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MPE Report

On Model Name: IP Multimedia Phone

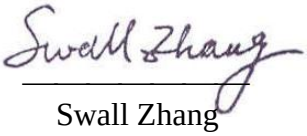
Model Numbers: GXV3175

Brand Name: Grandstream

FCC ID Number: YZZGXV317X

Prepared for Grandstream Networks,Inc

Test Report #:	SHE-1011-10532-FCC MPE
Prepared by:	May Wang
Reviewed by:	Jawen Yin
QC Manager:	Swall Zhang

Test Report Released by:  November 30,2010

Swall Zhang Date

Test Location

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

Test Site Location : Guangdong Galanz Enterprise Co. Ltd

25 South Ronggui Rd., Shunde, Foshan, Guangdong, China

Tel : 86-757-23612785

Fax : 86-757-23612537

Test Facility

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

- *CNAL – LAB Code: L2244*

Guangdong Galanz Enterprise Co. Ltd., 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*

Guangdong Galanz Enterprise Co. Ltd., 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.

List of Test and Measurement Instruments

Equipment	*Manufacturer*	*Model No.*	*Serial No.*	*Calibrated Untill*
Spectrum Analyzer	*R&S*	*FSP30*	*100755*	*2011-11-30*
EMI Receiver	*SCHAFFNER*	*SMR4503*	*11725*	*2011-11-30*
LISN	*ETS*	*4825/2*	*1161*	*2011-11-30*
Coaxial Cable	*ATC*	*N/A*	*N/A*	*2011-11-30*
Double-ridged Wave guide horn	*ETS*	*3115*	*6587*	*2011-11-30*
Amplifier	*Agilent*	*83017A*	*MY39500438*	*2011-11-30*
Band filter	*ASI*	*82346*	*S06389*	*2011-11-30*
Biconilog Antenna	*ETS*	*3142C*	*00042672*	*2011-11-30*
Semi-anechoic Chamber	*ETS*	*N/A*	*N/A*	*2011-11-30*

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Opinions and Interpretations

This test report relates to the abovementioned equipment under test (EUT). Without the permission of EMC Compliance Management Group.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 resultin additional deviation.

Administrative Data

Test Sample	*: IP Multimedia Phone*
Model Name	*: GXV3175*
Model Tested	*: GXV3175*
Serial Number	*: Engineering Sample*
Receipt Date of Test Item	*: November 22,2010*
Date Tested	*: November 23,2010 to November 26,2010*
Applicant	*: Grandstream Networks,Inc.*
	5F, Bldg #1, No.2 Kefa Rd., Science & Technology Park, Shenzhen, China
Tel	*: 86-755-2601 4600*
Fax	*: 86-755-2601 4601*
Manufacturer	*: Grandstream Networks,Inc.*
	5F, Bldg #1, No.2 Kefa Rd., Science & Technology Park, Shenzhen, China
Tel	*: 86-755-2601 4600*
Fax	*: 86-755-2601 4601*

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 built-in IEEE 802.11b/g/n adapter which operates in 2.4GHz ISM band and technical specifications of EUT as below:

<table>
<tr><th colspan="2">Parameter</th><th>Range</th></tr>
<tr><td>Basic parameters</td><td>Rated voltage</td><td>DC12V</td></tr>
<tr><td></td><td>Rated Current</td><td>1.5A</td></tr>
<tr><td rowspan="4">802.11b/g/n Adapter Parameters</td><td>Operating band</td><td>2400-2483.5MHz</td></tr>
<tr><td>Working Frequency of Each Channel</td><td>
<table>
<tr><th>Channel No.</th><th>Frequency (MHz)</th><th>Channel No.</th><th>Frequency (MHz)</th></tr>
<tr><td>001</td><td>2412</td><td>007</td><td>2442</td></tr>
<tr><td>002</td><td>2417</td><td>008</td><td>2447</td></tr>
<tr><td>003</td><td>2422</td><td>009</td><td>2452</td></tr>
<tr><td>004</td><td>2427</td><td>010</td><td>2457</td></tr>
<tr><td>005</td><td>2432</td><td>011</td><td>2462</td></tr>
<tr><td>006</td><td>2437</td><td>--</td><td>--</td></tr>
</table>
</td></tr>
<tr><td>Frequency of Number</td><td>IEEE 802.11b/g: 11 channels;
802.11n HT 20MHz: 11channels;
802.11n HT 40MHz: 7 channels.</td></tr>
<tr><td>Modulation Type</td><td>IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK)
IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK)
IEEE 802.11n HT20: OFDM
IEEE 802.11n H420: OFDM</td></tr>
<tr><td>Data Rate</td><td>IEEE 802.11b: 1/2/5.5/11Mbps;
IEEE 802.11g: 6/9/12/18/24/36/48/54Mbps;
IEEE 802.11n HT20: 65/58.5/52/39/26/19.5/13/6.5Mbps;
IEEE 802.11n HT40: 135/121.5/108/81/54/40.5/21/13.5Mbps</td></tr>
</table>

<table>
<tr><td></td><td>Tranmit Power</td><td>
<table>
<tr><th>Operating mode</th><th>Frequency Range (MHz)</th><th>Output Power (dBm)</th><th>Output Power (mW)</th></tr>
<tr><td>IEEE 802.11b</td><td>2412-2462</td><td>16±15%</td><td>22.91-69.18</td></tr>
<tr><td>IEEE 802.11g</td><td>2412-2462</td><td>12±15%</td><td>10.47-23.99</td></tr>
<tr><td>802.11n HT 20MHz</td><td>2412-2462</td><td>12±15%</td><td>10.47-23.99</td></tr>
<tr><td>802.11n HT 40MHz</td><td>2422-2452</td><td>12±15%</td><td>10.47-23.99</td></tr>
</table>
</td></tr>
<tr><td></td><td>Antenna Spec.</td><td>1. Antenna type: EMB Antenna
2. Gain: 2dBi
3. Impedance: 50ohm</td></tr>
<tr><td rowspan="5">I/O Port</td><td>Internet Port x 2</td><td>One connected to PC,other connected to internet.</td></tr>
<tr><td>USB port x2</td><td>Connected to USB device(for example with USB interface storage device,mouse,keyboard etc.)</td></tr>
<tr><td>Earphone port</td><td>Connected to earphone</td></tr>
<tr><td>Video port</td><td>Connected to other video display device</td></tr>
<tr><td>SD Card</td><td>Inserted SD storage device</td></tr>
<tr><td rowspan="3">AC/DC Adapter info.</td><td>Input</td><td>AC 100-240V,50/60Hz,0.55A</td></tr>
<tr><td>Output</td><td>12VDC,1.5A</td></tr>
<tr><td>Model</td><td>N/A</td></tr>
</table>

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

ATTACHMENT 1 – RF Exposure Compliance Requirement

APPLICABLE STANDARD:

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

Limits for General Population/Uncontrolled Exposure

a) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	*Electric Field Strength (E) (V/m)*	*Magnetic Field Strength (H) (A/m)*	*Power Density (S) (mW/cm2)*	*Averaging Times | E | 2 , | H | 2 or S (minutes)*
0.3-3.0	*614*	*1.63*	*(100)**	*6*
3.0-30	*1842/f*	*4.89/f*	*(900/f)**	*6*
30-300	*61.4*	*0.163*	*1.0*	*6*
300-1500			*F/300*	*6*
1500-100000			*5*	*6*

(b) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	*Electric Field Strength (E) (V/m)*	*Magnetic Field Strength (H) (A/m)*	*Power Density (S) (mW/cm2)*	*Averaging Times | E | 2 , | H | 2 or S (minutes)*
0.3-1.34	*614*	*1.63*	*(100)**	*30*
1.34-30	*824/f*	*2.19/f*	*(180/f)**	*30*
30-300	*27.5*	*0.073*	*0.2*	*30*
300-1500			*F/1500*	*30*
1500-100000			*1.0*	*30*

*Note: f=frequency in MHz; *Plane-wave equivalent power density*

MPE Calculation Method

$E (V/m) = (30*P*G)^{0.5}/d$ Power Density: $S (mW/m2) = E^2/377$

E = Electric Field (V/m)
P = Peak RF output Power (W)
G = EUT Antenna numeric gain (numeric)
d = Separation distance between radiator and human body (m)

The formula can be changed to
$S = (30*P*G) / (377*d^2)$

From the peak EUT RF output power, the minimum mobile separation distance d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

Note :
*The Max Conducted Peak Output Power is **12.93dBm(19.63mW)** in the Low channel(2.412GHz).*

The best case gain of the antenna is 2.0dBi.
2.0dB logarithmic terms convert to numeric result is nearly 1.58.

Test Result:

Channel (MHz)	*Antenna Gain (Numeric)*	*Peak Output Power (dBm)*	*Peak Output Power (mW)*	*Power Density (S) (mW/cm2)*	*Limit of Power Density (S) (mW/cm2)*	*Test Result*
2412	*1.58*	*12.93*	*19.63*	***0.00617***	*1.0*	*Compliant*

The unit does meet the requirement.