

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Personal Computer**

with type designation(s)
HP EliteDesk 8 G1i Small Form Factor (SFF) & Tower (TWR) PC

issued to

Mariner Systems (UK) Ltd.
Wokingham, Berkshire, United Kingdom

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Approved only with Mariner Kit shown on page 2.

Location classes:

Temperature	D
Humidity	B
Vibration	A
EMC	B
Enclosure	A / IP20

Issued at **Høvik** on **2026-05-19**

This Certificate is valid until **2031-05-18**.

DNV local unit: **UK & Ireland CMC & VMC**

Approval Engineer: **Nikolai Arntzen**



for **DNV**

This document has been digitally signed and will
therefore not have handwritten signature

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

Product description

HP EliteDesk 8 G1i Small Form Factor (SFF) & Tower (TWR) PC
 Verified for nominal supply voltage: 230 V ~ 50/60 Hz and 115 V ~ 50/60 Hz

Manufactured by

Mariner Systems (UK) Ltd.
 Wokingham,
 Berkshire,
 RG41 2FD,
 United Kingdom

Application/Limitation

Approval **ONLY** applies when used in conjunction with Mariner Systems (UK) Ltd:

Mariner Kit:

MS2710 TWR PC (Desktop configuration)
 MS2720 TWR PC (Tower configuration)
 MS2730 SFF PC (Horizontal mount)
 MS2740 SFF PC (Vertical mount)

Only to be installed together with in-line power filter RF 1004-MST-C.

Wireless communication such as WLAN and Bluetooth has not been assessed and is not covered by this type approval.

Steering Compass safe distance: 500 mm
 Standard Compass safe distance: 700 mm

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After certification the clause for software control will be put into force.

Software control

All changes in software are to be recorded as long as the system is in use on board. Documentation of major changes is to be forwarded to DNV for evaluation and approval before implemented on board. Certification of modified functionality may be required for the particular vessel.

Type Approval documentation

Name	Number	Rev. / Date
QuickSpec: HP EliteDesk 8 G1i PC	c09121527	23 / 2025-12-15
Assembly Drawing: MS2710 (Desktop configuration)	MS2710_A	2 / 2026-01-23
Assembly Drawing: MS2720 (Tower configuration)	MS2720_A	2 / 2026-01-26
Assembly Drawing: MS2730 (Horizontal mount)	MS2730_A	2 / 2026-01-23
Assembly Drawing: MS2740 (Vertical mount)	MS2740_A	2 / 2026-01-23
Datasheet: RFI Filter - RF 1004-MST-C	DS 103-MST	2 / 2020-01-30
Test Report: HP EliteDesk 8 G1i SFF PC	TL25114	1 / 2026-01-05
Test Report: HP EliteDesk 8 G1i TWR PC	TL25113	1 / 2026-01-05

Type approval initial assessment report, DNV UK 2026-05-06

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021.

Shock test (15g, 11ms, repeated 20 times for each axis) according to EN 60068-2-27:2009.

Applicable tests for protected equipment according to IEC 60945, 4th edition (2002), except section 8.12 'Corrosion'.

Marking of product

Mariner Kit Number + HP product label, as listed under Application/Limitation.

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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE