

EUROPEAN UNION RECOGNISED ORGANISATION (EU RO) MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

Certificate No:
MRA000002D

In accordance with Article 10.1 of EU Regulation 391/2009

This Certificate is issued to

Hatteland Technology AS
AKSDAL, Norway

for

Computers and Programmable Logic Controllers

with type designation(s)

Series E MMC Standard, Series E MMC Compact

The product is found to comply with

EU RO Mutual Recognition Technical Requirements for Computers and Programmable Logic Controllers

EU RO Mutual Recognition Technical Requirements for Display Monitors, Video Screens, Terminals

Intended service

Computers for control, monitoring, alarm, and safety functions subject to classification requirements.

Applicable tests for protected equipment according to IEC 60945 (Fourth edition - 2002) including Corrigendum 1 have additionally been verified.

Type:	Temperature [°C]:	Vibration:	EMC:	IP Code:
Series E MMC Standard	-15 and 55	±1mm / 0.7g;	All locations including bridge and open deck	IP22 standalone, IP66 when sealed to console
Series E MMC Compact	-15 and 70	±1.6mm / 4.0g	All locations including bridge and open deck	IP22 standalone, IP66 when sealed to console

This is to certify:

that the Product referred to herein has been inspected for the Manufacturer, pursuant to the relevant requirements of the European Union Recognised Organisation Mutual Recognition procedure, required by Article 10.1 of EU Regulation 391/2009, and has been found in accordance with those requirements.

This Certificate is valid until **2024-11-26**.

Issued at **Høvik** on **2019-11-27**

DNV GL local station: **Haugesund**

for **DNV GL**

Approval Engineer: **Nils Jarem**

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Trond Sjøvåg
Head of Section

When a product is presented with this EU RO MR Type Approval Certificate for given application, its acceptability with regards to the limitations stated in the certificate conditions defined in 1b, 1c and 1d of the applied Technical Requirement will be evaluated by the EU RO in charge of classing the ship or being in charge of the unit/system certification.
This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Form code: MRTA 001a

Revision: 2018-07

www.dnvgl.com

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Job Id: **262.4-000176-1**
 Certificate No: **MRA000002D**

Product description

Series E Maritime Multi Computers are panel computers. The type approval covers the following computer types:

Type	Description	Power supply options	Compass safe distance	
			Standard	Steering
Series E Maritime Multi Computer - Compact				
HD 08T30 MMC	Maritime Multi Computer	12-24V DC	65	25
HD 13T30 MMC	Maritime Multi Computer	12-24V DC	60	35
HM 13T30 XRP	Xtreme Rugged Marine Panel Computer	12-24V DC		
Series E Maritime Multi Computer – Standard				
HD 16T30 MMC	Maritime Multi Computer	24V / 100/230V AC	60	35
HD 21T30 MMC	Maritime Multi Computer	24V / 100/230V AC	70	60
HD 24T30 MMC	Maritime Multi Computer	24V / 100/230V AC	80	60
HD 27T30 MMC	Maritime Multi Computer	24V / 100/230V AC	80	60

Overview of tested firmware versions are listed in LET_DNV20190715AK listed under Type Approval documentation.

The type approved configurations are described by the respective data sheets listed under Type Approval documentation.

SSD, HDD and Accessories/Options information are listed in LET_DNV20190715AK, listed under Type Approval documentation.

Options for HD 08T30 MMC, HD 13T30 MMC and HM 13T30 MMC:

Apollo-IOH	Standard IO Module, HD 13T30 MMC-xxx-xxxxHx
Apollo-IOC	Custom IO Module, HD 13T30 MMC-xxx-xxxxIx
HM T30 ADP-A1:	MIL Adapter Kit. Mounting bracket for bulkhead/deckhead mounting

Accessories HD 08T30 MMC, HD 13T30 MMC and HM 13T30 MMC:

HD CMB SX2-B1	1 x Console Mount Kit.
HD FAN SX2-A1	1 x 40x40cm. -20°C to +70°C
HD 08COV STD-A1	1 x UV Sun Cover
JH C01MF A-A	1 x USB Cable 1m, TypeA-Chassis mount receptacle
P014338	1 x IP66 Mount Gasket (EPDM), Flush/Console mount
HT 00262 OPT-A1	4 x RS-422/RS-485 isolated, USB ext. module - (Based on PCA100293-1)
HT 00263 OPT-A1	4 x RS-232 COM non-isolated, USB ext. module - (Based on PCA100294-1)
HT 00264 OPT-A1	1 x CAN isolated, 2 channel, USB ext. module - (Based on ZIA0001310-B)
HT 00264 OPT-A2	1 x SLCAN isolated, 2 channel, USB ext. module - (Based on ZIA0001310-SLCAN)
HT 00273 OPT-A1	4 x Digital IN/OUT isolated, USB ext. module - (Based on PCA100297-1)
HT 00274 OPT-A1	2 x LAN 10/100Mbps, RJ45, USB ext. module - (Based on PCA100298-1)

Options for HD 16T30 MMC, HD 21T30 MMC, HD 24T30 MMC and HD 27T30 MMC

Info	See options listed in Datasheet and DOC207464-1, DOC207474-1, DOC207454-1 and DOC207475-1.
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Accessories for HD 16T30 MMC, HD 21T30 MMC, HD 24T30 MMC and HD 27T30 MMC:

HD CMB SE1-A1	Console Mount Kit for HD 16T30
HD TMB SE1-A1	Table Mount Bracket for HD 16T30
HD CMB SX1-B1	Console Mount Kit for HD 21T30, HD 24T30 and HD 27T30
HD TMB SE1-B1	Table Mount Bracket for HD 21T30, HD 24T30 and HD 27T30
JH C01MF A-A	1 x USB Cable 1m, TypeA-Chassis mount receptacle
HT 00262 OPT-A1	4 x RS-422/RS-485 isolated, USB ext. module - (Based on PCA100293-1)
HT 00263 OPT-A1	4 x RS-232 COM non-isolated, USB ext. module - (Based on PCA100294-1)
HT 00264 OPT-A1	1 x CAN isolated, 2 channel, USB ext. module - (Based on ZIA0001310-B)
HT 00264 OPT-A2	1 x SLCAN isolated, 2 channel, USB ext. module - (Based on ZIA0001310-SLCAN)
HT 00273 OPT-A1	4 x Digital IN/OUT isolated, USB ext. module - (Based on PCA100297-1)
HT 00274 OPT-A1	2 x LAN 10/100Mbps, RJ45, USB ext. module - (Based on PCA100298-1)
HT 00300 MSOS	OS options -> http://www.hatteland-display.com/os
HD 000TR SX2-A2	1 x Removable Front Tray 2.5" Empty (not for 16T30)
HD xxxxy SX1-z1	1 x Removable Front Tray 2.5" w/Storage Device (not for 16T30)

Manufactured by

Hatteland Technology
Eikeskogvegen 52, 5570 Akksdal, Norway

Application/Limitation

The Type Approval covers all hardware listed under Product description. The computers are intended for use in control, monitoring, alarm, and safety functions subject to classification requirements.

Type Approval documentation

Marking of product

Manufacturer's name: Hatteland Technology
Type No.: Main type as listed under product description + 7 characters to describe the options
Unique serial No.
Date of manufacture: YYYYMMDD
Power supply ratings: Input voltage as listed under product description + power rating (W)

Other Conditions

EU Mutual Recognition Technical Requirements for "Computers and programmable logic controllers" version 0.4 have been verified for all product listed under Product description.

EU Mutual Recognition Technical Requirements for "Display Monitors, Video Screens, Terminals" version 0.3 have additionally been verified for all panel computers, including the accessories and brackets listed under Product description.

Applicable tests for protected equipment according to IEC 60945 (Fourth edition - 2002) including Corrigendum 1 have additionally been verified for all products listed under Product description.

Environmental test parameters

Temperature: -15°C and 55°C (Series E Standard)
-15°C and 70°C (Series E Compact)
Vibration: ±1mm / 0.7g (Series E Standard)
±1.6mm / 4g (Series E Compact)
EMC: All locations including bridge and open deck
Enclosure: IP22 standalone,
IP66 when sealed to console

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed annually and at renewal of this certificate.

END OF CERTIFICATE