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**EMI TEST REPORT FOR CERTIFICATION  
to  
FCC PART 15 Subpart C (Section 15.247) & RSS-210  
Class II Permissive Change**

FCC ID: EJE-WL0025  
Industry Canada ID: 337J-WL0025

Radio Module: Ralink WLU5110-D50(ROHS) 802.11agbn WLAN

Host NoteBook: STYLISTIC Q Series  
Model Number: Q550

Report Number: M110324\_FCC\_WLU5110-D50(ROHS)\_C2PC\_DTS

Issue Date: 6<sup>th</sup> April 2011

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**EMC Technologies Report No. M110324\_FCC\_WLU5110-D50(ROHS)\_C2PC\_DTS**

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**Report No. M110324\_FCC\_WLU5110-D50(ROHS)\_C2PC\_DTS**

**Radio Module:** Ralink WLU5110-D50(ROHS) 802.11agbn WLAN  
**Manufacturer:** Ralink

**FCC ID:** EJE-WL0025  
**Industry Canada ID:** 337J-WL0025  
**Equipment Type:** Intentional Radiator (Transceiver)

**Host NoteBook:** Q550 STYLISTIC Q Series  
**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 C - Intentional Radiators  
Section 15.247: 2400 – 2483.5 MHz & 5725 – 5850 MHz Operation Bands  
ANSI C63.4 – 2003

RSS-210 Issue 8 Low Power Licence-Exempt RadioCommunication Devices Annex 8: 2400–2483.5 MHz & 5725–5850 MHz Operation Bands

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:** 27<sup>th</sup> March to 1<sup>st</sup> April 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



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to  
**FCC PART 15 Subpart C (Section 15.247) & RSS-210**  
**Class II Permissive Change**

## 1.0 INTRODUCTION

EMI testing was performed on the Ralink 802.11abgn Wireless LAN Module, Model: WLU5110-D50(ROHS) installed in Fujitsu STYLISTIC Q Series, Model number: Q550.

The WLU5110-D50(ROHS) WLAN transmitter installed in the Q550 STYLISTIC is a Ralink 802.11abgn Wireless LAN Module. This module was originally certified by Fujitsu Ltd as a modular approval under FCC ID: EJE-WL0025 (Canada ID: 337J-WL0025).

The other transmitter installed in the Q550 STYLISTIC 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). This Bluetooth preapproved module, is not co-located as the WLAN and Bluetooth antennas are >5cms apart. RF exposure and labeling will be addressed by Fujitsu according to FCC multi-transmitter and modular procedures.

The intention of this Class II Permissive Change application is to certify WLU5110-D50(ROHS) Ralink WLAN module installed in Fujitsu STYLISTIC Q Series, Model number: Q550. The Radio modules are installed in a controlled environment at the Fujitsu notebook production/assembly factory.

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

47 CFR, Part 15, Subpart C:	Rules for intentional radiators (particularly section 15.247)
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 15.247:	Operation in the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5850 MHz

The test sample **complied** with the requirements of 47 CFR, Part 15 Subpart C - Section 15.247.

The test sample also complied with the Industry Canada RSS-210 issue 8 - Low Power Licence-Exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment, Annex 8 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 C, Section 15.247

FCC Part 15 Subpart C Clauses	Industry Canada RSS-210 Issue 8 and RSS-Gen Clauses	Test Performed	Results
<b>15.203</b>	RSS-Gen (7.1.4)	Antenna Requirement	<b>Complies</b>
<b>15.205</b>	2.2 (Table 1)	Operation in Restricted Band	<b>Complies</b>
<b>15.207</b>	RSS-Gen (7.2.2)	Conducted Emissions	<b>Note 1</b>
<b>15.209</b>	RSS-Gen (6)	Radiated Emissions	<b>Complies</b>
<b>15.247 (a)(2)</b>	A8.1 (b) (d)	Channel Bandwidth	<b>Note 2</b>
<b>15.247 (b)(3)</b>	A8.4	Peak Output Power	<b>Note 2</b>
<b>15.247 (c)</b>	RSS-Gen (7.1.4)	Antenna Gain > 6 dBi	<b>Not Applicable.</b> Antenna gain < 6 dBi
<b>15.247 (d)</b>	A8.5	Out of Band Emissions	<b>Complies</b>
<b>15.247 (e)</b>	A8.2 (b)	Peak Power Spectral Density	<b>Note 2</b>
<b>15.247 (f)</b>	A8.3	Hybrid Systems (Note 3)	<b>Not Applicable.</b> EUT does not employ a hybrid system
<b>15.247 (g)</b>	A8.1	Frequency Hopping	<b>Not Applicable.</b> EUT does not employ frequency hopping
<b>15.247 (h)</b>	A8.1	Frequency Hopping	<b>Not Applicable.</b> EUT does not employ frequency hopping
<b>15.247 (i)</b>	RSS-Gen (5.5)	Radio Frequency Hazard	<b>Complies</b>

**Note 1:** Refer to FCC Part 15B Test Report

**Note 2:** Refer to original approval under FCC ID: EJE-WL0025 (Canada ID: 337J-WL0025)

**Note 3:** Hybrid systems are those that employ a combination of both frequency hopping and digital modulations technique.

## 1.2 Modifications by EMC Technologies

No modifications were required.



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## 2.0 GENERAL INFORMATION

(Information supplied by the Client)

### 2.1 EUT (WLAN) Details

<b>Transmitter:</b>	Wireless LAN Module
<b>Wireless Module:</b>	Ralink WLU5110-D50(ROHS) (11a/b/g/n)
<b>Model Number:</b>	WLU5110-D50(ROHS)
<b>Manufacturer:</b>	Ralink
<b>Maximum Data Rate:</b>	802.11b = 11Mbps, 802.11g and 802.11a = 54Mbps 802.11n = 150 Mbps
<b>Frequency Ranges:</b>	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
<b>Number of Channels:</b>	11 channels for 11b/g/n 24 channels for 11a/n with 20 MHz bandwidth 18 channels for 11n with 40 MHz bandwidth
<b>Antenna Type:</b>	Nissei Inverted F
<b>Antenna gain:</b>	Max antenna gain is less than 6 dBi. Refer antenna data provided separately
<b>Power Supply:</b>	3.3 VDC from PCI bus

#### Channels and Output Power Settings:

Modes	Channels	Frequency MHz	Average Output Power (dBm)
<b>802.11b</b>	1, 6 and 11	2412, 2437 and 2462	16.0
<b>802.11g</b>	1, 6 and 11	2412, 2437 and 2462	15.0
<b>802.11a</b>	36, 40 and 48	5180, 5200 and 5240	13.0
	52, 60 and 64	5260, 5300 and 5320	
	100, 120 and 140	5500, 5600 and 5700	
	149, 157 and 165	5745, 5785 and 5825	12.0
<b>802.11n</b> <b>20MHz Bandwidth</b>	1	2412	15.0
	6	2437	
	11	2462	
	36, 40 and 48	5180, 5200 and 5240	13.0
	52, 60 and 64	5260, 5300 and 5320	
	100, 120 and 140	5500, 5600 and 5700	
	149, 157 and 165	5745, 5785 and 5825	
<b>802.11n</b> <b>40MHz Bandwidth</b>	3	2422	15.0
	6	2437	
	9	2452	
	38, 54 and 62	5190, 5270 and 5310	13.0
	102, 118 and 134	5510, 5590 and 5670	
	151 and 159	5755 and 5795	

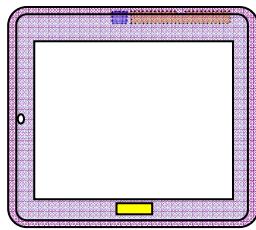


## 2.2 Host (Notebook PC) Details

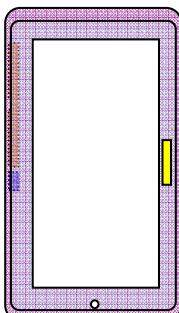
<b>NoteBook PC:</b>	STYLISTIC Q Series
<b>Model Name:</b>	Q550
<b>Serial Number:</b>	Pre-production Sample
<b>Manufacturer:</b>	FUJITSU LIMITED

<b>CPU Type and Speed:</b>	Atom Z670 1.5GHz
<b>LCD</b>	10.1"WXGA(1280x800 : LTN101AL01-701
<b>Graphics chip</b>	Non
<b>Wired LAN:</b>	Non
<b>Modem:</b>	Non
<b>Port Replicator Model:</b>	FPCPR114

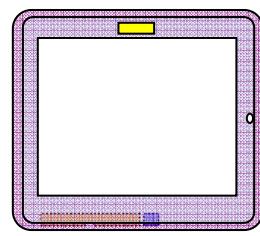
<b>AC Adapter Model:</b>	80W: SEE55N2-19.0(Sanken)
<b>Voltage:</b>	19 V
<b>Current Specs:</b>	2.1A
<b>Watts:</b>	40W



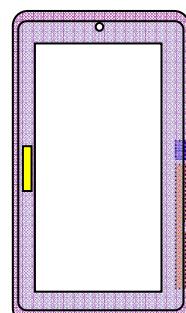
Primary Landscape



Primary Portrait



Secondary Landscape



Secondary Portrait

## 2.3 Test Configuration

The Ralink WLAN test software "QA" was used to transmit continuously during the tests.

Conducted tests were performed at the WLAN Antenna port.

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.



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## 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](http://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 (A<sup>2</sup>LA).

## 2.6 Test Equipment Calibration

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, log-periodic and horns) calibrated by the EMC Technologies. The complete list of test equipment used for the measurements, including calibration dates and traceability is contained in the Measurement Instrument Details.



## FCC 15.247 (DTS) RESULTS

### 3.0 CONDUCTED EMISSION MEASUREMENTS

Refer to FCC Part 15B Test Report

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 15.247(d).

Radiated emission measurements were performed to the limits as per section 15.209 and 15.247. All 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 dB $\mu$ V/m.

**V** = EMI Receiver Voltage in dB $\mu$ V. (measured value)

**AF** = Antenna Factor in dB(m<sup>-1</sup>). (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 dB $\mu$ V 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 original approval under FCC ID: EJE-WL0025 (Canada ID: 337J-WL0025) certified by Fujitsu Ltd. Manufacturer's original FCC 15.247 WLU5110-D50(ROHS) test report for full results showing compliance with the spurious and harmonics limits. However, to ensure the transmitter module install in Q550 STYLISTIC 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 74 dB $\mu$ V/m @ 3m and 54 dB $\mu$ V/m @ 3m limits are applied for emissions fall in the restricted bands. The limits for emission outside the restricted band are 20 dB below the fundamental field strength. 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 2.4 – 2.4835 GHz and 5.725 – 5.850 GHz are reported below. Harmonics in the frequency bands 5.15 – 5.35 GHz and 5.47 – 5.725 GHz, refer to M110324\_FCC\_WLU5110-D50(ROHS)\_C2PC\_NII.

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

#### 4.3.1.1 Configuration 802.11b

Frequency MHz	Peak Detector dB $\mu$ V/m	Average Detector dB $\mu$ V/m	Peak Limit dB $\mu$ V/m	Average Limit dB $\mu$ V/m	Result
2412	Transmit Frequency				
4824	50.9	47.2	74.0	54.0	Complied
3216	58.5	56.3	Note 1		Complied

Note 1 – emission is not within the restrict band. Therefore, the limits are 20dB below the transmit frequency.

Frequency MHz	Peak Detector dB $\mu$ V/m	Average Detector dB $\mu$ V/m	Peak Limit dB $\mu$ V/m	Average Limit dB $\mu$ V/m	Result
2437	Transmit Frequency				
4874	50.8	47.0	74.0	54.0	Complied
3249.3	56.5	54.5	Note 1		Complied

Note 1 – emission is not within the restrict band. Therefore, the limits are 20dB below the transmit frequency.

Frequency MHz	Peak Detector dB $\mu$ V/m	Average Detector dB $\mu$ V/m	Peak Limit dB $\mu$ V/m	Average Limit dB $\mu$ V/m	Result
2462	Transmit Frequency				
4924	51.4	47.4	74.0	54.0	Complied
3282.6	54.2	51.9	Note 1		Complied

Note 1 – emission is not within the restrict band. Therefore, the limits are 20dB below the transmit frequency.



**Result:** Harmonic and spurious were recorded up to 25 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 15.247 by a margin of 6.6 dB.

#### 4.3.1.2 Configuration 802.11g

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
2412	Transmit Frequency				
4824	51.3	34.2	74.0	54.0	Complied
3216	58.4	55.8	Note 1		Complied

Note 1 – emission is not within the restrict band. Therefore, the limits are 20dB below the transmit frequency.

**Result:** Harmonic and spurious were recorded up to 25 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 15.247 by a margin of > 10 dB.

#### 4.3.1.3 Configuration 802.11a

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
5745	Transmit Frequency				
Harmonics and spurious are low				Complied	

**Result:** No harmonic was recorded up to 40 GHz. Harmonics were confirmed low with both RBW and VBW reduced. The worst case emissions complied with the FCC limits of sections 15.209 and 15.247 by a margin of > 10 dB.

#### 4.3.1.4 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
2412	Transmit Frequency				
4824	51.4	34.4	74.0	54.0	Complied
3216	58.3	55.6	Note 1		Complied

Note 1 – emission is not within the restrict band. Therefore, the limits are 20dB below the transmit frequency.

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
5825	Transmit Frequency				
Harmonics and spurious are low				Complied	

**Result:** Harmonic and spurious were 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 15.247 by a margin of > 10 dB.



#### 4.3.1.5 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
2437	Transmit Frequency				
4874	51.0	33.1	74.0	54.0	Complied
3249.3	57.9	55.2	Note 1		Complied

Note 1 – emission is not within the restrict band. Therefore, the limits are 20dB below the transmit frequency.

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
5795	Transmit Frequency				
	Harmonics and spurious are low			Complied	

**Result:** Harmonic and spurious were 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 15.247 by a margin of >10 dB.

#### 4.3.2 Frequency Band: 30 - 1000 MHz

Refer to FCC Part 15B Test Report

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: EJE-WL0025 (Canada ID: 337J-WL0025) certified by Fujitsu Ltd.

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

### 5.0 PEAK OUTPUT POWER - Section 15.247 (b)(3)

Refer to original approval under FCC ID: EJE-WL0025 (Canada ID: 337J-WL0025) certified by Fujitsu Ltd.

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

### 6.0 CHANNEL BANDWIDTH

Refer to original approval under FCC ID: EJE-WL0025 (Canada ID: 337J-WL0025) certified by Fujitsu Ltd.

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

### 7.0 PEAK POWER SPECTRAL DENSITY

Refer to original approval under FCC ID: EJE-WL0025 (Canada ID: 337J-WL0025) certified by Fujitsu Ltd.

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



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## 8.0 RADIO FREQUENCY EXPOSURE (HAZARD) INFORMATION

Testing was performed in accordance with the requirements of FCC Part 15.247(i)

Spread spectrum transmitters operating in the 2400 - 2483.5 MHz and 5725 – 5850 MHz bands 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 M110325\_FCC\_WLU5110-D50(ROHS)\_SAR\_2.4 (2.4 GHz) and M110325\_FCC\_WLU5110-D50(ROHS)\_SAR\_5.6 (5.18 – 5.825 GHz). SAR values of 1.120 mW/g (5GHz) and 0.870 mW/g (2.4GHz) were measured which complied with the FCC human exposure requirements of 47 CFR 2.1093 (d).

## 9.0 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.



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## 10.0 COMPLIANCE STATEMENT

The Ralink 802.11abgn Wireless LAN Module, Model: WLU5110-D50(ROHS) installed in Fujitsu STYLISTIC Q Series, Model number: Q550, **complied** with the requirements of 47 CFR, Part 15 Subpart C - Rules for Radio Frequency Devices (intentional radiators), Section 15.247 - Operation in the frequency bands 2400 - 2483.5 MHz and 5725 – 5850 MHz.

The test sample also complied with the Industry Canada RSS-210 issue 8 - Low Power Licence-Exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment, Annex 8 and the RF exposure requirements of RSS-102.

**Results were as follows:**

### FCC Subpart C, Section 15.247

FCC Part 15 Subpart C Clauses	Industry Canada RSS-210 Issue 8 and RSS-Gen Clauses	Test Performed	Results
<b>15.203</b>	RSS-Gen (7.1.4)	Antenna Requirement	<b>Complies</b>
<b>15.205</b>	2.2 (Table 1)	Operation in Restricted Band	<b>Complies</b>
<b>15.207</b>	RSS-Gen (7.2.2)	Conducted Emissions	<b>Note 1</b>
<b>15.209</b>	RSS-Gen (6)	Radiated Emissions	<b>Complies</b>
<b>15.247 (a)(2)</b>	A8.1 (b) (d)	Channel Bandwidth	<b>Note 2</b>
<b>15.247 (b)(3)</b>	A8.4	Peak Output Power	<b>Note 2</b>
<b>15.247 (c)</b>	RSS-Gen (7.1.4)	Antenna Gain > 6 dBi	<b>Not Applicable.</b> Antenna gain < 6 dBi
<b>15.247 (d)</b>	A8.5	Out of Band Emissions	<b>Complies</b>
<b>15.247 (e)</b>	A8.2 (b)	Peak Power Spectral Density	<b>Note 2</b>
<b>15.247 (f)</b>	A8.3	Hybrid Systems (Note 3)	<b>Not Applicable.</b> EUT does not employ a hybrid system
<b>15.247 (g)</b>	A8.1	Frequency Hopping	<b>Not Applicable.</b> EUT does not employ frequency hopping
<b>15.247 (h)</b>	A8.1	Frequency Hopping	<b>Not Applicable.</b> EUT does not employ frequency hopping
<b>15.247 (i)</b>	RSS-Gen (5.5)	Radio Frequency Hazard	<b>Complies</b>

**Note 1:** Refer to FCC Part 15B Test Report

**Note 2:** Refer to original approval under FCC ID: EJE-WL0025 (Canada ID: 337J-WL0025)

**Note 3:** Hybrid systems are those that employ a combination of both frequency hopping and digital modulations technique.



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## 11.0 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:

<b>Conducted Emissions:</b>	9 kHz to 30 MHz	±3.2 dB
<b>Radiated Emissions:</b>	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%.

## 12.0 TEST REPORT APPENDICES

### MEASUREMENT INSTRUMENT DETAILS

### PHOTOGRAPHS

### ANTENNA INFORMATION

### FCC LABELLING DETAILS

### USER MANUAL

### RF Exposure Information

### FCC DOC for STYLISTIC Q Series

### FCC Part 15B Test Report



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