FCC PART 15, SUBPART B
FCC 15.247 TEST REPORT
TEST METHOD: ANSI C63.4: 2009

For

STAR 3000 SYSTEM

Prepared for

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DATE: NOVEMBER 3, 2012

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GENERAL REPORT SUMMARY

This electromagnetic emission report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced in any form except in full, without the written permission of Compatible Electronics.

This report must not be used to claim product endorsement by NVLAP, NIST or any other agency of the U.S. Government.

Device Tested:	Star 3000 System
Product Description:	Please see the expository statement.
Modifications:	The EUT was not modified during the testing.
Manufacturer:	Mojix, Inc. 11075 Santa Monica Boulevard, Suite 350 Los Angeles, California 90025
Test Dates:	September 17, 18, 19, 20, 21, 24, and 25, 2012
Test Specifications:	Emissions requirements CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.207, 15.209, and 15.247 Test Procedure: ANSI C63.4: 2009.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz - 30 MHz.	Complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, section 15.207.
2	Radiated RF Emissions, 10 kHz – 9300 MHz	Complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; the limits of CFR Title 47, Part 15 Subpart C, 15.209 and 15.247 (d)
3	Radiated RF Emissions for the Digital Portion 30 MHz – 1000 MHz	Complies with the **Class A** limits of CFR Title 47, Part 15, Subpart B.
4	20 dB Bandwidth	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (a)(1)(i)
5	Peak Power Output	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (b)(2)
6	RF Conducted Antenna Test	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (d)
7	Carrier Frequency Separation	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (a)(1)
8	Average Time of Occupancy	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (a)(1)(i)
9	Peak Power Spectral Density from the International Radiator to the Antenna	This test was not performed because the EUT is a frequency hopper.

1. PURPOSE

This document is a qualification test report based on the Emissions tests performed on the Star 3000 System. The emissions measurements were performed according to the measurement procedure described in ANSI C63.4: 2009. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.207, 15.209, and 15.247

Note #1: for the digital portion of the test on the Star 3000 RFID Reader, the EUT was within the **Class A** specification limits defined by CFR Title 47, Part 15 Subpart B.

Note #2: Please see section 5.1 for the list of model numbers and serial numbers used with the system. Each individual piece of equipment has its own model number.

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The emissions tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Mojix, Inc.

Shawn Manesh	Senior VP Operations
Hassan Syed	Manger RF Design Group
Gus Mendoza	Engineer

Compatible Electronics Inc.

Kyle Fujimoto	Test Engineer
James Ross	Test Engineer

2.4 Date Test Sample was Received

The test sample was received prior to the initial date of testing.

2.5 Disposition of the Test Sample

The test sample was returned to Mojix Inc. prior to the date of this test report.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this test report.

SPEC	TITLE
FCC Title 47, Part 15 Subpart C	FCC Rules - Radio frequency devices (including digital devices) – Intentional Radiators
ANSI C63.4 2009	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz
FCC Title 47, Part 15 Subpart B	FCC Rules - Radio frequency devices (including digital devices) – Unintentional Radiators

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration – (Emissions)

The EUT consists of an RFID Reader, eNode, eMux, GPIO, RF expander, and antenna and was setup as follows:

Configuration #1:

The RFID Reader was connected to a laptop, eMux, and power supply via its ethernet, transmit and DC in ports, respectively.

The eMux was also connected to the eNode and power supply vita its Out-1 and power ports, respectively. The Out-2, Out-3, and Out-4 ports were connected to 25-foot cables that were terminated to 50 ohms via terminators.

The eNode was also connected to the GPIO and antenna via its GPIO and ANT-1 ports, respectively. The ANT-2, ANT-3, ANT-4, and output ports were connected to 25-foot cables that were terminated to 50 ohms via terminators. The antenna was connected to the ANT-1 port because that was the port that produced the highest emission level. The GPIO was also connected to a sensor via each of its four input ports.

A program on the laptop allowed the EUT to transmit and/or receive at the low, middle, or high channel. The EUT was continuously transmitting and receiving during the test.

Configuration #2:

The RFID Reader was connected to a laptop, eMux, and power supply via its ethernet, transmit and DC in ports, respectively.

The eMux was also connected to the eNode and power supply vita its Out-1 and power ports, respectively. The Out-2, Out-3, and Out-4 ports were connected to 25-foot cables that were terminated to 50 ohms via terminators.

The eNode was also connected to the GPIO and RF Expander via its GPIO and ANT-1 ports, respectively. The ANT-2, ANT-3, ANT-4, and output ports of the eNode were connected to 25-foot cables that were terminated to 50 ohms via terminators.

The RF Expander was also connected to an antenna via its ANT-1 port. The ANT-2, ANT-3, and ANT-4 ports of the RF Expander were connected to 25-foot cables that were terminated to 50 ohms via the terminators.

The antenna was connected to the ANT-1 port because that was the port that produced the highest emission level. The GPIO was also connected to a sensor via each of its four input ports.

A program on the laptop allowed the EUT to transmit and/or receive at the low, middle, or high channel. The EUT was continuously transmitting and receiving during the test.

Configuration #3:

The RFID Reader was connected to a laptop, eNode, and power supply via its ethernet, transmit and DC in ports, respectively.

The eNode was also connected to the GPIO and RF Expander via its GPIO and ANT-1 ports, respectively. The ANT-2, ANT-3, ANT-4, and output ports of the eNode were connected to 25-foot cables that were terminated to 50 ohms via terminators.

The RF Expander was also connected to an antenna via its ANT-1 port. The ANT-2, ANT-3, and ANT-4 ports of the RF Expander were connected to 25-foot cables that were terminated to 50 ohms via the terminators.

The antenna was connected to the ANT-1 port because that was the port that produced the highest emission level. The GPIO was also connected to a sensor via each of its four input ports.

A program on the laptop allowed the EUT to transmit and/or receive at the low, middle, or high channel. The EUT was continuously transmitting and receiving during the test.

Note: The RFID Reader side was only tested in configurations #1 and #2 because those configurations include the eMux, which is the worst case configuration for the RFID Reader.

The highest emissions were found when the EUT was running in the above configurations. The cables were moved to maximize the emissions. The final conducted and radiated data was taken in both configuration described above. All initial investigations were performed with the measurement receiver in manual mode scanning the frequency range continuously. The cables were bundled and routed as shown in the photographs in Appendix D.

4.1.2 Cable Construction and Termination

Configuration #1:

Cable 1 This is a 1-meter unshielded cable connecting the eMux to the power supply. The cable has a 5-pin DIN connector on the eMux end and is hard wired into the switching power supply. The cable has a molded ferrite on the eMux side.

Cable 2 This is a 50-foot braid shielded cable connecting the eMux to the 4 Port eNode. The cable has an SMA connector at the 4 Port eNode end and a TNC connector at the eMux end. The shield of the cable was grounded to the chassis via the connectors.

Cables 3-5 These are 25-foot braid shielded cables connecting the Out-2, Out-3, and Out-4 ports of the eMux to 50 ohm terminators. The cables have SMA connectors at each end. The cables were coiled so that they were 40-centimeters above the ground plane. The shield of the cables were grounded to the chassis via the connectors.

Cable 6 This is a 50-foot braid shielded cable connecting the eMux to the RFID Reader. The cable has a TNC connector at the eMux end and a reverse polarity TNC connector at the RFID Reader end. The shield of the cable was grounded to the chassis via the connectors.

Cable 7 This is a 25-foot braid shielded cable connecting the RFID reader to the laptop. The cable has an RJ-45 connector at each end. The shield of the cable was grounded to the chassis via the connectors.

Cable 8 This is a 5-meter braid shielded cable connecting the RFID reader to the DC power supply. The cable has a Positronics FR11FP822LM5 connector at the RFID reader end and a Positronics P/N: 9942170007 connector at the DC power supply end. The cable was bundled to a length of 1-meter. The shield of the cable was grounded to the chassis via the connectors.

Cable 9 This is a 6.1-meter braid and foil shielded cable connecting the eNode to the antenna. The cable has a reverse SMA connector at the eNode end and a reverse TNC connector at the antenna end. The cable was coiled so that it was 40-centimeters above the ground plane. The shield of the cable was grounded to the chassis via the connectors.

Cables 10-12 These are 25-foot braid shielded cables connecting the ANT-2, ANT-3, and ANT-4 ports of the eNode to 50 ohm terminators. The cables have reverse polarity SMA connectors at the eNode end and regular SMA connectors at the 50 ohm terminator ends. The cables were coiled so that they were 40-centimeters above the ground plane. The shield of the cables were grounded to the chassis via the connectors.

Cables 13-16 These are 40-centimeter foil shielded cables connecting the GPIO to the each sensor. Th cables are hard wired to each 10-pin terminal block inside the GPIO and are hard wired into the sensor. The shield of the cables were grounded to the chassis via the connector.

Cable 17 This is a 1-meter foil shielded cable connecting the eNode to the GPIO. The cable is hard wired to a 10-pin terminal block inside the GPIO and has a standard TNC connector at the eNode end. The shield of the cable was grounded to the chassis via the connectors.

Configuration #1 (Continued)

Cable 18 This is a 25-foot braid shielded cable connecting the output port of the eNode to a 50 ohm terminator. The cable has a reverse polarity SMA connector at the eNode end and a regular SMA connector at the 50 ohm terminator end. The cable was coiled so that it was 40-centimeters above the ground plane. The shield of the cable was grounded to the chassis via the connectors.

Configuration #2:

Cable 1 This is a 1-meter unshielded cable connecting the eMux to the power supply. The cable has a 5-pin DIN connector on the eMux end and is hard wired into the switching power supply. The cable has a molded ferrite on the eMux side.

Cable 2 This is a 50-foot braid shielded cable connecting the eMux to the 4 Port eNode. The cable has an SMA connector at the 4 Port eNode end and a TNC connector at the eMux end. The shield of the cable was grounded to the chassis via the connectors.

Cables 3-5 These are 25-foot braid shielded cables connecting the Out-2, Out-3, and Out-4 ports of the eMux to 50 ohm terminators. The cables have SMA connectors at each end. The cables were coiled so that they were 40-centimeters above the ground plane. The shield of the cables were grounded to the chassis via the connectors.

Cable 6 This is a 50-foot braid shielded cable connecting the eMux to the RFID Reader. The cable has a TNC connector at the eMux end and a reverse polarity TNC connector at the RFID Reader end. The shield of the cable was grounded to the chassis via the connectors.

Cable 7 This is a 25-foot braid shielded cable connecting the RFID reader to the laptop. The cable has an RJ-45 connector at each end. The shield of the cable was grounded to the chassis via the connectors.

Cable 8 This is a 5-meter braid shielded cable connecting the RFID reader to the DC power supply. The cable has a Positronics FR11FP822LM5 connector at the RFID reader end and a Positronics P/N: 9942170007 connector at the DC power supply end. The cable was bundled to a length of 1-meter. The shield of the cable was grounded to the chassis via the connectors.

Cable 9 This is a 25-foot braid and foil shielded cable connecting the ANT-1 port of the eNode to the RF Expander. The cable has a reverse SMA connector at the eNode end and a reverse TNC connector at the RF Expander end. The cable was coiled so that it was 40-centimeters above the ground plane. The shield of the cable was grounded to the chassis via the connectors.

Cables 10-12 These are 25-foot braid shielded cables connecting the ANT-2, ANT-3, and ANT-4 ports of the eNode to 50 ohm terminators. The cables have reverse polarity SMA connectors at the eNode end and regular SMA connectors at the 50 ohm terminator ends. The cables were coiled so that they were 40-centimeters above the ground plane. The shield of the cables were grounded to the chassis via the connectors.

Cables 13-16 These are 40-centimeter foil shielded cables connecting the GPIO to the each sensor. The cables are hard wired to each 10-pin terminal block inside the GPIO and are hard wired into the sensor. The shield of the cables were grounded to the chassis via the connector.

Cable 17 This is a 1-meter foil shielded cable connecting the eNode to the GPIO. The cable is hard wired to a 10-pin terminal block inside the GPIO and has a standard TNC connector at the eNode end. The shield of the cable was grounded to the chassis via the connectors.

Configuration #2 (Continued)

Cable 18 This is a 6.1-meter braid and foil shielded cable connecting the RF Expander to the antenna. The cable has a reverse SMA connector at the RF Expander end and a reverse TNC connector at the antenna end. The cable was coiled so that it was 40-centimeters above the ground plane. The shield of the cable was grounded to the chassis via the connectors.

Cables 19-21 These are 25-foot braid shielded cables connecting the ANT-2, ANT-3, and ANT-4 ports of the RF Expander to 50 ohm terminators. The cables have reverse polarity SMA connectors at the RF Expander end and regular SMA connectors at the 50 ohm terminator ends. The cables were coiled so that they were 40-centimeters above the ground plane. The shield of the cables were grounded to the chassis via the connectors.

Cable 22 This is a 25-foot braid shielded cable connecting the output port of the eNode to a 50 ohm terminator. The cables has a reverse polarity SMA connector at the eNode end and a regular SMA connector at the 50 ohm terminator end. The cables was coiled so that it was 40-centimeters above the ground plane. The shield of the cable was grounded to the chassis via the connectors.

Configuration #3

Cable 1 This is a 50-foot braid shielded cable connecting the RFID Reader to the 4 Port eNode. The cable has an SMA connector at the RFID Reader end and a TNC connector at the eMux end. The shield of the cable was grounded to the chassis via the connectors.

Cable 2 This is a 25-foot unshielded cable connecting the RFID reader to the laptop. The cable has an RJ-45 connector at each end.

Cable 3 This is a 5-meter braid shielded cable connecting the RFID reader to the DC power supply. The cable has a Positronics FR11FP822LM5 connector at the RFID reader end and a Positronics P/N: 9942170007 connector at the DC power supply end. The cable was bundled to a length of 1-meter. The shield of the cable was grounded to the chassis via the connectors.

Cable 4 This is a 25-foot braid and foil shielded cable connecting the ANT-1 port of the eNode to the RF Expander. The cable has a reverse SMA connector at the eNode end and a reverse TNC connector at the RF Expander end. The cable was coiled so that it was 40-centimeters above the ground plane. The shield of the cable was grounded to the chassis via the connectors.

Cables 5-7 These are 25-foot braid shielded cables connecting the ANT-2, ANT-3, and ANT-4 ports of the eNode to 50 ohm terminators. The cables have reverse polarity SMA connectors at the eNode end and regular SMA connectors at the 50 ohm terminator ends. The cables were coiled so that they were 40-centimeters above the ground plane. The shield of the cables was grounded to the chassis via the connectors.

Configuration #3 (Continued)

Cables 8-11 These are 40-centimeter foil shielded cables connecting the GPIO to the each sensor. The cables are hard wired to each 10-pin terminal block inside the GPIO and are hard wired into the sensor. The shield of the cables was grounded to the chassis via the connector.

Cable 12 This is a 1-meter foil shielded cable connecting the eNode to the GPIO. The cable is hard wired to a 10-pin terminal block inside the GPIO and has a standard TNC connector at the eNode end. The shield of the cable was grounded to the chassis via the connectors.

Cable 13 This is a 6.1-meter braid and foil shielded cable connecting the RF Expander to the antenna. The cable has a reverse SMA connector at the RF Expander end and a reverse TNC connector at the antenna end. The cable was coiled so that it was 40-centimeters above the ground plane. The shield of the cable was grounded to the chassis via the connectors.

Cables 14-16 These are 25-foot braid shielded cables connecting the ANT-2, ANT-3, and ANT-4 ports of the RF Expander to 50 ohm terminators. The cables have reverse polarity SMA connectors at the RF Expander end and regular SMA connectors at the 50 ohm terminator ends. The cables were coiled so that they were 40-centimeters above the ground plane. The shield of the cables were grounded to the chassis via the connectors.

Cable 17 This is a 25-foot braid shielded cable connecting the output port of the eNode to a 50 ohm terminator. The cables has a reverse polarity SMA connector at the eNode end and a regular SMA connector at the 50 ohm terminator end. The cables was coiled so that it was 40-centimeters above the ground plane. The shield of the cable was grounded to the chassis via the connectors.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT TYPE	MANU-FACTURER	MODEL	SERIAL NUMBER	FCC ID
EMUX 3000 (PART OF EUT)	MOJIX, INC.	EMX-3004-WO	0829402423-3E7C7E	N/A
ENODE 3000 (PART OF EUT)	MOJIX, INC.	ENM-3004-F	09144024F1G-3ED8D2	VEDCBLENODE3K
STAR 3000 RFID READER (PART OF EUT)	MOJIX, INC.	STAR-3000-F	9164022A1076	N/A
ANTENNA (ENODE)	MTI WIRELESS EDGE	MT-262006/TRH/A	01471	N/A
POWER SUPPLY FOR EMUX (INDOOR VERSION)	ASTRODYNE	SPU131-108	04274024A1237	N/A
POWER SUPPLY FOR EMUX (OUTDOOR VERSION)	TRACO POWER	TEX 120-124	04274024A1239	N/A
SENSOR (4)	BANNER	Q60BB6AF2000	N/A	N/A
POWER SUPPLY FOR RFID READER	TRACO POWER	TEX 120-124	09144024F1147	N/A
LAPTOP	DELL	PP19L	N/A	DoC
(9) 50 OHM TERMINATORS	MINI-CIRCUITS	VAT-2W	N/A	N/A
RF EXPANDER (PART OF EUT)	MOJIX, INC.	EXP-3004-W	10001	VEDCBLENODE3K
GPIO (PART OF EUT)	MOJIX, INC.	GPO-3008-W	3ECF1F	N/A

5.2 Emissions Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CALIBRATION DUE DATE
GENERAL TEST EQUIPMENT USED FOR ALL RF EMISSIONS TESTS					
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
Spectrum Analyzer – Main Section	Hewlett Packard	8568B	2517A01563	May 30, 2012	May 30, 2013
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	2648A15285	May 30, 2012	May 30, 2013
Quasi-Peak Adapter	Hewlett Packard	85650A	2430A00424	May 30, 2012	May 30, 2013
EMI Receiver	Rohde & Schwarz	ESIB40	100194	November 19, 2010	November 19, 2012
Monitor	Hewlett Packard	D5258A	TW74500641	N/A	N/A
RF RADIATED EMISSIONS TEST EQUIPMENT					
Loop Antenna	Com-Power	AL-130	17089	January 21, 2011	January 21, 2013
Biconical Antenna	Com Power	AB-900	43028	May 24, 2012	May 24, 2013
Log Periodic Antenna	Com Power	AL-100	16252	May 24, 2012	May 24, 2013
Horn Antenna	Com-Power	AH-118	071175	February 29, 2012	March 1, 2014
Preamplifier	Com-Power	PA-102	1017	December 28, 2011	December 28, 2012
Microwave Preamplifier	Com-Power	PA-118	181656	December 28, 2011	December 28, 2012
Antenna Mast	Com Power	AM-100	N/A	N/A	N/A
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
RF CONDUCTED EMISSIONS TEST EQUIPMENT					
Emissions Program	Compatible Electronics	2.3 (SR19)	N/A	N/A	N/A
Transient Limiter	Seaward	252A910	1	November 7, 2011	November 7, 2012
LISN	Com Power	LI-215	12078	June 20, 2011	June 20, 2013
LISN	Com Power	LI-215	12082	June 20, 2011	June 20, 2013

6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 and 7.1.2 of this report for test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The eNode was grounded to the chassis of the RFID Reader via its interconnect cable.
The RFID Reader was grounded to earth ground via the DC power supply.
The eMux was grounded to the chassis of the eNode via its interconnect cable.

7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1 RF Emissions

7.1.1 Conducted Emissions Test

The spectrum analyzer was used as a measuring meter along with the quasi-peak adapter. The data was collected with the spectrum analyzer in the peak detect mode with the "Max Hold" feature activated. The quasi-peak was used only where indicated in the data sheets. A transient limiter was used for the protection of the spectrum analyzer input stage, and the spectrum analyzer offset was adjusted accordingly to read the actual data measured. The LISN output was read by the spectrum analyzer. The output of the second LISN was terminated by a 50 ohm termination. The effective measurement bandwidth used for the conducted emissions test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The initial test data was taken in manual mode while scanning the frequency ranges of 0.15 MHz to 1.6 MHz, 1.6 MHz to 5 MHz, and 5 MHz to 30 MHz. The conducted emissions from the EUT were maximized for operating mode as well as cable placement. Once a predominant frequency (within 12 dB of the limit) was found, it was more closely examined with the spectrum analyzer span adjusted to 1 MHz.

The final data was collected under program control by the computer in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The six highest emissions are listed in Table 1.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15 Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Section 15.207 for conducted emissions.

7.1.2 Radiated Emissions Test

The spectrum analyzer and EMI Receiver were used as a measuring meter along with the quasi-peak adapter. Amplifiers were used to increase the sensitivity of the instrument. The Com Power Preamplifier Model: PA-102 was used for frequencies from 30 MHz to 1 GHz and the Com Power Microwave Preamplifier Model: PA-118 was used for frequencies above 1 GHz. The spectrum analyzer and EMI Receiver were used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer or EMI Receiver records the highest measured reading over all the sweeps.

The quasi-peak adapter was used only for those readings which are marked accordingly on the data sheets.

The frequencies above 1 GHz were averaged manually by narrowing the video filter down to 10 Hz and putting the sweep time on AUTO on the spectrum analyzer to keep the amplitude reading calibrated.

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
10 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 300 MHz	120 kHz	Biconical Antenna
300 MHz to 1 GHz	120 kHz	Log Periodic Antenna
1 GHz to 9.3 GHz	1 MHz	Horn Antenna

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4: 2009. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT by the Radiated Emission Manual Test software. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna in order to ensure accurate results.

Radiated Emissions Test (Continued)

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 10-meter test distance from 10 kHz to 30 MHz, and at a 3 meter test distance from 30 MHz to 9.3 GHz to obtain the final test data.

Also, for the digital portion of the RFID Reader, the EUT was tested at a 10-meter test distance from 30 MHz to 1 GHz.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Sections 15.209 and 15.247 (d) for radiated emissions. Please see Appendix E for the data sheets

Note: The RFID Reader for the digital portion complies with the **Class A** limits of CFR Title 47, Part 15, Subpart B.

7.1.3 RF Emissions Test Results

Table 1.0 CONDUCTED EMISSION RESULTS (120V)
STAR 3000 SYSTEM

Frequency MHz	Emission Level* dBuV	Specification Limit dBuV	Delta dB
0.516 (Black Lead)	42.97 (A)	46.00	-3.03
0.771 (Black Lead)	42.34 (A)	46.00	-3.66
2.568 (White Lead)	41.79	46.00	-4.21
2.707 (White Lead)	41.39	46.00	-4.61
2.963 (Black Lead)	41.13	46.00	-4.87
0.516 (White Lead)	40.52 (A)	46.00	-5.48

Table 2.0 RADIATED EMISSION RESULTS
STAR 3000 SYSTEM

Frequency MHz	Emission Level* dBuV	Specification Limit dBuV	Delta dB
312.514 (V)	44.72 (QP)	46.40	-1.68
312.522 (V)	44.62	46.40	-1.78
375.001 (V)	44.44 (QP)	46.40	-1.96
62.516 (V)	37.09	39.10	-2.01
187.522 (V)	40.88	43.50	-2.62
697.178 (H)	43.01	46.00	-2.99

Notes:

* The complete emissions data is given in Appendix E of this report.

** The factors for the antennas and preamplifier gain are attached in Appendix D of this report.

A Average Reading

QP Quasi-Peak Reading

7.2 20 dB Bandwidth

The 20 dB Bandwidth was measured using the EMI Receiver. The bandwidth was measured using a direct connection from the RF output of the EUT. The resolution bandwidth was 30 kHz and the video bandwidth was 100 kHz.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (a)(1)(i). The 20 dB bandwidth is less than the separation between channels. Please see the data sheets located in Appendix E.

7.3 Peak Output Power

The Peak Output Power was measured using the EMI Receiver. The peak output power was measured using a direct connection from the RF output of the EUT. The resolution bandwidth was 3 MHz and the video bandwidth was 10 MHz. The cable loss was also added back into the reading using the reference level offset.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (b)(2). The maximum peak output power is less than 1 Watt. Please see the data sheets located in Appendix E.

7.4 RF Antenna Conducted Test

The RF antenna conducted test was performed using the EMI Receiver. The RF antenna conducted test measured using a direct connection from the RF out on the EUT into the input of the EMI Receiver. The resolution bandwidth was 100 kHz, and the video bandwidth was 300 kHz. The spans were wide enough to include all the harmonics and emissions that were produced by the intentional radiator.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (d). The RF power that is produced by the intentional radiator is at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power. Please see the radiated emission data sheets located in Appendix E.

7.5 RF Band Edges

The RF band edges were taken at the edges of the ISM spectrum (902 MHz when the EUT was on the low channel and 928 MHz when the EUT was on the high channel) using the EMI Receiver. The RBW was set to 100 kHz and the VBW was set to 300 kHz. Plots of the fundamental were taken to ensure the amplitude at the band edges were at least 20 dB down from the peak of the fundamental emission.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (d). The RF power at the band edges at 902 MHz and 928 MHz meet the requirements of FCC Title 47, Part 15, Subpart C section 15.247 (d). Please see the data sheets located in Appendix E.

7.6 Carrier Frequency Separation

The Channel Hopping Separation Test was measured using the EMI Receiver. The EUT was operating in its normal operating mode. The resolution bandwidth was 100 kHz, and the video bandwidth 300 kHz. The frequency span was wide enough to include the peaks of two adjacent channels.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (a)(1). The Channel Hopping Separation is greater than the 20 dB bandwidth. Please see the data sheets located in Appendix D.

7.7 Number of Hopping Frequencies

The Channel Hopping Separation Test was measured using the EMI Receiver. The EUT was operating in its normal operating mode. The resolution bandwidth was 100 kHz, and the video bandwidth was 300 kHz. The frequency span was wide enough to include all of the peaks in the frequency band of operation.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (a)(1) and 15.247 (a)(1)(i). The number of hopping frequencies is 50. Please see the data sheets located in Appendix E.

7.8 Average Time of Occupancy Test

The Average Time of Occupancy Test was measured using the EMI Receiver. The EUT was operating in normal operating mode. The frequency span was taken to 0 Hz with a sweep time of 20 msec to determine the time for each transmission.

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 10 seconds.

The sweep time was then changed to 5 seconds and the number of pulses taken. The number of pulses was then multiplied by 2 to determine the number of pulses in a 10 second period. The number of pulses in a 10 second period was then multiplied by the time for each pulse to determine the average time of occupancy.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (a)(1)(i). The EUT does not transmit for more than 400 msec in a 10 second period on any frequency. Please see the data sheets located in Appendix E.

7.9 Spectral Density Test

The spectrum density output was measured using the EMI Receiver. The spectral density output was measured using a direct connection from the RF out on the EUT into the input of the EMI Receiver. The resolution bandwidth 3 kHz, and the video bandwidth was 10 kHz. The highest 1.5 MHz of the signal was used as the frequency span with the sweep rate being 1 second for every 3 kHz of span.

Test Results:

This test was not performed because the EUT is a frequency hopper.

8. DEVIATIONS FROM THE TEST PROCEDURES

There were no deviations from the test procedures.

9. CONCLUSIONS

The Star 3000 System, as tested, meets all of the specification limits defined in FCC Title 47, Part 15, Subpart C, sections 15.205, 15.207, 15.209, and 15.247

Note #1: For the unintentional radiator portion of the test except for the RFID Reader, the EUT was within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B.

Note #2: The RFID Reader for the unintentional radiator portion was within the **Class A** specification limits defined by CFR Title 47, Part 15 Subpart B.

APPENDIX A

LABORATORY ACCREDITATIONS AND RECOGNITIONS

LABORATORY ACCREDITATIONS AND RECOGNITIONS

NVLAP LAB CODES 200063-0, 200528-0, 200527-0

For US, Canada, Australia/New Zealand, Taiwan and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025 an ISO 9002 equivalent. Please follow the link to the NIST site for each of our facilities NVLAP certificate and scope of accreditation.

NVLAP listing links
Agoura Division - http://ts.nist.gov/Standards/scopes/2000630.htm
Brea Division - http://ts.nist.gov/Standards/scopes/2005280.htm
Silverado/Lake Forest Division - http://ts.nist.gov/Standards/scopes/2005270.htm

ANSI listing
CETCB https://www.ansica.org/wwwversion2/outside/ALLdirectoryDetails.asp?menuID=1&prgID=3&orgID=123&status=4

Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for EMC under the US/EU Mutual Recognition Agreement (MRA).

Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for Taiwan/BSMI under the US/APEC (Asia-Pacific Economic Cooperation) Mutual Recognition Agreement (MRA).

We are also certified/listed for IT products by the following country/agency:

VCCI Listing, from VCCI site
Enter "Compatible" in search form http://www.vcci.or.jp/vcci_e/activity/registration/setsubi.html

FCC Listing, from FCC OET site
FCC test lab search https://fjallfoss.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm

Industry Canada Industrie Canada
Compatible Electronics IC listing can be found at:
http://www.ic.gc.ca/eic/site/ic1.nsf/eng/home

APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.247 and/or FCC **Class A** and/or FCC **Class B** specifications.

No modifications were made to the EUT during the testing.

APPENDIX C

ADDITIONAL MODELS COVERED UNDER THIS REPORT

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST Star 3000 System
S/N: NONE

There were no additional models covered under this report.

APPENDIX D

DIAGRAMS, CHARTS AND PHOTOS

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

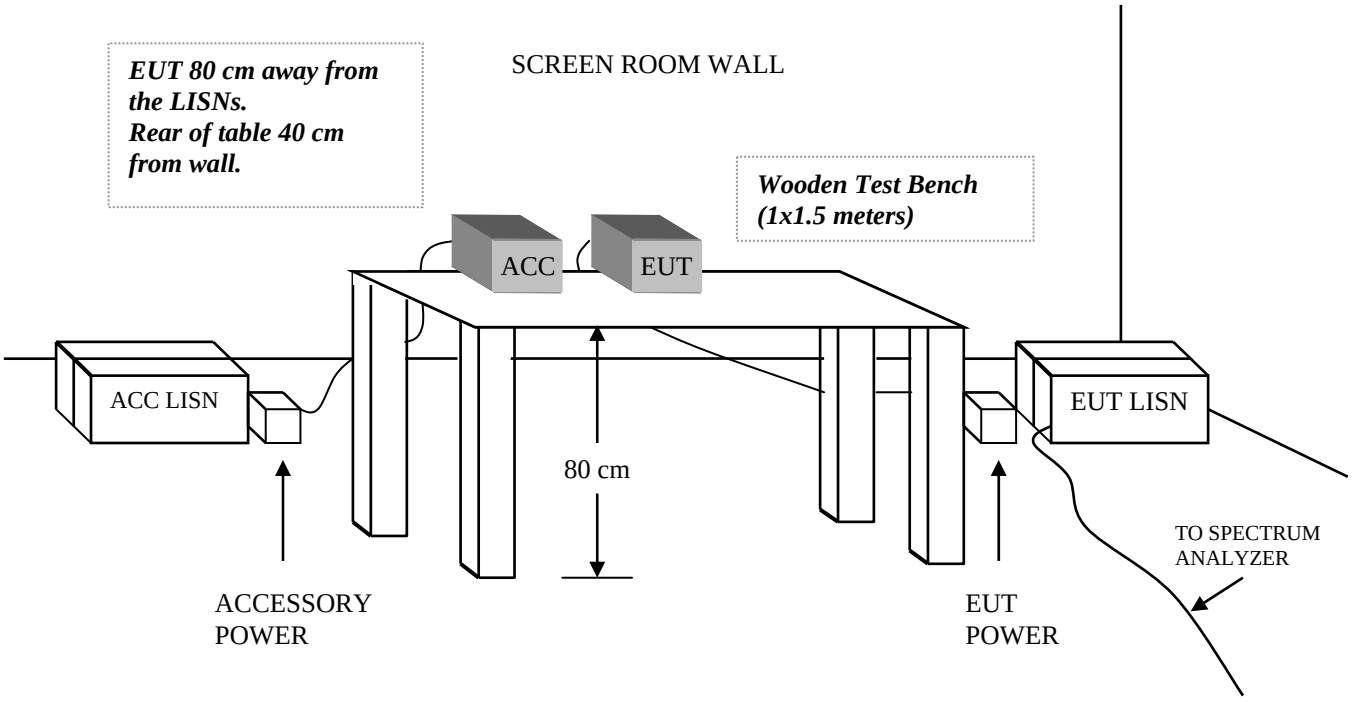


FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE

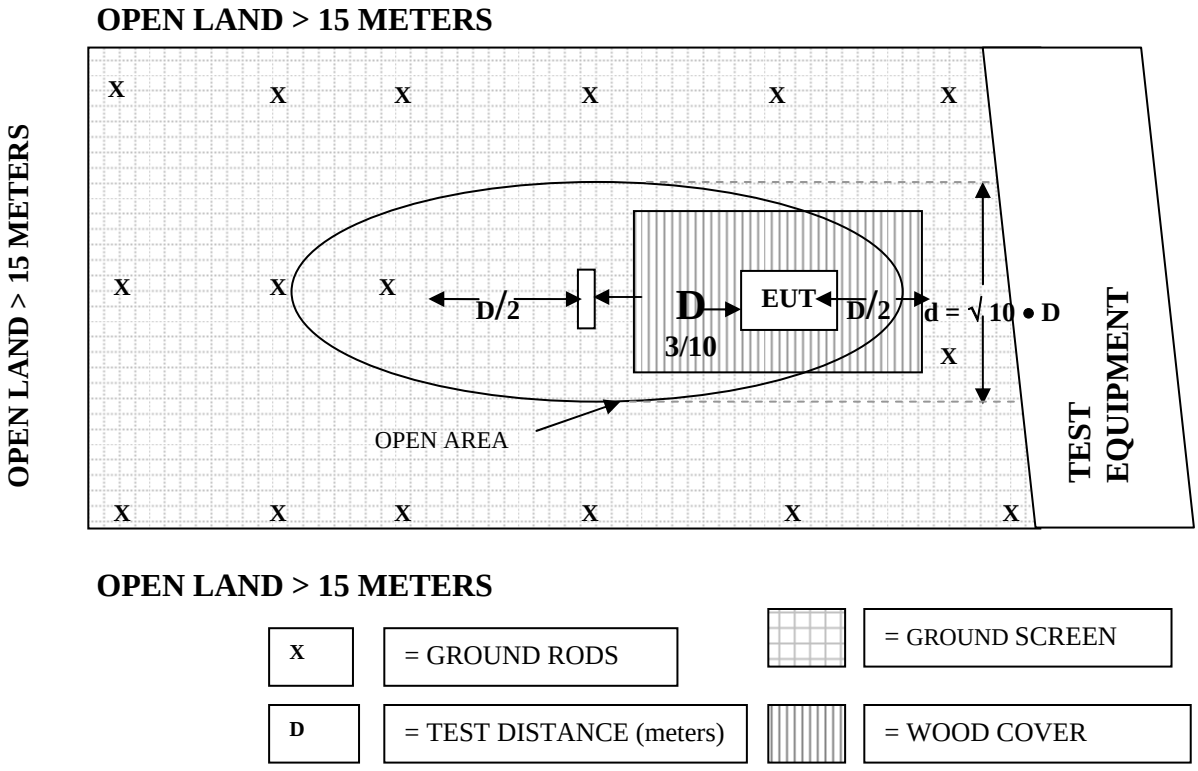
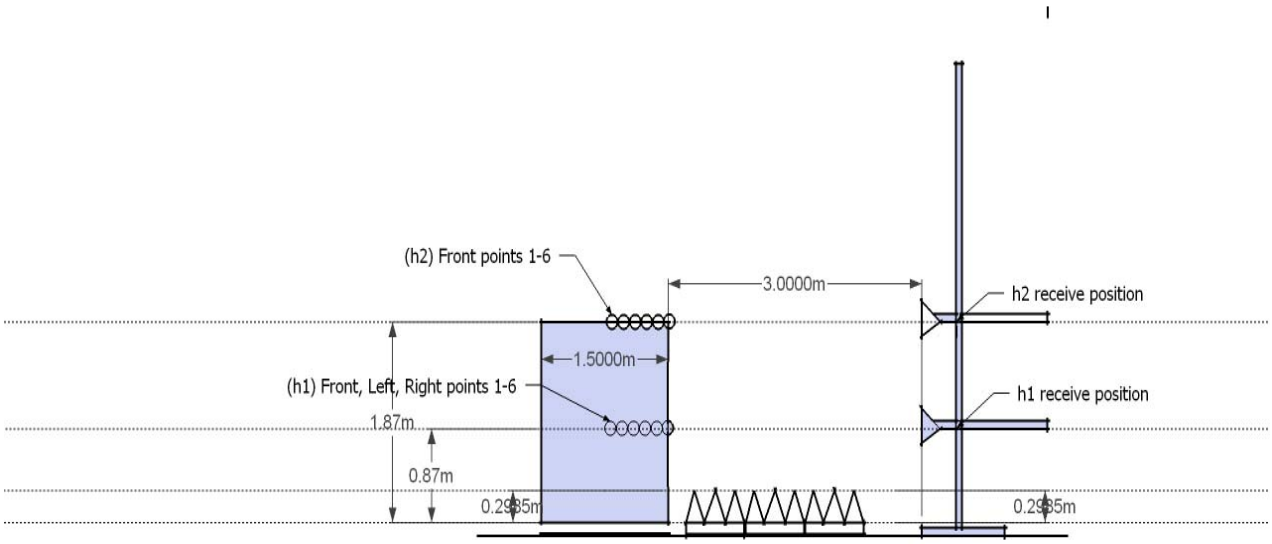


FIGURE 3: HIGH FREQUENCY TEST VOLUME



COM-POWER AL-130

LOOP ANTENNA

S/N: 17089

CALIBRATION DATE: JANUARY 21, 2011

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-41.9	9.6
0.01	-41.79	9.71
0.02	-41.43	10.07
0.05	-41.53	9.97
0.07	-41.47	10.03
0.1	-41.44	10.06
0.2	-41.61	9.89
0.3	-41.62	9.88
0.5	-41.66	9.84
0.7	-41.48	10.02
1	-41.13	10.37
2	-40.89	10.61
3	-41.00	10.50
4	-41.14	10.36
5	-41.02	10.48
10	-40.69	10.82
15	-40.41	11.09
20	-41.07	10.43
25	-42.10	9.40
30	-41.15	10.35

COM-POWER AB-900

BICONICAL ANTENNA

S/N: 43028

CALIBRATION DATE: MAY 24, 2012

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	11.80	120	13.20
35	11.20	125	13.30
40	11.90	140	11.60
45	10.70	150	11.80
50	11.40	160	12.70
60	10.30	175	14.80
70	7.60	180	15.70
80	5.70	200	15.80
90	7.90	250	14.80
100	10.7	300	19.80

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 16252

CALIBRATION DATE: MAY 24, 2012

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	13.00	700	20.30
350	13.20	750	20.80
400	14.50	800	21.00
450	15.40	850	23.70
500	15.80	900	21.70
550	16.60	950	24.20
600	18.90	1000	24.30
650	19.10		

COM POWER AH-118

HORN ANTENNA

S/N: 071175

CALIBRATION DATE: FEBRUARY 29, 2012

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	23.6	10.0	37.7
1.5	22.0	10.5	38.4
2.0	28.7	11.0	38.0
2.5	29.3	11.5	38.2
3.0	30.6	12.0	39.0
3.5	30.4	12.5	42.4
4.0	31.1	13.0	40.8
4.5	33.4	13.5	40.0
5.0	35.3	14.0	39.7
5.5	35.1	14.5	43.5
6.0	36.9	15.0	42.7
6.5	37.4	15.5	39.7
7.0	37.6	16.0	39.2
7.5	36.2	16.5	39.7
8.0	38.4	17.0	42.2
8.5	39.3	17.5	47.6
9.0	37.4	18.0	51.2
9.5	38.0		

COM-POWER PA-102

PREAMPLIFIER

S/N: 1017

CALIBRATION DATE: DECEMBER 28, 2011

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	38.54	300	38.45
40	38.53	350	38.47
50	38.57	400	38.36
60	38.54	450	38.07
70	38.54	500	38.31
80	38.54	550	38.37
90	38.54	600	38.28
100	38.53	650	38.19
125	38.51	700	38.24
150	38.43	750	37.88
175	38.56	800	37.94
200	38.50	850	37.65
225	38.46	900	37.50
250	38.57	950	37.47
275	38.45	1000	36.86

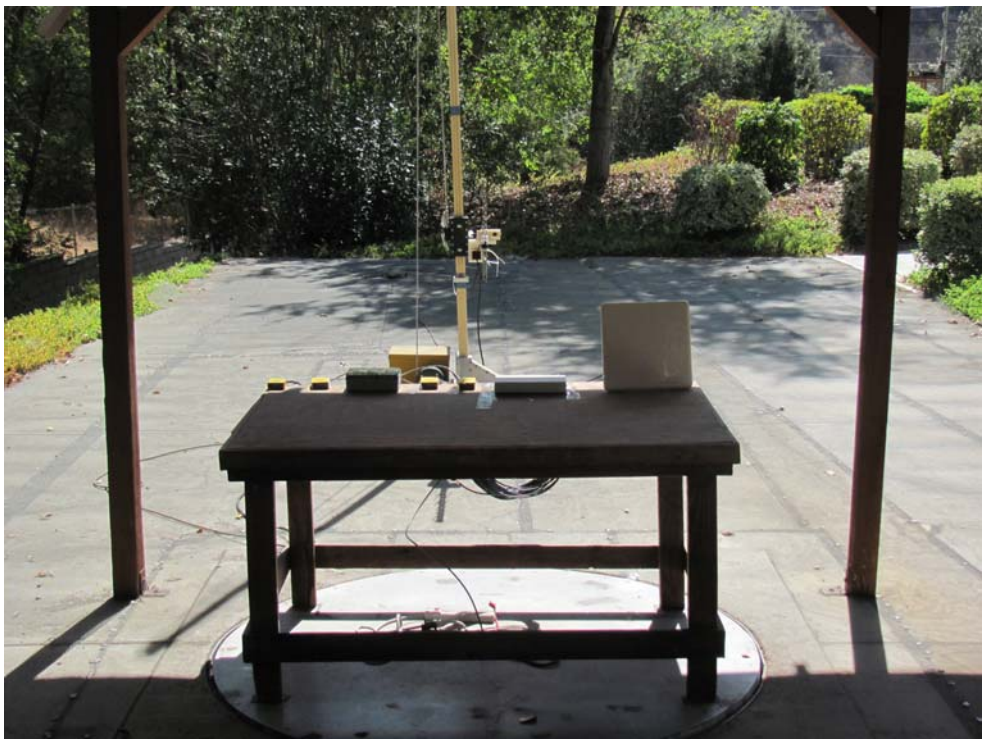
COM-POWER PA-118

PREAMPLIFIER

S/N: 181656

CALIBRATION DATE: DECEMBER 28, 2011

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	23.22	10.0	24.66
1.5	26.31	10.5	25.22
2.0	27.40	11.0	25.17
2.5	26.52	11.5	24.47
3.0	27.35	12.0	25.29
3.5	29.02	12.5	26.03
4.0	28.51	13.0	24.11
4.5	26.62	13.5	24.28
5.0	27.13	14.0	25.81
5.5	27.29	14.5	25.45
6.0	26.72	15.0	25.36
6.5	25.62	15.5	26.76
7.0	25.25	16.0	28.09
7.5	24.23	16.5	23.23
8.0	23.72	17.0	26.58
8.5	24.91	17.5	27.45
9.0	25.73	18.0	27.53
9.5	24.79		



FRONT VIEW

MOJIX, INC.
STAR 3000 SYSTEM
RADIATED EMISSIONS – CONFIGURATION #1 – eNode, GPIO, and ANTENNA SIDE

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

MOJIX, INC.
STAR 3000 SYSTEM
RADIATED EMISSIONS – CONFIGURATION #1 – eNode, GPIO, and ANTENNA SIDE

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

MOJIX, INC.
STAR 3000 SYSTEM
RADIATED EMISSIONS – CONFIGURATION #1 – STAR 3000 and eMux SIDE

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

MOJIX, INC.
STAR 3000 SYSTEM
RADIATED EMISSIONS – CONFIGURATION #1 – STAR 3000 and eMux SIDE

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

MOJIX, INC.
STAR 3000 SYSTEM
RADIATED EMISSIONS – CONFIGURATIONS #2 AND #3 –
eNode, GPIO, RF EXPANDER AND ANTENNA SIDE

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

MOJIX, INC.
STAR 3000 SYSTEM
RADIATED EMISSIONS – CONFIGURATIONS #2 AND #3 –
eNode, GPIO, RF EXPANDER AND ANTENNA SIDE

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

MOJIX, INC.
STAR 3000 SYSTEM
RADIATED EMISSIONS – CONFIGURATIONS #2 AND #3 – STAR 3000 AND eMux SIDE

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

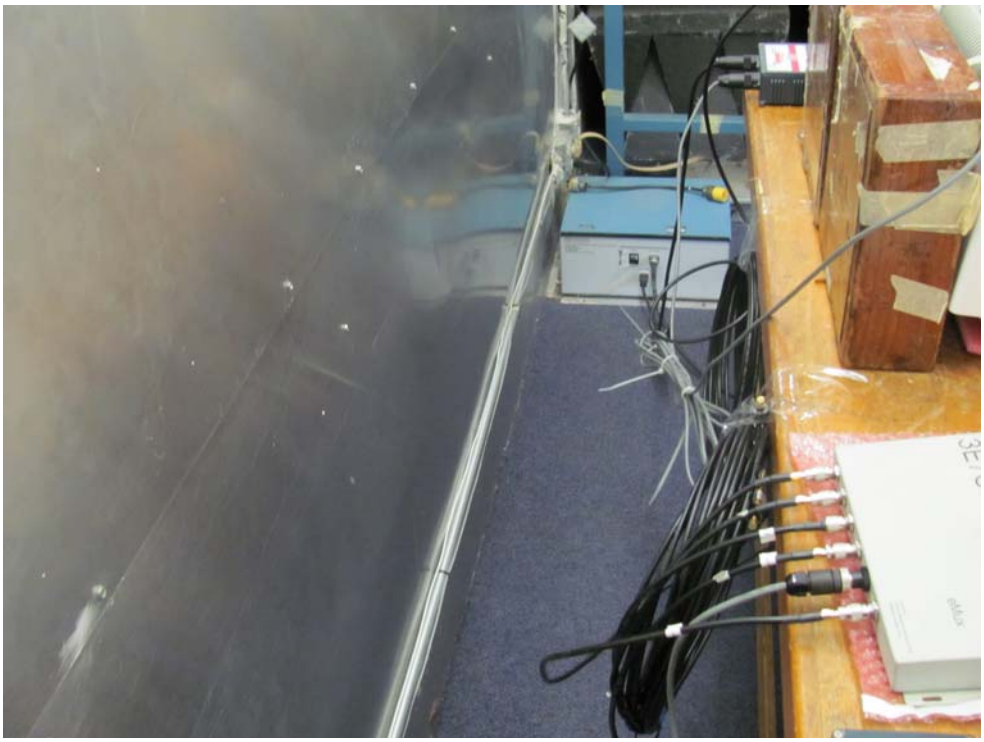
MOJIX, INC.
STAR 3000 SYSTEM
RADIATED EMISSIONS – CONFIGURATIONS #2 AND #3 – STAR 3000 AND eMux SIDE

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

MOJIX, INC.
STAR 3000 SYSTEM
CONDUCTED EMISSIONS – CONFIGURATION #2 –
STAR 3000 POWER SUPPLY

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

MOJIX, INC.
STAR 3000 SYSTEM
CONDUCTED EMISSIONS – CONFIGURATION #2 –
STAR 3000 POWER SUPPLY

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

MOJIX, INC.
STAR 3000 SYSTEM
CONDUCTED EMISSIONS – CONFIGURATION #1 – INDOOR SUPPLY ON eMux

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

MOJIX, INC.
STAR 3000 SYSTEM
CONDUCTED EMISSIONS – CONFIGURATION #1 – INDOOR SUPPLY ON eMux

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

MOJIX, INC.
STAR 3000 SYSTEM
CONDUCTED EMISSIONS – CONFIGURATION #2 – OUTDOOR SUPPLY ON eMux

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

MOJIX, INC.
STAR 3000 SYSTEM RFID READER
CONDUCTED EMISSIONS – CONFIGURATION #2 – OUTDOOR SUPPLY ON eMux

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #1 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

Low Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
902.73								N/A - Done via Conducted
1805.46	54.94	V	--	--	Peak	1.25	155	Not in Restricted Band
1805.46	49.92	V	--	--	Avg	1.25	155	Not in Restricted Band
2708.19	42.51	V	74	-31.49	Peak	1.35	165	
2708.19	29.72	V	54	-24.28	Avg	1.35	165	
3610.92	41.71	V	74	-32.29	Peak	1.25	165	
3610.92	27.97	V	54	-26.03	Avg	1.25	165	
4513.65	47.04	V	74	-26.96	Peak	1.55	175	
4513.65	34.29	V	54	-19.71	Avg	1.55	175	
5416.38								no emissions found
5416.38								
6319.11								no emissions found
6319.11								
7221.84								no emissions found
7221.84								
8124.57								no emissions found
8124.57								
9027.3								no emissions found
9027.3								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #1 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

Low Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
902.73								N/A - Done via Conducted
1805.46	46.31	H	--	--	Peak	1.25	155	Not in Restricted Band
1805.46	40.69	H	--	--	Avg	1.25	155	Not in Restricted Band
2708.19	36.63	H	74	-37.37	Peak	1.55	165	
2708.19	24.61	H	54	-29.39	Avg	1.55	165	
3610.92	37.37	H	74	-36.63	Peak	1.25	155	
3610.92	25.08	H	54	-28.92	Avg	1.25	155	
4513.65	42.03	H	74	-31.97	Peak	1.25	155	
4513.65	28.97	H	54	-25.03	Avg	1.25	155	
5416.38								no emissions found
5416.38								
6319.11								no emissions found
6319.11								
7221.84								no emissions found
7221.84								
8124.57								no emissions found
8124.57								
9027.3								no emissions found
9027.3								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #1 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

Middle Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
915.22								N/A - Done via Conducted
1830.44	58.99	V	--	--	Peak	1.25	155	Not in Restricted Band
1830.44	54.06	V	--	--	Avg	1.25	155	Not in Restricted Band
2745.66	46.02	V	74	-27.98	Peak	1.35	165	
2745.66	37.01	V	54	-16.99	Avg	1.35	165	
3660.88	40.63	V	74	-33.37	Peak	1.25	175	
3660.88	28.35	V	54	-25.65	Avg	1.25	175	
4576.1	46.49	V	74	-27.51	Peak	1.35	185	
4576.1	34.18	V	54	-19.82	Avg	1.35	185	
5491.32								no emissions found
5491.32								
6406.54								no emissions found
6406.54								
7321.76								no emissions found
7321.76								
8236.98								no emissions found
8236.98								
9152.2								no emissions found
9152.2								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #1 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

Middle Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
915.22								N/A - Done via Conducted
1830.44	59.52	H	--	--	Peak	1.25	155	Not in Restricted Band
1830.44	53.84	H	--	--	Avg	1.25	155	Not in Restricted Band
2745.66	40.59	H	74	-33.41	Peak	1.25	155	
2745.66	24.78	H	54	-29.22	Avg	1.25	155	
3660.88	36.45	H	74	-37.55	Peak	1.35	165	
3660.88	23.53	H	54	-30.47	Avg	1.35	165	
4576.1	41.16	H	74	-32.84	Peak	1.25	175	
4576.1	29.21	H	54	-24.79	Avg	1.25	175	
5491.32								no emissions found
5491.32								
6406.54								no emissions found
6406.54								
7321.76								no emissions found
7321.76								
8236.98								no emissions found
8236.98								
9152.2								no emissions found
9152.2								

FCC 15.247

Mojix, Inc.
Star 3000 System
Configuration #1 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

High Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
927.23								N/A - Done via Conducted
1854.46	61.39	V	--	--	Peak	1.25	155	Not in Restricted Band
1854.46	56.77	V	--	--	Avg	1.25	155	Not in Restricted Band
2781.69	45.53	V	74	-28.47	Peak	1.25	165	
2781.69	29.58	V	54	-24.42	Avg	1.25	165	
3708.92	40.63	V	74	-33.37	Peak	1.55	175	
3708.92	28.02	V	54	-25.98	Avg	1.55	175	
4636.15	47.41	V	74	-26.59	Peak	1.25	185	
4636.15	34.23	V	54	-19.77	Avg	1.25	185	
5563.38								no emissions found
5563.38								
6490.61								no emissions found
6490.61								
7417.84								no emissions found
7417.84								
8345.07								no emissions found
8345.07								
9272.3								no emissions found
9272.3								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #1 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

High Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
927.36								N/A - Done via Conducted
1854.72	57.28	H	--	--	Peak	1.25	255	Not in Restricted Band
1854.72	51.67	H	--	--	Avg	1.25	255	Not in Restricted Band
2782.08	43.97	H	74	-30.03	Peak	1.25	155	
2782.08	30.01	H	54	-23.99	Avg	1.25	155	
3709.44	40.43	H	74	-33.57	Peak	1.35	165	
3709.44	27.97	H	54	-26.03	Avg	1.35	165	
4636.8	47.71	H	74	-26.29	Peak	1.25	175	
4636.8	34.16	H	54	-19.84	Avg	1.25	175	
5564.16								no emissions found
5564.16								
6491.52								no emissions found
6491.52								
7418.88								no emissions found
7418.88								
8346.24								no emissions found
8346.24								
9273.6								no emission found
9273.6								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #1 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

1 GHz to 9.3 GHz - Vertical and Horizontal Polarizations
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W)

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions
								Detected from the Receive
								Mode from 1 GHz to 9.3 GHz
								No Emissions Detected
								from the Digital Portion from
								1 GHz to 9.3 GHz
								No Emissions Detected for
								the Non-Harmonic Tx
								Emissions from
								1 GHz to 9.3 GHz

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #2 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

Low Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W), RF eXpander (EXP-3004-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
902.73								N/A - Done via Conducted
1805.46	49.59	V	--	--	Peak	1.25	155	Not in Restricted Band
1805.46	43.47	V	--	--	Avg	1.25	155	Not in Restricted Band
2708.19	45.31	V	74	-28.69	Peak	1.15	165	
2708.19	30.26	V	54	-23.74	Avg	1.15	165	
3610.92	40.12	V	74	-33.88	Peak	1.25	155	
3610.92	30.28	V	54	-23.72	Avg	1.25	155	
4513.65	45.16	V	74	-28.84	Peak	1.35	165	
4513.65	35.25	V	54	-18.75	Avg	1.35	165	
5416.38								no emissions found
5416.38								
6319.11								no emissions found
6319.11								
7221.84								no emissions found
7221.84								
8124.57								no emissions found
8124.57								
9027.3								no emissions found
9027.3								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #2 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

Low Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W), RF eXpander (EXP-3004-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
902.73								N/A - Done via Conducted
1805.46	44.68	H	--	--	Peak	1.25	155	Not in Restricted Band
1805.46	36.31	H	--	--	Avg	1.25	155	Not in Restricted Band
2708.19	42.91	H	74	-31.09	Peak	1.35	165	
2708.19	29.97	H	54	-24.03	Avg	1.35	165	
3610.92	41.36	H	74	-32.64	Peak	1.25	175	
3610.92	27.96	H	54	-26.04	Avg	1.25	175	
4513.65	47.21	H	74	-26.79	Peak	1.25	165	
4513.65	34.31	H	54	-19.69	Avg	1.25	165	
5416.38								no emissions found
5416.38								
6319.11								no emissions found
6319.11								
7221.84								no emissions found
7221.84								
8124.57								no emissions found
8124.57								
9027.3								no emissions found
9027.3								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #2 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

Middle Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W), RF eXpander (EXP-3004-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
915.22								N/A - Done via Conducted
1830.44	48.08	V	--	--	Peak	1.25	155	Not in Restricted Band
1830.44	40.71	V	--	--	Avg	1.25	155	Not in Restricted Band
2745.66	50.05	V	74	-23.95	Peak	1.25	155	
2745.66	42.01	V	54	-11.99	Avg	1.25	155	
3660.88	42.55	V	74	-31.45	Peak	1.15	165	
3660.88	28.31	V	54	-25.69	Avg	1.15	165	
4576.1	47.22	V	74	-26.78	Peak	1.25	165	
4576.1	34.23	V	54	-19.77	Avg	1.25	165	
5491.32								no emissions found
5491.32								
6406.54								no emissions found
6406.54								
7321.76								no emissions found
7321.76								
8236.98								no emissions found
8236.98								
9152.2								no emissions found
9152.2								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #2 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

Middle Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W), RF eXpander (EXP-3004-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
915.22								N/A - Done via Conducted
1830.44	43.21	H	--	--	Peak	1.25	155	Not in Restricted Band
1830.44	27.81	H	--	--	Avg	1.25	155	Not in Restricted Band
2745.66	45.15	H	74	-28.85	Peak	1.35	165	
2745.66	34.22	H	54	-19.78	Avg	1.35	165	
3660.88	40.48	H	74	-33.52	Peak	1.25	175	
3660.88	28.39	H	54	-25.61	Avg	1.25	175	
4576.1	45.97	H	74	-28.03	Peak	1.35	225	
4576.1	34.24	H	54	-19.76	Avg	1.35	225	
5491.32								no emissions found
5491.32								
6406.54								no emissions found
6406.54								
7321.76								no emissions found
7321.76								
8236.98								no emissions found
8236.98								
9152.2								no emissions found
9152.2								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #2 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

High Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W), RF eXpander (EXP-3004-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
927.23								N/A - Done via Conducted
1854.46	49.81	V	--	--	Peak	1.25	155	Not in Restricted Band
1854.46	42.05	V	--	--	Avg	1.25	155	Not in Restricted Band
2781.69	49.32	V	74	-24.68	Peak	1.15	165	
2781.69	40.66	V	54	-13.34	Avg	1.15	165	
3708.92	41.27	V	74	-32.73	Peak	1.25	155	
3708.92	28.02	V	54	-25.98	Avg	1.25	155	
4636.15	46.93	V	74	-27.07	Peak	1.35	165	
4636.15	34.38	V	54	-19.62	Avg	1.35	165	
5563.38								no emissions found
5563.38								
6490.61								no emissions found
6490.61								
7417.84								no emissions found
7417.84								
8345.07								no emissions found
8345.07								
9272.3								no emissions found
9272.3								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #2 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

High Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W), RF eXpander (EXP-3004-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
927.36								N/A - Done via Conducted
1854.72	45.31	H	--	--	Peak	1.25	165	Not in Restricted Band
1854.72	39.73	H	--	--	Avg	1.25	165	Not in Restricted Band
2782.08	47.61	H	74	-26.39	Peak	1.25	155	
2782.08	37.18	H	54	-16.82	Avg	1.25	155	
3709.44	39.78	H	74	-34.22	Peak	1.35	165	
3709.44	28.03	H	54	-25.97	Avg	1.35	165	
4636.8	46.26	H	74	-27.74	Peak	1.25	175	
4636.8	34.25	H	54	-19.75	Avg	1.25	175	
5564.16								no emissions found
5564.16								
6491.52								no emissions found
6491.52								
7418.88								no emissions found
7418.88								
8346.24								no emissions found
8346.24								
9273.6								no emission found
9273.6								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #2 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

1 GHz to 9.3 GHz - Vertical and Horizontal Polarizations
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W), RF eXpander (EXP-3004-W)

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions
								Detected from the Receive
								Mode from 1 GHz to 9.3 GHz
								No Emissions Detected
								from the Digital Portion from
								1 GHz to 9.3 GHz
								No Emissions Detected for
								the Non-Harmonic Tx
								Emissions from
								1 GHz to 9.3 GHz

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #3 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

Low Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W), RF eXpander (EXP-3004-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
902.73								N/A - Done via Conducted
1805.46	44.5	V	--	--	Peak	1.15	180	Not in Restricted Band
1805.46	32.58	V	--	--	Avg	1.15	180	Not in Restricted Band
2708.19	48.54	V	74	-25.46	Peak	1.65	155	
2708.19	40.69	V	54	-13.31	Avg	1.65	155	
3610.92	41.69	V	74	-32.31	Peak	1.75	145	
3610.92	29.58	V	54	-24.42	Avg	1.75	145	
4513.65	47.59	V	74	-26.41	Peak	1.25	155	
4513.65	35.69	V	54	-18.31	Avg	1.25	155	
5416.38								no emissions found
5416.38								
6319.11								no emissions found
6319.11								
7221.84								no emissions found
7221.84								
8124.57								no emissions found
8124.57								
9027.3								no emissions found
9027.3								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #3 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

Low Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W), RF eXpander (EXP-3004-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
902.73								N/A - Done via Conducted
1805.46	44.91	H	--	--	Peak	1.25	155	Not in Restricted Band
1805.46	37.26	H	--	--	Avg	1.25	155	Not in Restricted Band
2708.19	47.12	H	74	-26.88	Peak	1.35	165	
2708.19	33.09	H	54	-20.91	Avg	1.35	165	
3610.92	40.37	H	74	-33.63	Peak	1.25	155	
3610.92	28.17	H	54	-25.83	Avg	1.25	155	
4513.65	46.69	H	74	-27.31	Peak	1.35	165	
4513.65	34.29	H	54	-19.71	Avg	1.35	165	
5416.38								no emissions found
5416.38								
6319.11								no emissions found
6319.11								
7221.84								no emissions found
7221.84								
8124.57								no emissions found
8124.57								
9027.3								no emissions found
9027.3								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #3 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

Middle Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W), RF eXpander (EXP-3004-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
915.22								N/A - Done via Conducted
1830.44	42.87	V	--	--	Peak	1.25	155	Not in Restricted Band
1830.44	34.82	V	--	--	Avg	1.25	155	Not in Restricted Band
2745.66	50.81	V	74	-23.19	Peak	1.35	135	
2745.66	44.76	V	54	-9.24	Avg	1.35	135	
3660.88	41.33	V	74	-32.67	Peak	1.25	165	
3660.88	28.58	V	54	-25.42	Avg	1.25	165	
4576.1	48.11	V	74	-25.89	Peak	1.15	155	
4576.1	35.52	V	54	-18.48	Avg	1.15	155	
5491.32								no emissions found
5491.32								
6406.54								no emissions found
6406.54								
7321.76								no emissions found
7321.76								
8236.98								no emissions found
8236.98								
9152.2								no emissions found
9152.2								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #3 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

Middle Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W), RF eXpander (EXP-3004-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
915.22								N/A - Done via Conducted
1830.44	45.26	H	--	--	Peak	1.25	155	Not in Restricted Band
1830.44	33.98	H	--	--	Avg	1.25	155	Not in Restricted Band
2745.66	49.44	H	74	-24.56	Peak	1.35	145	
2745.66	41.77	H	54	-12.23	Avg	1.35	145	
3660.88	40.62	H	74	-33.38	Peak	1.25	155	
3660.88	28.46	H	54	-25.54	Avg	1.25	155	
4576.1	46.61	H	74	-27.39	Peak	1.35	145	
4576.1	34.28	H	54	-19.72	Avg	1.35	145	
5491.32								no emissions found
5491.32								
6406.54								no emissions found
6406.54								
7321.76								no emissions found
7321.76								
8236.98								no emissions found
8236.98								
9152.2								no emissions found
9152.2								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #3 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

High Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W), RF eXpander (EXP-3004-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
927.23								N/A - Done via Conducted
1854.46	44.04	V	--	--	Peak	1.25	155	Not in Restricted Band
1854.46	32.64	V	--	--	Avg	1.25	155	Not in Restricted Band
2781.69	50.35	V	74	-23.65	Peak	1.35	145	
2781.69	40.98	V	54	-13.02	Avg	1.35	145	
3708.92	41.31	V	74	-32.69	Peak	1.25	155	
3708.92	29.01	V	54	-24.99	Avg	1.25	155	
4636.15	49.66	V	74	-24.34	Peak	1.35	145	
4636.15	36.54	V	54	-17.46	Avg	1.35	145	
5563.38								no emissions found
5563.38								
6490.61								no emissions found
6490.61								
7417.84								no emissions found
7417.84								
8345.07								no emissions found
8345.07								
9272.3								no emissions found
9272.3								

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #3 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

High Channel
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W), RF eXpander (EXP-3004-W)
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
927.36								N/A - Done via Conducted
1854.72	58.23	H	--	--	Peak	1.25	155	Not in Restricted Band
1854.72	54.93	H	--	--	Avg	1.25	155	Not in Restricted Band
2782.08	56.35	H	74	-17.65	Peak	1.35	155	
2782.08	53.69	H	54	-0.31	Avg	1.35	155	
3709.44	50.71	H	74	-23.29	Peak	1.25	165	
3709.44	43.91	H	54	-10.09	Avg	1.25	165	
4636.8	50.86	H	74	-23.14	Peak	1.35	175	
4636.8	37.12	H	54	-16.88	Avg	1.35	175	
5564.16								no emissions found
5564.16								
6491.52								no emissions found
6491.52								
7418.88								no emissions found
7418.88								
8346.24								no emissions found
8346.24								
9273.6								no emission found
9273.6								

FCC 15.249 and FCC Class B

Mojix, Inc.
Star 3000 System
Configuration #3 - eNode Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

1 GHz to 9.3 GHz - Vertical and Horizontal Polarizations
eNode 3000 (ENM-3004-F), GPIO 3000 (GPO-3008-W), RF eXpander (EXP-3004-W)

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions
								Detected from the Receive
								Mode from 1 GHz to 9.3 GHz
								No Emissions Detected
								from the Digital Portion from
								1 GHz to 9.3 GHz
								No Emissions Detected for
								the Non-Harmonic Tx
								Emissions from
								1 GHz to 9.3 GHz

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #1 - Star 3000 Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

Configuration #1 -- Star 3000 Side - Frequency Hopping Mode - 1 GHz to 9.3 GHz
Star 3000 (STAR-3000-F), eMux 3000 with Indoor Power Supply (EMX-3004-WO)

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.55	63.3	V	74	-10.7	Peak	1.25	155	
1805.6	43.3	V	54	-10.7	Avg	1.25	155	
1823.58	68.57	V	74	-5.43	Peak	1.25	155	
1823.57	48.57	V	54	-5.43	Avg	1.25	155	
1850.44	59.04	V	74	-14.96	Peak	1.25	155	
1850.44	39.04	V	54	-14.96	Avg	1.25	155	
1852.31	56.68	V	74	-17.32	Peak	1.25	155	
1852.31	36.68	V	54	-17.32	Avg	1.25	155	
1805.55	64.29	H	74	-9.71	Peak	1	225	
1805.6	44.29	H	54	-9.71	Avg	1	225	
1823.58	68.02	H	74	-5.98	Peak	1.25	155	
1823.57	48.02	H	54	-5.98	Avg	1.25	155	
1850.44	63.31	H	74	-10.69	Peak	1.15	145	
1850.44	43.31	H	54	-10.69	Avg	1.15	145	
1852.31	56.82	H	74	-17.18	Peak	1.25	155	
1852.31	36.82	H	54	-17.18	Avg	1.25	155	
								Note: No Additional Emissions
								Detected from 1 GHz to
								9.3 GHz from the EUT

FCC 15.247
Mojix, Inc.
Star 3000 System
Configuration #2 - Star 3000 Side

Date: 09/24/2012
Labs: B and D
Tested By: Kyle Fujimoto

Configuration #2 - Star 3000 Side - Frequency Hopping Mode - 1 GHz to 9.3 GHz
Star 3000 (STAR-3000-F), eMux 3000 with Outdoor P/S (EMX-3004-WO)

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.55	66.5	V	74	-7.5	Peak	1.25	155	
1805.6	46.5	V	54	-7.5	Avg	1.25	155	
1823.58	64.73	V	74	-9.27	Peak	1.25	155	
1823.57	44.73	V	54	-9.27	Avg	1.25	155	
1850.44	64.13	V	74	-9.87	Peak	1.25	155	
1850.44	44.13	V	54	-9.87	Avg	1.25	155	
1852.31	57.97	V	74	-16.03	Peak	1.25	155	
1852.31	37.97	V	54	-16.03	Avg	1.25	155	
1805.55	67.21	H	74	-6.79	Peak	1	225	
1805.6	47.21	H	54	-6.79	Avg	1	225	
1823.58	63.84	H	74	-10.16	Peak	1.25	155	
1823.57	43.84	H	54	-10.16	Avg	1.25	155	
1850.44	60.79	H	74	-13.21	Peak	1.15	145	
1850.44	40.79	H	54	-13.21	Avg	1.15	145	
1852.31	60.79	H	74	-13.21	Peak	1.25	155	
1852.31	40.79	H	54	-13.21	Avg	1.25	155	
								Note: No Additional Emissions
								Detected from 1 GHz to
								9.3 GHz from the EUT

Test Location : Compatible Electronics **Page** : 1/2
Customer : Mojix Inc. **Date** : 9/17/2012
Manufacturer : Mojix Inc. **Time** : 14:32:15
Eut name : Star 3000 System **Lab** : D
Model : See Section 5.1 of Test Report **Test Distance** : 10 Meters
Serial # : See Section 5.1 of Test Report
Specification : FCC Class A
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Radiated Emissions - FCC Class A
eMux 3000 with Indoor P/S and Star 3000 on Turntable
Configuration #1 - 30 MHz to 1 GHz
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1V	36.845	57.70	1.31	11.47	38.53	31.95	39.10	-7.15
2V	39.040	49.10	1.37	11.77	38.53	23.72	39.10	-15.38
3V	58.616	60.00	1.40	10.44	38.54	33.30	39.10	-5.80
4V	62.516	64.60	1.45	9.58	38.54	37.09	39.10	-2.01
5V	62.516	62.10	1.45	9.58	38.54	34.59	39.10	-4.51
6V	78.108	60.20	1.68	6.04	38.54	29.38	39.10	-9.72
7H	78.123	45.70	1.68	6.04	38.54	14.88	39.10	-24.22
8V	117.206	59.30	1.87	12.88	38.52	35.53	43.50	-7.97
9V	125.012	64.30	1.90	13.30	38.51	40.99	43.50	-2.51
10V	125.012Qp	63.64	1.90	13.30	38.51	40.33	43.50	-3.17
11H	125.017	59.30	1.90	13.30	38.51	35.99	43.50	-7.51
12V	132.826	54.60	2.00	12.39	38.48	30.51	43.50	-12.99
13V	136.724	61.70	2.05	11.96	38.47	37.23	43.50	-6.27
14V	156.242	61.70	2.23	12.37	38.46	37.83	43.50	-5.67
15H	156.269	56.00	2.23	12.37	38.46	32.13	43.50	-11.37
16V	187.520	64.30	2.40	15.74	38.53	43.91	43.50	0.41
17V	187.522Qp	61.27	2.40	15.74	38.53	40.88	43.50	-2.62
18H	195.289	38.30	2.46	15.78	38.51	18.03	43.50	-25.47
19V	195.347	54.00	2.46	15.78	38.51	33.73	43.50	-9.77
20V	249.991	55.90	2.80	14.80	38.57	34.93	46.40	-11.47
21H	249.995	50.70	2.80	14.80	38.57	29.73	46.40	-16.67
22V	250.032	53.20	2.80	14.80	38.57	32.23	46.40	-14.17
23V	258.286	62.00	2.83	15.69	38.53	42.00	46.40	-4.40
24V	275.438	44.30	2.90	17.46	38.45	26.21	46.40	-20.19
25V	312.514	67.00	3.13	13.05	38.46	44.72	46.40	-1.68
26H	312.516	65.90	3.13	13.05	38.46	43.62	46.40	-2.78
27H	312.516Qp	63.18	3.13	13.05	38.46	40.90	46.40	-5.50
28V	312.522Qp	66.90	3.13	13.05	38.46	44.62	46.40	-1.78
29V	336.018	52.40	3.17	13.15	38.46	30.26	46.40	-16.14
30H	336.038	50.80	3.17	13.15	38.46	28.66	46.40	-17.74
31H	350.000	41.20	3.20	13.20	38.47	19.13	46.40	-27.27
32H	366.663	47.70	3.37	13.65	38.43	26.30	46.40	-20.10
33V	374.998	67.20	3.46	13.87	38.41	46.12	46.40	-0.28
34V	375.001Qp	65.52	3.46	13.87	38.41	44.44	46.40	-1.96
35H	375.003	63.90	3.46	13.87	38.41	42.82	46.40	-3.58

Test Location : Compatible Electronics **Page** : 2/2
Customer : Mojix Inc. **Date** : 9/17/2012
Manufacturer : Mojix Inc. **Time** : 14:32:15
Eut name : Star 3000 System **Lab** : D
Model : See Section 5.1 of Test Report **Test Distance** : 10 Meters
Serial # : See Section 5.1 of Test Report
Specification : FCC Class A
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Radiated Emissions - FCC Class A
eMux 3000 with Indoor P/S and Star 3000 on Turntable
Configuration #1 - 30 MHz to 1 GHz
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
36H	462.768	40.30	3.81	15.51	38.13	21.48	46.40	-24.92
37V	462.806	47.30	3.81	15.51	38.13	28.48	46.40	-17.92
38V	500.110	40.70	4.10	15.80	38.31	22.29	46.40	-24.11

Test Location : Compatible Electronics **Page** : 1/1
Customer : Mojix, Inc. **Date** : 9/18/2012
Manufacturer : Mojix, Inc. **Time** : 8:42:25
Eut name : Star 3000 System **Lab** : D
Model : See Section 5.1 of Test Report **Test Distance** : 10 Meters
Serial # : See Section 5.1 of Test Report
Specification : FCC Class A
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Radiated Emissions - FCC Class A
eMux 3000 with Outdoor P/S and Star 3000 on Turntable
Configuration #2 - 30 MHz to 1 GHz
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1V	36.845	57.40	1.31	11.47	38.53	31.65	39.10	-7.45
2V	39.062	51.10	1.38	11.78	38.53	25.72	39.10	-13.38
3V	58.584	57.70	1.40	10.44	38.54	31.00	39.10	-8.10
4V	62.493	63.90	1.45	9.59	38.54	36.40	39.10	-2.70
5V	62.494Qp	62.96	1.45	9.59	38.54	35.46	39.10	-3.64
6H	78.113	45.60	1.68	6.04	38.54	14.78	39.10	-24.32
7V	78.146	62.10	1.68	6.03	38.54	31.28	39.10	-7.82
8V	117.174	55.00	1.87	12.87	38.52	31.23	43.50	-12.27
9H	124.973	51.00	1.90	13.30	38.51	27.69	43.50	-15.81
10V	125.029	48.40	1.90	13.30	38.51	25.09	43.50	-18.41
11V	132.806	49.80	2.00	12.39	38.48	25.71	43.50	-17.79
12V	136.726	67.70	2.05	11.95	38.47	43.23	43.50	-0.27
13V	136.731Qp	63.42	2.05	11.95	38.47	38.95	43.50	-4.55
14H	156.225	60.40	2.23	12.37	38.46	36.53	43.50	-6.97
15V	156.240	63.00	2.23	12.37	38.46	39.13	43.50	-4.37
16V	187.514	58.90	2.40	15.74	38.53	38.51	43.50	-4.99
17H	195.329	47.90	2.46	15.78	38.51	27.63	43.50	-15.87
18V	195.341	56.30	2.46	15.78	38.51	36.03	43.50	-7.47
19V	249.998	55.20	2.80	14.80	38.57	34.23	46.40	-12.17
20H	250.018	51.60	2.80	14.80	38.57	30.63	46.40	-15.77
21V	258.332	37.40	2.83	15.70	38.53	17.40	46.40	-29.00
22H	273.456	46.20	2.89	17.26	38.46	27.90	46.40	-18.50
23V	275.412	44.00	2.90	17.46	38.45	25.91	46.40	-20.49
24V	312.508	60.30	3.13	13.05	38.46	38.02	46.40	-8.38
25H	312.516	62.20	3.13	13.05	38.46	39.92	46.40	-6.48
26H	336.027	46.20	3.17	13.15	38.46	24.06	46.40	-22.34
27V	336.029	46.40	3.17	13.15	38.46	24.26	46.40	-22.14
28H	349.995	51.20	3.20	13.20	38.47	29.13	46.40	-17.27
29H	366.658	48.30	3.37	13.65	38.43	26.90	46.40	-19.50
30H	375.012	62.30	3.46	13.87	38.41	41.22	46.40	-5.18
31V	375.016	64.70	3.46	13.87	38.41	43.62	46.40	-2.78
32V	375.016Qp	62.76	3.46	13.87	38.41	41.68	46.40	-4.72
33H	462.780	43.90	3.81	15.51	38.13	25.08	46.40	-21.32
34H	500.008	47.20	4.10	15.80	38.31	28.79	46.40	-17.61

Test Location : Compatible Electronics **Page** : 1/2
Customer : Mojix Inc. **Date** : 9/19/2012
Manufacturer : Mojix Inc. **Time** : 8:31:59
Eut name : Star 3000 System **Lab** : D
Model : See Section 5.1 of Test Report **Test Distance** : 3 Meters
Serial # : See Section 5.1 of Test Report
Specification : FCC Class B
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Radiated Emissions - FCC Class B - Tx Portion
eNode 3000 and GPIO 3000 on Turntable
Configuration #1 - 10 kHz to 1 GHz
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1V	36.872	57.10	0.84	11.47	38.53	30.88	40.00	-9.12
2H	36.878	43.20	0.84	11.47	38.53	16.98	40.00	-23.02
3H	58.611	47.30	0.89	10.44	38.54	20.08	40.00	-19.92
4V	58.687	46.80	0.89	10.43	38.54	19.58	40.00	-20.42
5V	62.515	58.00	0.95	9.58	38.54	29.99	40.00	-10.01
6V	72.343	59.80	1.12	7.13	38.54	29.52	40.00	-10.48
7V	82.422	48.60	1.23	6.26	38.54	17.54	40.00	-22.46
8H	118.706	52.30	1.28	13.05	38.51	28.11	43.50	-15.39
9V	125.007	57.10	1.30	13.30	38.51	33.19	43.50	-10.31
10V	132.846	51.50	1.40	12.39	38.48	26.80	43.50	-16.70
11V	156.269	57.90	1.63	12.37	38.46	33.43	43.50	-10.07
12V	162.509	55.40	1.65	13.06	38.50	31.62	43.50	-11.88
13H	166.955	45.10	1.67	13.70	38.52	21.95	43.50	-21.55
14V	224.950	42.30	1.90	15.27	38.46	21.01	46.00	-24.99
15V	312.481	54.00	2.25	13.05	38.46	30.85	46.00	-15.15
16V	336.023	57.00	2.35	13.15	38.46	34.03	46.00	-11.97
17H	336.029	55.30	2.35	13.15	38.46	32.33	46.00	-13.67
18H	360.024	54.50	2.44	13.47	38.45	31.97	46.00	-14.03
19H	375.009	60.80	2.50	13.87	38.41	38.76	46.00	-7.24
20H	390.646	53.90	2.56	14.27	38.38	32.35	46.00	-13.65
21H	423.330	45.60	2.60	14.93	38.22	24.91	46.00	-21.09
22V	432.008	52.20	2.60	15.09	38.17	31.72	46.00	-14.28
23H	462.831	45.10	2.65	15.51	38.13	25.13	46.00	-20.87
24H	480.431	46.80	2.72	15.65	38.22	26.95	46.00	-19.05
25H	512.886	45.00	2.83	16.01	38.33	25.51	46.00	-20.49
26V	515.855	46.50	2.83	16.06	38.33	27.07	46.00	-18.93
27H	519.238	45.40	2.84	16.12	38.33	26.02	46.00	-19.98
28H	545.109	44.80	2.89	16.53	38.36	25.85	46.00	-20.15
29H	597.114	60.50	3.09	18.77	38.28	44.08	46.00	-1.92
30H	597.114Qp	52.30	3.09	18.77	38.28	35.88	46.00	-10.12
31H	609.731	55.30	3.12	18.94	38.26	39.10	46.00	-6.90
32H	629.139	57.40	3.16	19.02	38.23	41.35	46.00	-4.65
33V	649.435	52.40	3.20	19.10	38.19	36.51	46.00	-9.49
34V	655.884	60.00	3.22	19.25	38.20	44.27	46.00	-1.73
35V	655.884Qp	56.85	3.22	19.25	38.20	41.12	46.00	-4.88

Test Location : Compatible Electronics **Page** : 2/2
Customer : Mojix Inc. **Date** : 9/19/2012
Manufacturer : Mojix Inc. **Time** : 8:31:59
Eut name : Star 3000 System **Lab** : D
Model : See Section 5.1 of Test Report **Test Distance** : 3 Meters
Serial # : See Section 5.1 of Test Report
Specification : FCC Class B
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Radiated Emissions - FCC Class B - Tx Portion
eNode 3000 and GPIO 3000 on Turntable
Configuration #1 - 10 kHz to 1 GHz
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
36V	662.012	53.80	3.25	19.40	38.20	38.24	46.00	-7.76
37V	674.652	57.70	3.30	19.70	38.22	42.49	46.00	-3.51
38H	680.101	60.20	3.32	19.83	38.22	45.13	46.00	-0.87
39H	680.101Qp	50.97	3.32	19.83	38.22	35.90	46.00	-10.10
40V	693.801	54.80	3.38	20.16	38.23	40.10	46.00	-5.90
41H	712.704	55.50	3.48	20.43	38.15	41.26	46.00	-4.74
42H	719.112	51.00	3.52	20.50	38.10	36.91	46.00	-9.09
43H	771.429	47.40	3.70	20.89	37.91	34.08	46.00	-11.92
44H	785.946	50.70	3.70	20.95	37.92	37.42	46.00	-8.58
45H	805.474	51.60	3.77	21.26	37.91	38.72	46.00	-7.28
46H	825.260	40.10	4.01	22.18	37.79	28.50	46.00	-17.50

Test Location : Compatible Electronics **Page** : 1/1
Customer : Mojix Inc. **Date** : 9/17/2012
Manufacturer : Mojix Inc. **Time** : 12:04:23
Eut name : Star 3000 System **Lab** : D
Model : See Section 5.1 of Test Report **Test Distance** : 3 Meters
Serial # : See Section 5.1 of Test Report
Specification : FCC Class B
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Radiated Emissions - FCC Class B - Tx Portion
eMux 3000 with Indoor P/S and Star 3000 on Turntable
Configuration #1 - 10 kHz to 1 GHz
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1V	127.943	59.80	1.34	12.95	38.50	35.59	43.50	-7.91
2H	127.945	56.50	1.34	12.95	38.50	32.29	43.50	-11.21
3V	128.887	61.30	1.35	12.84	38.50	36.99	43.50	-6.51
4V	149.673	57.20	1.60	11.79	38.43	32.16	43.50	-11.34
5H	149.782	57.00	1.60	11.80	38.43	31.96	43.50	-11.54
6V	158.249	65.00	1.63	12.55	38.48	40.71	43.50	-2.79
7V	162.118	58.40	1.65	13.01	38.50	34.56	43.50	-8.94
8V	167.990	60.90	1.67	13.84	38.53	37.89	43.50	-5.61
9V	171.901	59.10	1.69	14.38	38.54	36.62	43.50	-6.88
10H	250.005	56.60	2.10	14.80	38.57	34.93	46.00	-11.07
11V	250.006	57.10	2.10	14.80	38.57	35.43	46.00	-10.57
12H	437.498	55.30	2.60	15.18	38.14	34.95	46.00	-11.05

Test Location : Compatible Electronics **Page** : 1/1
Customer : Mojix Inc. **Date** : 9/20/2012
Manufacturer : Mojix Inc. **Time** : 8:33:41
Eut name : Star 3000 System **Lab** : D
Model : See Section 5.1 of Test Report **Test Distance** : 3 Meters
Serial # : See Section 5.1 of Test Report
Specification : FCC Class B
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Radiated Emissions - FCC Class B - Tx Portion
eNode 3000, RF eXpander, and GPIO 3000 on Turntable
Configuration #2 - 10 kHz to 1 GHz
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1V	62.512	53.90	0.95	9.58	38.54	25.89	40.00	-14.11
2V	117.186	50.60	1.27	12.87	38.52	26.23	43.50	-17.27
3V	134.759	53.50	1.42	12.17	38.48	28.62	43.50	-14.88
4V	140.628	66.10	1.49	11.61	38.46	40.75	43.50	-2.75
5V	140.628Qp	65.07	1.49	11.61	38.46	39.72	43.50	-3.78
6H	147.263	54.90	1.57	11.75	38.44	29.78	43.50	-13.72
7H	312.504	64.30	2.25	13.05	38.46	41.15	46.00	-4.85
8V	312.511	55.00	2.25	13.05	38.46	31.85	46.00	-14.15
9V	336.019	54.60	2.35	13.15	38.46	31.63	46.00	-14.37
10V	336.031	54.70	2.35	13.15	38.46	31.73	46.00	-14.27
11H	400.354	50.10	2.60	14.51	38.36	28.85	46.00	-17.15
12V	413.418	36.20	2.60	14.75	38.28	15.27	46.00	-30.73
13V	473.019	45.80	2.69	15.59	38.18	25.90	46.00	-20.10
14H	690.774	57.30	3.36	20.09	38.23	42.52	46.00	-3.48
15H	697.178	59.30	3.39	20.23	38.24	44.69	46.00	-1.31
16H	697.178Qp	57.62	3.39	20.23	38.24	43.01	46.00	-2.99
17V	710.916	43.00	3.47	20.41	38.16	28.72	46.00	-17.28
18H	775.509	48.40	3.70	20.90	37.91	35.09	46.00	-10.91

Test Location : Compatible Electronics **Page** : 1/1
Customer : Mojix Inc. **Date** : 9/18/2012
Manufacturer : Mojix Inc. **Time** : 10:48:06
Eut name : Star 3000 System **Lab** : D
Model : See Section 5.1 of Test Report **Test Distance** : 3 Meters
Serial # : See Section 5.1 of Test Report
Specification : FCC Class B
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Radiated Emissions - FCC Class B - Tx Portion
eMux 3000 with Outdoor P/S and Star 3000 on Turntable
Configuration #2 - 10 kHz to 1 GHz
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1H	126.510	47.60	1.32	13.12	38.50	23.53	43.50	-19.97
2V	127.970	52.90	1.34	12.95	38.50	28.69	43.50	-14.81
3V	149.710	60.00	1.60	11.79	38.43	34.96	43.50	-8.54
4H	150.240	54.30	1.60	11.82	38.43	29.29	43.50	-14.21
5V	158.450	48.50	1.64	12.56	38.48	24.22	43.50	-19.28
6V	162.102	54.90	1.65	13.01	38.50	31.06	43.50	-12.44
7V	167.977	52.80	1.67	13.84	38.53	29.79	43.50	-13.71
8V	171.850	53.50	1.69	14.37	38.54	31.02	43.50	-12.48
9V	171.920	53.00	1.69	14.38	38.55	30.53	43.50	-12.97
10V	209.010	50.90	1.77	15.60	38.49	29.79	43.50	-13.71
11V	437.492	52.60	2.60	15.18	38.14	32.25	46.00	-13.75
12H	437.520	42.50	2.60	15.19	38.14	22.15	46.00	-23.85

Test Location : Compatible Electronics **Page** : 1/2
Customer : Mojix Inc. **Date** : 9/20/2012
Manufacturer : Mojix Inc. **Time** : 14:20:20
Eut name : Star 3000 System **Lab** : D
Model : See Section 5.1 of Test Report **Test Distance** : 3 Meters
Serial # : See Section 5.1 of Test Report
Specification : FCC Class B
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Radiated Emissions - FCC Class B - Tx Portion
eNode 3000, GPIO 3000, and RF eXpander on Turntable
Configuration #3 - 10 kHz to 1 GHz
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1V	36.876	57.40	0.84	11.47	38.53	31.18	40.00	-8.82
2V	62.507	58.70	0.95	9.58	38.54	30.70	40.00	-9.30
3H	78.136	61.60	1.18	6.04	38.54	30.28	40.00	-9.72
4V	83.233	61.70	1.23	6.44	38.54	30.83	40.00	-9.17
5H	110.810	55.00	1.25	12.11	38.52	29.83	43.50	-13.67
6H	118.675	55.80	1.28	13.05	38.51	31.61	43.50	-11.89
7V	124.997	54.00	1.30	13.30	38.51	30.09	43.50	-13.41
8H	125.024	53.30	1.30	13.30	38.51	29.39	43.50	-14.11
9H	136.729	60.20	1.45	11.95	38.47	35.13	43.50	-8.37
10V	138.691	56.80	1.47	11.74	38.46	31.55	43.50	-11.95
11V	140.623	65.00	1.49	11.61	38.46	39.65	43.50	-3.85
12V	143.980	59.10	1.53	11.68	38.45	33.87	43.50	-9.63
13H	144.012	53.90	1.53	11.68	38.45	28.67	43.50	-14.83
14V	153.247	46.80	1.61	12.10	38.45	22.06	43.50	-21.44
15H	154.477	54.50	1.62	12.21	38.45	29.87	43.50	-13.63
16V	156.234	56.00	1.63	12.37	38.46	31.53	43.50	-11.97
17H	156.262	62.60	1.63	12.37	38.46	38.13	43.50	-5.37
18H	156.268	63.60	1.63	12.37	38.46	39.13	43.50	-4.37
19V	156.271	59.20	1.63	12.37	38.46	34.73	43.50	-8.77
20H	234.355	48.30	1.98	15.09	38.50	26.86	46.00	-19.14
21H	234.385	48.10	1.98	15.09	38.50	26.66	46.00	-19.34
22V	244.230	43.70	2.06	14.90	38.55	22.11	46.00	-23.89
23H	249.996	56.90	2.10	14.80	38.57	35.23	46.00	-10.77
24H	253.951	48.30	2.12	15.23	38.55	27.10	46.00	-18.90
25V	256.139	47.50	2.13	15.47	38.54	26.55	46.00	-19.45
26V	267.468	41.80	2.17	16.65	38.48	22.14	46.00	-23.86
27H	281.272	47.80	2.20	18.03	38.45	29.58	46.00	-16.42
28V	287.998	53.70	2.20	18.68	38.45	36.13	46.00	-9.87
29V	288.003	53.30	2.20	18.68	38.45	35.73	46.00	-10.27
30H	288.016	53.40	2.20	18.68	38.45	35.83	46.00	-10.17
31V	312.522	57.90	2.25	13.05	38.46	34.75	46.00	-11.25
32H	312.526	52.30	2.25	13.05	38.46	29.15	46.00	-16.85
33V	336.015	52.10	2.35	13.15	38.46	29.13	46.00	-16.87
34H	336.024	57.40	2.35	13.15	38.46	34.43	46.00	-11.57
35V	359.997	47.40	2.44	13.47	38.45	24.87	46.00	-21.13

Test Location : Compatible Electronics **Page** : 2/2
Customer : Mojix Inc. **Date** : 9/20/2012
Manufacturer : Mojix Inc. **Time** : 14:20:20
Eut name : Star 3000 System **Lab** : D
Model : See Section 5.1 of Test Report **Test Distance** : 3 Meters
Serial # : See Section 5.1 of Test Report
Specification : FCC Class B
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Radiated Emissions - FCC Class B - Tx Portion
eNode 3000, GPIO 3000, and RF eXpander on Turntable
Configuration #3 - 10 kHz to 1 GHz
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
36H	360.019	53.20	2.44	13.47	38.45	30.67	46.00	-15.33
37V	385.104	41.70	2.54	14.13	38.39	19.98	46.00	-26.02
38H	385.766	50.80	2.55	14.15	38.39	29.10	46.00	-16.90
39H	390.613	56.20	2.56	14.27	38.38	34.65	46.00	-11.35
40V	404.373	41.40	2.60	14.58	38.33	20.25	46.00	-25.75
41H	431.970	56.70	2.60	15.09	38.17	36.22	46.00	-9.78
42V	432.006	51.20	2.60	15.09	38.17	30.72	46.00	-15.28
43V	437.487	46.00	2.60	15.18	38.14	25.65	46.00	-20.35
44H	528.093	48.00	2.86	16.26	38.34	28.77	46.00	-17.23
45H	568.207	44.80	2.97	17.46	38.34	26.90	46.00	-19.10
46V	612.124	48.20	3.12	18.95	38.26	32.02	46.00	-13.98
47H	626.479	51.10	3.15	19.01	38.23	35.03	46.00	-10.97
48V	631.361	50.50	3.16	19.03	38.22	34.47	46.00	-11.53
49V	637.725	52.20	3.18	19.05	38.21	36.22	46.00	-9.78
50H	639.564	50.70	3.18	19.06	38.21	34.73	46.00	-11.27
51V	650.472	49.00	3.20	19.11	38.19	33.12	46.00	-12.88
52V	663.129	50.10	3.25	19.42	38.20	34.57	46.00	-11.43
53H	665.477	51.70	3.26	19.48	38.21	36.24	46.00	-9.76
54V	701.577	47.60	3.41	20.32	38.23	33.10	46.00	-12.90