



# NIPPON KAIJI KYOKAI

## TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA19560M

**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 System(UK)Ltd.**  
Place of Manufacturing: **Oaklands Park, Wokingham, Berkshire, RG41 2FD, UK**  
Product description: **Personal Computer**  
Model: **HP Z4 G4 Workstation with Mariner Kit MS3070 or MS3080**

Approval No.: **19A038**  
Valid until: **3 October 2024**

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

Issued at Tokyo on 4 October 2019.

T. Shimada  
General Manager  
Machinery Department

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

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Attached sheet -1/3 to the Certificate No. TA19560M

**Specification & documents:**

1. Particulars:

Voltage: 110-240Vac

Frequency: 50-60Hz

2. Components and reference drawings:

Component Description	Comment / Prior test report
Processor	All Intel Xeon processors up to and including 4.0GHz (4.4GHz turbo) frequency, 19.25MB cache, 14 cores
Power Supply	700W 90% efficient
Memory	Up to 256 GB DDR4-2666 ECC Reg DIMM (8GB/16GB/32GB)
Storage	300GB 15000 rpm SAS SFF 500GB SATA-6G 3.5" (7200 rpm) 1TB SATA-6G 3.5" (7200 rpm) 2TB SATA-6G 3.5" (7200 rpm) 256GB SATA SSD 512GB SATA SSD 1TB SATA SSD 256GB Z Turbo Drive M.2 MLC SSD 512GB Z Turbo Drive M.2 MLC SSD 256GB Z Turbo Drive M.2 TLC SSD 512GB Z Turbo Drive M.2 TLC SSD
Optical Drive	HP 9.5mm DVD ROM HP 9.5mm DVD Writer HP 9.5mm Slim Blu Ray Disc Writer
Graphics Card	NVIDIA Quadro P400 2GB NVIDIA Quadro P600 2GB NVIDIA Quadro P620 2GB NVIDIA Quadro P1000 4GB NVIDIA Quadro P2000 5GB AMD FirePro W2100 2GB AMD Radeon Pro WX 3100 4GB AMD Radeon Pro WX 4100 4GB
Network Interface Card	Intel Ethernet I219-LM PCIe Controller (integrated) Intel Ethernet I210-AT PCIe Controller (integrated) Intel I210-T1 PCIe x1 Gigabit NIC Intel i350-T2 PCIe Dual Port Gigabit NIC Intel i350-T4 PCIe 4-Port Gigabit NIC Intel X550-T2 10GbE Dual Port NIC Intel X710-DA2 10GbE SFP+ Dual Port NIC Intel 10GbE SFP+ SR Transceiver

- To be continued -

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Attached sheet -2/3 to the Certificate No. TA19560M

Keyboard	HP Business Slim PS/2 Keyboard HP Business Slim USB Keyboard HP Smart Card CCID Keyboard
Mouse	HP PS/2 Mouse HP Optical USB Mouse HP USB Hardened Mouse
Miscellaneous	MicroSemi SmartHBA2100-4i4e SAS Controller HP SD 4 Media Card Reader HP Serial Port Adapter HP Standard CPU Cooling Solution HP Premium FIO Module HP Fan & Front Guide Kit HP Memory Cooling Solution
Operating system	Windows 10 Pro 64 for Workstations Windows 10 Pro 64 Windows 7 Pro 64 HP Linux Ready

3. Documentation and Test Reports:

Documentation: HP Z4 G4 Workstation Components Feb 19.

HP Z4 G4 Component Options-History

c05527757-DA-15954 -Worldwide -Version 9 -September 21, 2018.

MS3070 Assembly, Dwg. No: MS3070\_A, Issue: No.1, Date: 12 November 2018.

MS3080 Assembly, Dwg. No: MS3080\_A, Issue: No.1, Date: 12 November 2018.

Filter Type RF 1007-MST-A, Dwg.No. DS 105-MST, Issue No. 0.1.

Test Report:

Marine Type Approval Test Requirements-Issue 13.November 2017.

Test Report TL18111,HP Z4 G4 Workstation Test Unit A dated 22 January 2019.

Test Report TL18112,HP Z4 G4 Workstation Test Unit B dated 22 January 2019.

Test Report TL18113,HP Z4 G4 Workstation Test Unit C dated 22 January 2019.

- To be continued -

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Attached sheet -3/3 to the Certificate No. TA19560M

**Test items & approval conditions:**

1. Test items:

(Applied testing items are marked with X.)

ENVIRONMENTAL TESTS(IACS UR E10 Rev.7 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 (Acceleration ±0.7g × 2 hours)		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 <sup>*</sup>		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 <sup>*</sup>		X
Conducted emission test <sup>*</sup>		X
Flame retardant test		--

<sup>\*</sup>Note: Test requirement for equipment installed in the bridge or deck zone is applied.

2. Approved condition:

- a) The product is not allowed to be installed on open deck.

- The End -