

WECDIS

Warship Electronic Chart Display & Information System



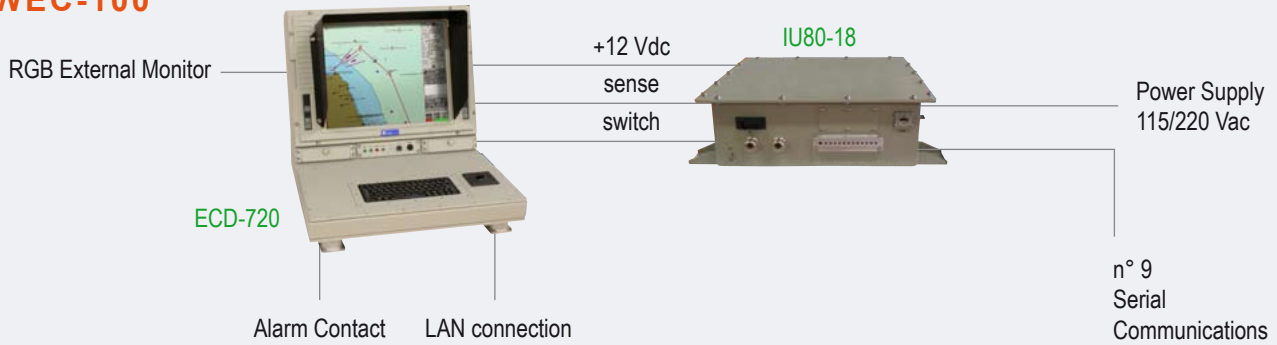
Applications

- **Stand-alone or included into integrated bridge systems**
- **Whatever application requirement full watching and control over navigation plans**
- **W-ECDIS available through adoption by Additional Navigation Information**

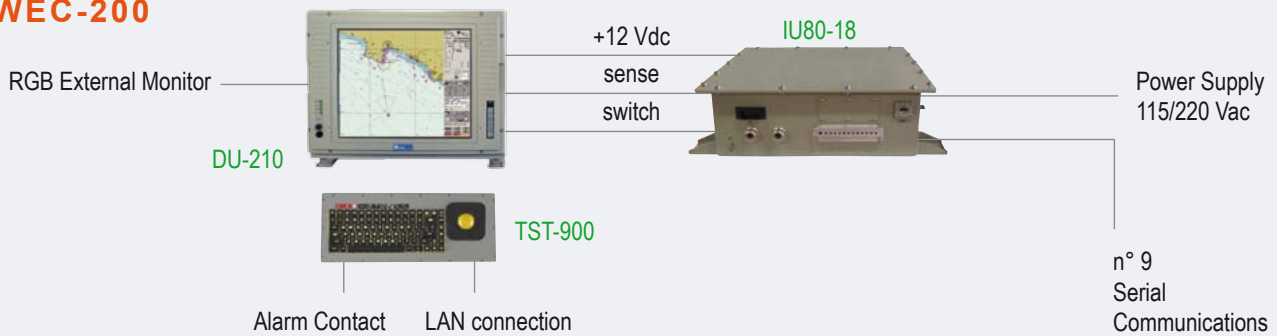
Performances

- Fully IMO compliant as per type approved ECDIS
- use both IHO S-57 ENC data
- uses data conforming to NATO Digital Geographic Information Exchange (DIGEST) Standards including Vector Product Format (VPF) and Digital Nautical Chart (DNC).
- uses Additional Navigation Information (ANI) provided by government hydrographic offices and military sources, including specific types of ANI data such as Raster Navigational Charts (RNC's), Admiralty Raster Chart Service (ARCS), NOAA's raster charts distributed and updated by Maptech, Inc.
- DNV type approved
- complies also to the characteristics requested from norms STANAG 4564 and 7170 regulating the additional WECDIS functionalities.
- automatically supports the supply of S-57 standard charts, encrypted with the PRIMAR scheme S-63
- displays C-MAP charts with CM93v3 format and to automatically manage their updates through internet.
- represents AML in S57 format, DNC in DIGEST format and RNC in ARCS format charts
- connected to the navigation sensors, the console displays the own ship position through graphical symbol overlapped to the cartographic and equipped with data, representing the geographical coordinates and the kinematical characteristics such as the course and speed, true and relative to the water.
- modular structure using COTS components for remarkable growing expansion

WEC-100



WEC-200



Some examples of software features

Manual Fix and Visual Corrections



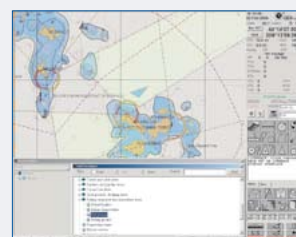
- Bearing and Range LOPs
- Accuracy Measurements
- Referencing of the Fix to the Current Moment
- In Dead Reckoning you may shift the ship's position to the calculated one by pressing OK button.

Moving Haven

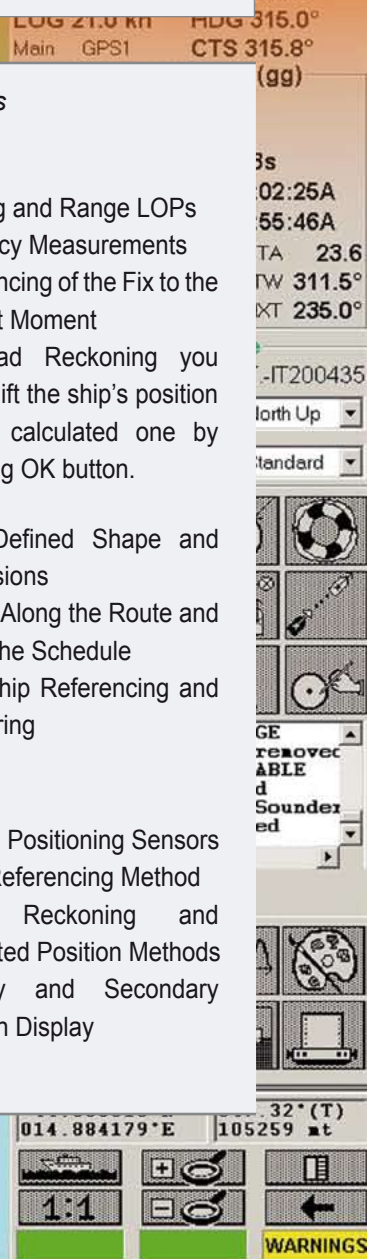


- User Defined Shape and Dimensions
- Motion Along the Route and under the Schedule
- Own Ship Referencing and Monitoring

Estimated Position Mode



- Up to 7 Positioning Sensors
- Echo Referencing Method
- Dead Reckoning and Estimated Position Methods
- Primary and Secondary Position Display



WEC-100

Display type	High resolution, 20.1" diagonal, colour LCD. The LCD is a Si/TFT active matrix.
Control desk	Keyboard group with dedicated keys and 2" trackball for rapid positioning of cursor.
Processor	Pentium IV - 2.8 GHz
Main memory	512 Mbytes RAM minimum
Operating system	Windows 2000 with service pack3
Graphic accelerator	Intel 82845G Built in, AGP 4X
Hard disk	80 Gbytes or more
Removable data storage devices	CD ROM RW, DVD, Floppy Disk
On board multi I/O	Fast Ethernet 10/100 MB, PCI bus, UPS ports, RS-232 or RS-422 serial ports
Self diagnostics	Comprehensive built-in test equipment (BITE) with fault detection and isolation
Power requirement	Single phase 220 or 115 Vac at 50/60Hz, 200 W max power consumption
Ethernet	Primary LAN: ICH4 integrated LAN controller (10/100 Mb), Secondary LAN: Intel 82540EM (10/100/1000 MB)

WEC-200

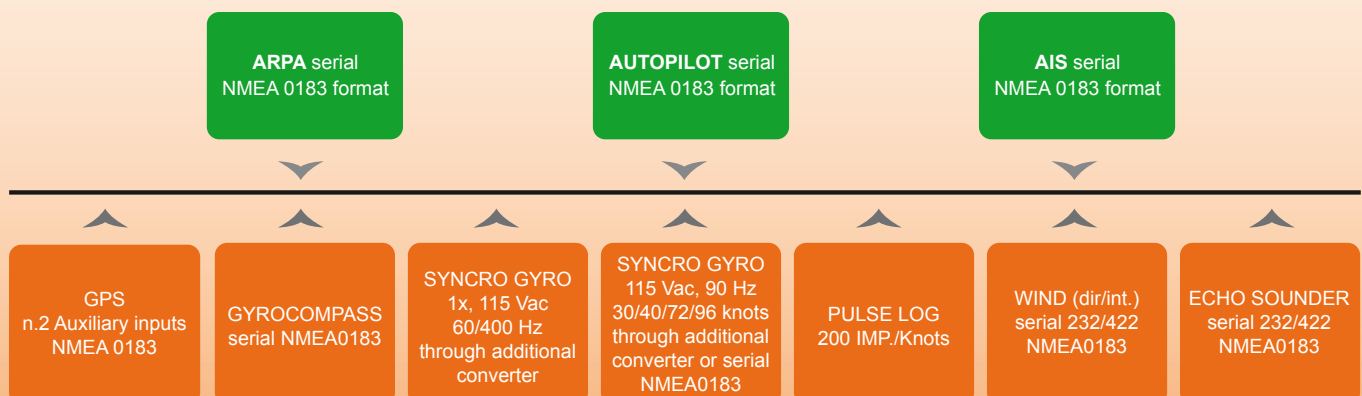
Monitor		Hardware	
Resolution	1280x1024	CPU	Intel Core 2 Duo
Technology	S-TFT active matrix	Working frequency	2.8 GHz
Dimension	20.1 inches diagonal	RAM	2 Gbyte
Dot pitch	0.312 x 0.312 mm	Hard Disk	250 Gbyte
Brightness	200 cd/m ² (typical)	Graphic	Intel GMA 4500MHD
Contrast	250:1 (typical)	Ethernet	INTEL 82574L Gigabit Network
Angle of vision	± 80° (horizontal and vertical)	UPS	Backup of almost 15 minute for short-time interruptions of primary power supply
		Movable support	CD/DVD R/W or USB drive

Power supply and environmental performances

Operating temperature	From 0°C to +50°C as per MIL-STD 2036 par. 5.1.2.17.1 for internal units
Relative humidity	Up to 95% at +40°C, non condensing
Sanility	As per MIL-STD-2036 par. 5.1.2.12.2
Vibrations	As per MIL-STD-167-1
Drip Proof	As per MIL-STD-108E
Shock (with shock absorbers)	0.5 sine, 30 g for 11 milliseconds
Safety	As per MIL-STD-2036 par. 4.10
EMI	As per MIL-STD-461C methods RE02, CE03, RS03, CS02 and CS06
Power supply	115 or 220 ± 10% VAC, single phase, 50/60 Hz ± 5%
Max consumption	200 W

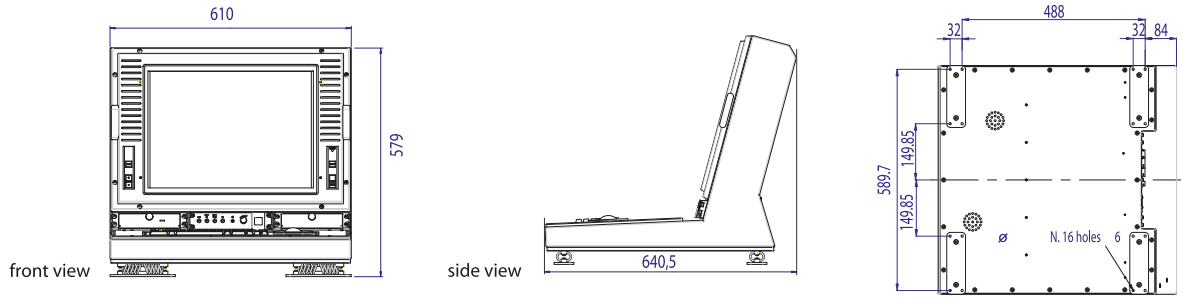
Software performances

- Standard ECDIS as per wheelmark certification by DNV
- The system is able to manage and display additional information for navigation and conduct of warfare onboard warships as defined in NATO STANDARD 4564; the system supports the concurrent access and display of official charts together with AML (Additional military layers) data sets in S57 and DNC in accordance with NATO STANDARD 7170.



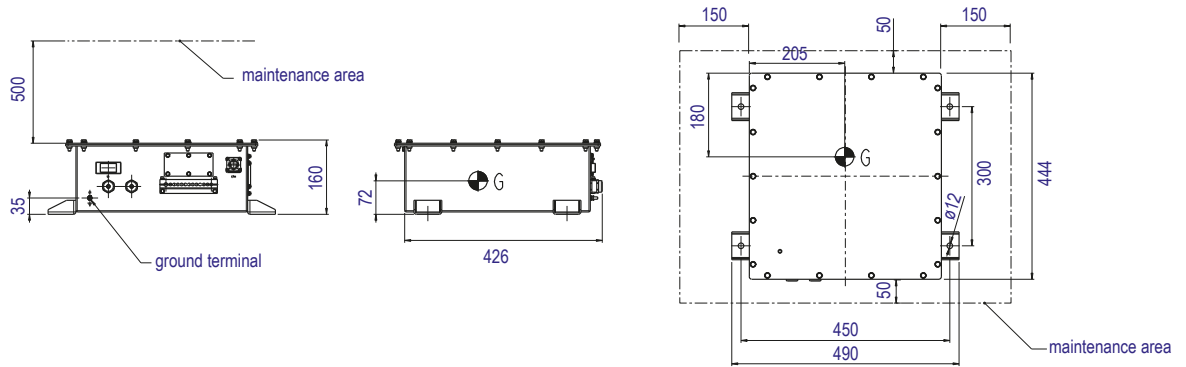
ECD-720

W. 40 Kg



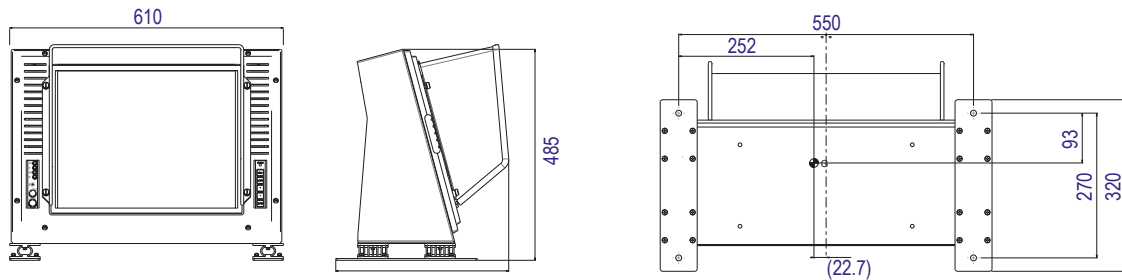
IU80-18

W. 14 Kg



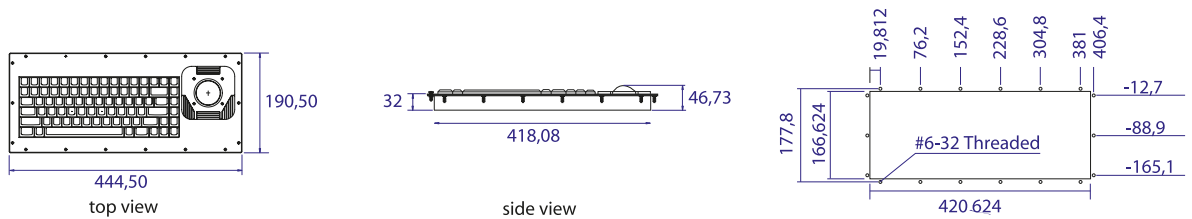
DU-210

W. 22.5 Kg



TST-900

W. 2 Kg



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Surveillance & Security

Guidance, Navigation & Positioning

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Marine Electronics

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