

Application for FCC Certification
On behalf of

LUMIMAX OPTOELECTRONIC TECHNOLOGY (SUZHOU) CO.,
LTD.

Product Name: 10.1 inch Digital Photo Frame

Model No.: LP-101XX

Brand: (1) Lumimax (2) AKANERGY (3) PROTREND

FCC ID: YV7SZ101015B07-EF

(MPE Calculation)

Prepared For : LUMIMAX OPTOELECTRONIC
TECHNOLOGY (SUZHOU) CO., LTD.
Development industrial district, Sha-xi countryside,
Taicang City, Jiangsu, China

Prepared By : Audix Technology (Shanghai) Co., Ltd.
3F 34Bldg 680 Guiping Rd.,
Caohejing Hi-Tech Park,
Shanghai 200233, China

Tel: +86-21-64955500

Fax: +86-21-64955491

Report No. : ACI-F10163
Date of Test : May 21 – Oct. 14, 2010
Date of Report : Nov. 23, 2010

TABLE OF CONTENTS

	Page
1 GENERAL INFORMATION.....	4
1.1 Description of Equipment Under Test.....	4
1.2 Description of Test Facility	6
1.3 Measurement Uncertainty	6
2 SUMMARY OF STANDARDS AND RESULTS	7
2.1 Applicable Standard	7
2.2 Specification Limits	7
2.3 MPE Calculation Method.....	7
2.4 Calculated Result.....	8

TEST REPORT FOR FCC CERTIFICATE

Applicant : LUMIMAX OPTOELECTRONIC TECHNOLOGY
(SUZHOU) CO., LTD.

Manufacturer : LUMIMAX OPTOELECTRONIC TECHNOLOGY
(SUZHOU) CO., LTD.

EUT Description : 10.1 inch Digital Photo Frame

(A) Model No. : LP-101XX

(B) Brand : (1) Lumimax (2) AKANERGY
(3) PROTREND

(C) Test Voltage : AC 120V/60Hz

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: LP-101XX, S/N: E2010051211), which was tested on Mar. 04, 2010 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 : May 21 – Oct. 14, 2010 Date of Report : Nov. 23, 2010

Producer : Kathy Wang
KATHY WANG / Assistant

Review : Dio Yang
DIO YANG / Deputy Assistant Manager

 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	:	10.1 inch Digital Photo Frame
Type of EUT	:	<input checked="" type="checkbox"/> Production <input type="checkbox"/> Pre-product <input type="checkbox"/> Pro-type
Model Number	:	LP-101XX
Test Model	:	LP-101WT
Serial Number	:	E2010051211
Brand	:	(1) Lumimax (2) AKANERGY (3) PROTREND
Note #1	:	The “X” in the LP-101XX is as follows: LP-101XX <div style="margin-left: 100px;"><div style="display: inline-block; width: 100px; border-left: 1px solid black; border-bottom: 1px solid black; height: 100px;"></div><div style="display: inline-block; vertical-align: top; padding-left: 10px;"><p>Stand for model series: T means high level model with Wi-Fi Module, Remote Control and IR Receiver; R means middle level model with Remote Control and IR Receiver; Blank means basic model.</p><p>Stand for the color of the front frame: B means black; W means white; R means white & red and L means white & blue</p></div></div>
Note #2	:	The data of LP-101WT was tested and recorded in the report.
WLAN SDIO Module	:	Manufacturer : Jorjin Technologies Inc. Model Number : WG6100-00
Radio Tech	:	IEEE 802.11b/g
Freq. Band	:	2412 MHz - 2462 MHz Total 11 Channels in 5 MHz Separation
Tested Freq.	:	2412 MHz (Channel 01) 2437 MHz (Channel 06) 2462 MHz (Channel 11)
Modulation	:	DSSS for 802.11b OFDM for 802.11g

Transmit data rate: 802.11b: 1, 2, 5.5, 11, 22 Mbps
802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
After testing, the highest average output power of the EUT was at 1 Mbps in 802.11b mode and 24 Mbps in 802.11g mode.
So 1 Mbps and 24 Mbps mode were representative selected to test in this report.

Antenna Gain : 5 dBi

Applicant : LUMIMAX OPTOELECTRONIC TECHNOLOGY (SUZHOU) CO., LTD.
Development industrial district, Sha-xi countryside, Taicang City, Jiangsu, China

Manufacturer : LUMIMAX OPTOELECTRONIC TECHNOLOGY (SUZHOU) CO., LTD.
Development industrial district, Sha-xi countryside, Taicang City, Jiangsu, China

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 : $U = 0.30 \text{ dB}$

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: F10140 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 802.11b modulation

Frequency	Output Power to Antenna	Antenna Gain		Power Density	Limit
(MHz)	(mW)	(dBi)	(Numeric)	(mW/cm ²)	(mW/cm ²)
2412	14.32	5	3.16	0.00900	1.0
2437	14.13	5	3.16	0.00888	1.0
2462	13.55	5	3.16	0.00851	1.0

Separation distance R= 20cm.

Frequency	Output Power to Antenna	Antenna Gain		Limit	Distance
(MHz)	(mW)	(dBi)	(Numeric)	(mW/cm ²)	(cm)
2412	14.32	5	3.16	1.0	1.90
2437	14.13	5	3.16	1.0	1.88
2462	13.55	5	3.16	1.0	1.84

The antenna used for this transmitter must be installed to provide a separation distance of at least 1.90cm from all persons.

2.4.2 Radio Frequency Radiation Exposure Evaluation for 802.11g modulation

Frequency	Output Power to Antenna	Antenna Gain		Power Density	Limit
(MHz)	(mW)	(dBi)	(Numeric)	(mW/cm ²)	(mW/cm ²)
2412	61.66	5	3.16	0.03876	1.0
2437	61.09	5	3.16	0.03840	1.0
2462	59.98	5	3.16	0.03771	1.0

Separation distance R= 20cm.

Frequency	Output Power to Antenna	Antenna Gain		Limit	Distance
(MHz)	(mW)	(dBi)	(Numeric)	(mW/cm ²)	(cm)
2412	61.66	5	3.16	1.0	3.94
2437	61.09	5	3.16	1.0	3.92
2462	59.98	5	3.16	1.0	3.87

The antenna used for this transmitter must be installed to provide a separation distance of at least 3.94cm from all persons.