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EMI TEST REPORT FOR CERTIFICATION
to
FCC PART 15 Subpart C (Section 15.247)
Class II Permissive Change

FCC ID:	UWT-X52-N
Wireless Radio Module:	WLAN 802.11a/b/g/n Mini-card Module
Model:	X52-N
Host:	Acurix Networks Intelligent Wireless Node
Model:	X3-N-XX
Report Number:	M101050_FCC_X52-N_C2PC
Tested for:	aCure Technology Pty Ltd
Issue Date:	22nd November 2010

EMI TEST REPORT FOR CERTIFICATION
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EMC Technologies Report No. M101050_FCC_X52-N_C2PC

Issue Date: 22nd November 2010

CONTENTS

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Report Number:	M101050_FCC_X52-N_C2PC
FCC ID:	UWT-X52-N
Equipment Type:	Intentional Radiator
Wireless Radio Module:	WLAN 802.11a/b/g/n Mini-card Module
Model:	X52-N
Manufacturer:	Wistron NeWeb Corporation - Taiwan
Antenna Models:	X1-N-24 (5GHz) XA-12-N (2.4GHz)
Host:	Acurix Networks Intelligent Wireless Node
Model:	X3-N-XX
Tested For:	aCure Technology Pty Ltd
Address:	78 Hasler Road Osborne Park WA 6015 Australia
Contact:	Mark Middleton
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
Test Dates:	21st October to 12th November 2010
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
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Class II Permissive Change

1.0 INTRODUCTION

EMI testing was performed on the WLAN 802.11a/b/g/n Mini-card Module, Model: X52-N, with Acurix Networks Intelligent Wireless Node, Model: X3-N-XX.

The Wireless module was recently certified by aCure Technology Pty Ltd under FCC ID: UWT-X52-N. The intention of this **Class II Permissive Change** application is to re-certify the wireless module installed in the Acurix Networks Intelligent Wireless Node, Model: X3-N-XX with a higher antenna gain that were not covered by an original authorization.

This **Class II Permissive Change** filing is only for FCC Part 15.247 (DTS: IEEE802.11a (5745-5825 MHz), IEEE802.11b, IEEE802.11g and IEEE802.11n (5755-5795 MHz)) portion. Therefore, all DTS results are reported in this test report.

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

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

The measurement procedure used was in accordance with ANSI C63.4-2003 and OET Bulletin No. 65. 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	Test Performed	Results
15.203	Antenna Requirement	**Complied**
15.205	Operation in Restricted Band	**Complied**
15.207	Conducted Emissions	**Note 1**
15.209	Radiated Emissions	**Complied**
15.247 (a)(2)	Channel Bandwidth	**Note 2**
15.247 (b)	Peak Output Power	**Not applicable. Refer to 15.247 (c)** Antenna Gain > 6 dBi.
15.247 (c)	Antenna Gain > 6 dBi	**Yes, complied. Refer to Note 2**
15.247 (d)	Out of Band Emissions	**Complied**
15.247 (e)	Peak Power Spectral Density	**Note 2**
15.247 (f)	Hybrid Systems (note 3)	**Not Applicable** EUT does not employ a hybrid system
15.247 (g)	Frequency Hopping	**Not Applicable** EUT does not employ a frequency hopping modulation technique
15.247 (h)	Frequency Hopping	**Not Applicable** EUT does not employ a frequency hopping modulation technique
15.247 (i)	Radio Frequency Hazard	**Complied**

Note 1: Not included in this C2PC filing. New antenna (higher gain) would not change previous results.
Note 2: Refer to original approval under FCC ID: UWT-X52-N
Note 3: Hybrid systems are those that employ a combination of both frequency hopping and digital modulations technique.

2.0 EUT DETAILS

(Information supplied by the Client)

2.1 General

Wireless Radio Module:	WLAN 802.11a/b/g/n Mini-card Module
Model:	X52-N
Manufacturer:	Wistron NeWeb Corporation - Taiwan
Frequency Range:	2412 – 2462 MHz and 5745 – 5825 MHz
Maximum Data Rates:	802.11b = 11Mbps, 802.11g and 802.11a = 54Mbps 802.11n = 300 Mbps
Antenna Models and Gains:	X1-N-24 (5GHz Max antenna gain is 24 dBi) XA-12-N (2.4GHz Max antenna gain is 12 dBi) Refer antenna data provided separately
Host:	Acurix Networks Intelligent Wireless Node
Model:	X3-N-XX

The Acurix Networks X3-N-XX is an intelligent wireless node delivers a whopping 900Mbps of connectivity supporting 3 x 300Mbps links for backhaul and access in any mix of point to point, point to multipoint, mesh and infrastructure-mesh configurations. Each of the three radios is capable of supporting links up to 300Mbps and can do 20MHz or 40MHz channels.

The X52-N WLAN 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 Operational Description

The wireless radio was configured to transmit continuously with both antennas transmitting during the tests.

2.3 Test Configuration

Conducted tests were performed at the wireless radio antenna port.
Radiated tests were performed for measuring the harmonics and spurious from the transmitter.

Power is provided via passive PoE at the Ethernet port. The PoE voltage range is +36V to +60V (+48V nominal) from the external power supply. Testing was performed at a voltage of 48VDC

2.4 Support Equipment

A Toshiba Laptop
PoE Injector
Pronghorn Motherboard

2.5 Modifications by EMC Technologies

No modifications were required.

2.6 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.

2.7 Test Facility

2.7.1 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 open area test site (OATS) has also been accepted by Industry Canada for the performance of radiated measurements in accordance with RSS 212, Issue 1 (Provisional) - **Industry Canada OATS number - IC 3569B-1.**

Radiated Emission measurements were performed at EMC Technologies Open Area Test Site (OATS) situated at Lerderderg Gorge, near the township of Bacchus Marsh in Victoria, Australia.

Conducted measurements at an antenna ports were performed at EMC Technologies' laboratory in Keilor Park, Victoria Australia.

2.7.2 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 (A^2LA).

2.8 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

2.9 Ambients at OATS

The Open Area Test Site (OATS) is an area of low background ambient signals. No significant broadband ambients are present however commercial radio and TV signals exceed the limit in the FM radio, VHF and UHF television bands. Radiated prescan measurements were performed in the shielded enclosure to check for possible radiated emissions at the frequencies where the OATS ambient signals exceeded the test limit.

RESULTS

3.0 CONDUCTED EMISSION MEASUREMENTS

Not included in this C2PC filing. New antenna would not change previous results.

Refer to test report: FR931819-06AB_FCC RF Test Report_15.247. Tested and granted under FCC ID: UWT-X52-N. Conducted emissions result was complied by a margin of 0.66dB. Testing was performed by SPORTON International Inc, Taiwan – accredited by TAF (Taiwan Accreditation Foundation), Certificate Number: L1190-091230.

4.0 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. The measurements were made at the open area test site.

The EUT was set up on the table top (placed on turntable) of total height 80 cm above the ground plane, and operated as described in section 2 of this report. Calibrated EMCO 3115 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 dBµV/m

4.3 Radiated Emissions Results (Spurious and Harmonics)

4.3.1 Frequency Band: 1 – 40 GHz

All measurements above 1 GHz were initially made over a distance of 1 and 3 metres.

The 74 dBμV/m @ 3m and 54 dBμV/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. The limits for emission outside the restricted band are 20 dB below the fundamental field strength.

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.

4.3.1.1 Configuration 802.11b

Channel 1 - 2412 MHz

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
2412	113.6	109.5	Transmitter Fundamental Level		
4824	53.4	50.2	74.0	54.0	Complied
7236	59.5	54.0	74.0	54.0	Complied
9648	54.9	51.5	93.6	89.5	Complied
2640	56.0	48.9	93.6	89.5	Complied
2386 – BE	60.1	52.8	74.0	54.0	Complied

Channel 6 - 2437 MHz

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
2437	113.1	108.9	Transmitter Fundamental Level		
4874	53.5	50.4	74.0	54.0	Complied
7311	Harmonics are lower than Channel 1 – 2412 MHz				Complied
9748					Complied
2640	58.4	51.3	93.1	88.9	Complied

Channel 11 - 2462 MHz

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
2462	112.8	108.7	Transmitter Fundamental Level		
4924	54.6	50.7	74.0	54.0	Complied
7386	Harmonics are lower than Channel 1 – 2412 MHz				Complied
9848					Complied
2640	57.1	50.8	92.8	88.7	Complied
2483.5 – BE	62.6	54.0	74.0	54.0	Complied

Result: Harmonic and spurious emissions 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 0 dB.

4.3.1.2 Configuration 802.11g

Channel 1 - 2412 MHz

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
2412	116.8	103.4	Transmitter Fundamental Level		
4824	51.1	32.7	74.0	54.0	Complied
7236	64.5	49.2	74.0	54.0	Complied
2640	62.8	53.0	96.8	83.4	Complied
2390 – BE	81.9	64.1	84.5	64.5	Complied

*Measurement was performed at a distance of 1m and the limit corrected/adjusted by 10.5dB.

Channel 6 - 2437 MHz

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
2437	116.0	102.7	Transmitter Fundamental Level		
4874	51.2	32.9	74.0	54.0	Complied
7311	Harmonic is lower than Channel 1 – 2412 MHz				Complied
2640	62.5	52.9	96.0	82.7	Complied

Channel 11 - 2462 MHz

Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
2462	115.3	101.8	Transmitter Fundamental Level		
4924	Harmonics are lower than Channel 1 – 2412 MHz				Complied
7386					Complied
2640	62.0	50.7	95.3	81.8	Complied
2483.5 – BE	80.4	63.2	84.5	64.5	Complied

*Measurement was performed at a distance of 1m and the limit corrected/adjusted by 10.5dB.

Result: Harmonic and spurious emissions 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 0.4 dB.

4.3.1.3 Configuration 802.11n – 2.4GHz – 20MHz Channel Bandwidth Signal

Channel tested: 1 (2412MHz), 6 (2437MHz) and 11 (2462MHz).

Result: Fundamental, harmonics, spurious and band-edge levels are similar to or lower than the 802.11g configuration. Refer to section 4.3.1.2

4.3.1.4 Configuration 802.11n – 2.4GHz – 40MHz Channel Bandwidth Signal

Channel tested: 3 (2422MHz), 6 (2437MHz) and 9 (2452MHz).

Result: Fundamental, harmonics, spurious and band-edge levels are similar to or lower than the 802.11g configuration. Refer to section 4.3.1.2

4.3.1.5 Configuration 802.11a

Channel	Frequency MHz	Peak Detector dBuV/m	Average Detector dBuV/m	Peak Limit dBuV/m	Average Limit dBuV/m	Result
149	5745	132.3	121.4	Transmitter Fundamental Level		
	17235	66.2	51.7	112.3	101.4	Complied
	5725 - BE	102.4	85.5	112.3	101.4	Complied
157	5785	131.8	120.7	Transmitter Fundamental Level		
	17355	64.5	50.3	111.8	100.7	Complied
165	5825	132.0	121.1	Transmitter Fundamental Level		
	17475	Harmonic level is lower than channel 149 – 5745MHz				Complied
	5850 – BE	95.4	78.2	112.0	101.1	Complied

Result: Harmonic emissions 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 15.9 dB.

4.3.1.6 Configuration 802.11n – 5GHz – 20MHz Channel Bandwidth Signal

Channel tested: 149 (5745MHz), 157 (5785MHz) and 165 (5825MHz).

Result: Fundamental, harmonics, spurious and band-edge levels are similar to or lower than the 802.11a configuration. Refer to section 4.3.1.5

4.3.1.7 Configuration 802.11n – 5GHz – 40MHz Channel Bandwidth Signal

Channel tested: 151 (5755MHz) and 159 (5795MHz).

Result: Fundamental, harmonics, spurious and band-edge levels are similar to or lower than the 802.11a configuration. Refer to section 4.3.1.5

4.3.2 Frequency Band: 30 - 1000 MHz

Not included in this C2PC filing. New antenna would not change previous results.

Refer to test report: FR931819-06AB_FCC RF Test Report_15.247. Tested and granted under FCC ID: UWT-X52-N. Emissions result was complied by a margin of 2.65dB. Testing was performed by SPORTON International Inc, Taiwan – accredited by TAF (Taiwan Accreditation Foundation), Certificate Number: L1190-091230.

4.3.3 Conducted Band Edge Measurements

Refer to test report: FR931819-06AB_FCC RF Test Report_15.247. Tested and granted under FCC ID: UWT-X52-N. Testing was performed by SPORTON International Inc, Taiwan – accredited by TAF (Taiwan Accreditation Foundation), Certificate Number: L1190-091230.

5.0 PEAK OUTPUT POWER

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

15.247(c)(1)(i) – Systems operating in the 2400-2483.5 MHz band, the transmitter has an antenna gain of 12 dBi. The peak output power is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. Therefore the peak output power limit is 28 dBm.

15.247(c)(1)(ii) – Systems operating in the 5725-5850 MHz band, the transmitter has an antenna gain of 24 dBi. However, no reduction in peak output power is required. Therefore the peak output power limit is 30 dBm.

Refer to test report: FR931819-06AB_FCC RF Test Report_15.247. Tested and granted under FCC ID: UWT-X52-N. Testing was performed by SPORTON International Inc, Taiwan – accredited by TAF (Taiwan Accreditation Foundation), Certificate Number: L1190-091230.

6.0 CHANNEL BANDWIDTH

Refer to test report: FR931819-06AB_FCC RF Test Report_15.247. Tested and granted under FCC ID: UWT-X52-N. Testing was performed by SPORTON International Inc, Taiwan – accredited by TAF (Taiwan Accreditation Foundation), Certificate Number: L1190-091230.

7.0 PEAK POWER SPECTRAL DENSITY

Refer to test report: FR931819-06AB_FCC RF Test Report_15.247. Tested and granted under FCC ID: UWT-X52-N. Testing was performed by SPORTON International Inc, Taiwan – accredited by TAF (Taiwan Accreditation Foundation), Certificate Number: L1190-091230.

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).

The MPE calculation shown below is for the antenna with a minimum separation distance of 300cm (3m).

In accordance with Section 1.1310, the Maximum Permissible Exposure (MPE) limit for the General Population/Uncontrolled Exposure of 1.0 has been applied, i.e 1mW/cm^2.

Friis transmission formula: $Pd = (P*G) / (4*\pi*r^2)$

where: Pd = power density (mW/cm^2)
P = power input to the antenna (mW)
G = antenna gain (numeric)
r = distance to the center of radiation of the antenna (cm)

Prediction frequency = 2437 MHz
Maximum peak output power = 26.46 dBm = 442.6 mW
Antenna gain (typical) = 12 dBi = 15.85 numeric
Prediction distance = 300 cm (3m)
The power density calculated = 0.0062 mW/cm^2

Prediction frequency = 5785 MHz
Maximum peak output power = 22.72 dBm = 187.1 mW
Antenna gain (typical) = 24 dBi = 251.2 numeric
Prediction distance = 300 cm (3m)
The power density calculated = 0.042 mW/cm^2

As the device can incorporate up to three radio modules, the co-located MPE is calculate by summing the worst case power density and compare to the limit (1 mW/cm^2).

Worst case power density is the 5GHz. Therefore, the total power density is 0.126 mW/cm^2

Results: Calculations show that the Wireless Radio device with described antennas complied with co-located Maximum Permissible Exposure (MPE) limit for the General Population/Uncontrolled Exposure with a separation distance of greater than 300cm.

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.

10.0 COMPLIANCE STATEMENT

The WLAN 802.11a/b/g/n Mini-card Module, Model: X52-N, with Acurix Networks Intelligent Wireless Node, Model: X3-N-XX, tested on behalf of aCure Technology Pty Ltd, **complies** with the **Class II Permissive Change** requirements of 47 CFR, Part 15 Subpart C - Rules for Radio Frequency Devices (intentional radiators), Section 15.247 - Operation in the frequency band 2400 - 2483.5 MHz and 5725 – 5850 MHz.

Results were as follows - FCC Subpart C, Section 15.247

FCC Part 15 Subpart C, Clauses	Test Performed	Results
15.203	Antenna Requirement	**Complied**
15.205	Operation in Restricted Band	**Complied**
15.207	Conducted Emissions	**Note 1**
15.209	Radiated Emissions	**Complied**
15.247 (a)(2)	Channel Bandwidth	**Note 2**
15.247 (b)	Peak Output Power	**Not applicable. Refer to 15.247 (c)** Antenna Gain > 6 dBi.
15.247 (c)	Antenna Gain > 6 dBi	**Yes, complied. Refer to Note 2**
15.247 (d)	Out of Band Emissions	**Complied**
15.247 (e)	Peak Power Spectral Density	**Note 2**
15.247 (f)	Hybrid Systems (note 3)	**Not Applicable** EUT does not employ a hybrid system
15.247 (g)	Frequency Hopping	**Not Applicable** EUT does not employ a frequency hopping modulation technique
15.247 (h)	Frequency Hopping	**Not Applicable** EUT does not employ a frequency hopping modulation technique
15.247 (i)	Radio Frequency Hazard	**Complied**

Note 1: Not included in this C2PC filing. New antenna (higher gain) would not change previous results.
Note 2: Refer to original approval under FCC ID: UWT-X52-N
Note 3: Hybrid systems are those that employ a combination of both frequency hopping and digital modulations technique.

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:

Radiated Emissions:	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

APPENDIX A: MEASUREMENT INSTRUMENT DETAILS
APPENDIX B: PHOTOGRAPHS
APPENDIX C: ANTENNA DETAILS
APPENDIX D: FCC LABELLING DETAILS
APPENDIX E: USER MANUAL

RF Exposure Information
FR931819-06AB_FCC RF Test Report_15.247