

Application for FCC Certification
On behalf of

Philips Medical Systems North America Co.

Product Name: Advanced Interface Module

Model No.: ST80i AIM

Serial No.: AWD1100021

FCC ID: PQC-ST80IAIM

(MPE Calculation)

Prepared For : Philips Medical Systems North America Co.
3000 Minuteman Road, Andover, Massachusetts,
United States, 01810

Prepared By : Audix Technology (Shanghai) Co., Ltd.
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Report No. : ACI-F12060
Date of Test : Jan. 13, 2012
Date of Report : Feb. 02, 2012

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TEST REPORT FOR FCC CERTIFICATE

Applicant : Philips Medical Systems North America Co.
 Manufacturer : Philips Medical Systems North America Co.
 EUT Description : Advanced Interface Module
 (A) Model No. : ST80i AIM
 (B) Serial No. : AWD1100021
 (C) Test Voltage : DC 5V (USB Power)

Test Procedure Used:

FCC OET Bulletin 65 August 1997

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC OET Bulletin 65.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report also shows that the EUT (M/N: ST80i AIM, S/N: AWD1100021), which was tested on Jan. 13, 2012 is technically compliance with the FCC limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Jan. 13, 2012 Date of Report : Feb. 02, 2012

Producer : *Alan He*
ALAN HE / Assistant

Review : *Dio Yang*
DIO YANG / Assistant Manager

AUDIX® For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

.....Signatory : *Sammy Chen*
Authorized Signature EMC **SAMMY CHEN / Deputy Manager**

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test

Description : Advanced Interface Module

Type of EUT Production Pre-product Pro-type

Model Number : ST80i AIM

Serial Number : AWD1100021

Radio Tech : IEEE 802.15.4 (ZigBee®)

Freq. Band : 2405 MHz - 2480 MHz
Total 16 Channels in 5 MHz Separation

Tested Freq. : 2405 MHz (Channel 00)
2440 MHz (Channel 07)
2480 MHz (Channel 15)

Antenna Gain : 2.0 dBi (for both Antenna0 and Antenna1)

Applicant : Philips Medical Systems North America Co.
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Manufacturer : Philips Medical Systems North America Co.
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United States, 01810

1.2 Description of Test Facility

Site Description (Semi-Anechoic Chamber) : Sept. 17, 1998 file on
Apr 29, 2009 Renewed
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046, USA

Name of Firm : Audix Technology (Shanghai) Co., Ltd.

Site Location : 3 F 34 Bldg 680 Guiping Rd.,
Caohejing Hi-Tech Park,
Shanghai 200233, China

FCC registration Number : 91789

Accredited by NVLAP, Lab Code : 200371-0

1.3 Measurement Uncertainty

Output Power Expanded Uncertainty : U = 0.30 dB

2 SUMMARY OF STANDARDS AND RESULTS

2.1 Applicable Standard

FCC OET Bulletin 65:1997

2.2 Specification Limits

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/150	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

*Plane-wave equivalent power density

NOTE: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

The limit value 1.0mW/cm² is available for this EUT.

2.3 MPE Calculation Method

$$S = PG/(4 \pi R^2)$$

$$R = [PG/(4 \pi S)]^{0.5}$$

where: S = power density (in appropriate units, e.g. mW/ cm²)

P = power input to the antenna (in appropriate units, e.g., mW)

(the measured power value see Report: F11129 Section 6.6)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

2.4 Calculated Result

2.4.1 Radio Frequency Radiation Exposure Evaluation for Antenna0

Frequency	Output Power to Antenna	Antenna Gain		Power Density	Limit
		(dBi)	(Numeric)		
(MHz)	(mW)	(dBi)	(Numeric)	(mW/cm ²)	(mW/cm ²)
2405	1.64	2.0	1.585	0.000517	1.0
2440	1.40	2.0	1.585	0.000441	1.0
2480	1.14	2.0	1.585	0.000359	1.0

Separation distance R= 20cm.

Frequency	Output Power to Antenna	Antenna Gain		Limit	Distance
		(dBi)	(Numeric)		
(MHz)	(mW)	(dBi)	(Numeric)	(mW/cm ²)	(cm)
2405	1.64	2.0	1.585	1.0	0.45
2440	1.40	2.0	1.585	1.0	0.42
2480	1.14	2.0	1.585	1.0	0.38

The antenna used for this transmitter must be installed to provide a separation distance of at least 0.45cm from all persons.

2.4.2 Radio Frequency Radiation Exposure Evaluation for Antenna1

Frequency	Output Power to Antenna	Antenna Gain		Power Density	Limit
		(dBi)	(Numeric)		
(MHz)	(mW)	(dBi)	(Numeric)	(mW/cm ²)	(mW/cm ²)
2405	1.07	2.0	1.585	0.000337	1.0
2440	0.96	2.0	1.585	0.000303	1.0
2480	0.87	2.0	1.585	0.000274	1.0

Separation distance R= 20cm.

Frequency	Output Power to Antenna	Antenna Gain		Limit	Distance
		(dBi)	(Numeric)		
(MHz)	(mW)	(dBi)	(Numeric)	(mW/cm ²)	(cm)
2405	1.07	2.0	1.585	1.0	0.37
2440	0.96	2.0	1.585	1.0	0.35
2480	0.87	2.0	1.585	1.0	0.33

The antenna used for this transmitter must be installed to provide a separation distance of at least 0.37cm from all persons.