



## CERTIFICATE OF TYPE APPROVAL

(EC Certificate of Type Examination - Module B)  
(Marine Equipment Directive - 96/98/EC)

**Applicant:-**  
**EUROCOM INDUSTRIES A/S**  
Porsvej 2  
DK-9200 Aalborg SV  
DENMARK

**Manufacturer:-**  
**THRANE & THRANE A/S**  
Lundtoftegårdsvej 93D  
DK - 2800 Lyngby  
DENMARK

This is to certify that the applicant has submitted details of a:-

**INMARSAT – C, SHIP EARTH STATION**  
(Commission Directive 2002/75/EC – Item A.1/5.13)

Of system type known and designated as:-

**SAILOR Inmarsat-C Mobile Earth Station - Type – H2095C**

(Comprising component parts and having technical characteristics shown in shedule 1)

and that this has been tested and assessed, and when used in a combination of component parts as described in the attached schedules, is CERTIFIED as complying with:

IEC 61097-4 :1994 "INMARSAT-C ship earth station equipment"

IEC 60945 : 1996 "General Requirements for marine equipment"

(being specifications for technical characteristics and methods of measurements, published by the International Electrotechnical Commission).

It is also RECOGNISED that the equipment conforms to performance standards not inferior to those adopted by the International Maritime Organisation, and which are contained in the relevant parts of Resolution A807(19) as amended by MSC 68(68) Annex 4, MSC/Circ 862 and Resolution A694(17).

\*Note. as interpreted by the Inmarsat Organisation in their System Definition Manual for Inmarsat C and Change Notice 114.

**SIGNED:**

**DATE of ISSUE:** 9<sup>th</sup> November 2003

**DATE of EXPIRY:** 8<sup>th</sup> November 2008

**P J Goddard** Authorised Signatory

**Certificate Number:** QQ-MED-51/03-02

This Certificate is Valid until expiry date shown, subject to the standard conditions of issue printed on the attached schedule  
Eurocom Industries A/S are Module D registered with QinetiQ,  
ref; Certificate DQAS-07/01-ECI001R & Condition 3.

QinetiQ  
Fraser Range  
Fort Cumberland Road, Eastney  
Portsmouth, Hampshire. PO4 9LJ



Maritime and Coastguard Agency  
The MCA is an Executive Agency of the Department  
of Transport, Local Government and the Regions

*Under the terms of the United Kingdom Statutory Instrument, No 1957 : 1999, the QinetiQ Group PLC (formerly known as DERA) has been Notified to the European Commission by the Maritime and Coastguard Agency as a Body authorised to conduct Conformity Assessment procedures under the provisions of the European Council Directive 96/98/EC on Marine Equipment and issue Certificates of Type Approval.*

# Certificate of Type Approval - Schedule 1

## SAILOR Inmarsat-C Mobile Earth Station - Type – H2095C

The applicant declared that the following units comprise the radio equipment of the designation given on page 1. These units have been assessed & tested, and satisfactory details of these units were included in the technical file. These units form systems consistent with the Item Description A1/5.13, given in Annex A1 of Directive 2002/75/EC

### MAIN UNIT Comprising:-

SAT-C Transceiver Unit	H2095C
Maritime Inmarsat C Antenna	55.108 or 55.107 or SA1605M
Telex Data Terminal / LCD Display and Keyboard	DT4646E KB4641E or H2099A
Hard Copy Printer	H1252B
Remote Alarm / Distress Button	55.198
Printer / Remote Alarm / Distress Button	H1604D or TT-3042D
AC / DC Power Supply or Power Supply	H2096B PCH4652 or PS4655
GMDSS Alarm Panel	AP4365

### With Software configuration:-

DCE software	Version 3.31	*3
DTE software	Version 3.30	*3

### \*NOTES:-

- 1 This certificate is issued in recognition of INMARSAT Certificate IT-04-060-01 and its attached Type Approval Particulars, TA-04-060-17, dated 6 November 2003. Testing conducted by the INMARSAT Organisation and their issue of certification allows a presumption of conformity to the technical detail of IEC 61097-4.
- 2 These Units are identical to the Thrane & Thrane TT-3020C Inmarsat C Transceiver system approved under certificate number QQ-MED/51/03-01, except for the "SAILOR" labels.
- 3 Software Modification: This approval is valid for equipment including subsequent software versions only where written details of such versions have been submitted to and accepted by QinetiQ.

### Technical Characteristics

FREQUENCY OF OPERATION	TRANSMIT: RECEIVE:	1626.5MHz to 1660.5MHz 1525.0MHz TO 1559.0MHz	
CHANNELS		N/A	
POWER CHARACTERISTIC		EIRP 14±2dBW	at 5° elevation
MODULATION		BPSK	
DSC CLASS		None	Not applicable to Inmarsat equipment
IEC 61162-1 SERIAL (NMEA) PORTS		Listener - 1 Talker - 1 (only if internal GPS fitted)	XDR, MTW, MWV & VHW, sentences plus VTG, GGA, GLL & HDT (if not from internal GPS) VTG, GGA, GLL, HDT & ZDA O/P if GPS equipped.
TEMPERATURE RANGE & IEC 60945 CLASS	Exposed Protected	-25°C to +55°C (+70°C storage) -15°C to +55°C.	-- Antenna -- All other units
POWER SOURCE		24V DC 100-230V AC, 50/60Hz	- Input direct to transceiver Input to AC/DC Power Supply (option)

**Conditions of Issue of this certificate are printed the reverse of this sheet.**

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