

## EMI TEST REPORT

On Model Name: IP Multimedia Phone

Model Number: GXV3175

Brand Name: Grandstream

Prepared for Grandstream Networks, INC

FCC ID Number: YZZGXV3175-T

According to FCC 47 CFR Part 15(2012), Subpart B

Test Report #: SHE-1208-10861-FCC

Tested by: Daomen Galanz  
Engineer Company Name

Reviewed by: Jamerson ECMG  
Senior Engineer Company Name

QC Manager: Swall Zhang ECMG  
QC Manager Company Name

Test Report Released by: Swall Zhang September 25<sup>th</sup>, 2012  
Swall Zhang Date

### **Test Location**

*Tests performed in a Certified ANSI Semi-Anechoic Chamber and Shielded Room.*

*Test Site Location : Galanz*

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*Tel : (86)-757-23612785*

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### **Test Facility**

*The test facility was recognized, certified, or accredited by the following organizations:*

- *CNAL – LAB Code: L2244*

*Galanz EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.*

- *FCC – Registration No.: 580210*

*Galanz EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC was maintained in our files.*

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<i>Exhibit Type</i>	<i>File Description</i>	<i>File Name</i>
<i>Test Report</i>	<i>Test Report</i>	<i>YZZGXV3175-T_Test report.pdf</i>
<i>Operation Description</i>	<i>Technical Description</i>	<i>YZZGXV3175-T_operation description.pdf</i>
<i>External Photos</i>	<i>External Photos</i>	<i>YZZGXV3175-T_External Photos.pdf</i>
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<i>ID Label/Location</i>	<i>Label and Location</i>	<i>YZZGXV3175-T_Label &amp; Location.pdf</i>
<i>User Manual</i>	<i>User Manual</i>	<i>YZZGXV3175-T_User Manual.pdf</i>
<i>Test setup photos</i>	<i>Test setup photos</i>	<i>YZZGXV3175-T_Test Setup Photos.pdf</i>

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*This test report relates to the abovementioned equipment under test (EUT). Without the permission of ECMG Electronic Technical Testing Corp (Shenzhen) Test Lab this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark on this or similar products. The manufacturer has sole responsibility of continued compliance of the device.*

### **Statement of Measurement Uncertainty**

*The data and results referenced in the document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities that can account for a nominal measurement error. Furthermore, component and process variability of devices similar to that tested may result in additional deviation.*

## **Administrative Data**

*Test Sample* : *IP Multimedia Phone*

*Model Numbers* : *GXV3175*

*Model Tested* : *GXV3175*

*Receipt Date* : *August 16<sup>th</sup>, 2012*

*Date Tested* : *September 6<sup>th</sup>, 2012*

*Applicant* : *Grandstream Networks, INC*

*Address* : *5F, Bldg #1, No.2 Kefa Rd., Science & Technology Park, Shenzhen, China*

*Telephone* : *(86)-755-26014600*

*Fax* : *(86)-755-26014601*

*Manufacturer* : *Grandstream Networks, INC*

*Address* : *5F, Bldg #1, No.2 Kefa Rd., Science & Technology Park, Shenzhen, China*

*Telephone* : *(86)-755-26014600*

*Fax* : *(86)-755-26014601*

*Factory* : *Grandstream Networks, INC*

*Address* : *5F, Bldg #1, No.2 Kefa Rd., Science & Technology Park, Shenzhen, China*

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*Fax* : *(86)-755-26014601*

## EUT Description

Grandstream Networks, INC., model tested GXV3175 (referred to as the EUT in this report) is an IP Multimedia Phone.

The EUT is an IP multimedia phone which integrates an IEEE 802.11 b/g/n wireless module. Main technical specifications of the EUT are as follows:

Parameter		Range
Basic parameters	Rated voltage	12VDC
	Rated Current	1.5A
I/O Ports	Home Button	Press Home button to navigate to main screen
	Camera	1.3M pixel adjustable CMOS camera with privacy shutter
	PC Ethernet Port	10/100Mbps RJ-45 port connecting to PC
	Network Ethernet Port	10/100Mbps RJ-45 port connecting to Ethernet
	Power Jack	12V DC Power connector port
	RJ11 Jack	Phone handset connector port
	Camera Adjust Wheel	Scroll the wheel to turn on/off the camera; Adjust the camera position and lens angle
	Stylus	Stylus for touch screen (optional)
	USB Port	USB devices may be connected via the USB port. For example, you can connect a USB flash drive to save captured pictures and plug in USB keyboard or mouse for the built-in web browser
	SD Card Slot	SD card could be inserted in for picture/music/video files storage
	HDMI	High-Definition Multimedia Interface
Power Adapter	Headset Jack	3.5mm stereo headset connector port
	Input	100-240VAC 50/60Hz 0.4A
	Output	12VDC, 1.5A,
	Model	SFF1200150A1BB
	Brand name	Mass

**NOTE:** For more detailed informations or features please refer to user's manual of EUT.

## ***Test Summary***

*The Electromagnetic Compatibility requirements on model GXV3175 for this test are stated below. All results listed in this report relate exclusively to this above-mentioned model as the Equipment under Test. This report confers no approval or endorsement upon any other component, host or subsystem used in the test set-up.*

<b><i>Emission Tests</i></b>				
<b><i>Specifications</i></b>	<b><i>Description</i></b>	<b><i>Test Results</i></b>	<b><i>Test Point</i></b>	<b><i>Remark</i></b>
<i>FCC Part 15.107 ANSI C63.4 -2009</i>	<i>Conducted Emission</i>	<i>Passed</i>	<i>AC Input Port</i>	<i>Attachment 1</i>
<i>FCC Part 15.109 ANSI C63.4 -2009</i>	<i>Radiated Emission</i>	<i>Passed</i>	<i>Enclosure</i>	<i>Attachment 2</i>



### **Test Mode Justification**

*Pre-scan has been conducted to determine the worst-case modes from all possible combinations between available operational modes, the following modes were chosen for the final test as described below.*

#### **IP Call mode:**

*Connected the EUT to another an IP Phone by an RJ-45 cable and established a video call communication between them. Then connected a notebook PC to PC port of the EUT by another an RJ-45 cable and ping "192.168.0.160 -t" to EUT and measured it.*

#### **For PoE Mode:**

*Removed AC Adaptor of EUT, Let EUT powered by PoE mode and measured it.*

### **EUT Exercise Software**

*No test software support this test.*

### **Equipment Modification**

*Any modifications installed previous to testing by Grandstream Networks, INC. will be incorporated in each production model sold or leased in United States.*

*There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen). Test personnel.*

***EUT Sample Photos for model GXV3175***



***EUT- Front View***



***EUT -Rear View***



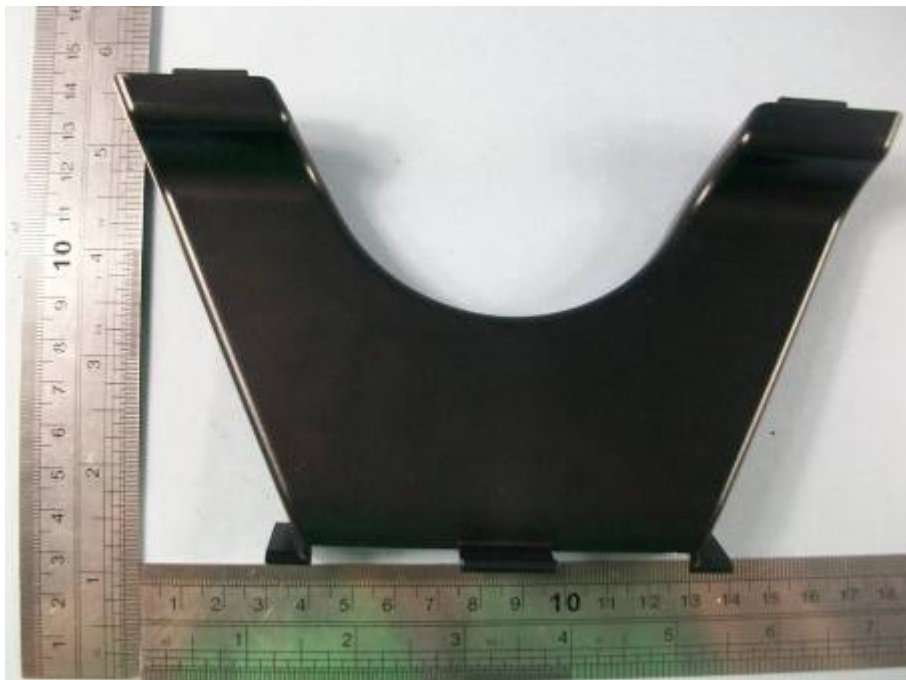
***Uncovered View***



***Mainboard -Front View***



***Mainboard -Rear View***



***Support View***





***Power Adaptor View (Manufacturer: Mass Power)***

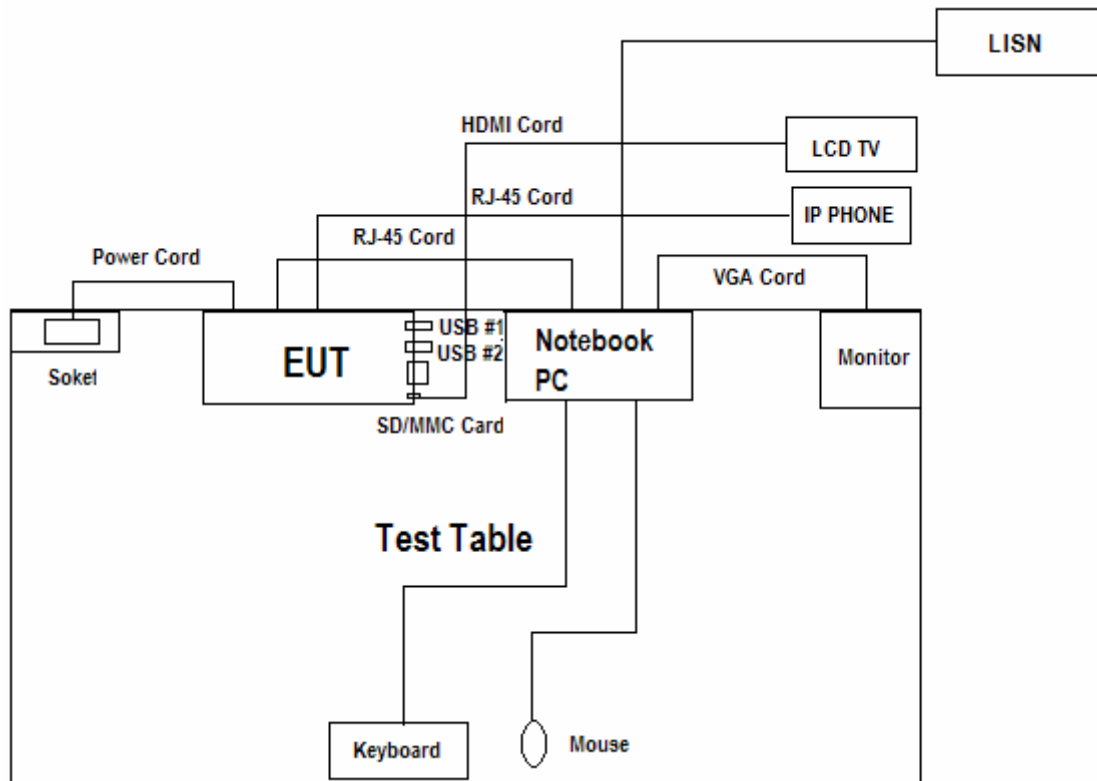
## Test System Details

EUT			
Model Number:	GXV3175		
Model Tested:	GXV3175		
Description:	IP Multimedia Phone		
Input:	AC 120V/60Hz		
Manufacturer:	Grandstream Networks, INC		
Support Equipment			
Description	Model Number	Serial Number	Manufacturer
Notebook PC	NC4000	CNU4122BCL	HP
Power Adapter Of Notebook PC	PPP009H	239427-003	HP
Mouse	MO32B0	23-033131	HP
Keyboard	SK-1788	---	LENOVO
Monitor	177V+	---	AOC
LCD TV	KLV-32BX320	---	SONY
Power Over Ethernet Adapter base unit	DWL-P200	E405162001002	D-Link
PoE Power Adaptor	FJ-SW2545XY	2004010807120622	FUJIA

<i>Cable Description</i>					
<i>Description</i>	<i>From</i>	<i>To</i>	<i>Length (Meters)</i>	<i>Shielded (Y/N)</i>	<i>Ferrite (Y/N)</i>
<i>Adapter Cord Of Notebook</i>	<i>Power Adapter</i>	<i>Notebook PC</i>	<i>1.6</i>	<i>N</i>	<i>Y</i>
	<i>Power Adapter</i>	<i>AC Plug</i>	<i>1.2</i>	<i>N</i>	<i>Y</i>
<i>Mouse Cord</i>	<i>Mouse</i>	<i>Plug</i>	<i>1.2</i>	<i>N</i>	<i>Y</i>
<i>Keyboard Cord</i>	<i>keyboard</i>	<i>Plug</i>	<i>1.2</i>	<i>N</i>	<i>Y</i>
<i>VGA Cable</i>	<i>Monitor</i>	<i>Notebook</i>	<i>1.2</i>	<i>Y</i>	<i>Y</i>
<i>RJ-45 Cord #1</i>	<i>EUT</i>	<i>Notebook PC</i>	<i>1.5</i>	<i>N</i>	<i>N</i>
<i>RJ-45 Cord #2</i>	<i>EUT</i>	<i>Another IP Multimedia Phone</i>	<i>&gt;3.0</i>	<i>N</i>	<i>N</i>
<i>HDMI Cable</i>	<i>EUT</i>	<i>LCD TV</i>	<i>1.2</i>	<i>Y</i>	<i>Y</i>
<i>Headphone Cable</i>	<i>EUT</i>	<i>Headphone</i>	<i>1.2</i>	<i>N</i>	<i>N</i>
<i>PoE power Cable</i>	<i>PoE</i>	<i>Plug</i>	<i>1.6</i>	<i>N</i>	<i>Y</i>
<i>Power Adapter cord of EUT</i>	<i>EUT</i>	<i>Plug</i>	<i>2.4</i>	<i>N</i>	<i>N</i>
<i>Note:The "EUT" means "IP Multimedia Phone".</i>					

*NOTE:The EUT has been tested as an independent unit together with other necessary accessories or support units. The above support units or accessories were used to form a representative test configuration during the test tests.*

## Configuration of Tested System



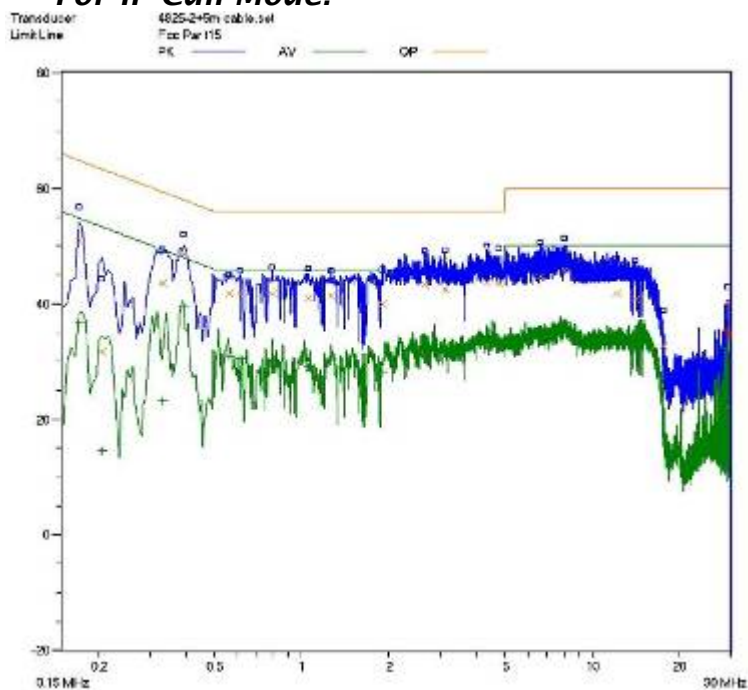
*Note : The same system configuration shall apply to PoE mode when removed AC Adaptor of EUT.*



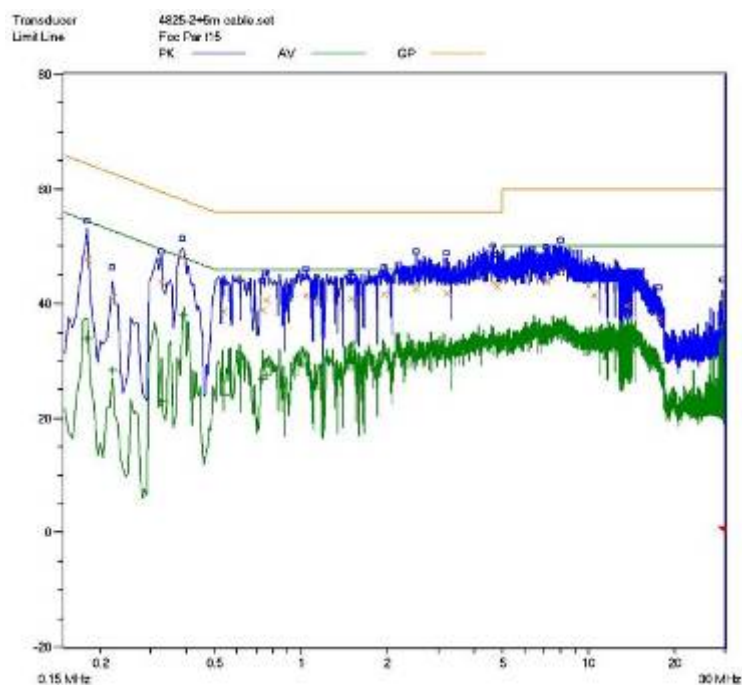
**ATTACHMENT 1 - CONDUCTED EMISSION TEST RESULTS**

<b>CLIENT:</b>	Grandstream Networks, INC	<b>TEST STANDERD:</b>	FCC Part 15, Subpart B, Section 15.107
<b>MODEL NUMBERS:</b>	GXV3175	<b>PRODUCT:</b>	IP Multimedia Phone
<b>MODEL TESTED:</b>	GXV3175	<b>EUT DESIGNATION:</b>	Home or Office
<b>TEMPERATURE:</b>	23°C	<b>HUMIDITY:</b>	51%
<b>ATM PRESSURE:</b>	103kPa	<b>GROUNDING:</b>	None
<b>TESTED BY:</b>	Daomen	<b>DATE OF TEST:</b>	September 6 <sup>th</sup>
<b>TEST REFERENCE:</b>	ANSI C63.4-2009		
<b>TEST PROCEDURE:</b>	The EUT was set up according to the guidelines of ANSI C63.4-2009 for conducted emissions. The measurement was using a AMN on each line and an EMI receiver peak scan was made at the frequency measurement range. The six highest significant peaks were then marked, and these signals were then quasi-peaked and averaged. The frequency range investigated was from 150KHz to 30MHz.		
<b>DESCRIPTION OF TEST MODE</b>	IP Call mode		
<b>TESTED RANGE:</b>	150kHz to 30MHz		
<b>TEST VOLTAGE:</b>	AC 120V/60Hz		
<b>RESULTS:</b>	The EUT meets the requirements of test reference for Conducted Emissions. The test results relate only to the equipment under test provided by client.		
<b>Changes or Modifications:</b>	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen). Test personnel.		
<b>M. UNCERTAINTY:</b>	Freq. $\pm 2 \times 10^{-7}$ x Center Freq., Amp $\pm 2.6$ dB		

**For IP Call Mode:**



**Line L Conducted Emission Graph**



**Line N Conducted Emission Graph**

**Test Data:**

<i>Lines (L/N)</i>	<i>Frequency (MHz)</i>	<i>Corrected QP Level (dBuV)</i>	<i>Limits QP (dBuV)</i>	<i>Margin QP (dB)</i>	<i>Frequency (MHz)</i>	<i>Corrected AV Level (dBuV)</i>	<i>Limits AV (dBuV)</i>	<i>Margin QP (dB)</i>
<b>IP Call Mode</b>								
L	0.170	51.1	64.9	-13.8	0.170	36.9	54.9	-18.0
L	0.390	48.0	58.0	-10.0	0.390	39.7	48.0	-8.3
L	7.890	45.9	60.0	-14.1	7.890	36.6	50.0	-13.4
N	0.180	47.8	64.4	-16.6	0.180	33.9	54.4	-20.5
N	0.385	48.1	58.2	-10.1	0.385	37.8	48.2	-10.4
N	7.995	45.7	60.0	-14.3	7.995	36.6	50.0	-13.4
Note : 1) All readings are using a bandwidth of 9 kHz, with a 500 ms sweep time. A video filter was not use. 2) "QP" means "Quasi-Peak" values, "AV" means "Average" values. 3) The other reading are too low against official limits that are not be recorded.								

**Test Equipment List:**

Test Equipment	Model No.	Manufacturer	Serial No.	Last Cal.	Cal. Interval
Receiver	SMR4503	SCHAFFNER	11725	2012.07.08	2013.07.08
Line impedance stabilization network	4825/2	ETS	1161	2012.07.08	2013.07.08
Note: All testing were performed using internationally recognized standards. All test instruments were calibrated.					

TESTED BY:

*Daomen*

ENGINEER

*Galanz*

COMPANY NAME

REVIEWED BY:

*Jamerym*

SENIOR ENGINEER

*ECMG*

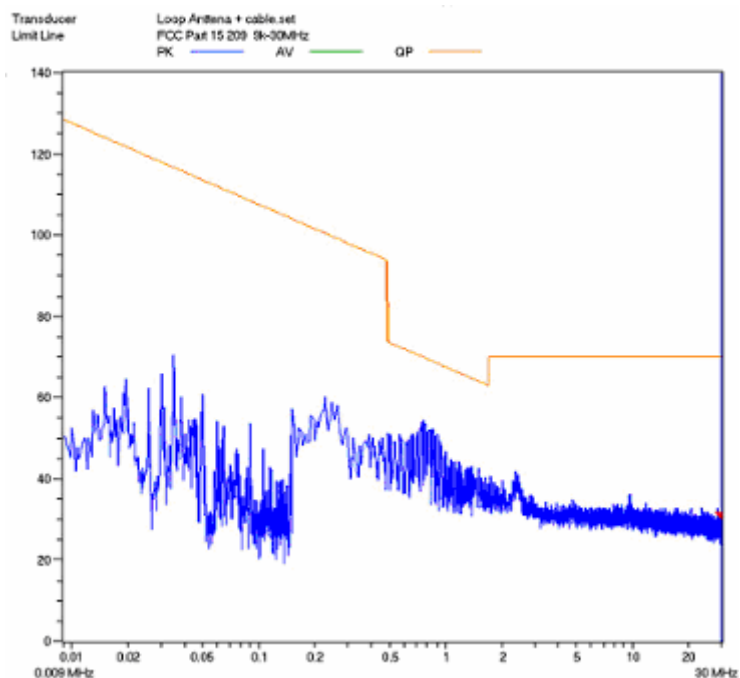
COMPANY NAME

**Conducted Emission Test Set-up:**

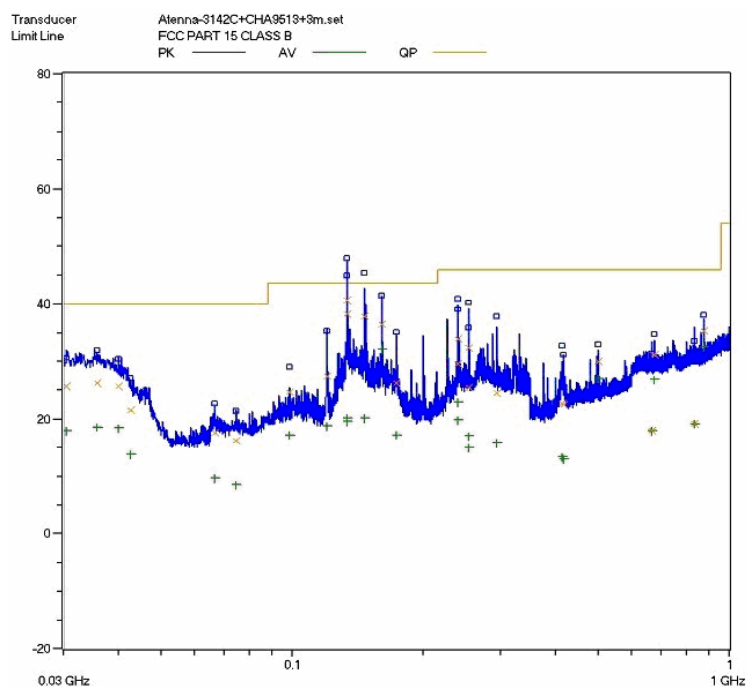
**ATTACHMENT 2 – RADIATED EMISSION MEASUREMENT**

<b>CLIENT:</b>	Grandstream Networks, INC	<b>TEST STANDERD:</b>	FCC Part 15,Subpart B, Section 15.109
<b>MODEL NUMBERS:</b>	GXV3175	<b>PRODUCT:</b>	IP Multimedia Phone
<b>EUT MODEL:</b>	GXV3175	<b>EUT DESIGNATION:</b>	Home or Office
<b>TEMPERATURE:</b>	23°C	<b>HUMIDITY:</b>	49%RH
<b>ATM PRESSURE:</b>	103.0kPa	<b>GROUNDING:</b>	None
<b>TESTED BY:</b>	Daomen	<b>DATE OF TEST:</b>	September 5 <sup>th</sup> , 2012
<b>TEST REFERENCE:</b>	ANSI C63.4-2009		
<b>TEST PROCEDURE:</b>	<p>The EUT was set up according to the guidelines of ANSI C63.4-2009 for radiated emissions. An EMI receiver peak scan was made at the frequency measurement range (pre-scan) in an Anechoic chamber.signal discrimination was then performed and the significant peaks marked.these peaks were then quasi-peaked in the frequency range of 30 MHz to 1GHz and average and peak in the frequency range of 1GHz to 3GHz at an anechoic chamber.</p> <p>The following data lists the significant emission frequencies, measured levels, correction factors (including cable and antenna correction factors), and the corrected readings against the limits. Explanation of the Correction Factor are given as follows:</p> <p>FS= RA + AF + CF - AG</p> <p>Where: FS = Field Strength</p> <p>RA = Receiver Amplitude</p> <p>AF = Antenna Factor</p> <p>CF = Cable Attenuation Factor</p> <p>AG = Amplifier Gain</p>		
<b>TEST MODE</b>	IP Call mode,PoE mode		
<b>TESTED RANGE:</b>	9K-30MHz and 30MHz to 8GHz		
<b>TEST VOLTAGE:</b>	AC 120V/60Hz		
<b>RESULTS:</b>	The EUT meet the requirements of test reference for radiated emissions.The test results relate only to the equipment under test provided by client.		
<b>CHANGES OR MODIFICATIONS:</b>	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen). Test personnel.		
<b>M. UNCERTAINTY:</b>	Freq. $\pm 2 \times 10^{-7}$ x Center Freq., Amp $\pm 2.6$ dB		

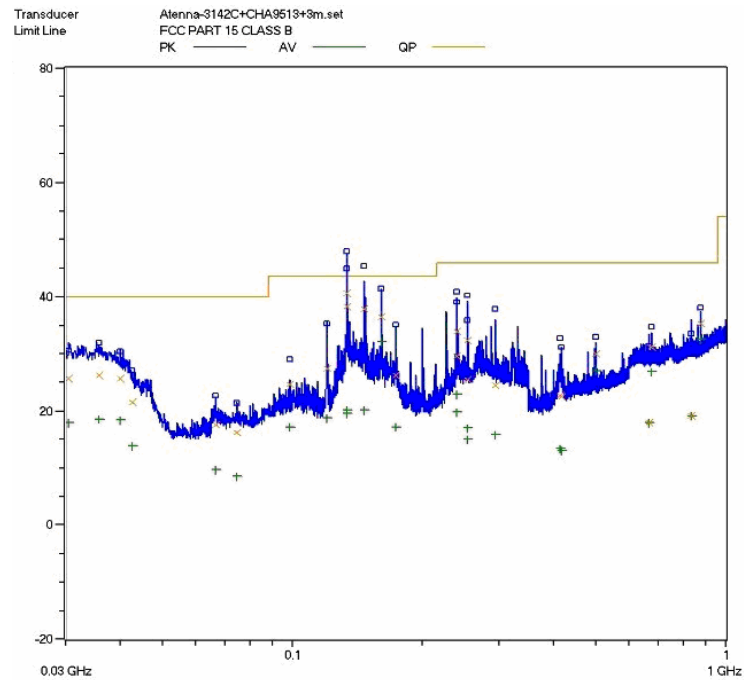
**For IP Call Mode:**



**Radiated Field Strength Emission Test Plot(9KHz-30MHz)**

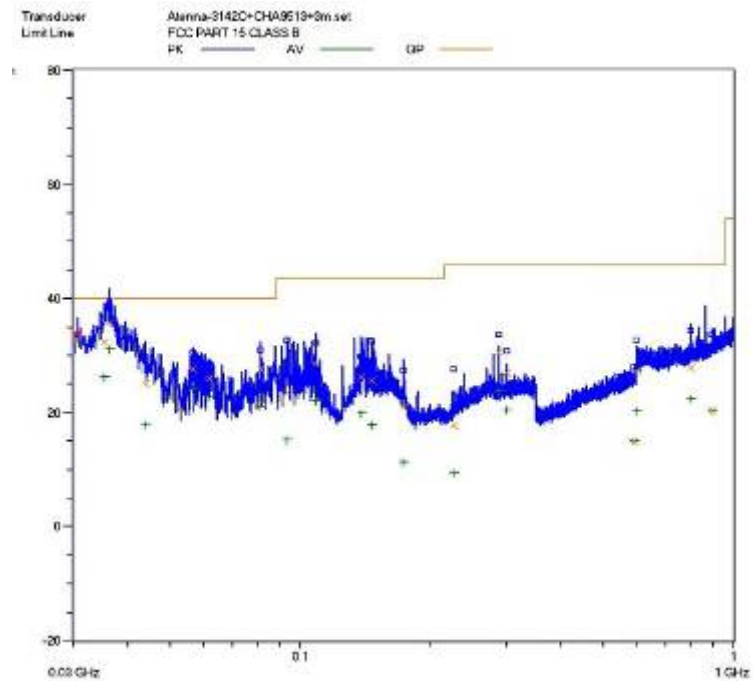
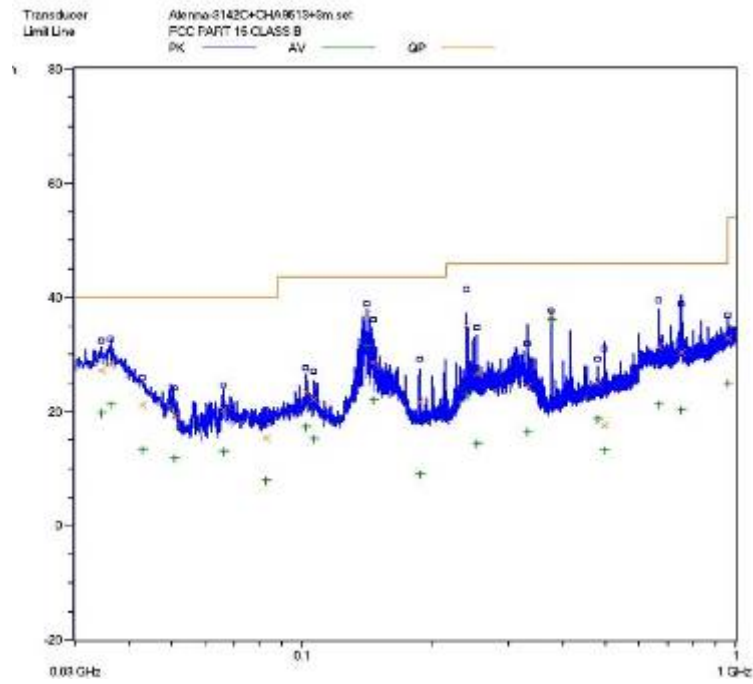


**Horizontal: Radiated Emission Test Plot(30MHz-1000MHz)**



**Vertical: Radiated Emission Test Plot(30MHz-1000MHz)**

**For PoE mode:**





**Test Data:****IP Call mode/9KHz to 30MHz:**

Test No. #:	Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Reading Level QP (dBuV/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/
3	/	/	/	/	/	/	/
4	/	/	/	/	/	/	/
5	/	/	/	/	/	/	/
6	/	/	/	/	/	/	/

**Note:**

1. The field strength is calculated by adding the antenna factor, cable factor. The basic equation with a sample calculation is as follows:  
 $\text{Emission Level} = \text{Reading Level} + \text{Antenna Factor} + \text{Cable Loss}$ .
2. The limits shown are based on quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz. the bandwidth of Test Receiver was set at 200Hz in frequency range of 9KHz to 150KHz, 9kHz in the frequency range of 150KHz to 30MHz.
3. All emission levels in the frequency range of 9KHz to 30MHz are 20dB below the official limits that are not reported.

**Test Data:**  
**IP Call Mode/Below 1GHz:**

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Preamplifier Factor (dB)	Reading Level QP (dBuV/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
<b>Horizontal</b>							
133.280	0.02	7.5	/	30.78	38.3	43.5	-5.2
133.360	0.02	7.5	/	33.18	40.7	43.5	-2.8
146.720	0.02	8.4	/	29.38	37.8	43.5	-5.7
240.080	0.12	11.1	/	22.68	33.9	46	-12.1
500.000	0.2	17.4	/	12.4	30	46	-16.0
875.040	0.42	22.5	/	12.48	35.4	46	-10.6
<b>Vertical</b>							
133.280	0.02	7.5	/	30.78	38.3	43.5	-5.2
133.360	0.02	7.5	/	33.18	40.7	43.5	-2.8
146.720	0.02	8.4	/	29.38	37.8	43.5	-5.7
160.000	0.02	10	/	26.48	36.5	43.5	-7.0
240.080	0.12	11.1	/	22.68	33.9	46	-12.1
875.040	0.42	22.5	/	12.48	35.4	46	-10.6

**Note:**

1. All readings are quasi-peak unless stated otherwise, using a QPA bandwidth of 120kHz, with a 60 s sweep time. A video filter was not used.
2. The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows: Emission Level = Reading Level + Antenna Factor + Cable Loss - Preamplifier Factor.
3. The other emission levels are 20dB below the official limits that are not reported.

**IP Call Mode/Above 1GHz:**

<b>Frequency (MHz)</b>	<b>Cable Loss (dB)</b>	<b>Antenna Factor (dB)</b>	<b>Preamplifier Factor (dB)</b>	<b>Reading Level (dBuV/m)</b>	<b>Emission Level (dBuV/m)</b>	<b>Limit (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Antenna Polarization (H/V)</b>
<b>Peak Measurement</b>								
1.056	1.39	23.9	-33.6	-6.59	52.3	74	-21.7	H
1.192	1.48	24.2	-33.6	-4.58	54.7	74	-19.3	H
1.328	1.57	25.3	-33.6	-3.97	56.5	74	-17.5	H
1.631	1.78	26.1	-33	-13.48	47.4	74	-26.6	V
1.660	1.78	26.1	-33	-11.98	48.9	74	-25.1	V
1.818	1.89	27.3	-33	-15.09	47.1	74	-26.9	V
<b>Average Measurement</b>								
1.056	1.39	23.9	-33.6	-18.59	40.3	54	-13.7	H
1.192	1.48	24.2	-33.6	-16.58	42.7	54	-11.3	H
1.328	1.57	25.3	-33.6	-15.17	45.3	54	-8.7	H
1.631	1.78	26.1	-33	-13.78	47.1	54	-6.9	V
1.660	1.78	26.1	-33	-14.38	46.5	54	-7.5	V
1.818	1.89	27.3	-33	-15.39	46.8	54	-7.2	V

**Note:**

1. The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows: Emission Level = Reading Level + Antenna Factor + Cable Loss - Preamplifier Factor.
2. The limits shown are based on Peak value and Average value detector above 1GHz, the bandwidth of Test Receiver was set at 1MHz above 1GHz.
3. The other emission levels are 20dB below the official limits that are not reported.

**PoE Mode/Below 1GHz:**

<b>Frequency (MHz)</b>	<b>Cable Loss (dB)</b>	<b>Antenna Factor (dB)</b>	<b>Preamp Factor (dB)</b>	<b>Reading Level QP (dBuV/m)</b>	<b>Emission Level (dBuV/m)</b>	<b>Limit (dBuV/m)</b>	<b>Margin (dB)</b>
<b>Horizontal</b>							
34.640	0.02	18.0	/	9.28	27.3	40	-12.7
141.200	0.02	7.8	/	29.18	37.0	43.5	-6.5
239.920	0.12	11.1	/	23.98	35.2	46	-10.8
375.040	0.16	13.9	/	22.74	36.8	46	-9.2
664.320	0.36	20	/	11.04	31.4	46	-14.6
957.280	0.44	23.9	/	8.56	32.9	46	-13.1
<b>Vertical</b>							
35.360	0.02	18.2	/	14.18	32.4	40	-7.6
36.160	0.02	18.4	/	17.18	35.6	40	-4.4
56.640	0.02	5.7	/	21.88	27.6	40	-12.4
81.200	0.02	5.5	/	22.18	27.7	40	-12.3
108.800	0.02	7.7	/	20.88	28.6	43.5	-14.9
288.000	0.15	13.1	/	17.35	30.6	46	-15.4

**Note:**

1. All readings are quasi-peak unless stated otherwise, using a QPA bandwidth of 120kHz, with a 60 s sweep time. A video filter was not used.
2. The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows: Emission Level = Reading Level + Antenna Factor + Cable Loss - Preamplifier Factor.
3. The other emission levels are 20dB below the official limits that are not reported.

**PoE Mode/Above 1GHz:**

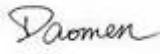
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Preamplifier Factor (dB)	Reading Level (dBuV/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Polarization (H/V)
<b>Peak Measurement</b>								
1.170	1.12	24.5	-34.45	-12.87	47.20	74	-26.8	H
2.046	1.58	27.5	-37.37	-23.7	42.75	74	-31.25	H
1.860	1.31	26.7	-37.37	-23.04	42.34	74	-31.66	H
1.170	1.12	24.5	-34.45	-12.97	47.10	74	-26.9	V
1.856	1.30	26.3	-37.37	-22.76	42.21	74	-31.79	V
1.860	1.31	26.7	-37.37	-25.37	40.01	74	-33.99	V
<b>Average Measurement</b>								
1.170	1.12	24.5	-34.45	-32.18	27.89	54	-26.11	H
1.346	1.23	24.7	-35.60	-41.59	24.86	54	-29.14	H
1.860	1.31	26.7	-37.37	-42.81	22.57	54	-31.43	H
1.170	1.12	24.5	-34.45	-33.05	27.02	54	-26.98	V
1.856	1.30	26.3	-37.37	-42.87	22.10	54	-31.9	V
1.860	1.31	26.7	-37.37	-44.81	20.57	54	-33.43	V

**Note:**

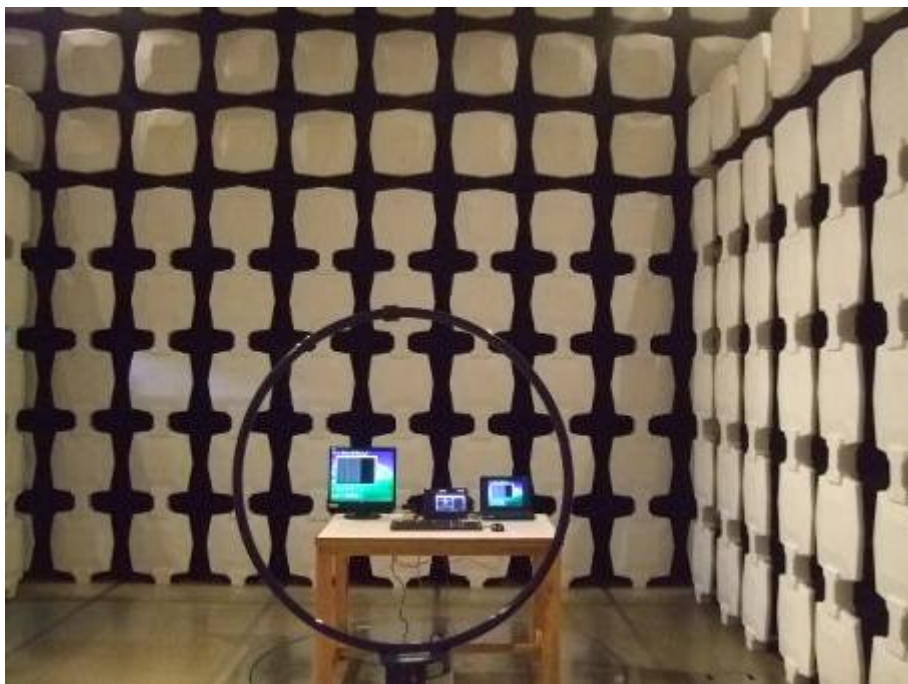
1. The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows: Emission Level = Reading Level + Antenna Factor + Cable Loss - Preamplifier Factor.
2. The limits shown are based on Peak value and Average value detector above 1GHz, the bandwidth of Test Receiver was set at 1MHz above 1GHz.
3. The other emission levels are 20dB below the official limits that are not reported.

**Test Equipment List:**

<b>Test Equipment</b>	<b>Model No.</b>	<b>Manufacturer</b>	<b>Serial No.</b>	<b>Last Cal.</b>	<b>Cal. Due</b>
Receiver	SMR4503	SCHAFFNER	11725	2012.07.08	2013.07.07
HF Loop Antenna	HLA6120	TESEQ	26348	2012.09.27	2013.09.26
Double-ridged Wave guide horn	3115	ETS	6587	2012.08.02	2013.08.01
Microwave system amplifier	83017A	Agilent	MY39500438	2012.07.11	2013.07.10
Biconilog Antenna	3142C	ETS	00042672	2012.09.28	2013.09.27
Band-pass Filter	BRM50702	Micro-Tronic	S/N-030	2011.11.30	2012.11.29
Spectrum Analyzer	FSP30	R&S	100755	2011.11.30	2012.11.29
Note: All testing were performed using internationally recognized standards. All test instruments were calibrated.					

TESTED BY:  Galanz  
ENGINEER COMPANY NAME

REVIEWED BY:  ECMG  
SENIOR ENGINEER COMPANY NAME



***Radiated Emission Test Set-up (9 KHz-30MHz)***



***Radiated Emission Test Set-up (Below 1GHz)***



***Radiated Emission Test Set-up (Above 1GHz)***