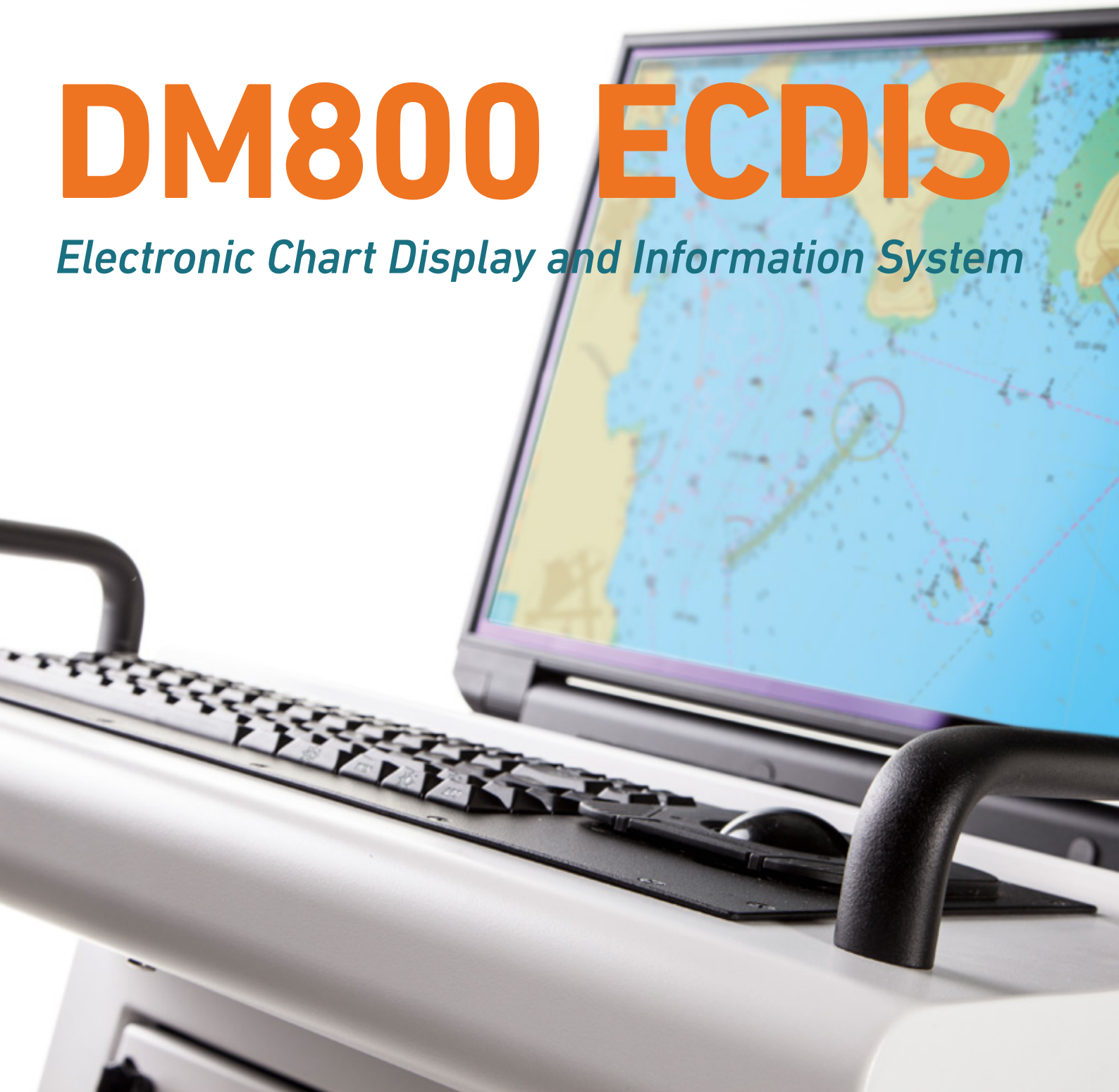


# DM800 ECDIS

*Electronic Chart Display and Information System*



Danelec systems  
**Solid • Safe • Simple**

- *New ECDIS platform with break-through SWAP technology™*
- *IMO-compliant with the latest ECDIS standards – and beyond*

*Discover the Danelec difference...*

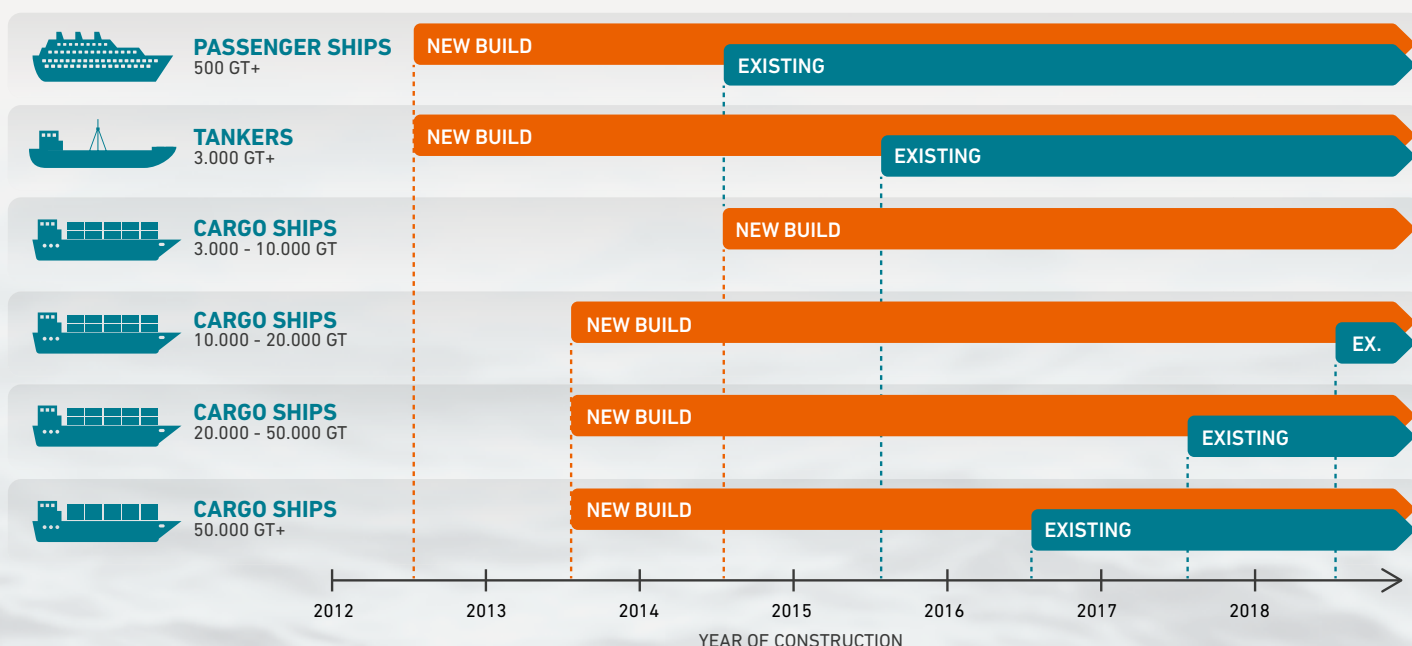
**danelec**  
■■■■■■■■ MARINE

# A New Era of Navigation

## A New Era of Navigation

Replacing traditional paper charts, the introduction of Electronic Chart Display and Information Systems (ECDIS) as officially approved aid to navigation marks a whole new era in the history of marine navigation. ECDIS is a computer based navigation system and automated decision aid, integrating a variety of data and displaying dynamic navigation information on screen.

The current performance standards for ECDIS were laid down by the Maritime Safety Committee of the International Maritime Organization (IMO) in resolution MSC.232(82), effective as of January 1, 2009. In the same year IMO approved amendments to SOLAS V (19) making ECDIS mandatory on most ships over 500 GT in accordance with a rolling timetable that began in July 2012.



In 2015 several international standards related to ECDIS underwent revisions, such as IEC 61174 Ed.4 on operational and performance requirements for ECDIS as well as IHO S-52 Annex A Ed.4 related to chart presentation.

## Complete ECDIS solution by Danelec Marine

Our new DM800 ECDIS platform complies with all applicable IMO and IEC standards, including IEC 61162-450, which is an essential part of the new ECDIS standard IEC 61174 Ed. 4.

Designed specifically for maritime application down to the last component, Danelec ECDIS systems offer high quality and reliability in a compact solution with an unmatched flexibility for easy installation on all bridges – for standalone application or console mount.



### ECDIS HARDWARE

- Unique SWAP technology™
- 10 years service guarantee
- Extensive service network



### APPLICATION SOFTWARE

- Linux stability and security
- Intuitive use and interface
- Software updates by crew



### CHART SOLUTION

- Additional overlay support
- Seamless updates
- PAYS licensing option



### TRAINING OPTIONS

- Class room
- Online / CBT
- Onboard



# Equipment

## DM800 ECDIS Main Unit

Linux based ECDIS computer with 32 GB SSD • 12 serial channels (10 x IEC 61162-1, 2 x IEC 61162-2) • 4 Ethernet ports (10/100BASE-T, RJ45) • 8 USB ports (2.0) • AC power (110-230V, 50-60Hz) • Supplied with ECDIS Alarm Panel and USB Hardware Key • Built in DVD drive

W: 342 mm  
H: 287 mm  
D: 238 mm  
W: 7.5 kg



## Monitor 27" widescreen

Rugged, military-grade LED display • Max resolution 1920 x 1080 pixels (Full HD) • DVI-I, VGA, Composite video and S-Video interfaces • IP42 rated enclosure protection • AC power (90-264V), DC power (24V) • Low power consumption / low heat emission for extended lifetime • Narrow frame and flexible mounting options • Supplied with mounting kit

W: 632 mm  
H: 375 mm  
D: 73 mm  
W: 8.5 kg



## Monitor 24" widescreen

Rugged, military-grade LED display • Max resolution 1920 x 1080 pixels (Full HD) • DVI-I, VGA, Composite video and S-Video interfaces • IP42 rated enclosure protection • AC power (90-264V), DC power (24V) • Low power consumption / low heat emission for extended lifetime • Narrow frame and flexible mounting options • Supplied with mounting kit

W: 574 mm  
H: 341 mm  
D: 73 mm  
W: 7.9 kg



## Monitor 19"

Rugged, military-grade LED display • Max resolution 1280 x 1024 pixels (SXGA) • DVI-I, VGA, Composite video and S-Video interfaces • IP42 rated enclosure protection • AC power (90-264V), DC power (24V) • Low power consumption / low heat emission for extended lifetime • Narrow frame and flexible mounting options • Supplied with mounting kit

W: 414 mm  
H: 342 mm  
D: 73 mm  
W: 6.5 kg



## ECDIS Keyboard / Trackball

Rugged, military-grade marine keyboard • Chemically and abrasion resistant keys with red backlight • IP66 rated enclosure protection • Connection to Main Unit via USB port • Supplied with 50mm Dura Track trackball • Can be flush mounted

W: 424 mm  
H: 63 mm  
D: 170 mm  
W: 2.1 kg



## ECDIS Console

Danelec ECDIS Console in classic pedestal design • Housing ECDIS Computer, Alarm Panel, Keyboard / trackball and Monitor • Prepared for flush mounting of keyboard (with handrail) • Prepared for top mounting of monitor

(Without monitor)  
W: 620 mm  
H: 934 mm  
D: 679 mm  
W: 64 kg



## Uninterruptible Power Supply

Danelec ECDIS is type approved without the need for UPS • UPS is available if flag state or customer requires • Backup time: 13.5 min. (130W) at half load / 5.5 min. (260W) at full load • AC power (230V, 50-60Hz) • Output power capacity: 420VA / 260W • Marine approved (IEC 60945)

W: 202 mm  
H: 197 mm  
D: 374 mm  
W: 9.1 kg



Standard Equipment

Optional Equipment





## ECDIS Application Software

Danelec ECDIS is 100% Linux-based, which is a guarantee for stability and high performance. It requires much less processing power or memory compared to Windows-based systems, leaving more room for chart storage capacity, and it also provides superior resistance to viruses and malware.

The intuitive easy-to-learn user interface optimizes operation and reduces training time for watchstanders. The maximum menu depth is three levels, which means all important functions, such as route planning or modification, can be accessed with minimal clicks and drag-and-drop functionality.

Future-proof ECDIS solution – software updates can be done by the vessel's crew without the costly involvement of a service technician on board.

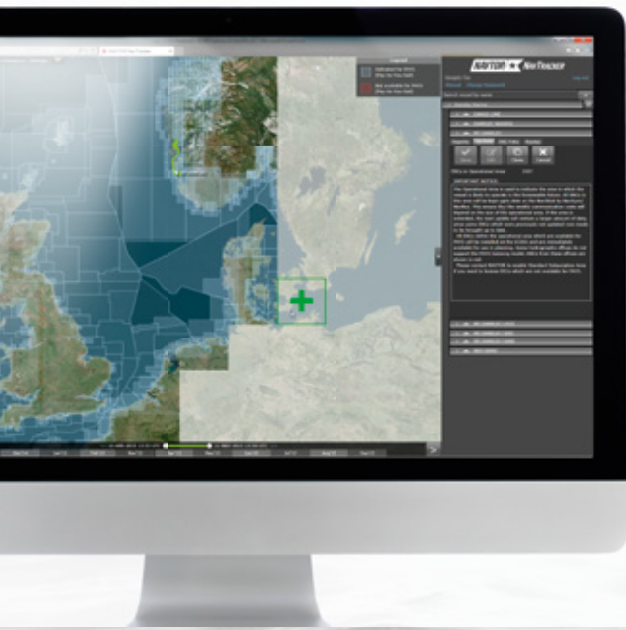


## Industry-leading Chart Solutions

The Danelec ECDIS platform runs all commercial Electronic Navigational Charts (ENCs), including Admiralty Vector Chart Service (AVCS), in S-57 and S-63 formats, as well as NAVTOR System Electronic Navigational Charts (SENC) data. It also incorporates additional overlay functions, such as Admiralty Information Overlay (AIO), NAVTEX, etc.

Updating with a click of a button – with the seamless update service Danelec ECDIS users receive automatic notifications when updates are available. In addition to the chart database, all permits, AIO data and subscribed digital publications are also updated at the same time.

The vessel's chart portfolio can be handled easily via a web-based chart management tool. Users can also take advantage of a "Pay-as-You-Sail" (PAYS) chart-licensing scheme, eliminating the need to order and manage an electronic chart portfolio on board.



## Multiple Training Options

Danelec offers a wide range of training options to meet IMO requirements for type-specific familiarization, such as:

- Classroom training – Classic training offered by training facilities worldwide.
- Online / Computer based training (CBT) – Remote training with online testing and interview.
- Onboard training – Training provided on board the vessel or on-site.

For more information visit [www.ecdis.com](http://www.ecdis.com).



## 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**





## Solid product design

Danelec products are based on an application-specific design to ensure extremely high reliability. The quality of our products has been proven by 6,000 installations worldwide.

In addition, we provide a service guarantee of 10 years after a product's »end of life«, assuring our customers that Danelec equipment is serviceable during its entire lifetime.

## Safe support

Our company's global network of Certified Service Centers is stocked with the parts and products you need, and our Service Partners are located in more than 50 countries, allowing us to offer 24/7 service and support.

## Simple installation and maintenance

Danelec products have been developed with SWAP technology™ (SoftWare Advanced Protection), a revolutionary solution allowing for the fast and easy replacement of the hardware main unit (in case of failure) without the need of software reinstallation or configuration. This saves time and money, while protecting valuable shipboard data. And it keeps ships on schedule, eliminating in-port delays for repairs.

Our remote access solution between ship and shore allows extremely easy and efficient data transfer without being limited by satellite capacity onboard vessels. Remote access provides a wide range of benefits concerning control, safety and optimization without the need of physical attendance to the vessel.

**Danelec systems**  
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