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**EMI TEST REPORT FOR CERTIFICATION
to
FCC PART 15 Subpart E (Section 15.407) & RSS-210
Class II Permissive Change**

FCC ID: PPD-AR5BHB116
Industry Canada ID: 4104A-AR5BHB116

Radio Module: Atheros 802.11agbn AR5BHB116 WLAN Module

Host Notebook: Portable PC LifeBook T Series
Model Number: T901

Report Number: M101141_FCC_AR5BHB116_C2PC_NII

Issue Date: 15th February 2011

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EMC Technologies Report No. M101141_FCC_AR5BHB116_C2PC_NII

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CONTENTS

1.0	INTRODUCTION
2.0	GENERAL INFORMATION
FCC 15.407 (U-NII) RESULTS	
3.0	CONDUCTED EMI MEASUREMENTS
4.0	RADIATED EMI MEASUREMENTS
5.0	PEAK OUTPUT POWER
6.0	CHANNEL BANDWIDTH
7.0	PEAK POWER SPECTRAL DENSITY
8.0	PEAK EXCURSION
9.0	FREQUENCY STABILITY
10.0	DYNAMIC FREQUENCY SELECTION
11.0	DISCONTINUE TRANSMISSION
12.0	RADIO FREQUENCY EXPOSURE
13.0	ANTENNA REQUIREMENT
14.0	COMPLIANCE STATEMENT
15.0	MEASUREMENT UNCERTAINTIES
16.0	TEST REPORT APPENDICES
MEASUREMENT INSTRUMENT DETAILS	
PHOTOGRAPHS	
ANTENNA INFORMATION	
FCC LABELLING DETAILS	
USER MANUAL	
RF Exposure Information	
FCC DOC for LifeBook T Series	
FCC Part 15B Test Report	
Atheros AR5BHB116 FCC 15.407 Test Report	
Atheros AR5BHB116 FCC 15.407 DFS Test Report	



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Class II Permissive Change

Report No. M101141_FCC_AR5BHB116_C2PC_NII

Radio Module: Atheros 802.11agbn AR5BHB116 WLAN Module
Manufacturer: Atheros Communications Inc

FCC ID: PPD-AR5BHB116
Industry Canada ID: 4104A-AR5BHB116
Equipment Type: Intentional Radiator (Transceiver)

Host Notebook: T901 Portable LifeBook
Manufacturer: Fujitsu Ltd - Mobile Computing Division
Address: 1-1 Kamikodanaka 4-Chome, Nakahara-Ku, Kawasaki, Japan
Contact: Mr. Tsuyoshi Uchihara

Test Standards: FCC Part 15 – Radio Frequency Devices (October 2009)
FCC Part 15, Subpart E – Unlicensed National Information, Infrastructure
Devices
FCC Part 15.407, General Technical Requirements
ANSI C63.4 – 2003

RSS-210 Issue 7 Low Power Licence-Exempt RadioCommunication
Devices Annex 9: Local Area Network Devices

RSS-102 Issue 1 (Provisional), Evaluation Procedure for Mobile and
Portable Radio Transmitters with respect to Health Canada's Safety Code 6
for Exposure of Humans to Radio Frequency Fields

Test Dates: 4th to 8th February 2011

Test Engineer: Chieu Huynh - B.Eng (Hons) Electronics

Attestation: *I hereby certify that the device(s) described herein were tested as
described in this report and that the data included is that which was
obtained during such testing.*



Authorised Signatory: Chieu Huynh
Senior EMC Engineer
EMC Technologies Pty Ltd



EMI TEST REPORT FOR CERTIFICATION to FCC PART 15 Subpart E (Section 15.407) & RSS-210 Class II Permissive Change

1.0 INTRODUCTION

EMI testing was performed on the Atheros Half Mini-PCI Wireless LAN Module (HB116 802.11a/b/g/n 2x2), Model: AR5BHB116 installed in Portable PC Fujitsu LifeBook T Series, Model numbers: T901.

The AR5BHB116 (HB116 802.11a/b/g/n 2x2) WLAN transmitter installed in the T901 notebook is an Atheros Half Mini-PCI Wireless LAN Module. This module was originally certified by Atheros Communications as a modular approval under FCC ID: PPD-AR5BHB116 (Canada ID: 4104A-AR5BHB116).

The other transmitter installed in the T901 LifeBook is Broadcom Bluetooth Module, Model: BCM92070MD_REF6. The Bluetooth module was originally certified by Broadcom as a modular approval under FCC ID: QDS-BRCM1043 (Canada ID: 4324A-BRCM1043).

There are two variants of the Portable PC, Fujitsu LifeBook T Series, Model: T901 covered in this report. One that is equipped with the modular certified low power Bluetooth transmitter with built-in antenna and one variant that does not contain Bluetooth transmitter or Bluetooth antenna. Testing was conducted on the sample that is equipped with the Bluetooth transmitter and Bluetooth antenna.

The intention of this Class II Permissive Change application is to certify AR5BHB116 Atheros module installed in Portable PC Fujitsu LifeBook T Series, Model: T901. The Radio modules are installed in a controlled environment at the Fujitsu notebook production/assembly factory.

The AR5BHB116 2x2 WLAN supports IEEE 802.11b, IEEE 802.11g, IEEE 802.11a and IEEE 802.11n (DTS & U-NII) configurations.

Test results and procedures were performed in accordance with the following Federal Communications Commission (FCC) standards/regulations:

47 CFR, Part 15, Subpart E:	Unlicensed National Information Infrastructure Devices (U-NII) operating in the 5.15-5.35 GHz, 5.47-5.725 GHz and 5.725-5.825 GHz frequency bands
Section 15.203:	Antenna requirements
Section 15.205:	Restricted bands of operation
Section 15.207:	Conducted Emission Limits
Section 15.209:	Radiated Emission Limits (General requirements)
Section 15.407:	General Technical Requirements

The results and technical details of the test sample are detailed in this report. The test sample **complied** with the requirements of 47 CFR, Part 15 Subpart E - Section 15.407.

The test sample also complied with the Industry Canada RSS-210 issue 7 - Low Power Licence-Exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment, Annex 9 Local Area Network Devices requirements and the RF exposure requirements of RSS-102.

The measurement procedure used was in accordance with ANSI C63.4-2003. The instrumentation conformed to the requirements of ANSI C63.2-1996.



1.1 Summary of Results

FCC Subpart E, Section 15.407

FCC Part 15, Subpart E Clauses	Industry Canada RSS-210 Clauses	Test Performed	Result
15.203	5.5	Antenna Requirement	Complies
15.205	6.3	Operation in Restricted Band	Complies
15.207	6.6	Conducted Emissions	Note 1
15.209	6.3	Radiated Emissions	Complies
15.407 (a)(1) (a)(2)	Annex A9.2	Peak Transmit Power	Note 2
15.407 (a)(5)	Annex A9.2	Peak Power Spectral Density	Note 2
15.407 (a)(6)		Peak Excursion	Note 2
15.407 (b)	Annex A9.3	Undesirable Emission	Complies
15.407 (c)	Annex A9.5(4)	Discontinue Transmission	Complies
15.407 (d)		Reserved	-
15.407 (e)	2.2 (Table 1)	Restricted to Indoor Operations	Complies
15.407 (f)	RSS-Gen (5.5)	Radio Frequency Hazard	Complies
15.407 (g)	Annex A9.5(5)	Frequency Stability	Note 2
15.407 (h)		Transmit Power Control	Not Applicable E.I.R.P < 500 mW
15.407 (h)	Annex A9.4	Dynamic Frequency Selection	Note 3

Note 1: Refer to FCC Part 15B Test Report

Note 2: Refer to original approval under FCC ID: PPD-AR5BHB116 (Canada ID: 4104A-AR5BHB116)

Note 3: Refer to original approval under FCC ID: PPD-AR5BHB116 (Canada ID: 4104A-AR5BHB116)

1.2 Modifications by EMC Technologies

No modifications were required.



2.0 GENERAL INFORMATION

(Information supplied by the Client)

2.1 EUT (WLAN) Details

Transmitter: Half Mini-Card Wireless LAN Module
Wireless Module: HB116 (11a/b/g/n)
Model Number: AR5BHB116
Manufacturer: Atheros Communication Inc,
Maximum Data Rate: 802.11b = 11Mbps, 802.11g and 802.11a = 54Mbps
802.11n = 300 Mbps
Frequency Ranges: 2.412 –2.462 GHz for 11b/g/n
5.18 - 5.32 GHz, 5.5 – 5.7 GHz and 5.745 - 5.825 GHz for 11a/n
Number of Channels: 11 channels for 11b/g/n
24 channels for 11a/n with 20 MHz bandwidth
18 channels for 11n with 40 MHz bandwidth
Antenna Types: Nissei Inverted F (1st, 2nd)
Antenna gain: Max antenna gain is less than 6 dBi.
Refer antenna data provided separately
Power Supply: 3.3 VDC from PCI bus

Channels and Output Powers:

Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Tx BW (MHz)	Average Power Target (dBm)		
					Tx A		Tx B
802.11a	36	5180	6	-	12.0		12.0
	40	5200					
	44	5220					
	48	5240					
	52	5260					
	56	5280			13.5		13.5
	60	5300					
	64	5320					
	100	5500					
	104	5520					
	108	5540					
	112	5560					
	116	5580					
	120	5600					
	124	5620					
	128	5640					
	132	5660					
	136	5680					
	140	5700					
	149	5745			15.0		15.0
	153	5765					
157	5785						
161	5805						
165	5825						
802.11b	1	2412	1	-	16.5		16.5
	6	2437					
	11	2462					
802.11g	1	2412	6	-	10.5		10.5
	2	2417			16.5		16.5
	6	2437					
	10	2457					
	11	2462			10.0		10.0



Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Tx BW (MHz)	Average Power Target (dBm)	
					Tx A	Tx B
802.11n	1	2412	HT0	20	11.0	11.0
	2	2417				
	6	2437			13.0	13.0
	10	2457				
	11	2462			10.0	10.0
	36	5180				
	40	5200			12.0	12.0
	44	5220				
	48	5240			12.5	12.5
	52	5260				
	56	5280			13.0	13.0
	60	5300				
	64	5320				
	100	5500				
	104	5520				
	108	5540				
	112	5560				
	116	5580				
	120	5600			13.5	13.5
	124	5620				
	128	5640				
	132	5660				
	136	5680				
	140	5700				
	149	5745				
	153	5765			15.0	15.0
	157	5785				
	161	5805				
	165	5825			14.5	14.5
	3F	2422		40 Wide	9.5	9.5
	4F	2427				
	5F	2432				
	6F	2437			13.0	13.0
	7F	2442				
	8F	2447				
	9F	2452			9.5	9.5
	38	5190			11.0	11.0
	46	5230			13.5	13.5
	54	5270			12.0	12.0
	62	5310			8.5	8.5
	102	5510				
	110	5550				
	118	5590			14.0	14.0
	126	5630				
	134	5670				
	151	5755			15.5	15.5
	159	5795			15.0	15.0

The AR5BHB116 is capable of using multiple antennas transmitting simultaneously (two antennas). In any two antennas transmitting, the power level is 3 dB lower (50%) for each antenna port than if a single antenna was transmitting.

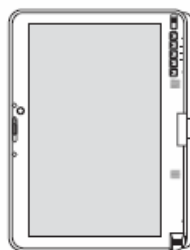


2.2 Host (Notebook PC) Details

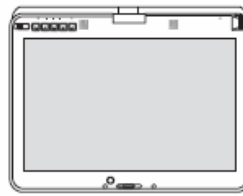
NoteBook PC:	Portable LifeBook T series
Model Name:	T901
Serial Number:	Pre-production Sample
Manufacturer:	FUJITSU LIMITED
CPU Type and Speed:	Core i7-2620M 2.7GHz
LCD:	13.3"WXGA (1280x800 : HV133WX1
Wired LAN:	Intel 82579LM : 10 Base-T/100 Base-TX/1000Base-T
Modem:	Agere MDC1.5 modem Model: D40
Port Replicator Model:	FPCPR105
AC Adapter Model:	80W: ADP-80NB A (Delta), SEE100P2-19.0 (Sanken), P JW1942N (Tamura), P JW1942NA (Tamura)
Voltage:	19 V
Current Specs:	4.22A
Watts:	80W



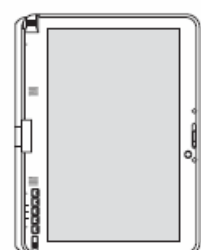
Primary
Landscape Orientation



Primary Portrait
Orientation



Secondary
Landscape Orientation



Secondary Portrait
Orientation

2.3 Test Configuration

The Atheros WLAN test software "ART2" was used to transmit continuously during the tests.

Conducted tests were performed at the WLAN Antenna ports.

Radiated tests were performed for measuring the harmonics and spurious from the transmitters.

Power is provided via an AC adaptor. Testing was performed at a voltage of 110VAC at 50Hz.

2.4 Test Procedure

Emissions measurements were performed in accordance with the procedures of ANSI C63.4-2003. Radiated emissions tests were performed at a distance of 1 and 3 metres from the EUT.

2.5 Test Facility

2.5.1 General

EMC Technologies Pty Ltd is listed by the FCC as a test laboratory able to perform compliance testing for the public. EMC Technologies is listed as an FCC part 47CFR2.948 test lab and may perform the testing required under Parts 15 and 18 – **FCC Registration Number 90560**

EMC Technologies Pty Ltd has also been accredited as a Conformity Assessment Body (CAB) by Australian Communications and Media Authority (ACMA) under the APECTEL MRA and is designated to perform compliance testing on equipment subject to Declaration of Conformity (DoC) and Certification under Parts 15 & 18 of the FCC Commission's rules – **Registration Number 494713 & Designation number AU0001.**

EMC Technologies has also been accepted by Industry Canada for the performance of radiated measurements in accordance with RSS 212, Issue 1 (Provisional) - **Industry Canada number 3569B.**

Measurements were performed at EMC Technologies' laboratory in Keilor Park, Victoria Australia.

2.5.2 NATA Accreditation

EMC Technologies is accredited in Australia to test to the following standards by the National Association of Testing Authorities (NATA).

“FCC Part 15 unintentional and intentional emitters in the frequency range 9kHz to 18 GHz excluding TV receivers (15.117 and 15.119), TV interface devices (15.115), cable ready consumer electronic equipment (15.118), cable locating equipment (15.213) and unlicensed national information infrastructure devices (Sub part E).”

The current full scope of accreditation can be found on the NATA website: www.nata.asn.au It also includes a large number of emissions, immunity, SAR, EMR and Safety standards.

NATA is the Australian national laboratory accreditation body and has accredited EMC Technologies to operate to the IEC/ISO17025 requirements. A major requirement for accreditation is the assessment of the company and its personnel as being technically competent in testing to the standards. This requires fully documented test procedures, continued calibration of all equipment to the National Standard at the National Measurements Institute (NMI) and an internal quality system to ISO 9002. NATA has mutual recognition agreements with the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Association for Laboratory Accreditation (A²LA).

2.6 Test Equipment Calibration

All measurement instrumentation and transducers were calibrated in accordance with the applicable standards by an independent NATA registered laboratory such as Agilent Technologies (Australia) Pty Ltd or the National Measurement Institute (NMI). All equipment calibration is traceable to Australia national standards at the National Measurements Institute. The reference antenna calibration was performed by NMI and the working antennas (biconical and log-periodic) calibrated by the EMC Technologies. The complete list of test equipment used for the measurements, including calibration dates and traceability is contained in Appendix A



FCC 15.407 (U-NII) RESULTS

3.0 CONDUCTED EMISSION MEASUREMENTS

Testing was performed by Fujitsu General EMC Laboratory, JAPAN accredited by NVLAP (Lab Code: 200373-0).

4.0 RADIATED SPURIOUS EMISSION MEASUREMENTS

4.1 Test Procedure

Testing was performed in accordance with the requirements of FCC Part 15.407(b).

Radiated emission measurements were performed to the limits as per section 15.209 and 15.407. Measurements above 1 GHz were made over a distance of 3 and 1 metres.

Calibrated EMCO 3115, EMCO 3116 and ETS standard gain horn antennas were used for measurements between 1 to 40 GHz.

The measurement of emissions above 1000 MHz was measured using a following setting:

Peak measurements setting: RBW = VBW = 1 MHz

Average measurements setting: RBW = 1 MHz and VBW = 10 Hz

The receiver bandwidth was set to 6 dB.

The EUT was slowly rotated with the Peak Detector set to Max-Hold. This was performed for two antenna heights. When an emission was located, it was positively identified and its maximum level found by rotating the automated turntable, and by varying the antenna height. Each significant peak was investigated with the Peak/Average Detectors. The measurement data for each frequency range was corrected for cable losses, antenna factors and preamplifier gain. This process was performed for both horizontal and vertical antenna polarisations.

4.2 Calculation of field strength

The field strength was calculated automatically by the software using all the pre-stored calibration data. The method of calculation is shown below:

E = V + AF - G + L Where:

E = Radiated Field Strength in dBμV/m.

V = EMI Receiver Voltage in dBμV. (measured value)

AF = Antenna Factor in dB(m⁻¹). (stored as a data array)

G = Preamplifier Gain in dB. (stored as a data array)

L = Cable loss in dB. (stored as a data array of Insertion Loss versus frequency)

- Example Field Strength Calculation**

Assuming a receiver reading of 34.0 dBμV is obtained at 90 MHz, the Antenna Factor at that frequency is 9.2 dB. The cable loss is 1.9 dB while the preamplifier gain is 20 dB. The resulting Field Strength is therefore as follows:

$$34.0 + 9.2 + 1.9 - 20 = 25.1 \text{ dB}\mu\text{V/m}$$



4.3 Radiated Emissions (Spurious and Harmonics)

This transmitter module was originally tested and certified by the manufacturer as a stand-alone module outside a laptop (host) with higher gain antennas. Refer to manufacturer's original FCC 15.407 AR5BHB116 test report for full results showing compliance with the spurious and harmonics limits. However, to ensure the transmitter module install in T901 LifeBook is still in compliance, verification tests were performed at the worst case (frequencies with higher average output power) or selected frequencies for harmonics and spurious emissions.

Initial investigations were performed with all data rates. Final testing was performed while the transmitter continuously operated in the worst case condition.

All orientations were investigated and tested. Worst results were reported below.

4.3.1 Frequency Band: 1 – 40 GHz

The peak limits for undesirable emission outside of the restricted bands are –27 dBm (68.3 dBuV/m @ 3m). The 74 dBuV/m @ 3m and 54 dBuV/m @ 3m limits are applied for emissions fall in the restricted bands. The limits are adjusted by 10.5 dB when measurements perform at a distance of 1m.

Testing was performed while the WLAN transmitter continuously operated. Harmonics related to the WLAN transmitter operated in the frequency bands 5.15 – 5.35 GHz and 5.47 – 5.725 GHz are reported below. Harmonics in the frequency bands 2.4 – 2.4835 GHz and 5.725 – 5.850 GHz, refer to M101141_FCC_AR5BHB116_C2PC_DTS.

Measurements were performed with the EUT operating in the worst case mode of single antenna transmitting. For multiple antennas transmitting like two antennas transmitting, the power level is 3 dB lower (50%) with respect to single antenna mode.

Harmonics were measured for channels where the RF output power was highest.

4.3.1.1 Configuration 802.11a

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
5180	Transmit Frequency				
Harmonics	Low				Complied

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
5320	Transmit Frequency				
10640	54.1	39.4	74.0	54.0	Complied

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
5580	Transmit Frequency				
Harmonics	Low				Complied

Result: Harmonic was recorded up to 40 GHz. Other harmonics were confirmed low with both RBW and VBW reduced. The worst case emissions complied with the FCC limits of sections 15.209 and 15.407 by a margin of 14.6 dB.



4.3.1.2 Configuration 802.11n – Tx BW = 20 MHz

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
5240	Transmit Frequency				
Harmonics	Low				Complied

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
5300	Transmit Frequency				
Harmonics	Low				Complied

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
5500	Transmit Frequency				
Harmonics	Low				Complied

Result: Harmonics were low. Emissions complied with the FCC limits of sections 15.209 and 15.407 by a margin of greater than 20.0 dB.

4.3.1.3 Configuration 802.11n – Tx BW = 40 MHz

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
5230	Transmit Frequency				
Harmonics	Low				Complied

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
5670	Transmit Frequency				
Harmonics	Low				Complied

Result: Harmonics were low. Emissions complied with the FCC limits of sections 15.209 and 15.407 by a margin of greater than 20.0 dB.

4.3.2 Frequency Band: 30 - 1000 MHz

Testing was performed by Fujitsu General EMC Laboratory, JAPAN accredited by NVLAP (Lab Code: 200373-0).

4.3.3 RF Conducted Measurements at the Antenna Terminal (including Band Edge)

Refer to original approval under FCC ID: PPD-AR5BHB116 (Canada ID: 4104A-AR5BHB116) certified by Atheros.

Testing was performed by Sporton International Inc, Taiwan (Testing Laboratory: 1190).



5.0 PEAK OUTPUT POWER - Section 15.407(a)

Refer to original approval under FCC ID: PPD-AR5BHB116 (Canada ID: 4104A-AR5BHB116) certified by Atheros.

Testing was performed by Sporton International Inc, Taiwan (Testing Laboratory: 1190).

6.0 CHANNEL BANDWIDTH

Refer to original approval under FCC ID: PPD-AR5BHB116 (Canada ID: 4104A-AR5BHB116) certified by Atheros.

Testing was performed by Sporton International Inc, Taiwan (Testing Laboratory: 1190).

7.0 PEAK POWER SPECTRAL DENSITY

Refer to original approval under FCC ID: PPD-AR5BHB116 (Canada ID: 4104A-AR5BHB116) certified by Atheros.

Testing was performed by Sporton International Inc, Taiwan (Testing Laboratory: 1190).

8.0 PEAK EXCURSION

Refer to original approval under FCC ID: PPD-AR5BHB116 (Canada ID: 4104A-AR5BHB116) certified by Atheros.

Testing was performed by Sporton International Inc, Taiwan (Testing Laboratory: 1190).

9.0 FREQUENCY STABILITY

Refer to original approval under FCC ID: PPD-AR5BHB116 (Canada ID: 4104A-AR5BHB116) certified by Atheros.

Testing was performed by Sporton International Inc, Taiwan (Testing Laboratory: 1190).

10.0 DYNAMIC FREQUENCY SELECTION

The EUT is a Client Device without Radar Interference Detection Function.

Ad-hoc operation (not under control of a Master Device) is supported in the 2.4 GHz & 5.15 - 5.25 GHz bands only. This Ad-hoc capability is limited in hardware via factory programmed EEPROM settings that cannot be accessed or changed by end users. The Ad-hoc supported channels of operation cannot be modified – regardless of which client utility or operating system control is used.

Refer to original approval under FCC ID: PPD-AR5BHB116 (Canada ID: 4104A-AR5BHB116) certified by Atheros.

Testing was performed by Sporton International Inc, Taiwan (Testing Laboratory: 1190).



11.0 DISCONTINUE TRANSMISSION

Data Transmission is always initiated by software, which is then passed down through the MAC, through the digital and analog baseband, finally to the RF chip. Several special packets (ACKs, CTS, PSpoll, etc) are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which then turns off at the end of the packet. Therefore, the transmitter will be ON only while one of the four mentioned packets is being transmitted.

12.0 RADIO FREQUENCY EXPOSURE (HAZARD) INFORMATION

Testing was performed in accordance with the requirements of FCC Part 15.407(f)

Spread spectrum transmitters operating in the 5.15 – 5.35 GHz and 5.47 – 5.725 GHz are required to be operated in a manner that ensures that the public is not exposed to RF energy levels in accordance with CFR 47, Section 1.1307(b)(1).

In accordance with this section and also section 2.1093 this device has been defined as a portable device.

SAR testing was performed in accordance with OET Bulletin 65 and reported under EMC Technologies reports M101143_FCC_AR5BHB116_SAR_2.4 (2.4 GHz) and M101143_FCC_AR5BHB116_SAR_5.6 (5.18 – 5.825 GHz). SAR values of 1.20 mW/g (5GHz) and 0.463 mW/g (2.4GHz) were measured which complied with the FCC human exposure requirements of 47 CFR 2.1093 (d).

13.0 ANTENNA REQUIREMENT

This intentional radiator was designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.



14.0 COMPLIANCE STATEMENT

The Atheros Half Mini-PCI Wireless LAN Module (HB116 802.11a/b/g/n 2x2), Model: AR5BHB116 installed in Portable PC Fujitsu notebook PC, Model: T901, **complied** with the requirements of 47 CFR, Part 15 Subpart E - Section 15.407 (5.15-5.35 GHz and 5.47 – 5.725 GHz bands).

The test sample also complied with the Industry Canada RSS-210 issue 7 - Low Power Licence-Exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment, Annex 9 Local Area Network Devices requirements and the RF exposure requirements of RSS-102.

Results were as follows:

FCC Subpart E, Section 15.407

FCC Part 15, Subpart E Clauses	Industry Canada RSS-210 Clauses	Test Performed	Result
15.203	5.5	Antenna Requirement	Complies
15.205	6.3	Operation in Restricted Band	Complies
15.207	6.6	Conducted Emissions	Note 1
15.209	6.3	Radiated Emissions	Complies
15.407 (a)(1) (a)(2)	Annex A9.2	Peak Transmit Power	Note 2
15.407 (a)(5)	Annex A9.2	Peak Power Spectral Density	Note 2
15.407 (a)(6)		Peak Excursion	Note 2
15.407 (b)	Annex A9.3	Undesirable Emission	Complies
15.407 (c)	Annex A9.5(4)	Discontinue Transmission	Complies
15.407 (d)		Reserved	-
15.407 (e)	2.2 (Table 1)	Restricted to Indoor Operations	Complies
15.407 (f)	RSS-Gen (5.5)	Radio Frequency Hazard	Complies
15.407 (g)	Annex A9.5(5)	Frequency Stability	Note 2
15.407 (h)		Transmit Power Control	Not Applicable E.I.R.P < 500 mW
15.407 (h)	Annex A9.4	Dynamic Frequency Selection	Note 3

Note 1: Refer to FCC Part 15B Test Report

Note 2: Refer to original approval under FCC ID: PPD-AR5BHB116 (Canada ID: 4104A-AR5BHB116)

Note 3: Refer to original approval under FCC ID: PPD-AR5BHB116 (Canada ID: 4104A-AR5BHB116)



15.0 MEASUREMENT UNCERTAINTIES

EMC Technologies has evaluated the equipment and the methods used to perform the emissions testing. The estimated measurement uncertainties for emissions tests shown within this report are as follows:

Conducted Emissions:	9 kHz to 30 MHz	±3.2 dB
Radiated Emissions:	30 MHz to 300 MHz	±5.1 dB
	300 MHz to 1000 MHz	±4.7 dB
	1 GHz to 18 GHz	±4.6 dB

The above expanded uncertainties are based on standard uncertainties multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

16.0 TEST REPORT APPENDICES

MEASUREMENT INSTRUMENT DETAILS
PHOTOGRAPHS
ANTENNA INFORMATION
FCC LABELLING DETAILS
USER MANUAL
RF Exposure Information
FCC DOC for LifeBook T Series
FCC Part 15B Test Report
Atheros AR5BHB116 FCC 15.407 Test Report
Atheros AR5BHB116 FCC 15.407 DFS Test Report

