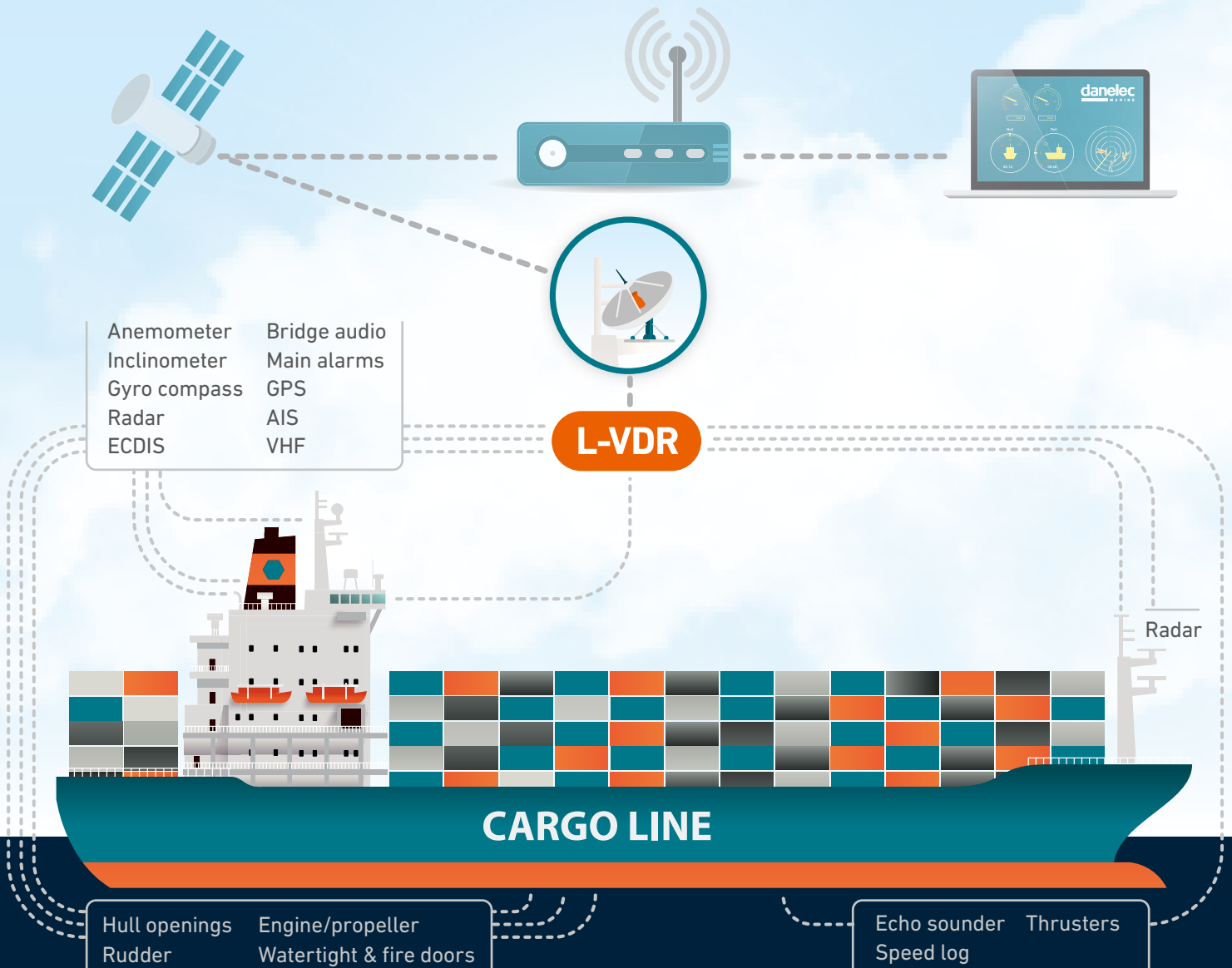


DM100 L-VDR

Light Voyage Data Recorder



Danelec systems
Solid • Safe • Simple

- *New generation L-VDR with breakthrough SWAP technology™*
- *Efficient voyage data documentation – and beyond*

Discover the Danelec difference...

danelec
MARINE

In Need of Voyage Data Documentation?

In Need of Voyage Data Documentation?

Danelec Marine's newest generation of Light Voyage Data Recorders (L-VDRs) are non-mandatory systems, intended for vessels not required to implement a full VDR or a simplified VDR by regulations, but in need of responsible documentation of voyage related data towards third parties. Not only in fatal situations, but also in near-miss incidents at sea or during docking/departure maneuvers. Moreover, Danelec Marine newest L-VDR systems provide the opportunity for monitoring the vessel for efficient ship management, as well as the benefits of ship-2-shore remote management solutions.

The DM100 L-VDR is built on the same proven platform as the IMO compliant DM100 VDR / S-VDR series, and provides the recording capabilities of a type-approved full VDR system without being connected to a fixed/float-free capsule.

With a DM100 L-VDR onboard your vessel, you get the essentials of a cutting edge data recording platform and cost efficient internet-of-things (IoT) infrastructure, logging 30 days of vital navigation and communication data with the ability to transfer and replay data in shore offices.

Application Areas

Record, replay and analyze data on shore and onboard

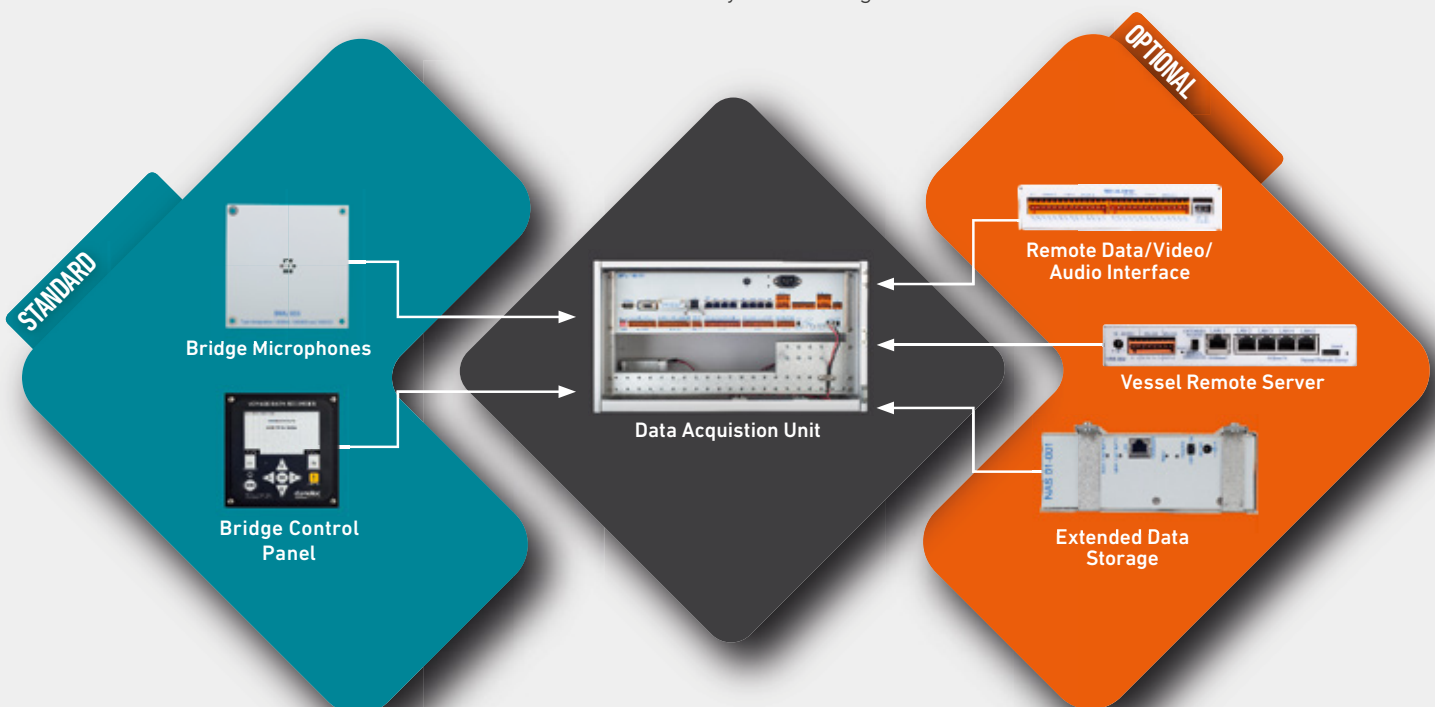
- DanelecConnect provides a gateway to all vessel-related data measurements from shore or onboard

On demand remote access from shore

- Emergency transfer of recorded data
- Diagnostics of system and connected sensors remotely
- Alarm analysis report and Dump for Support functionality
- Remote configuration from shore

DanelecConnect ship-2-shore data solutions

- Logging of all vessel-related data measurements from shore
- Automatic data transfer of selected compressed data (<1 MB / 24 h recorded)
- Data hosting service with 100% uptime
- Customizable cloud-based dashboard solution on shore analysis and insight



VDR Explorer Playback Software

Danelec VDRs are supplied with the VDR Explorer playback software as standard. The software runs from any PC and can provide real-time monitoring and replay recorded data.

The recorded data can be presented in a large variety of both graphical and numerical ways, and is extremely easy and user friendly to operate.

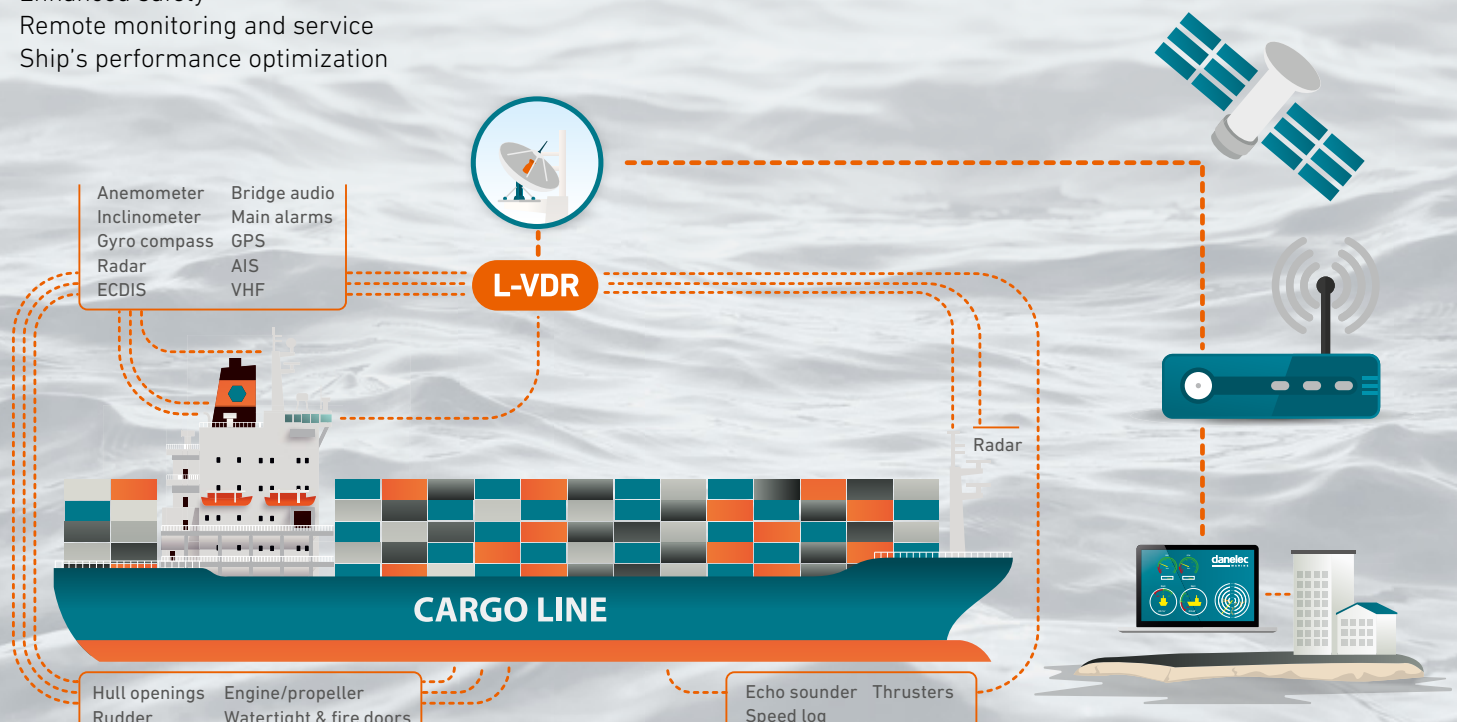
- Windows based application for playback
- Intuitive user interface
- Customizable conning page
- Extract data from the VDR through a web browser via Web Extractor tool



DanelecConnect Remote Management Solution

DanelecConnect is a web-based remote management service available with the Danelec DM100 L-VDR. As a value-added interface, DanelecConnect allows selective transmission of data from the VDR via satellite to the home office without being limited by satellite capacity onboard vessels. Remote management provides a wide range of benefits concerning control, safety and optimization without the need of physical attendance to the vessel, such as:

- Enhanced safety
- Remote monitoring and service
- Ship's performance optimization



STANDARD



W: 495 mm
H: 250 mm
D: 242 mm
W: 11 kg

Data Acquisition Unit

30 days of recording capacity on built-in SSD • 10 inputs for bridge audio and VHF • 12 inputs for serial data (IEC 61162-1, IEC 61162-2 and Modbus) • 7 inputs for IEC 61162-450 network data (1000BASE-T) • AC power (110-230V, 50-60Hz) • Built-in UPS with NiMh batteries

STANDARD



W: 144 mm
H: 144 mm
D: 64 mm
W: 1.1 kg

Bridge Control Panel

Interface for Operational Performance Test • Built-in graphical color TFT LCD display • Ethernet (100BASE-TX) interface • Powered from Data Acquisition Unit (PoE)

STANDARD



(Outdoor / Indoor)
W: 84 mm
H: 84 mm
D: 30 mm
W: 0.1 kg

Bridge Microphones (Indoor)

Built-in buzzer for self-test • Built-in amplifier and filters • Powered from Data Acquisition Unit

OPTIONAL



W: 141 mm
H: 32 mm
D: 163 mm
W: 0.3 kg

Remote Data Interface (Serial/Analog/Digital)

8 inputs for serial data (IEC 61162-1, IEC 61162-2 and Modbus) (in serial version) • 8 inputs for analog data (in analog version) • 24 inputs for digital data (in digital version) • Powered from Data Acquisition Unit or locally • Can be daisy chained • Can operate as standalone equipment • Support for SWAP technology™

OPTIONAL



W: 61 mm
H: 172 mm
D: 116 mm
W: 1.1 kg

Extended Data Storage

Up to 6 months of recording time • Marine approved (IEC 60945) • SSD and HDD versions • Storage capacity: 256GB, 512GB or 1TB • Ethernet (1000BASE-T) interface • AC power (110-230V, 50-60Hz) through AC adaptor

OPTIONAL



W: 180 mm
H: 30 mm
D: 100 mm
W: 0.3 kg

Vessel Remote Server

DIN rail mountable or standalone • 1 x Ethernet (1000BASE-T) port for the VDR • 4 x Ethernet (100BASE-TX) ports for the ship's LAN networks • 12-24V DC power input • AC power (110-230V, 50-60Hz) through AC adaptor • Normal or Extended Access operating modes • Support for SWAP technology™

A Revolution in Shipboard Service

Servicing and repairing shipboard electronics can be time consuming and expensive. There are the complicated logistics of scheduling a service call and finding a properly trained technician – sometimes from a remote port. Then there is the question of whether the technicians have the correct spare parts on hand and can complete the repairs in time to meet the ship's sailing schedule.

Now there is a way to save time and money, while eliminating in-port delays, thanks to the new **SoftWare Advanced Protection (SWAP)** solution from Danelec. With SWAP technology™, all system software and configuration, as well as programming data, is automatically saved on a hot-swappable memory card that can easily be removed from the old unit and inserted into the new one. Relocating the repair from ship to shore saves hours of time in re-installing software and re-programming the unit.

The Traditional Way

In a typical service scenario, the technicians board the ship, troubleshoot the problem and determine what spares are needed to make the repair. If the parts are not available locally, they must be ordered. Depending on the system, port state control authorities may prevent the ship's departure until the repairs are made, resulting in expensive demurrage and port costs.

If the ship is allowed to sail, the spares must be delivered to its next port, requiring another expensive service call to complete the repairs.

The Danelec Way

The SWAP solution is quick and easy:

- When a Danelec-trained technician reports to the ship for a service call, he arrives with a replacement unit in hand
- The technician removes the memory card from the old unit
- He switches out the old unit with the replacement unit
- Inserts the memory card into the new unit
- Then he takes the old unit to shore for repair

The Benefits are Invaluable

SWAP technology™

- **Saves time** by enabling onboard repairs to be accomplished in a matter of hours, not days
- **Saves money** by reducing man hours for service calls
- **Protects valuable shipboard data** on a hot-swappable memory card
- **Keeps ships on schedule**, eliminating in-port delays for repairs



Danelec systems
Solid • Safe • Simple

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™