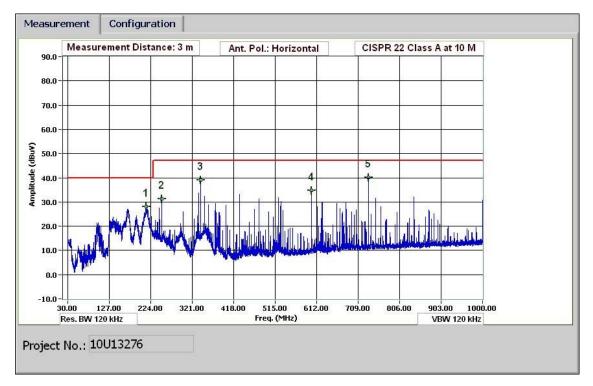
Report No: 11PRO009 Date: 15 November 2011

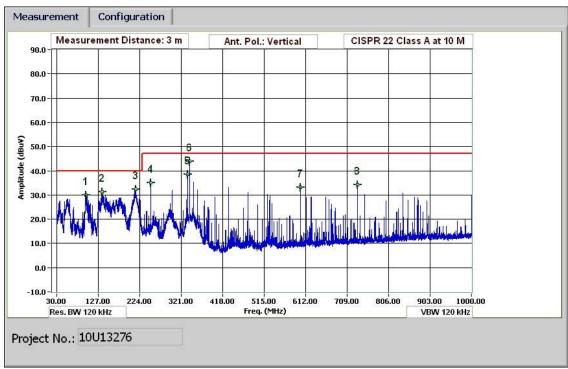
3.65 GHz Fixed Wireless Transceiver FCC ID: XN3-QUANTUM6636

3.8.3. TRANSMITTER RADIATED EMISSIONS BELOW 1 GHZ SPURIOUS AND DIGITAL SECTION EMISSIONS

IC: 8974A-QUANTUM6636

64 QAM5 MHz Channels (Worst case emissions)





Report No: 11PRO009 Date: 15 November 2011

3.65 GHz Fixed Wireless Transceiver
FCC ID: XN3-QUANTUM6636
IC: 8974A-QUANTUM6636

30-1000MHz Frequency Measurement

Compliance Certification Services, Fremont 5m Chamber

Test Engr: Thanh Nguyen
Date: 06/22/10
Project #: 10U13276

Company: PureWave Networsks Inc.

EUT Description: 6X6 3.65GHz WIMAX Base Station

EUT M/N: Quantum 6600 Test Target: EN55022 Class A

Mode Oper: Tx 64QAM 5MHz BW, Low Ch 3652.5MHz

f Measurement Frequency Amp Preamp Gain Margin Margin vs. Limit

Dist Distance to Antenna D Corr Distance Correct to 3 meters
Read Analyzer Reading Filter Filter Insert Loss

AF Antenna Factor Corr. Calculated Field Strength
CL Cable Loss Limit Field Strength Limit

f	Dist	Read	AF	CL	Amp	D Corr	Filter	Corr.	Limit	Margin	Ant. Pol.	Det.	
MHz	(m)	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBuV/m	dB	V/H	P/A/QP	
98.163	3.0	58.3	9.5	0.9	28.3	-10.5	0.0	29.9	40.0	-10.1	V	P	
136.684	3.0	55.5	13.3	1.1	28.3	-10.5	0.0	31.2	40.0	-8.8	V	P	
215.528	3.0	57.8	11.9	1.3	28.2	-10.5	0.0	32.4	40.0	-7.6	V	P	
249.969	3.0	60.5	11.8	1.4	28.2	-10.5	0.0	35.0	47.0	-12.0	V	P	
336.013	3.0	61.5	14.0	1.6	28.1	-10.5	0.0	38.6	47.0	-8.4	V	P	
340.933	3.0	66.8	14.0	1.6	28.1	-10.5	0.0	43.9	47.0	-3.1	V	P	
599.904	3.0	50.5	18.4	2.2	27.5	-10.5	0.0	33.1	47.0	-13.9	V	P	
733.349	3.0	49.4	20.0	2.5	27.3	-10.5	0.0	34.3	47.0	-12.7	V	P	
212.768	3.0	53.4	11.9	1.3	28.2	-10.5	0.0	28.0	40.0	-12.0	Н	P	
250.089	3.0	56.7	11.8	1.4	28.2	-10.5	0.0	31.2	47.0	-15.8	Н	P	
340.933	3.0	61.9	14.0	1.6	28.1	-10.5	0.0	39.0	47.0	-8.0	Н	P	
600.024	3.0	52.0	18.4	2.2	27.5	-10.5	0.0	34.7	47.0	-12.3	Н	P	
733.349	3.0	55.4	20.0	2.5	27.3	-10.5	0.0	40.2	47.0	-6.8	Н	P	

Rev. 1.27.09

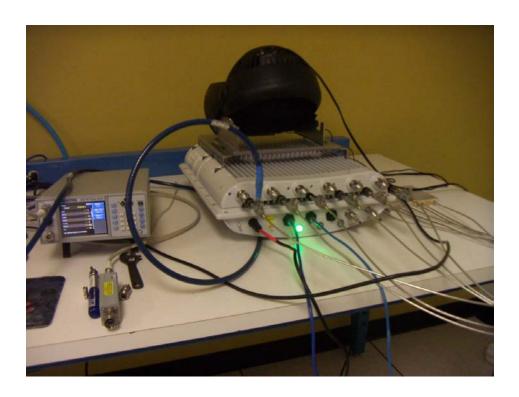
Note: No other emissions were detected above the system noise floor.

Report No: 11PRO009 Date: 15 November 2011

3.65 GHz Fixed Wireless Transceiver
FCC ID: XN3-QUANTUM6636
IC: 8974A-QUANTUM6636

5. SETUP PHOTOS

ANTENNA PORT CONDUCTED RF MEASUREMENT SETUP



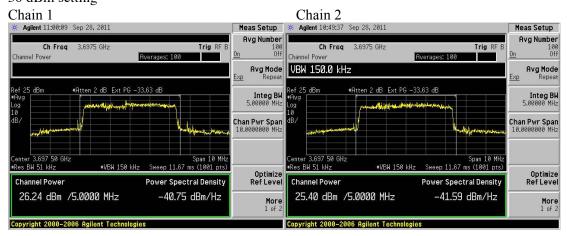
END OF REPORT

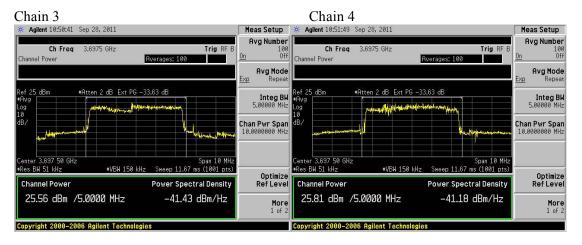
IC: 8974A-QUANTUM6636

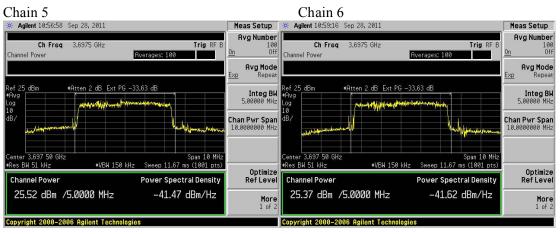
3.65 GHz Fixed Wireless Transceiver FCC ID: XN3-QUANTUM6636

APPENDIX A: POWER OUTPUT SPECTRUM ANALYZER PLOTS

POWER OUTPUT SPECTRUM ANALYZER PLOTS: QPSK 5 MHZ 30 dBm setting







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3.65 GHz Fixed Wireless Transceiver
FCC ID: XN3-QUANTUM6636

POWER OUTPUT SPECTRUM ANALYZER PLOTS: QPSK 10 MHZ EBW
33 dBm setting



FCC ID: XN3-QUANTUM6636 IC: 8974A-QUANTUM6636 POWER OUTPUT SPECTRUM ANALYZER PLOTS: 16QAM 5 MHZ EBW 30 dBm setting Chain 1 Chain 2 Agilent 11:05:49 Sep 28, 2011 Agilent 11:06:51 Sep 28, 2011 Meas Setup Meas Setup Avg Number Avg Number Ch Freq 3.6975 GHz Trig RF B Ch Freq 3.6975 GH: Trig RF B Avg Mode Avg Mode #Atten 2 dB Ext PG -33.63 dB #Atten 2 dB Ext PG -33.63 dB Integ BW #Avg Integ BW 5.00000 MHz Chan Pwr Span 10.0000000 MHz Chan Pwr Span 10,0000000 MHz #VBW 150 kH≥ Sween 11 67 ms (1001 nts) #UBW 150 kH≥ Sween 11 67 ms (1001 nts) Channel Power Power Spectral Density Channel Power Power Spectral Density 26.37 dBm /5.0000 MHz -40.62 dBm/Hz 25.47 dBm /5.0000 MHz -41.52 dBm/Hz Copyright 2000-2006 Ac Chain 3 Chain 4 Agilent 11:10:01 Sep 28, 2011 Agilent 11:09:07 Sep 28, 2011 Meas Setup Meas Setup Avg Number Avg Number Trig RF B Ch Freq Trig RF B Avg Mode Repeat Avg Mode Repeat #Atten 2 dB Ext PG -33.63 dB #Atten 2 dB Ext PG -33.63 dB Integ BW 5.00000 MHz Integ BW 5.00000 MHz Chan Pwr Span 10,0000000 MHz Chan Pwr Span Center 3.697 50 GHz #Res BW 51 kHz Span 10 MHz Sweep 11.67 ms (1001 pts) Span 10 MHz Sweep 11.67 ms (1001 pts) ≠VBW 150 kHz #VBW 150 kHz Optimize Ref Level Optimize Ref Level Channel Power Power Spectral Density Channel Power Power Spectral Density 24.70 dBm /5.0000 MHz -42.29 dBm/Hz 25.94 dBm /5.0000 MHz -41.05 dBm/Hz Copyright 2000-2006 Agilent Techn Copyright 2000-2006 Agilent Technolog Chain 5 Chain 6 Agilent 11:10:53 Sep 28, 2011 Agilent 11:11:44 Sep 28, 2011 Meas Setup Meas Setup Avg Number Avg Number Ch Freq 3.6975 GHz Ch Freq 3.6975 GHz Trig RF B Trig RF B 100 Off Averages: 100 Channel Power Channel Power Averages: 100 Avg Mode Repeat **Avg Mode** #Atten 2 dB Ext PG -33.63 dB #Atten 2 dB Ext PG -33.63 dB Integ BW 5.00000 MHz Integ BW 5.00000 MHz Chan Pwr Span 10.0000000 MHz Chan Pwr Span enter 3.697 50 GHz Res BW 51 kHz ter 3.697 50 GHz s BW 51 kHz ≠VBW 150 kHz ≠VBW 150 kHz Channel Power Power Spectral Density Channel Power Power Spectral Density

Date: 15 November 2011

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25.57 dBm /5.0000 MHz

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-41.42 dBm/Hz

3.65 GHz Fixed Wireless Transceiver

25.48 dBm /5.0000 MHz

-41.51 dBm/Hz

POWER OUTPUT SPECTRUM ANALYZER PLOTS: 16QAM 10 MHZ EBW 33 dBm setting Chain 1 Chain 2 Agilent 09:54:11 Sep 28, 2011 Agilent 10:16:38 Sep 28, 2011 Meas Setup Meas Setup Avg Number Avg Number Ch Freq 3.695 GHz Trig RF B Ch Freq 3.695 GHz Trig RF B Avg Mode Avg Mode #Atten 2 dB Ext PG -33.63 dB #Atten 2 dB Ext PG -33.63 dB Integ BW 10.0000 MHz Integ BW 10.0000 MHz Chan Pwr Span 20,0000000 MHz Chan Pwr Span 20,0000000 MHz ●VBW 300 kHz Sween 6 067 ms (1001 nts) •VBW 300 kH≥ Sween 6 067 ms (1001 nts) Optimize Ref Level Optimize Ref Level Channel Power Power Spectral Density Channel Power Power Spectral Density -42.28 dBm/Hz -42.94 dBm/Hz 27.72 dBm /10.0000 MHz 27.06 dBm /10.0000 MHz Copyright 2000-2006 Agilent Technologic Copyright 2000-2006 Agilent Technologie Chain 3 Chain 4 Agilent 10:17:36 Sep 28, 2011 Agilent 09:50:05 Sep 28, 2011 Meas Setup Meas Setup Avg Number Avg Number Ch Freq Trig RF B Ch Freq Trig RF B Avg Mode Repeat Avg Mode Repeat #Atten 2 dB Ext PG -33.63 dB #Atten 2 dB Ext PG -33.63 dB Integ BW 10.0000 MHz Integ BW 10.0000 MHz Chan Pwr Span 20,0000000 MHz Chan Pwr Span 20,0000000 MHz Span 20 MHz Sweep 6.067 ms (1001 pts) Span 20 MHz Sweep 6.067 ms (1001 pts) #VBW 300 kHz #VBW 300 kHz Optimize Ref Level **Channel Power Power Spectral Density Channel Power** Power Spectral Density 27.29 dBm /10.0000 MHz -42.71 dBm/Hz 27.32 dBm /10.0000 MHz -42.68 dBm/Hz More 1 of 2 More 1 of 2 Copyright 2000-2006 Ag Chain 5 Chain 6 Agilent 09:51:44 Sep 28, 2011 Meas Setup Agilent 09:53:05 Sep 28, 2011 Meas Setup Avg Number Avg Number Ch Freq Trig RF B Ch Freq Trig RF B Avg Mode Avg Mode Repeat Integ BW #Avg Integ BW 10.0000 MHz Chan Pwr Span Chan Pwr Span enter 3.695 00 GHz Res BW 100 kHz Span 20 MHz Sweep 6.067 ms (1001 pts) Span 20 MHz Sweep 6.067 ms (1001 pts) #UBW 300 kHz #VBW 300 kHz **Power Spectral Density** Power Spectral Density 26.66 dBm /10.0000 MHz -43.34 dBm/Hz 28.67 dBm /10.0000 MHz -41.33 dBm/Hz

Date: 15 November 2011

IC: 8974A-QUANTUM6636

Report No: 11PRO009

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3.65 GHz Fixed Wireless Transceiver FCC ID: XN3-QUANTUM6636

FCC ID: XN3-QUANTUM6636 IC: 8974A-QUANTUM6636 POWER OUTPUT SPECTRUM ANALYZER PLOTS: 64QAM 5 MHZ EBW 30 dBm setting Chain 1 Chain 2 Agilent 11:26:49 Sep 28, 2011 Agilent 11:27:56 Sep 28, 2011 Meas Setup Meas Setup Avg Number Avg Number Trig RF B Ch Freq Trig RF B Avg Mode Avg Mode #Atten 2 dB Ext PG -33.63 dB #Atten 2 dB Ext PG -33.63 dB Integ BW 5.00000 MHz Integ BW 5.00000 MHz Chan Pwr Span 10,0000000 MHz Chan Pwr Span 10.0000000 MHz •VBW 150 kHz Sweep 11.67 ms (1001 pts) •VBW 150 kHz Sween 11.67 ms (1001 nts) Optimize Ref Level Optimize Ref Level Channel Power Power Spectral Density Channel Power Power Spectral Density 26.62 dBm /5.0000 MHz -40.37 dBm/Hz 24.66 dBm /5.0000 MHz -42.33 dBm/Hz Copyright 2000-2006 Agilent Technolog Copyright 2000-2006 Agilent Technologie Chain 3 Chain 4 Agilent 11:33:20 Sep 28, 2011 Agilent 11:32:06 Sep 28, 2011 Meas Setup Meas Setup Avg Number Avg Number Ch Freq Trig RF B Ch Freq Trig RF B Avg Mode Repeat Avg Mode Repeat #Atten 2 dB Ext PG -33.63 dB #Atten 2 dB Ext PG -33.63 dB Integ BW 5.00000 MHz Integ BW 5.00000 MHz Chan Pwr Span 10.0000000 MHz Chan Pwr Span 10.0000000 MHz Span 10 MHz Sweep 11.67 ms (1001 pts) Span 10 MH: Sweep 11.67 ms (1001 pts) #VBW 150 kHz #VBW 150 kHz Optimize Ref Level **Channel Power Power Spectral Density Channel Power** Power Spectral Density 24.85 dBm /5.0000 MHz -42.14 dBm/Hz 26.00 dBm /5.0000 MHz -40.99 dBm/Hz More 1 of 2 More 1 of 2 Copyright 2000-2006 Ag vright 2000-2006 Ag Chain 5 Chain 6 Agilent 11:44:37 Sep 28, 2011 Agilent 11:23:58 Sep 28, 2011 Amplitude Meas Setup Avg Number Y Axis Units, Trig Free Ch Freq Trig RF B Ext Preamp Gain -33.63 dB Ref LvI Offst 0.00 dB Avg Mode Reneat Int Preamp Integ BW 5.00000 MHz Chan Pwr Span Corrections

Ext Amp Gain

Atten Step 10dB

Channel Power

25.80 dBm /5.0000 MHz

Sweep 11.67 ms (1001 pts)

Power Spectral Density

-41.19 dBm/Hz

#VBW 150 kHz

≠VBW 510 kHz

25.75 dBm /5.0000 MHz

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Sweep 11.27 ms (1001 pts

Power Spectral Density

-41.24 dBm/Hz

Date: 15 November 2011

Report No: 11PRO009

3.65 GHz Fixed Wireless Transceiver

FCC ID: XN3-QUANTUM6636 IC: 8974A-QUANTUM6636 POWER OUTPUT SPECTRUM ANALYZER PLOTS: 64QAM 10 MHZ EBW 33 dBm setting Chain 1 Chain 2 Agilent 10:15:15 Sep 28, 2011 Agilent 10:07:48 Sep 28, 2011 Meas Setup Meas Setup Avg Number Avg Number Ch Freq 3.695 GHz Trig RF B Ch Freq 3.695 GHz Trig RF B Avg Mode Avg Mode #Atten 2 dB Ext PG -33.63 dB #Atten 2 dB Ext PG -33.63 dB Integ BW 10.0000 MHz Integ BW 10.0000 MHz Chan Pwr Span 20,0000000 MHz Chan Pwr Span 20,0000000 MHz ●VBW 300 kHz Sween 6 067 ms (1001 nts) •VBW 300 kH≥ Sween 6 067 ms (1001 nts) Optimize Ref Level Optimize Ref Level Channel Power Power Spectral Density Channel Power Power Spectral Density 27.83 dBm /10.0000 MHz -42.17 dBm/Hz -42.70 dBm/Hz 27.30 dBm /10.0000 MHz Copyright 2000-2006 Agilent Technolog Copyright 2000-2006 Agilent Technologie Chain 3 Chain 4 Agilent 10:08:32 Sep 28, 2011 Agilent 10:09:46 Sep 28, 2011 Meas Setup Meas Setup Avg Number Avg Number Ch Freq 3.695 GHz Trig RF B Ch Freq Trig RF B Avg Mode Repeat Avg Mode Repeat #Atten 2 dB Ext PG -33.63 dB #Atten 2 dB Ext PG -33.63 dB Integ BW 10.0000 MHz Integ BW 10.0000 MHz Chan Pwr Span 20,0000000 MHz Chan Pwr Span 20.0000000 MHz Span 20 MHz Sweep 6.067 ms (1001 pts) Span 20 MHz Sweep 6.067 ms (1001 pts) ●VBW 300 kHz #VBW 300 kHz Optimize Ref Level **Channel Power Power Spectral Density Channel Power** Power Spectral Density -42.24 dBm/Hz 27.29 dBm /10.0000 MHz -42.71 dBm/Hz 27.76 dBm /10.0000 MHz More 1 of 2 Copyright 2000-2006 A Chain 5 Chain 6 Agilent 10:11:02 Sep 28, 2011 Meas Setup Agilent 10:11:43 Sep 28, 2011 Meas Setup Avg Number Avg Number Ch Freq Trig RF B Ch Freq Trig RF B Avg Mode Avg Mode Repeat Integ BW #Avg Integ BW 10.0000 MHz Chan Pwr Span Chan Pwr Span enter 3.695 00 GHz Res BW 100 kHz Span 20 MHz Sweep 6.067 ms (1001 pts) Span 20 MHz Sweep 6.067 ms (1001 pts) #UBW 300 kHz #VBW 300 kHz **Power Spectral Density** Power Spectral Density

Date: 15 November 2011

Report No: 11PRO009

27.13 dBm /10.0000 MHz

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-42.87 dBm/Hz

3.65 GHz Fixed Wireless Transceiver

28.51 dBm /10.0000 MHz

-41.49 dBm/Hz