



# NIPPON KAIJI KYOKAI

## *Certificate* **OF** **TYPE APPROVAL**

**Manufacturer:** Mariner Systems (UK) Ltd.

**Place of manufacturing:** Oaklands Park, Workingham, Berkshire, RG41 2FD, UK

**Product description:** PC

**Model:** HP Compaq dc7900 Small Form Factor (SFF) PC used with Mariner Kit MS2170 or MS2180

**Approval No.:** 09A002

**Specification & documents:** As shown on the attached sheet (-1/2)

**Test items & approval conditions:** As shown on the attached sheet (-2/2)

THIS IS TO CERTIFY that the above mentioned model of the product has been type approved with **Approval No. 09A002** in accordance with the requirements specified in Chapter1, Part 7 of Guidance for the approval and type approval of materials and equipment for marine use and relevant Society's Rules.

This certificate will remain in force until 22nd January 2015.

Issued at Tokyo on 23rd January 2009.

  
S. Ogasawa  
General Manager,  
Machinery Department



**Specification & documents :**

1. Ratings: AC 100-240V, 50/60Hz

2. Component and reference drawing:

Component	Drawing
HP Compaq dc7900 Small Form Factor (SFF) PC used with Mariner Kit MS2170(Horizontal mount) or MS2180(Vertical mount)	DA-13029 Ver.6

3. Test report etc:

- Environmental Test File No. TL1228 & 1229 (5 Dec. 2008)
- Data for flame retardant material

4. Software (as operating system):

- Windows Vista / XP professional / XP Home
- FreeDOS

**Test items :** Applied testing items are marked with X.

ENVIRONMENTAL TESTS		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 x 16hours)		X
Damp heat test		X
Vibration test		X
Inclination test		X
Cold test (Temperature : -25°C x 16hours)		X
Salt mist test		--
Electrostatic discharge immunity test		X
Radiated radio frequency immunity test (Frequency : 30kHz~2GHz)		X
Conducted low frequency immunity test		X
Conducted high frequency immunity test (Frequency : 10kHz~80MHz)		X
Burst/Fast transient immunity test		X
Surge immunity test		X
Radiated emission test (Frequency : 10kHz~2GHz)		X
Conducted emission test		X
Flame retardant test		--