



# NIPPON KAIJI KYOKAI

## TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA23016M

**This is to certify** that the undernoted product(s) has/have been approved in accordance with the requirements specified in Chapter 1, Part 7 of "Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use" and the relevant Society's Rules.

This certificate is issued to

Manufacturer: **Mariner Systems (UK) Ltd.**  
Place of Manufacturing: **Oaklands Park, Wokingham, Berkshire, RG41, 2FD, UK**  
Product description: **Mariner Kit for Personal Computer**  
Model: **Mariner Kit MS2650 and MS2660 for HP Elite Tower 800 G9  
Desktop PC  
Mariner Kit MS2670 and MS2680 for HP Elite SFF 800 G9  
Desktop PC**  
Approval No.: **23A001**  
Valid until: **10 January 2028**

This certificate is subject to the conditions specified in the attached sheet(s).

Issued at Tokyo on 11 January 2023.

  
  
S. Oishi  
General Manager  
Machinery Department

Note: The manufacturer, if desired, is requested to apply to the Society for renewal prior to the expiration date.

# NIPPON KAIJI KYOKAI

Attached sheet -1/3 to the Certificate No. TA23016M

## Specification & documents:

1. Particulars: Power supply: AC 100V ~ 240V, 50 / 60Hz

2. Components and reference drawings:

Component	Drawing
Mariner Kit MS2650 and MS2660 for HP Elite Tower 800 G9 Desktop PC	- HP Elite Series 800 G9 Desktops PCs QuickSpecs version 28 - MS2650_A - MS2660_A
Mariner Kit MS2670 and MS2680 for HP Elite SFF 800 G9 Desktop PC	- HP Elite Series 800 G9 Desktops PCs QuickSpecs version 28 - MS2670_A - MS2680_A
RFI FILTER - RF 1004-MST-C (Used with above)	DS 103-MST

3. Documentation and Test Reports:

- Marine Type Approval Test Requirements (Issue 16, dated May 2022)
- Test Report TL22296 (Issue 2, dated 20 December 2022)
- Test Report TL22277 (Issue 2, dated 20 December 2022)
- Electrical Safety Test Report (Report number R21-5423, dated 3 March 2021)
- Mariner Kit Component Matrix

- To be continued -

**Test items & approval conditions:**

## 1. Test items:

(Applied testing items are marked with X.)

ENVIRONMENTAL TESTS (IACS UR E10 Rev.8 basis)		Mark
External examination		X
Operation test and performance test		X
Electric power supply failure test		X
Power supply fluctuation test	Electric	X
	Pneumatic and Hydraulic	--
Insulation resistance test		X
High voltage test		X
Pressure test (Pneumatic and Hydraulic)		--
Dry heat test (Temperature 70°C × 16 hours)		X
Damp heat test		X
Vibration test <b>Note (1)</b>		X
Inclination test		X
Cold test (Temperature -25°C × 16 hours)		X
Salt mist test		--
Electrostatic discharge immunity test		X
Radiated radio frequency immunity test		X
Conducted low frequency immunity test		X
Conducted high frequency immunity test		X
Burst / Fast transient immunity test		X
Surge immunity test		X
Radiated emission test		X
Conducted emission test		X
Flame retardant test		X

- To be continued -

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Attached sheet -3/3 to the Certificate No. TA23016M

Note (1)

- Acceleration  $\pm 1.0$  g  
Mariner Kit MS2650 and MS2660 for HP Elite Tower 800 G9 Desktop PC
- Acceleration  $\pm 0.7$  g  
Mariner Kit MS2670 and MS2680 for HP Elite SFF 800 G9 Desktop PC

2. Approval condition:

The product is not allowed to be installed on open decks.

**- The End -**