telefication bv
The Netherlands
Chamber of Commerce
09076358
www.telefication.com

telefication

Test report
99605622

based on:
FCC Part 2, section 2.1053 (10-1-04 Edition)

Iridium fixed mount transceiver
SAILOR
ST4120

SKANTI Iridium fixed mount transceiver
SKANTI
ITU 7701

ECI Iridium fixed mount transceiver
ECI
ITU 1000

Contents

This report comprises of four modules. The total number of pages exclusive of the pages enclosed in the additional information module is: 16

Main module

1 Introduction

This report contains the result of tests performed by:

Telefication bv
Edisonstraat 12a
6902 PK Zevenaar
The Netherlands

Telefication complies with the accreditation criteria for test laboratories as laid down in ISO/IEC 17025:1999. The accreditation covers the quality system of the laboratory as well as the specific activities as described in the authorized annex bearing the accreditation number L021 and is granted on 30 November 1990 by the Dutch Council For Accreditation (RvA: Raad voor Accreditatie). The contents of this test report, if reproduced, shall be copied in full, unless special consent in writing for reproduction in part is granted by Telefication. Copyright of this test report is reserved to Telefication.

Ordering party:

Company name	:	Thrane & Thrane A/S
Address	:	Porsvej 2
Zipcode	:	9200
City/town	:	Aalborg
Country	:	Denmark
Date of order	:	3 January 2005

2 Product

A sample of the following product was submitted for testing:

Product name	:	Iridium fixed mount transceiver
Product category	:	Intentional radiators
Manufacturer	:	Thrane & Thrane A/S
Trade mark	:	SAILOR
Type designation	:	ST4120
FCC ID	:	ROJRTU4120B
Emission designator	:	41K7Q7W
Hardware version	:	--
Software version	:	--
Serial number	:	--

Variants (identical in every hardware and software aspect) :

Product name	:	Iridium fixed mount transceiver
Manufacturer	:	Thrane & Thrane A/S
Trade mark	:	SKANTI
Main type designation	:	ITU 7701; transceiver unit (Skanti)

Product name	:	Iridium fixed mount transceiver
Manufacturer	:	Thrane & Thrane A/S
Trade mark	:	ECI
Main type designation	:	ITU 1000; transceiver unit (ECI)

3 Test schedule

Tests were carried out in accordance with the specification detailed in chapter 6 "Summary" of this report.

Tests were carried out at the following location:
- Telefication, Zevenaar

The sample of the product was received on:
- 18 April 2005

Tests were carried out on:
- 18 and 29 April 2005

4 Product documentation

For production of this report the following product documentation was used:

Description	Date	Identification
EMC test specification for Iridium Mk-IV, rev 0.03, 6 pages	11-04-2005	IR04031
Technical manual Sailor SC4000 Iridium	Not dated	Doc. No. M4150GB0, issue H/0514

5 Observations and comments

With respect to the previous ST4120 model version, the following modifications apply:

1) Iridium L-Band transceiver (LBT) model 9522 replaced by new model 9522A.
2) Interface to LBT changed from multi drop bus to single point-to-point bus. This effect removal of Motorola LBT interface chips, which are then replaced by 1 microprocessor (D17) for handling signal routing between LBT to SIM reader and LBT to Handset.
3) Sim reader chip Philips TDA8706 is replaced by newer model Philips TDA 8029.
4) New software code for microprocessor D17 handling signal routing and SIM card interface. Labelled 39822.
5) Modified software code for microprocessor D5. Changes made in LBT task for interfacing to new LBT model. Labelled 39821.

6 Summary

The product is intended for use in the following application area:

GMPCS (MARITIME SATELLITE APPLICATION)

The sample was tested according to the following specification:

FCC Part 2, section 2.1053 (10-1-04 Edition)

7 Conclusions

The sample of the product showed **NO NON-COMPLIANCES** to the specification stated in chapter 6 of this report.

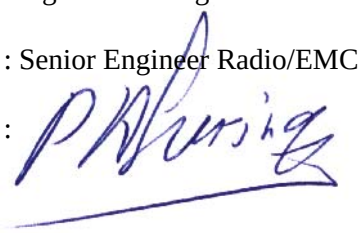
The results of the tests as stated in this report, are exclusively applicable to the product item as identified in this report. Telefication does not accept any responsibility for the results stated in this report, with respect to the properties of product items not involved in these tests.

All tests are performed by:

name : ing. P.A. Suringa

function : Senior Engineer Radio/EMC

signature :

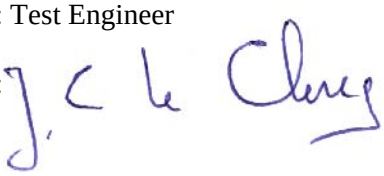


Review of test methods and report by:

name : ing. J.C. le Clercq

function : Test Engineer

signature :



The above conclusions have been verified by the following signatory:

date : 30 May 2005

name : J.P. van de Poll

function : Co-ordinator Test Group

signature :

Test results module

1 Summary

According to FCC Part 2, section 2.1053 the following tests have been performed:

Port	Reference	Phenomena	Result
Enclosure	section 2.1053	Radiated emissions	P

Results:

P	=	pass	NA	=	not applicable
F	=	fail	NP	=	not performed

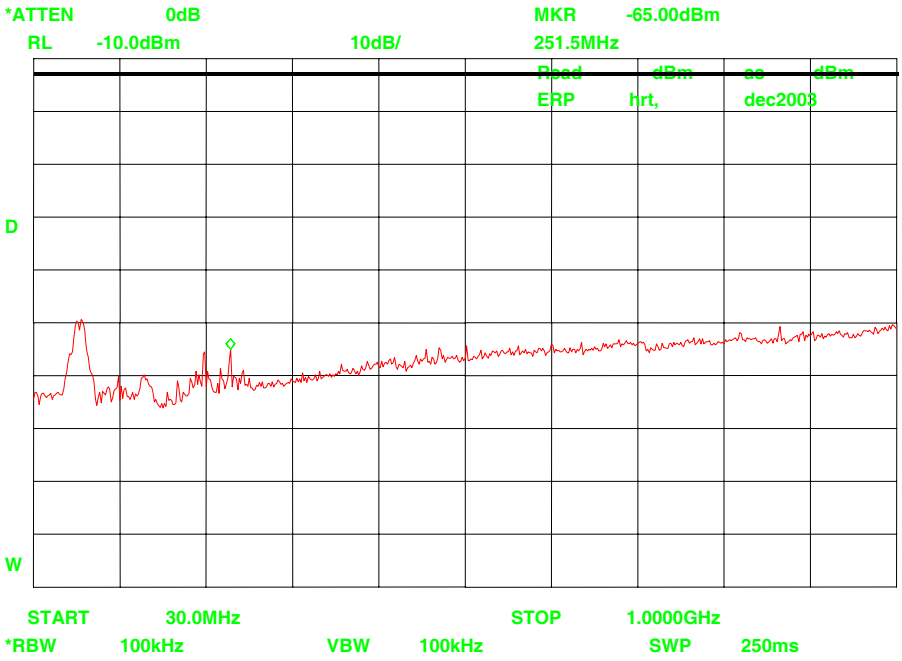
2 Emission tests

2.1 Cabinet radiation

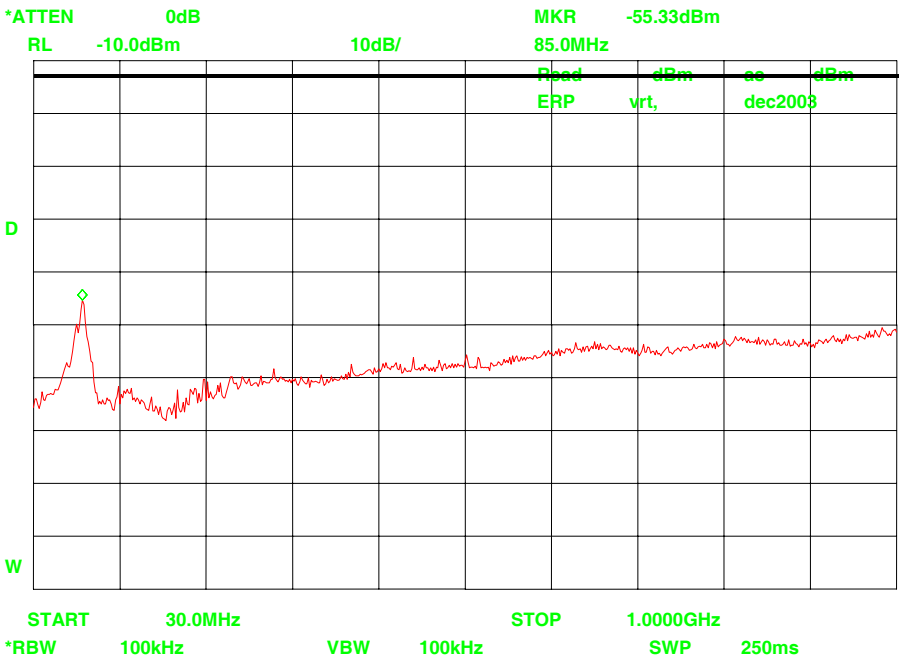
Compliance standards	:	FCC part 2, section 2.1053; part 25, section 25.202 (f) (3)
Justification	:	Compliance measurements in the range 0.03 – 18 GHz have been performed in a 3 m compact fully anechoic room (CFAC). The CFAC has been calibrated for e.(i).r.p. measurements.
Compliance limit	:	Transmitting power is 7 W max. (38.5 dBm) Limit = transmitting power minus attenuation as required per section 25.202 (f) (3). 38.5 dBm – (43 dB + 8.5 dB) = -13 dBm.

Test results 0.03 – 1 GHz:

Horizontal polarization

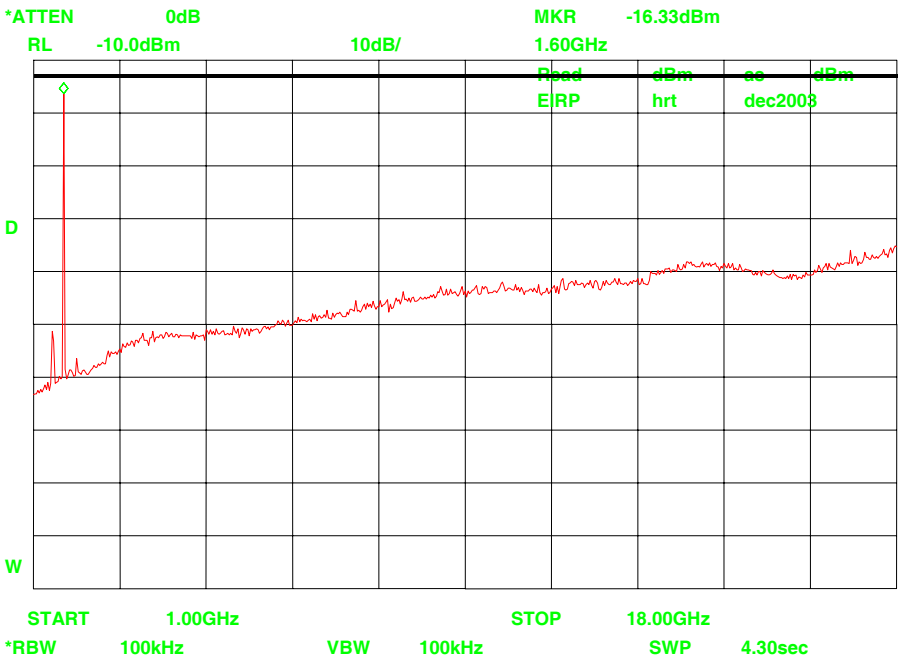


Vertical polarization

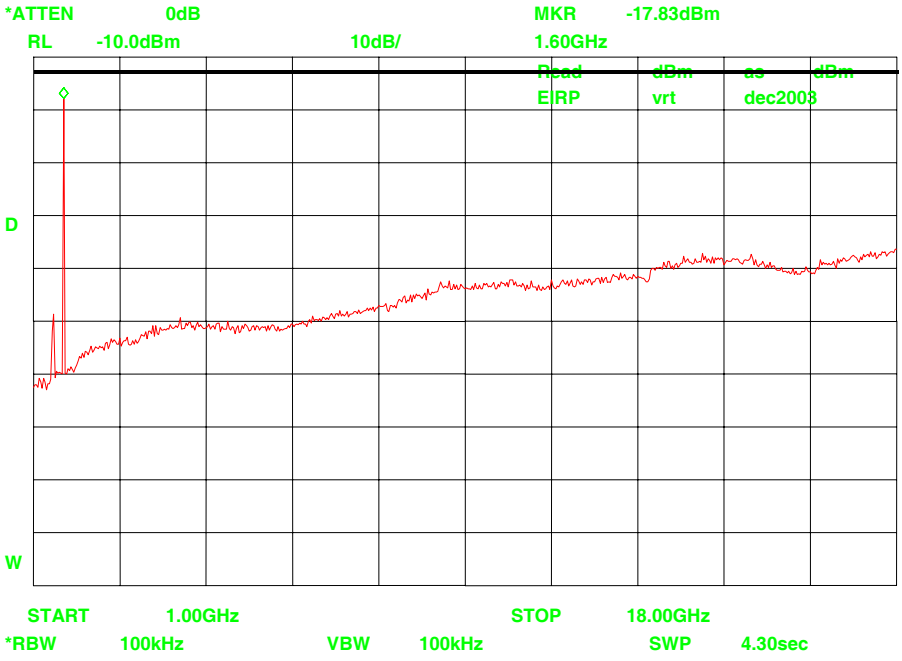


Test results 1 –18 GHz:

Horizontal polarization



Vertical polarization



Used test equipment module

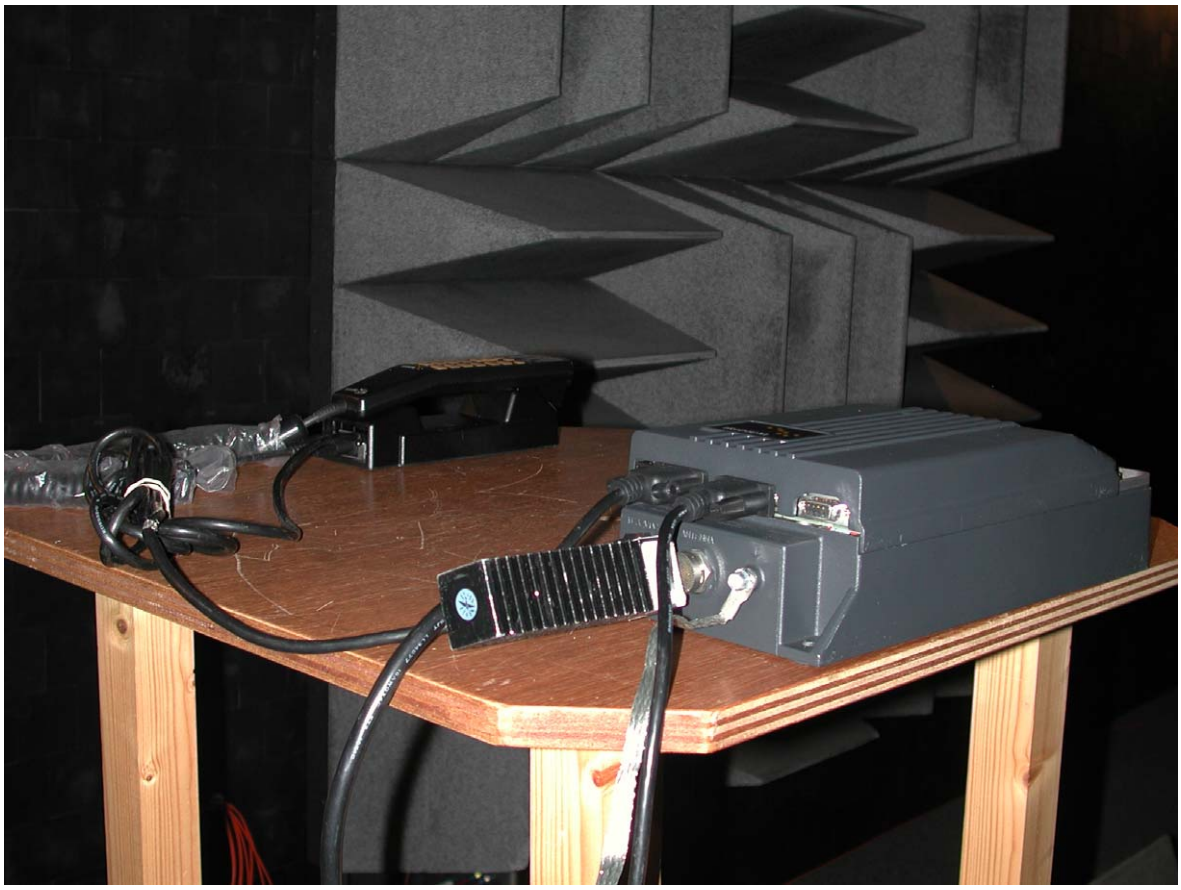
This module contains the list of test equipment used.

Ref	Description	Telefication ident.	Manufacturer	Model
1	Spectrum analyzer	TE 00481	HP	8563E
2	Pre-amplifier	TE 00344	R & S	ESV-Z3
3	Pre-amplifier	TE 00092	HP	8449B
4	Logper/bow-tie antenna	TE 00700	EMCO	3143
5	Horn antenna	TE 00531	EMCO	3115
6	Compact Full Anechoic Chamber (CFAC)	TE 01064	Euroshield	RFD-F-100

Photographs module

Photograph 1: *ST4120*

Photograph 2: Radiated emissions test set-up (detail)



Photograph 3: Radiated emissions (1 – 18 GHz) test set up.