

MARINE DIVISION

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Certificate number: 20588/A0 BV

File number : AP 3914

Product code : 4502H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

TYPE APPROVAL CERTIFICATE

as per Bureau Veritas Classification Rules

This certificate is issued to

MARINER SYSTEMS (UK) Ltd

Wokingham - UNITED KINGDOM

for the type of product

NETWORK COMMUNICATION SYSTEMS

HP ProCurve Switch
1400 series and 1700 series

Regulations and standards :

BUREAU VERITAS Rules for the Classification of Steel Ships.

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements of the Regulations and standards mentioned above.

This certificate is valid until : 12 Jun 2013

At Paris la Défense, on : 12 Jun 2008

For BUREAU VERITAS,
By order of the Secretary

L.COURREGELONGUE

Approval office



Local office : BV LONDON

Surveyor : S. Yule



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

HP ProCurve switches 1400 series and 1700 series are respectively unmanaged or managed 8 or 24 ports used in conjunction with Mariner Systems (UK) Ltd. MS650 or MS660 Kits.

	Model 1400-8G (Unmanaged Ports)	Model 1400-24G (Unmanaged Ports)	Model 1700-8 (Managed Ports)	Model 1700-24 (Managed Ports)
Ports (RJ45 10/100 Mbps)	NA	NA	7	22
Ports (RJ45 10/100/1000 Mbps)	8	22	1	NA
Dual-Personality Ports (RJ45 10/100/1000 or mini-GBIC)	NA	2	NA	2
Throughput (million pps)	11.9	35.7	2.0	6.2
Switching Capacity (Gbps)	16	48	3.4	8.4
Address Table Size (entries)	8000	8000	8000	8000
Mounting Kit:	MS650	MS660	MS650	MS660

Power Supply: 100-127/200-240 VAC 50/60 Hz.

2. DOCUMENTS AND DRAWINGS :

HP Data sheets on ProCurve Switches:

1400 series - No. DA-12733 Ver.2 dated November 1, 2007

1700 series - No. DA-12734 Ver.2 dated November 2, 2007

3. TEST REPORTS :

Mariner Systems - Type Approval Laboratory (UK) Ltd.:

EMC and Environments Test Report witnessed by BV Surveyor No. TL1200 issued on 25 March 2008.

4. APPLICATION / LIMITATION :

4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships.

4.2 - Approval also valid for ships to be granted with the notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**

4.3 - BUREAU VERITAS Environmental Category, **EC Code: 31.**

4.4 - Equipment fulfils the EMC requirements for installation Bridge and Deck zones.

4.5 - Equipment is to be used in conjunction with Mariner Systems (UK) Ltd MS650 or MS660 Kits.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The **HP ProCurve switches 1400 series and 1700 series** are to be manufactured, examined and tested by **MARINER SYSTEMS (UK) Ltd.** in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships.

5.2 - Production sites are to be recognized by Bureau Veritas as per NR320 for HBV products. To this end **MARINER SYSTEMS (UK) Ltd.** has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.

5.3 - **MARINER SYSTEMS (UK) Ltd.** has declared to Bureau Veritas that the type of product described in this certificate are manufactured at the following production site:

**MARINER SYSTEMS (UK) Ltd.
Oaklands Park
Wokingham
Berkshire
UNITED KINGDOM**

5.4 - Each equipment is to be supplied with manual (s) for installation, use and maintenance.

6. MARKING OF PRODUCT :

- Trade name
- Date of manufacture and serial number
- Equipment type or model identification under which it was type-tested.

7. OTHERS :

This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that:

**MARINER SYSTEMS (UK) Ltd.
Oaklands Park
Wokingham
Berkshire
UNITED KINGDOM**

will accept full responsibility for informing shipbuilders, shipowners and/or their sub-contractors of the proper methods of fitting and general maintenance of the approved equipments and the conditions of this approval.

***** END OF CERTIFICATE *****