolete, always supported*
  We guarantee serviceability of our products during their lifetime for a minimum of 10 years. Since our products are developed in-house, we have full control over all components.

High quality Danish design
10+ years service guarantee

SAFE

SERVICE & SUPPORT

- **Immediate support anywhere** | *There is always a service tech near your ship*
  Our extensive global network of service centers carry spare parts and provide service repairs 24/7 with 600+ factory-certified techs in 50+ countries.

- **World class service** | *Consistent, efficient and transparent*
  Danelec eService platform™ automates and streamlines traditional manual processes, bringing unprecedented levels of consistency and efficiency to shipboard service.

24/7 worldwide service & parts
Danelec eService platform™

SIMPLE

OPERATION & MAINTENANCE

- **Information at your fingertips** | *Capture shipboard data and put it to use*
  Our range of remote management solutions enable instant and cost-optimized access from shore to ship, so that you can harness the power of big data for informed decisions and more efficient asset management.

- **Maximize uptime** | *Rest assured your ship sails on schedule*
  Our exclusive SWAP technology™ enables fast and easy replacement of equipment in case of failure, without reinstalling software and reconfiguring the system.

Remote management solutions
SWAP technology™

Danelec systems
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