

MS2160

Mariner Kit for use with HP Compaq dc7900
Convertible Minitower PC (Minitower configuration)



The HP Compaq dc7900 Convertible Minitower (CMT) PC is marine type-approved by all of the major international marine Classification Societies when it is installed in conjunction with our Mariner Kit MS2160.

The MS2160 Mariner Kit affords protection against the effects of vibration and shock experienced in the offshore marine environment and has been type-tested against IACS Unified Requirement E10 and the relevant sections of IEC60945 (see below right for test details).

This type-approved combination of hardware and Mariner Kit can be used as the platform for your critical navigation, control, loading and general purpose applications (please check individual type-approval certificates for any restrictions).

“Proven solutions for a demanding environment”



WHAT IS SO SPECIAL ABOUT THE HP COMPAQ DC7900 CMT PC?

- ◆ The dc7900 has been engineered for the specific needs of business computing
- ◆ Lengthy lifecycle (approx 15 months) and stable hardware and software images
- ◆ The only tower in the industry that converts between minitower and desktop configurations
- ◆ Energy efficient solution that helps lower electricity consumption and operating costs by utilizing improved power saving technology such as 85% efficient power supplies and power management solutions
- ◆ The dc7900 meets or exceeds most worldwide environmental PC standards – EPEAT Gold registered and ENERGY STAR® qualified
- ◆ Tool-less serviceability features for easier upgrades and repairs
- ◆ Built around the Intel® Q45 Express chipset and the latest Intel® Core™ 2 Quad and Intel® Core™ 2 Duo processors to provide the performance you expect from a commercial class PC
- ◆ Integrated Intel® Graphics Media Accelerator 4500 delivers exceptional graphics performance for all essential and multimedia requirements
- ◆ Three full-height PCI slots; Two full-height PCI Express x16 slots; One full-height PCI Express x1 slot
- ◆ Two front and six rear USB 2.0 ports; One DisplayPort
- ◆ Worldwide product availability and HP Global Services helps keep corporate costs low and provide consistency across regions and technologies
- ◆ Three-year limited warranty on parts and labour as standard

This Mariner system is type-tested against the consolidated, ‘worst-case’ requirements of all the major international marine Classification Societies:

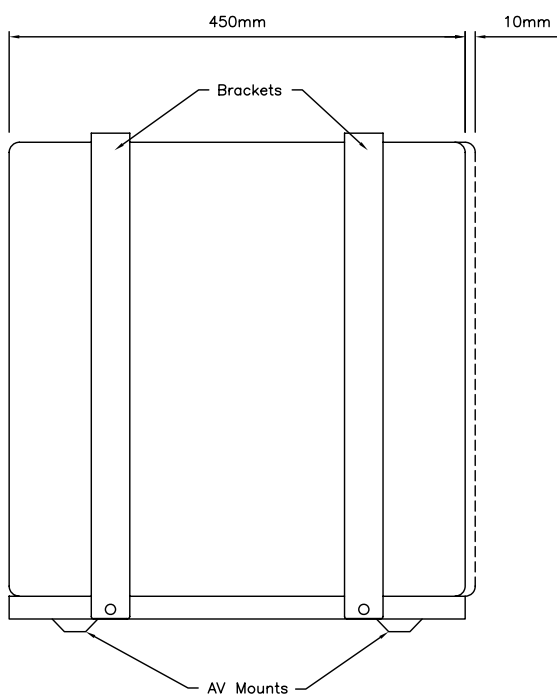
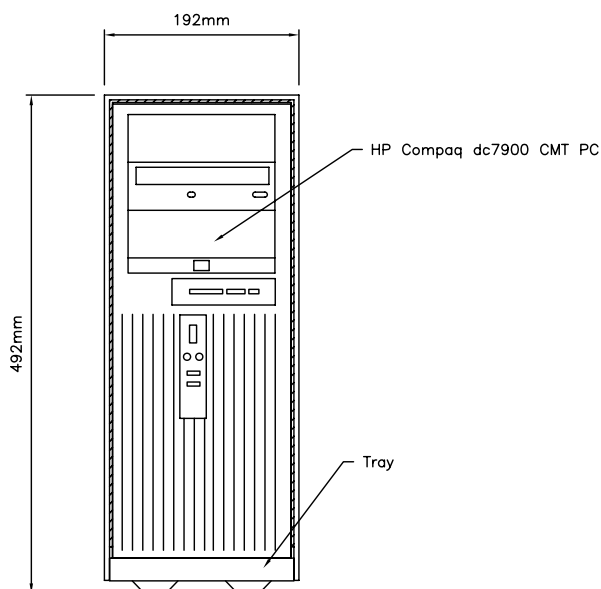
ABS, BV, CCS, DNV, GL, KR, LR, NKK, PRS, RINA

Type-tests included on the test programme are as follows:

- > Vibration, Shock, Static and Dynamic Inclination
- > Dry & Damp Heat, Low Temperature
- > Acoustic Noise, Compass Safe Distance
- > High Voltage, Power Supply Variation & Power Supply Failure
- > Conducted LF & RF, Electromagnetic Field
- > Radiated & Conducted Emissions, Electrostatic Discharge
- > Insulation Resistance, Burst / Fast Transients
- > Surge Immunity, Access to Dangerous Voltages

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OPERATING GUIDELINES

Although all our equipment is tested against extreme environmental conditions for the purposes of marine type-approval, installation should take into account the following guidelines:

- > Keep the computer away from excessive moisture, direct moisture and the extremes of heat and cold and, wherever possible, ensure that the unit is within the manufacturer's specified operating/non-operating ranges:

	Operating	Non-Operating
Temperature	+10° to +35°C (+50° to +95°F)	-30° to +60°C (-22° to +140°F)
Humidity	10% to 90% (non-condensing)	5% to 95% (non-condensing)

- > Leave a 10.2 cm (4-inch) clearance on all vented sides of the computer to permit the required airflow
- > Never restrict airflow into the computer by blocking any vents or air intakes
- > Occasionally clean the air vents on the front, back and any other vented side of the computer as lint, dust and other foreign matter can block the vents and limit the airflow
- > If the computer is to be operated within a separate enclosure, intake and exhaust ventilation must be provided on the enclosure, and the same operating guidelines listed above will still apply

By following these guidelines you will maximise the life of your equipment and minimise service costs.

STATISTICS

Overall Fitted Dimensions	192mm (w) x 492mm (h) x 460mm (d)
Weight (Mariner Kit only)	Approx 3 kg
Weight (including hardware)	Approx 15 kg
Chipset	Intel® Q45 Express
Processor	Intel® Core™ 2 Quad Q8200 / Q9400 (2.33 to 2.66 GHz, 4 to 6 MB L2 cache, 1333 MHz FSB); Intel® Core™ 2 Duo E7200 / E7300 / E8300 / E8400 / E8500 / E8600 (2.53 to 3.33 GHz, 3 to 6 MB L2 cache, 1066 to 1333 MHz FSB); Intel® Pentium™ E2200 / E2220 / E5200 (2.20 to 2.50 GHz, 1 to 2 MB L2 cache, 800 MHz FSB); Intel® Celeron™ 440 (2.00 GHz, 512 KB L2 cache, 800 MHz FSB)
Memory	1 to 8 GB DDR2 PC2-6400 Non-ECC
Hard Drive	80 to 500 GB Serial ATA 3.0 GB/s (7200 rpm)
Keyboard	HP Standard (PS/2 or USB)
Mouse	HP 2-Button Scroll (PS/2 or USB); HP 2-Button Optical Scroll (PS/2)
Network Card	Integrated Intel® 82567LM Gigabit Ethernet
Graphics	Intel® Media Accelerator 4500 Graphics (integrated with Intel® Q45 Express chipset)
Optical Storage	HP SATA DVD-ROM; HP SATA SuperMulti LightScribe DVD Writer
Audio	Integrated HD audio with ADI 1884 codec
Operating System	Genuine Windows® Vista Business 32; Genuine Windows® Vista Business 64; Genuine Windows® Vista Home Basic 32; Genuine Windows® Vista Ultimate 32; Genuine Windows® Vista Business with downgrade to Windows® XP Professional; FreeDOS
Slots	3 full-height PCI; 2 full-height PCI Express x16; 1 full-height PCI Express x1
USB support	8 x USB 2.0 ports - 2 front and 6 rear
Interfaces	1 x Serial port (2nd optional); 1 x Parallel port (optional)

Design and specifications are subject to change without notice. E&OE.

Version 1