

NextNet[®] Wireless

BTS-2500-E BASE STATION

FCC and INDUSTRY CANADA CERTIFICATION REPORT

NextNet[®] Wireless, Inc.
9555 James Ave. South Suite 270
Bloomington, MN 55431

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Section 1

Cover Letter

Cover Letter

To Whom It May Concern:

This report is being submitted to the Federal Communications Commission for the certification of equipment pursuant to the requirements found in 47 CFR Telecommunication CHAPTER I FEDERAL COMMUNICATIONS COMMISSION, Parts 0, 1, 2, 15, and 27 as published in the Federal Register on April 27th, 2006.

This report is also being submitted to Industry Canada for the Certification of Equipment pursuant to the requirements contained in RSS-193 Issue 1, dated July 2003 "Multipoint and Point-to-Point Communications Systems (MCS) in the Fixed Service Operating in the 2150-2160 MHz, 2500-2596 MHz and 2686-2690 MHz Bands".

The product listed in this filing has been tested in accordance with the requirements contained in the appropriate FCC Rules and Regulations and Industry Canada Radio Standards Specifications. To the best of my knowledge, the tests completed for this certification submission were performed using measurement procedures consistent with accepted FCC, Industry Canada, and industry procedures and demonstrates that this equipment complies with the appropriate regulatory requirements. I hereby certify that this application was prepared under my direction and that to the best of my knowledge and belief, the facts set forth in this application and accompanying technical data are true and correct.

Regards,
Tim Blom
Principal Engineer
NextNet[®] Wireless, Inc.

Report Summary

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Test Report Summary FCC Part 27

47CFR Rule Part	Requirement	Test Result
1.1310 / 2.1091 / 27.52	Radio Frequency Radiation Exposure Limits / evaluation: Fixed devices	Pass
2.1046 27.50(h)(1)(i)	RF Output Power	Pass
2.1047 27.53(l)	Modulation Characteristics	Pass
2.1049 27.53(l)	Occupied Bandwidth	Pass
2.1051	Spurious Emissions at Antenna Terminals	Pass
2.1053	Field Strength of Spurious Radiation	Pass
2.1055 / 27.54	Frequency Stability	Pass

FCC Requirements Check List

FCC Rule Part	Description	Response
0.457dii	Records not routinely available for public inspection	Section 10
0.459	Requests that materials or information submitted to the Commission be withheld from public inspection.	Section 10
Part 27 "Application for Certification" requirements		
2.947	Measurement procedure:	Sections 5, 6, 9
2.1033(c)	Technical Report Required	Sections 5, 6, 9
2.1033(c)1	Name / Address of Manufacturer / Applicant	NextNet [®] Wireless, Inc. 9555 James Avenue South, Suite 270 Bloomington, MN 55431
2.1033(c)2	FCC identifier.	PHX-BTS2500E
2.1033(c)3	Manual(s) / Literature	Section 8
2.1033(c)4	Type or types of emission.	27.53(l): Digital OFDM / 4M96W7D OFDM / 5M48W7D
2.1033(c)5	Frequency range.	2496 – 2690 MHz
2.1033(c)6	Power Range	0.001 Watts – 5.5 Watts Power set point is adjustable by system operator.
2.1033(c)7	Maximum power rating	Section 5
2.1033(c)8	DC voltages and DC currents	Sections 11, 12
2.1033(c)9	Tune-up procedure	Section 11
2.1033(c)10	Schematic diagram and descriptions	Sections 12, 13, 14
2.1033(c)11	Labels	Section 2
2.1033(c)12	Photographs	Sections 3, 4, 7
2.1033(c)13	Technical Description	Section 14
2.1033(c)14	2.1046 through 2.1057 data	Sections 5, 6, Appendix
2.1033(c)15	External power amplifier	Not applicable
2.1033(c)16	AM broadcast	Not applicable
2.1033(c)17	Composite system	Not applicable
2.1033(d)	Part 20 hearing aid compatible	Not applicable
2.1033(e)	A single application / composite system	Not applicable

Industry Canada Requirements Check List

Clause	Description / Requirement	Response / Information Location
<i>RSS-193 Multipoint and Point-to-Point Communication Systems (MCS) in the Fixed Service Operating in the 2150-2160 MHz, 2500-2596 MHz and 2686-2690 MHz Bands, Issue 1 July 2003</i>		
2.4	<i>RSP-100 Radio Equipment Certification Procedure, Issue 8, Revision 1, May 2002</i>	Detailed Below
	<i>RSS-102 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 Issue 1 Provisional, September 25, 1999</i>	Section 9, RF Exposure Information
	<i>RSS-212 Test Facilities and Test Methods for Radio Equipment Issue 1 Provisional, February 27, 1999</i>	Detailed Below
	<i>SRSP-302.5 Technical Requirements for Stations in the Fixed Service Operating in the 2150 to 2160 MHz and 2500 to 2690 MHz Bands Issue 2, January 1, 2000</i>	Detailed Below
3.	Certification Requirements	
3.1	Application for Certification	Per RSP-100
3.2	(a) the unit's documentation (e.g. schematics, user manual, etc.)	Sections 11, 12, 13
	(b) a list of all test equipment used, identifying the instrument manufacturer, type and model number	Section 5
	(c) the test voltage	Sections 5, 6, 9
	(d) the test frequencies	Sections 5, 6, 9
	(e) the frequency stability and supporting information	Section 6
	(f) the maximum transmitter power and testing method used	Section 5
	(g) Type of modulation with a brief description of description giving any information useful for the understanding of the device such as bit rate and symbol rate, if the modulation is digital	Section 14
	(h) the occupied bandwidth and emission designator	Section 5, 14

Clause	Description / Requirement	Response / Information Location
	(i) all the measurement results that address the requirements of other applicable RSSs	Sections 5, 6, 9
	(j) any additional information that is needed to better understand the operation of the equipment under consideration	Section 14
3.3	Frequency Plan	2500-2596 MHz
3.4	Typical Transmitter Output Powers	< 20 Watts
3.5	Types of Modulation	Digital
3.6	Definition of Bandwidth	99 % or 20 dB
4.	Measurement Methods	
4.1	General	Sections 5, 6, 9
4.2	Frequency Stability	Section 6
4.3	Transmitter Output Power	Section 5
4.4	Transmitter Unwanted Emissions	Section 6
4.5	Receiver Spurious Emissions	Section 6
5.	General Standard Specifications	
5.1	Quality Control	Section 14
5.2	Equipment Labels	Section 2
5.3	External Controls	Section 14
5.4	Exposure of Humans to RF Fields	Section 9
6.	Transmitter and Receiver Standard Specifications	
6.1	Frequency Stability	< ± 10.0 ppm
6.2	Transmitter Output Power	33 or 37.4 ± 1.0dB
6.3	Unwanted Emissions	Section 5
6.4	Additional Out-of-Band Suppression	N/A
6.5	Receiver Spurious Emissions	Section 6
RSP-100 Radio Equipment Certification Procedure, Issue 8, Revision 1, May 2002		
3.	Certification requirements	
3.1	General	Sections 5, 6, 9
3.2	Radio Equipment	--
3.3	Approval by Other Agencies	--
3.4	Required Representative	ATCB-Form-IC-Application
4.0	Labeling of Certified Radio Equipment	Section 2
5.	Types of Certification	
5.1	Single Certification	ATCB-Form-IC-Application
5.1(a)	Original Appendix I	ATCB-Form-IC-Application
5.1(b)	Cover letter	Section 1, ATCB-Form-IC-Application
5.1(c)	Original Appendix II	ATCB-Form-IC-Application
5.1(d)	Test report	Sections 5, 6

Clause	Description / Requirement	Response / Information Location
5.1(e)	Photographs / product literature	Sections 3, 4, 8
5.1(f)	Schematics / block diagrams	Sections 11, 12, 13
5.1(g)	Product label info	Section 2
7.	Testing and Technical Brief	
7.1	OATS filing	ATCB-Form-IC-Application
7.2	Technical Brief	
7.2(a)	cover letter	Section 1, 14
7.2(b)	Detailed description	Sections 8, 12, 14
7.2(c)	Test report	Sections 5, 6
7.2(c)(i)	Appendix II sheet	ATCB-Form-IC-Application
7.2(c)(ii)	Test results	Sections 5, 6, 9
7.2(c)(iii)	Radio frequency emission type designator	ATCB-Form-IC-Application
7.2(d)	Photographs	Sections 3, 4
<i>SRSP-302.5 Technical Requirements for Stations in the Fixed Service Operating in the 2150 to 2160 MHz and 2500 to 2690 MHz Bands Issue 2, January 1, 2000</i>		
4.2	The band 2500 to 2686 MHz	
4.2.2	The block from 2500 to 2596 MHz is designated for MCS use.	
4.2.5	One-way and two-way operations are permitted for MCS	
5.	Technical Requirements	
5.1	Transmitter Power	Section 5
5.2	Station EIRP	Section 5, 9
5.3	Subscriber EIRP	N/A
5.4	Subscriber EIRP < -6dBW	N/A
5.5	Out of block emissions	Per RSS-193
5.6	Analog Modulation	N/A