Specifications: TECDIS 2138BA



TECDIS 2138 B is a standalone ECDIS computer.

It is type-approved according to IMO regulations, allowing paperless navigation[[1]](#footnote-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 2424 conforms to the following standards:

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

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| 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

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| **Usable Charts** | S-57 ed.3S-63 (including Primar and AVCS)CM-93/3 (C-Map ENC / ENC+ / CAES / Professional+[[2]](#footnote-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) |
| Compatible monitors |

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| Current |  |  | Obsolete/discontinued |
| **Unit name** | **Unit size** | **Other** |  | **Unit name** | **Unit size** |
| HD 19T22 TIDHD 24T22 TIDHD 26T22 TIDHD 27T22 TIDHD 24T22 FUDHD 26T22 FUD | 19”24” Wide26” Wide27” Wide24” Wide26” Wide | Telko logoTelko logoTelko logoTelko logoFuruno logoFuruno logo |  | JH 19T14MMDJH 20T17MMDJH 23T12MMDJH 23T14MMDJH 19T03 BOAAHD 19T21 MMDHD 24T21 MMDHD 26T21 MMD | 19”20”23”23”19”19”24” Wide26” Wide |

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| 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, POSUser 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 navigation monitoring** | Off track, Waypoint, Arrival, Grounding, Depth |
| **Alarms** | Off track, Index Lane, Channel limit, Waypoint approach, Depth, Non ENC dangers, Restricted Areas, Cautions Areas, Possible danger, Harbour Mode |
| **Other Functions** | Single click chart update, Night/Day presentation, ARPA-/radar target and -bearing display #1, ARPA-/radar target and -bearing display #2, MOB, SAR, Log book 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. |
| Other features |  |
| **Autopilot output** | Output of: APB, RMB, RMC,RTE |
| **Presentation Modes** | Type approval for installation with Raytheon Anschütz NP 5500 autopilot |
| **Radar Overlay (option)** | Display of radar echoes from any Furuno radar |
| **Seismic streamers (option)** | Streamer configuration with up to 24 streamers displayed graphically in chart. |
| **1-click chart loading** | Available for charts from the following providers:Navtor, ChartCo, Nautisk Forlag |
| **Navtex (option)** | Connects to all Navtex receivers sending in the NRX format. You can display navtex messages with position references. |
| **Weather overlay (option)** | Advanced weather overlay feature using top quality commercial maritime weather forecast data available as a subscription service from C-Map. |
| **Piracy overlay (option)** | 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. |
| **AIO overlay** | Show Temporary and Preliminary Notices as an overlay on the chart, with the Admiralty Information Overlay (AIO) service by UKHO.  |

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| HW Connections |  |
| **No. of serial ports** | 1x RS 232 (non-isolated) – dedicated for monitor communication1x 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 |
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| Port description | IP | IEC 61162-1 Ed 4.0 | Proprietary |
| **Sensor** | Sentences |
| **Position 1:** | GNS, GGA, GLL, RMC |  | Hake |  |
| **Position 2:** | GNS, GGA, GLL, RMC, VDO | Hake | Hake |  |
| **COG/SOG1:** | VTG, RMC, OSD, VDO |  | Hake |  |
| **COG/SOG1:** | VTG, RMC, OSD, VDO | Hake | Hake |  |
| **Heading 1:** | HDT, OSD, VHW, VDO, THS |  | Hake |  |
| **Heading 2:** | HDT, OSD, VHW, VDO, THS | Hake | Hake |  |
| **Water speed:** | VHW, OSD, VBW | Hake | Hake |  |
| **Radar ARPA 1:** |  TTM | Hake | Hake |  |
| **Radar ARPA 2:** |  TTM | Hake | Hake |  |
| **Radar cursor 1:** |  RSD | Hake | Hake |  |
| **Radar cursor 2:** | RSD | Hake | Hake |  |
| **AIS (In- and output):** | AIxxx | Hake | Hake |  |
| **Depth:** | DPT, DBT | Hake | Hake |  |
| **Rel. wind:** | MWV | Hake | Hake |  |
| **Route:** | WPL + RTE | Hake | Hake |  |
| **Alarm ctrl. (In- and output)** | ALR + ACK |  | Hake | Hake |
| **Navtex** | NRX | Hake | Hake |  |
| **Search** | FLIR |  | Hake |  |
| **Option 1** |  | Hake | Hake | Hake |
| **Option 2** |  | Hake | Hake | Hake |
| **Option 3** |  | Hake | Hake | Hake |
| **Option 4** |  | Hake | Hake | Hake |
| **Printer:**  | USB port printer connection only |

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| Power Supply |  |
| **Voltage** | 115 to 230 VAC, 47 ~ 63 Hz |
| **Power cons. max** | 330W |
| **Power cons. typ.** | 70W |

# Equipment List

## Standard

1. Computer, HT C02 HJ TEC with AC power (AA version)
2. TECDIS code plug (attached to the computer’s rear panel)
3. Accessories Box
	1. TECDIS Installation Manual
	2. TECDIS User Guide
	3. USB extension cable 1.0m
	4. CD-bag
		1. Driver CD from Hatteland
		2. Chart database DVD C-Map Professional+
		3. Chart database DVD C-Map CAES
		4. TECDIS Service Key (USB memory stick)
	5. 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

## Options

1. Telko Alarm Interface TEA-01[[3]](#footnote-3)
2. TECDIS Keypad, optional 19 key quick operation keyboard with custom keys
3. Alarm Speaker (Bracket mount) DNH HP-6 (required when display or control unit does not contain a buzzer)
4. Alarm Speaker (Flush mount) DNH HPS-6 (required when display or control unit does not contain a buzzer)
5. Conning Adapter analog interface CA-xxxx (configurable number of analog and digital inputs)
6. Conning software
7. Track Control System, TECDIS SW option programmed in code plug
8. Seismic streamers, TECDIS SW option programmed in code plug
9. Navtex, TECDIS SW option programmed in code plug
10. Weather overlay, TECDIS SW option programmed in code plug
11. Piracy overlay, TECDIS SW option programmed in code plug
12. Radar Overlay, TECDIS SW option programmed in code plug

Document revision history

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| --- | --- | --- | --- |
| 2.0 | 04th January 2018 | Second release. Completely rewritten. | Cato Haugland |
| 3.0 | 02nd March 2018 | Third release – updated I/O ports | Cato Haugland |
| 4.0 | 08th June 2018 | Fourth release – updated design | Cato Haugland |
| 5.0 | 20th August 2018 | Fifth release – updated document template, technical drawings and standards compliance | Cato Haugland |





1. Paperless navigation requires a dual ECDIS installation. [↑](#footnote-ref-1)
2. C-Map Professional+ is not an official chart service, it does however provide world scale charts [↑](#footnote-ref-2)
3. Requires an RS-232 port. This unit by standard is shipped with only one RS232-port, which is dedicated for monitor communication. For TEA-01 to work, either an expansion card (Moxa 4-port RS232/422/485) must be purchased, or the monitor has to be configured with RS422 (if possible). Contact distributor for more information. [↑](#footnote-ref-3)