SPECIFICATIONS: TECDIS 2728

TECDIS 2728 is an all-in one ECDIS computer.

It is type-approved according to IMO regulations, allowing paperless navigation.

The integrated design makes it perfect for retrofit installation.

STANDARDS COMPLIANCE

TECDIS 2728 conforms to the following standards:

Marine Equipment Directive 2014/90/EU of the EC council.

Regulation (EU) 2018/773:	Item No. MED/4.30
SOLAS 74 as amended	Regulations V/18, V/19 & X/3
IMO Resolutions	A.694(17) MSC.36(63) MSC.97(73) MSC.191(79) MSC.232(82) MSC.302(87)
IMO Circulars	MSC.1/Circ 1503
IEC Standards	Performance testing – IEC 61174 (2015) Performance testing, presentation – IEC 62288 (2014) Environmental testing – IEC 60945 (2002) Serial interface testing – IEC 61162 (2010)

GENERAL SPECIFICATIONS

Usable Charts	S-57 ed.3 S-63 (including Primar and AVCS) CM-93/3 (C-Map ENC / ENC+ / CAES / Professional+[1])
Display	27-inch TFT LED display with Full HD resolution. Integrated in the unit.
Operating system	Windows 7 Pro 32-bit, English
Processor	Intel Core i5 6500TE 2.3 GHz
Chipset	Intel GL82 Q170
Memory (RAM)	8 GB[2]
Storage	150 GB SATA SSD (approximately 120GB free) in a removable disk bay

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[1] C-Map Professional+ is not an official chart service, it does however provide world scale charts

[2] Windows 7 32bit can only allocate up to 4 GB of RAM

Display of data

Own Ship:	GPS Position, COG, HDG, SOG, STW
Route:	Active route name, DTG, ETA, and CTS-, DTG-, TTG to selected WP
ARPA targets:	BRG, DIST, COG, SOG, POS User selectable: ARPA Target color, ARPA target track color, «Save» ARPA target track.
Others:	EBL, VRM, EBL list, Parallel index lines, Cursor position, True or relative cursor bearing
Maritime Calculation	Can calculate Range/Bearing to or from a position, with Rhumb-line or Great Circle routes, distances selectable in meters or NM. TTG, ETA, datum conversion
Route monitoring	Off track, Waypoint, Arrival, Grounding, Depth
1-click chart loading	Available for charts from the following providers: Navtor, ChartCo, Nautisk Forlag
Alarms	Off track, Index Lane, Channel limit, Waypoint approach, Depth, Non ENC dangers, Restricted Areas, Cautions Areas, Possible danger, Harbour Mode
Autopilot output	Output of: APB, RMB, RMC, RTE
AIO overlay	Show Temporary and Preliminary Notices as an overlay on the chart, with the Admiralty Information Overlay (AIO) service by UKHO.
Other Functions	• Night/Day presentation • MOB • SAR • Log w/replay functionality • docking Conning display • Tooltip • User defined chart presentation, easy transfer of installed configuration to replacement cold standby unit • Easy screen dump facility when in navigation mode.

Optional features

The following options are available for purchase with a perpetual license (onetime fee):

Track Control	Type approval for installation with Raytheon Anschütz NP 5500 autopilot
Radar Overlay	Display of radar echoes from Furuno radars: 2xx7, 2xx8, 15xx
Seismic streamers	Streamer configuration with up to 24 streamers displayed graphically in chart.
Navtex	Connects to all Navtex receivers sending in the NRX format. You can display Navtex messages with position references.
Weather overlay	Advanced weather overlay feature using top quality commercial maritime weather forecast data available as a subscription service from C-Map.
Piracy overlay	Piracy Information is available as an overlay on top of C-MAP charts in OceanView. The C-Map OceanView navigation planning tool visualizes information to help navigators and operators identify, understand and manage risks posed by maritime crime.

TELCARE

TELCARE gives power to the TECDIS users.
TELCARE is a subscription service for new features in TECDIS. The following features are only available with a valid TELCARE subscription:

TotalTide	Show Tides from Admiralty TotalTide in the chart. Requires a TotalTide subscription from UKHO.
Rendevous	With Rendevous TECDIS will predict where on your route you will meet that target. This function works for targets within 1 NM of your route, and predicts where the target will meet your vessel (assuming the target will move along the same path your route shows).. Rendevous supports up to 8 targets simultaneously, and the prediction is updated every second.
Transit conning	The most important sensor and voyage information is displayed with bigger text, in a clear and very readable conning window. The conning window can be moved around on the screen.
Edit route lane	Edit the route corridor and turn radius visually in the chart with the cursor.
1-click chart loading	Available for Global Navigation Solutions – GNS

HW Connections

No. of serial ports	1x RS-232/RS-422/RS-485 (non-isolated) 8x NMEA RS-422 (with phoenix 5-pin connectors)
Monitor out	1x Displayport (DP 1.2 dualmode, female port)
Ethernet	5x 10/100/1000 Mbps (RJ-45)
USB ports	2x USB 2.0 ports 2x USB 3.0 ports

Port description

Sensor	Sentences	IP	IEC 61162-1 Ed 4.0	IEC 61162-450	Proprietary
Position 1:	GNS, GGA, GLL, RMC		✓	✓	
Position 2:	GNS, GGA, GLL, RMC, VDO	✓	✓	✓	
COG/SOG1:	VTG, RMC, OSD, VDO		✓	✓	
COG/SOG1:	VTG, RMC, OSD, VDO	✓	✓	✓	
Heading 1:	HDT, OSD, VHW, VDO, THS		✓	✓	
Heading 2:	HDT, OSD, VHW, VDO, THS	✓	✓	✓	
Water speed:	VHW, OSD, VBW	✓	✓	✓	
Radar ARPA 1:	TTM	✓	✓	✓	
Radar ARPA 2:	TTM	✓	✓	✓	
Radar cursor 1:	RSD	✓	✓	✓	
Radar cursor 2:	RSD	✓	✓	✓	
AIS (In- and output):	AIxxx	✓	✓	✓	
Depth:	DPT, DBT	✓	✓	✓	
Rel. wind:	MWV	✓	✓	✓	
Route:	WPL + RTE	✓	✓	✓	
Alarm ctrl. (In- and output)	ALR + ACK		✓	✓	✓
Navtex	NRX	✓	✓	✓	
Search	FLIR		✓	✓	
Option 1		✓	✓	✓	✓
Option 2		✓	✓	✓	✓
Option 3		✓	✓	✓	✓
Option 4		✓	✓	✓	✓
Printer:	USB port printer connection only				

Power Supply

Power supply	Multipower - 115 to 230 VAC, 50 ~ 60 Hz + 24 VDC
Power cons. max	125W
Power cons. typ.	50W

Equipment List

Standard

1. Computer, HD 27T22 DEC M53
2. TECDIS code plug
3. Accessories Box
    a. TECDIS Installation Manual for TECDIS 2728
    b. TECDIS User Guide
    c. USB extension cable 1.0m
    d. CD-bag
        i. Driver CD from Hatteland
        ii. Chart database DVD C-Map Professional+
        iii. Chart database DVD C-Map CAES
        iv. TECDIS Service Key (USB memory stick)
    e. AC power cables 220 VAC/50Hz euro type F and 115 VAC/60Hz US type B power cable
4. Cherry G84-4100LCMGB-2, keyboard
5. Logitech TrackMan Marble ELK, mouse
6. Declaration of Conformity

Hardware options

1. Mounting brackets incl. screws for console mount
2. Mounting brackets incl. screws for table mount
3. External CD/DVD-drive via USB
4. Telko Alarm Interface TEA-01
5. Conning Adapter analog interface CA-xxxx (configurable number of analog and digital inputs)

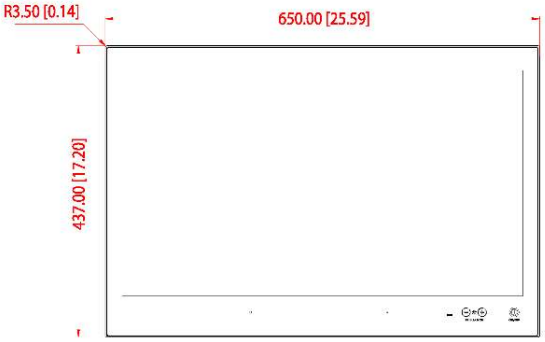
Software options

1.	**Conning software**	Custom software for each vessel. Requires design and programming.
2. **3.** **4.** **5.** **6.** **7.**	**Track Control System** **Seismic streamers** **Navtex** **Weather overlay** **Piracy overlay** **Radar Overlay**	TECDIS SW option programmed in code plug

Document revision history

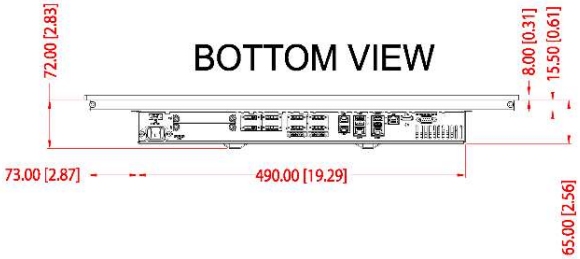
1.0	25th April 2018	Initial release	CH
2.0	11th June 2018	Updated font, sizing and logo use	CH
3.0	14th August 2018	Updated technical drawing presentation and logo placement	CH
4.0	20th August 2018	Updated Standards Compliance	CH
5.0	25th April 2019	Added section on TELCARE. Updated section for optional features.	CH

FRONT VIEW

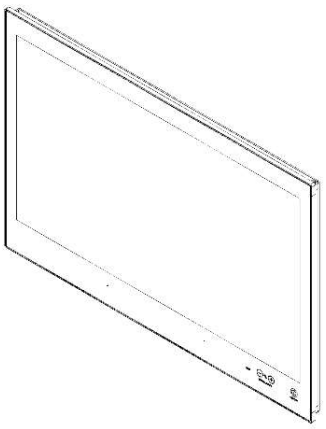


SIDE VIEW

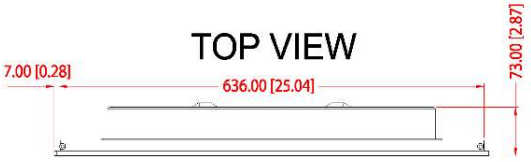
BOTTOM VIEW



ISOMETRIC VIEW



TOP VIEW



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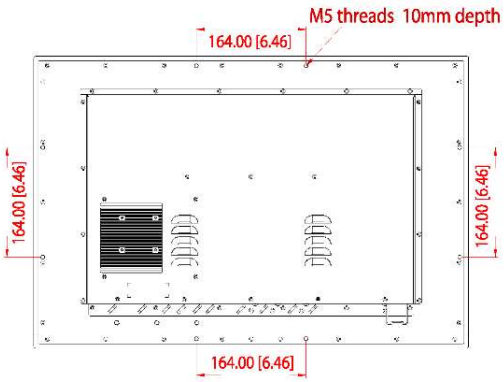
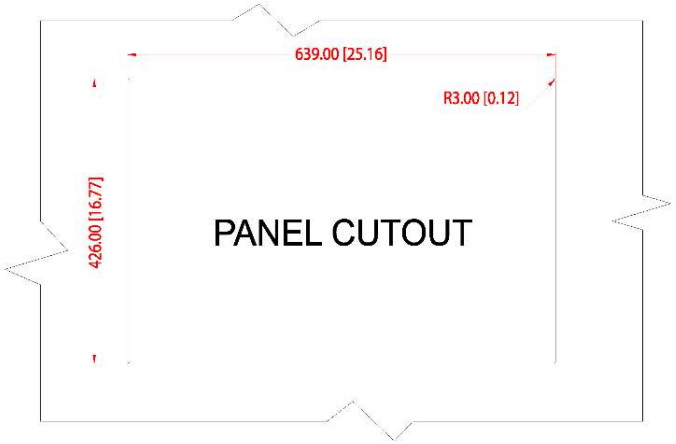
PANEL CUTOUT