SPECIFICATIONS: TECDIS 2138BD

TECDIS 2138 B is a standalone ECDIS computer.

It is type-approved according to IMO regulations, allowing paperless navigation[1].

The expandable design makes it a great choice for demanding ECDIS installations, including TECDIS TCS (Track Control System) and NAUT-OSV or NAUT-AW certified vessels.

Standards compliance

TECDIS 2138B 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+[2])
Display	Separate purchase (from compatible monitors listed below)
Operating system	Windows 7 32-bit, English
Processor	Intel Core i5 4570S – 2.9 GHz Quad Core
Chipset	Intel Q87
Memory (RAM)	4 GB
Storage	120 GB SSD (approximately 85 GB free)

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[1] Paperless navigation requires a dual ECDIS installation.
[2] C-Map Professional+ is not an official chart service, it does however provide world scale charts

Compatible monitors

Current

Unit name	Unit size	Other
HD 19T22 TID	19"	Telko logo
HD 24T22 TID	24" Wide	Telko logo
HD 26T22 TID	26" Wide	Telko logo
HD 27T22 TID	27" Wide	Telko logo
HD19T22 FUD	19"	Furuno logo
HD 24T22 FUD	24" Wide	Furuno logo
HD 26T22 FUD	26" Wide	Furuno logo

Obsolete/discontinued

Unit name	Unit size
JH 19T14MMD	19"
JH 20T17MMD	20"
JH 23T12MMD	23"
JH 23T14MMD	23"
JH 19T03 BOAA	19"
HD 19T21 MMD	19"
HD 24T21 MMD	24" Wide
HD 26T21 MMD	26" Wide

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 (non-isolated) – dedicated for monitor communication
	1x RS422/485 (non-isolated)
	8x NMEA RS422 (with phoenix 5-pin connectors)
Monitor	1x DVI-D (digital only)
	1x DVI-I (analog + digital)
	1x DP (Displayport)
Ethernet	4x 10/100/1000 Mbps (RJ-45)
USB ports	4x USB 2.0 ports (2 in front)
	2x USB 3.0 ports

Port description

Sensor	Sentences	IP	IEC 61162-1 Ed 4.0	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

Voltage	24 V DC
Power cons. max	220W
Power cons. typ.	70W

Equipment List

Standard

1. Computer, HT C02 HJ TEC with DC power (DA version)
2. TECDIS code plug (attached to the computer's rear panel)
3. Accessories Box
    a. USB extension cable 1.0m
    b. 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)
4. Cherry G84-4100LCMGB-2, keyboard
5. Logitech TrackMan Marble ELK, mouse
6. Declaration of Conformity

Hardware options

1. Telko Alarm Interface TEA-01[3]
2. Alarm Speaker (Bracket mount) DNH HP-6 (required when display or control unit does not contain a buzzer)
3. Alarm Speaker (Flush mount) DNH HPS-6 (required when display or control unit does not contain a buzzer)
4. Conning Adapter analog interface CA-xxxx (configurable number of analog and digital inputs)
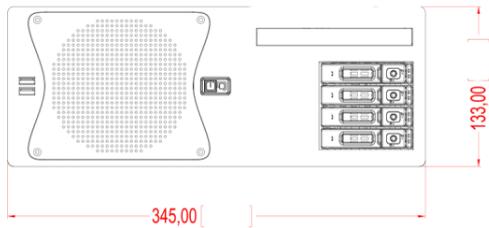
Software options

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

Document revision history

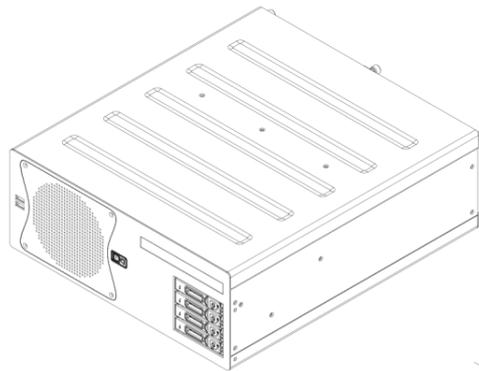| 1.0	20th August 2018	First release	CH
2.0	26th April 2019	Updated all feature sections, and added TELCARE description	CH

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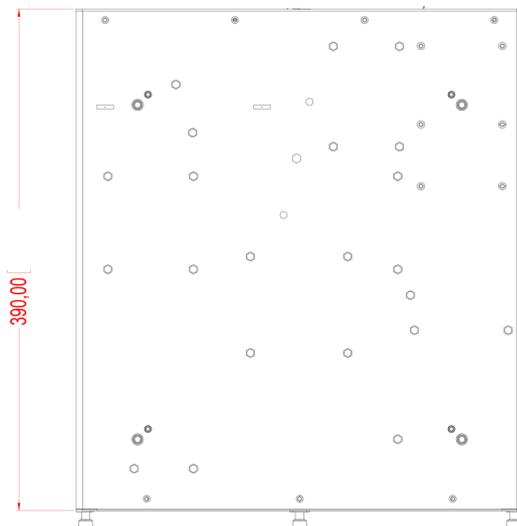[3] Requires an extra RS-232 port.

FRONT VIEW

133,00
345,00

TOP VIEW

404,47
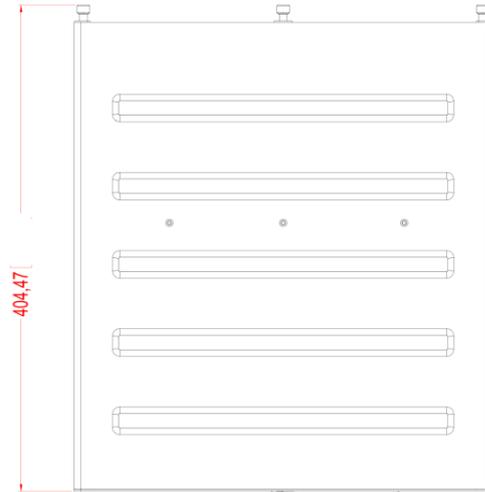
SIDE VIEW

ISOMETRIC VIEW

BACK VIEW

0
48,00
169,30
260,01
280,33
300,65
320,97

BOTTOM VIEW

390,00

Revision number 2.0   Author Cato Haugland   Name TECDIS 2138BD Specifications