



TEST REPORT

Wireless Access Point

Model Names **GL2411AP**

WAP11

Tested at November 24, 2000

According to

47CFR Part 15C (15.247) &15B

Issued for

Global Sun Technology Inc.

No. 13, Tung Yuan Rd., Jung Li Industrial Park, Jung Li City,
Taoyuan Hsien, Taiwan, R.O.C.

PREPARED BY: ADVANCE DATA TECHNOLOGY CORPORATION



Accredited Laboratory

11F, NO.1, SEC.4, NAN-KING EAST RD.,
TAIPEI, TAIWAN, R.O.C.

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REPORT NO : RF89111710
PRODUCT : Wireless Access Point
MODEL NO : GL2411AP
SERIAL NO : N/A
APPLICANT : Global Sun Technology Inc.
ADDRESS : No. 13, Tung Yuan Rd., Jung Li Industrial Park,
Chung Li City, Taoyuan Hsien, Taiwan R.O.C.
OEM Brand Holder : The Linksys Group Inc.
ISSUED BY : Advance Data Technology Corporation (ADT Corp.)
OFFICE ADDRESS : 11F, No. 1, Sec. 4, Nan-King East Rd., Taipei,
Taiwan, R.O.C.
LABORATORY ADDRESS : No. 13-1, Lane 19, Wen Shan 3rd St., Kweishan,
Taoyuan Hsien, Taiwan, R.O.C.
TEST STANDARD : 47CFR Part 15, Subpart C (15.247) & Subpart B
TEST DATE : November 24, 2000
TEST RESULT : Pass

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1 CERTIFICATION

Issue Date: November 28, 2000

PRODUCT : Wireless Access Point
MODEL NO : GL2411AP, WAP11
FCC ID : 07JGL2411AP
SPEC. : 2.4 ~ 2.4835 MHz, 11 Channels, DSSS Modulation
APPLICANT : Global Sun Technology Inc.
OEM BRAND HOLDER : The Linksys Group Inc.
TEST STANDARD : FCC 47CFR Part 15, Subpart C(Section 15.247) &Subpart B
ANSI C63.4-1992

We, ADVANCE DATA TECHNOLOGY CORPORATION, hereby certify that one sample of the designated sample has been tested in our facility. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate representation of the measurements of the sample's EMI characteristics and the energy emitted under the conditions herein specified.

TESTED BY : Steven Lu **DATE:** Nov, 28, 2000.
Steven Lu
PREPARED BY : Demi Chen **DATE:** Nov. 28, 2000
Demi Chen
APPROVED BY : Alan Lane **DATE:** Nov. 28, 2000
Dr. Alan Lane, Manager



2 SUMMARY OF TEST RESULTS

47 CFR Part 15, Subpart C			
PARAGRAPH.	TEST REQUIREMENTS	COMPLIANCE (YES/NO)	TEST RESULT
15.107	AC Power Conducted Emissions Spec.: 48 dBuV	Yes	Minimum passing margin is -7.45 dBuV At 7.86464 MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Spec.: min. 500 kHz	Yes	9.98 MHz > 500 kHz
15.247(b)	Maximum Peak Output Power Spec.: max. 30 dBm	Yes	19.18 dBm < 30 dBm
15.247(c)	Transmitter Radiated Emissions Spec.: Table 15.209	Yes	Minimum passing margin is -2.4 dBuV At 599.88 MHz
15.247(d)	Power Spectral Density Spec.: max. 8dBm	Yes	-10.73 dBm < 8 dBm
15.247(c)	Band Edge Measurement	Yes	N/A
15.247(e)	Processing Gain of Direct Sequence Spread Spectrum System Spec.: min. 10 dB	Yes	11.4dB ≥ 10dB

3 DECLARATION OF COMPLIANCE WITH SUBPART B

The digital circuits and receiver portion of the EUT has been tested in ADT. The test result has been verified to comply with FCC Part 15, Subpart B, Class B – Computing Devices (FCC DoC). The engineering test report can be provided upon FCC requests.



4 GENERAL DESCRIPTION

4.1 General Description of EUT

Modulation Type	: DBPSK(1Mbps)/DQPSK(2Mbps)/CCK(5.5/11Mbps)
Data Rate	: 11/5.5/2/1 Mbps
Operating Frequency	: 2.4 - 2.4835 GHz
Number of Channel	: 11
Channel Spacing	: 5 MHz
Transmit Power	: 20dBm
Antenna Type	: Dipole Antenna
Power Supply	: AC Adapter
Others	: N/A

4.2 Applicant

Name	Global Sun Technology Inc.
Address	No.13, Tung Yuan Rd., Jung Li Industrial Park, Chung Li City, TaoYuan Hsien
Country	Taiwan, R.O.C.
Name for contact person	Mr. Lin
Tel	+886-3-461-7436 ext.272
Fax	+886-3-461-7441
e-mail address:	Alanlin@globalsuntech.com.tw



4.3 Manufacturer

The same with Applicant.

4.4 Brand Name and Model Name

A. Applicant

Company : Global Sun Technology Inc.
Brand Name : GSTec
Product Name : Wireless Access Point
Model Name : GL2411AP

B. OEM Brand Holder

Company : The Linksys Group Inc.
Brand Name : Linksys
Product Name : Wireless Network Access Point
Model Name : WAP11



4.5 Description of Test mode

The model WAP11 is shown in page 90, model GL2411AP in page 91. The difference between these two models are the plastic housing and the antenna structure. Since the PCB layout and circuit design are the same for both models, so the conductive testing in paragraph 6.3, 6.4, 6.6, 6.7 and 6.8 has no need to be re-tested. The maximum gain of both models is -0.8dBi (WAP11), which is used in RF exposure test.

Eleven channels are provided in this EUT.

Channel	Frequency	Channel	Frequency
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

1. Below 1 GHz, the channel 1, 6 and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
2. Above 1 GHz, the channel 1, 6 and 11 were chosen for evaluation.
3. Both antennas have been tested, the data shown here is the worst case.

4.6 Test Methodology

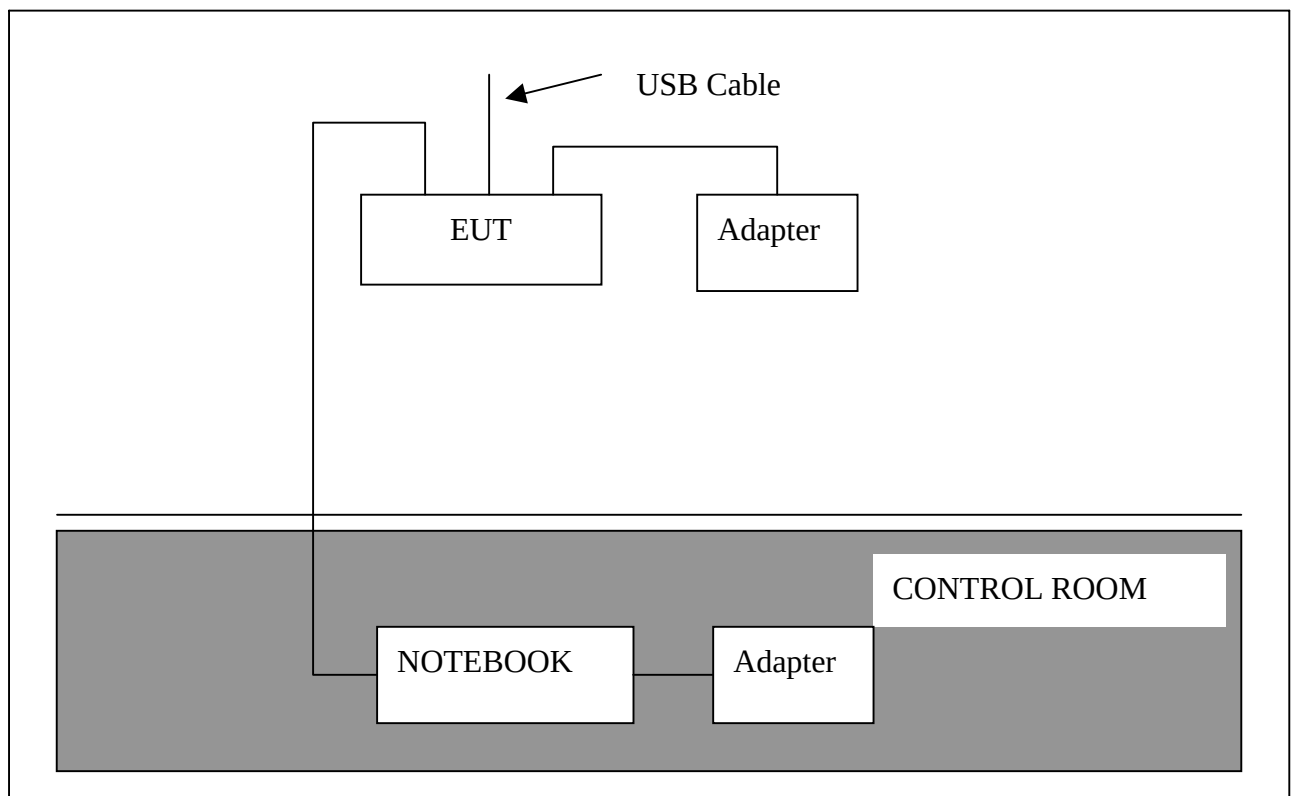
These tests were conducted on a sample of EUT for the evaluation in compliance with FCC CFR47 Part 15, Subpart C (15.247) & Subpart 15 B.

Both conducted and radiated emissions measurements were conducted in accordance with ANSI C63.4:1992.

4.7 Support Units List

No	Product	Brand	Model No.	Serial No.	I/O Cable
1.	NOTEBOOK	ASUS	MP83/8200	O6N1008037	Nonshielded Power (1.8m)

4.8 Configuration of System Under Test





5 GENERAL INFORMATION OF TEST FACILITY

5.1 Test Lab.

Advance Data Technology Corporation (NVLAP accredited)
R&TTE Certification Division

No. 13-1, Lane 19, Wen Shan 3rd St., Kweishan, Taoyuan, Taiwan, R.O.C.

Tel: +886-3-3270910

Fax: +886-3-3270892

5.2 Calibration Interval

All calibration intervals of the test sites and test instruments are 12 months. The calibrations are traceable to NML/ROC and NIST/USA.

6 TEST PROCEDURES AND TEST RESULTS

6.1 Conducted Emission Measurement

6.1.1 Test Instruments

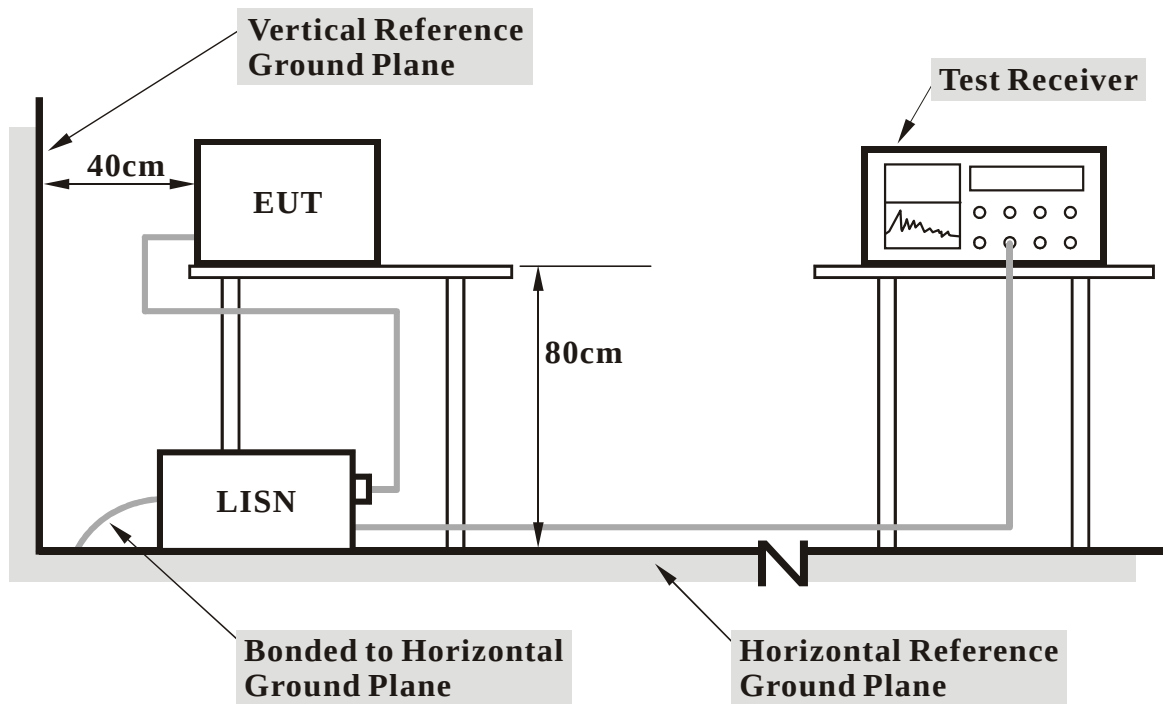
Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ROHDE & SCHWARZ Test Receiver	ESH3	893495/006	July 26, 2001
ROHDE & SCHWARZ Spectrum Monitor	EZM	893787/013	July 14, 2001
ROHDE & SCHWARZ Artificial Mains Network	ESH2-Z5	892107/003	July 11, 2001
EMCO L.I.S.N.	3825/2	9504-2359	July 11, 2001
Shielded Room	Site 3	ADT-C03	NA

The measurement uncertainty is less than +/- 2.6dB, which is calculated as per NAMAS document NIS81.

6.1.2 Test Procedures

1. Place the EUT at 0.4 meter away from the conduction wall of the shielded room.
2. Connect the EUT to the power mains through a Line Impedance Stabilization Network (LISN).
3. Connect the other support units to the other LISN too.
4. Make sure the 50Ω / $50\mu\text{H}$ coupling impedance is provided to the measurement instrument by the LISNs.
5. Measure the maximum conducted interference on both lines of the power mains connected to the EUT, within frequency range 450KHz ~ 30MHz.
6. The emission level under limit by 10dB is not needed to be reported.

6.1.3 Test Setup



- Note:** 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

6.1.4 Photograph of Test Setup

Model: GL2411AP



Model: WAP11





6.1.5 EUT Operating Condition

The software provided by client enabled the EUT to continuously transmit and receive data at lowest, middle and highest channel frequencies individually. “H” patterns were sent to support units and displayed on the screen of support unit for maintaining the operating condition.

6.1.6 Climate Condition

The temperature and related humidity is 23°C and 70%.