

SPECIFICATIONS: TECDIS 2139C

TECDIS 2139C is a standalone ECDIS computer.

It is type-approved according to IMO regulations, allowing paperless navigation¹. The compact, feature rich design makes it a versatile solution for any kind of vessel.



STANDARDS COMPLIANCE

TECDIS 2139C 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+)
Display	Separate purchase (from compatible monitors listed on next page)
Operating system	Windows 10 IoT Enterprise 2019 (64bit), English
Processor	Intel Core i5-9500TE – 2.20 GHz (6 cores)
Chipset	Intel Q370
Memory (RAM)	8 GB
Storage	240 GB SSD (approximately 200 GB free) in removable disk tray
Other	

¹ Paperless navigation requires a dual ECDIS installation.

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
HD 19T22 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	2x non-isolated RS 232 (one dedicated for monitor communication) 12x isolated NMEA RS422 (with phoenix 5-pin connectors)
Monitor	1x USB-C 2x DP (Displayport)
Ethernet	4x 10/100/1000 Mbps (RJ-45)
USB ports	4x USB 3.1 ports (rear) 2x USB 3.1 ports (front)
Other	

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	100 to 240 VAC, 50/60 Hz + 24 VDC (multipower, with uninterrupted switchover if power loss occurs)
Power cons. Max	160W
Power cons. Typ.	70W

EQUIPMENT LIST

Standard

1. Computer, HTC03-i5-MP
2. TECDIS code plug (attached to the computer's rear panel)
3. Accessories Box
 - a. 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)
 - b. 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, trackball
6. Declaration of Conformity

Hardware options

1. Telko Alarm Interface TEA-01²
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	
4. Navtex	TECDIS SW option
5. Weather overlay	programmed in
6. Piracy overlay	code plug
7. Radar Overlay	

DOCUMENT REVISION HISTORY

1.0	20 th June 2022	First release	Thomas Holtan
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² Requires an RS-232 port.

