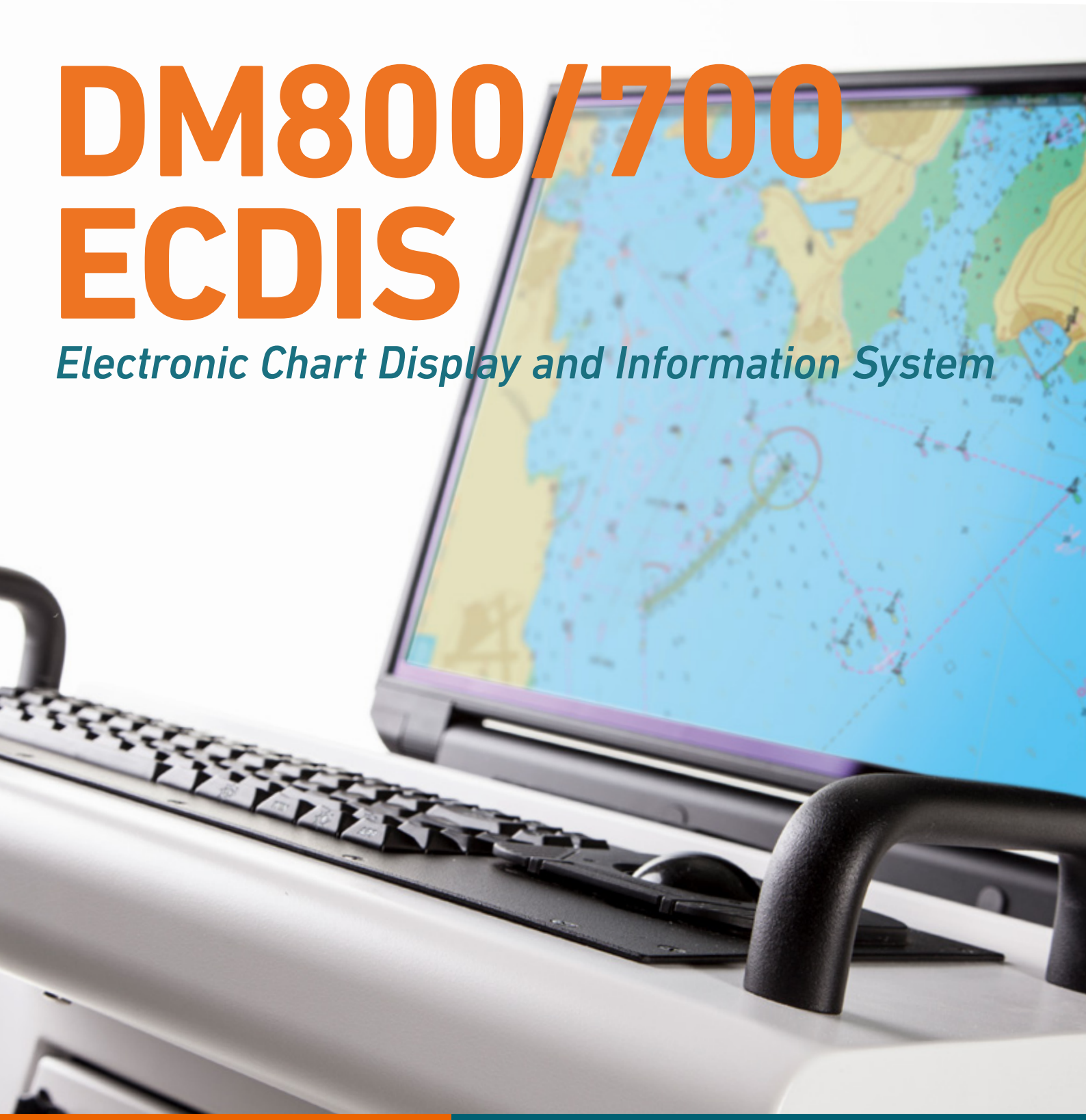
DM800/700 ECDIS

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...

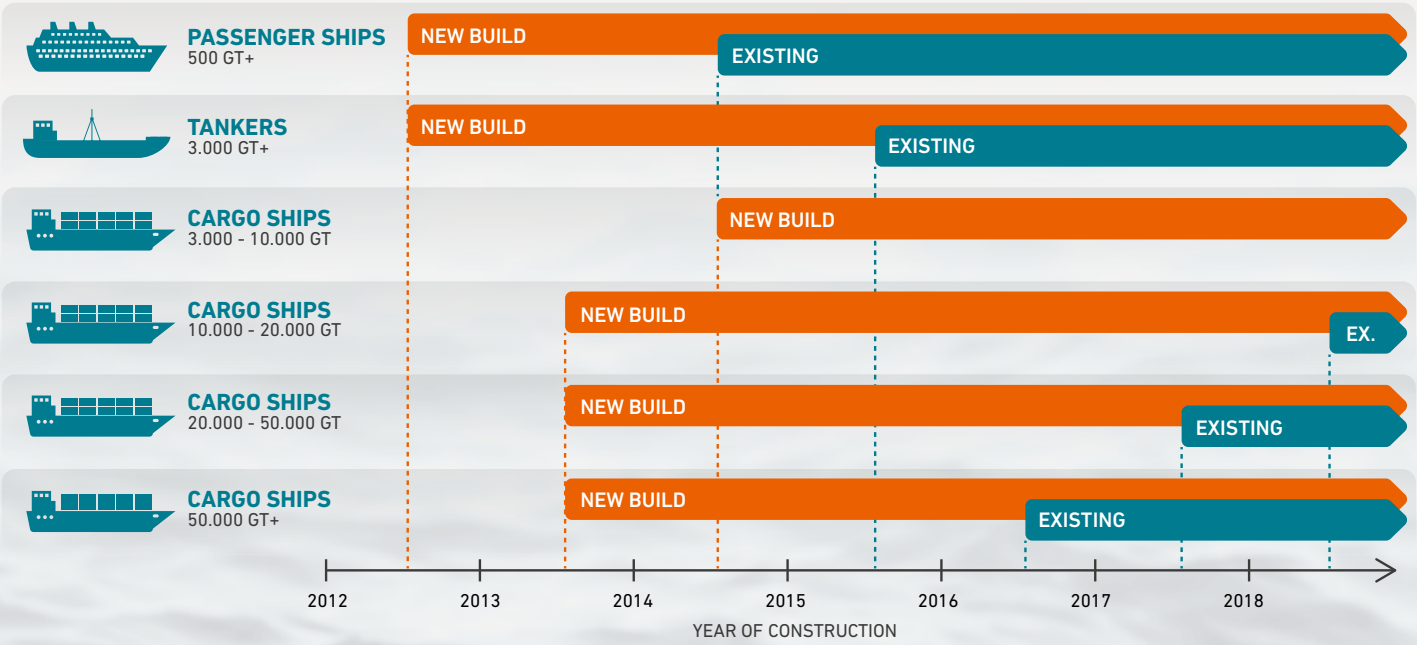
danelec MARINE

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

The Danelec 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

- Onshore / Classroom
- Online / CBT
- Onboard

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:

- Onshore / Classroom training – Classic classroom 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 at the shipping company's premises.

For more information visit www.ecdis.com.

danelec MARINE

Standard equipment

Optional equipment

Choose between

STANDARD

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

DM800 ECDIS Main Unit

Linux based ECDIS computer with 32 GB SSD (expandable up to 512GB) • 12 serial channels (10 x IEC 61162-1, 2 x IEC 61162-2) • 4 Ethernet ports (100BASE-TX, RJ45) • 8 USB ports (USB 2.0) • AC power (110-230V, 50-60Hz) • Supplied with ECDIS Alarm Panel and USB Hardware Key • Built in DVD drive

STANDARD

W: 211 mm
H: 35 mm
D: 161 mm
W: 0.8 kg

DM700 ECDIS Main Unit

Linux based ECDIS computer with 64 GB SSD (expandable up to 256GB) • 5 serial channels (5 x IEC 61162-2) • 2 Ethernet ports (1000BASE-T, RJ45) • 4 USB ports (1 x USB 3.0, 2 x USB 2.0, 1 x internal USB 2.0 for USB Hardware Key) • Powered from monitor • Supplied with USB Hardware Key • ECDIS Alarm Panel as option

OPTIONAL

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

STANDARD

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

STANDARD

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

STANDARD

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

STANDARD

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

Advanced 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

STANDARD

W: 510 mm
H: 53 mm
D: 170 mm
W: 1.3 kg

Basic Keyboard / Trackball

Connection to Main Unit via USB port • Supplied with 46mm trackball • Can be flush mounted

OPTIONAL

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

One technology platform – several options to suit every need:

DM800 ECDIS

Enhanced features

- Dual processor system
- Advanced network capability providing additional security and redundancy
- 4 Ethernet ports / 12 serial (NMEA) inputs

DM700 ECDIS

Essential features

- Single quad-core processor system
- Standard network capability for system synchronization in dual installations
- 2 Ethernet ports / 5 serial (NMEA) inputs

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 **S**oft**W**are **A**dvanced **P**rotection (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 500+ 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
Solid • Safe • Simple

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