



TEST REPORT

Applicant:	Grandstream	Networks,	Inc.
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Address: 126 Brookline Ave., 3rd Floor Boston, MA 02215, USA

FCC ID: YZZGHP63XW

Product Name: Compact Hotel Phone with Color LCD

Standard(s): 47 CFR Part 15 Subpart B ANSI C63.4-2014

The above device has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: CR231171096-00C

Date Of Issue: 2024/1/15

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Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "▲". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	CR231171096-00C	Original Report	2024/1/15

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	Compact Hotel Phone with Color LCD	
EUT Model:	GHP631W	
Multiple Model(s):	GHP630W	
Trade Name:	GRANDSTREAM	
Highest Operation Frequency:	5825 MHz	
Rated Input Voltage:	DC 12V from adapter, DC 48V from PoE	
Serial Number:	2EE8-1	
EUT Received Date:	2023/11/29	
EUT Received Status:	Good	
Note: The Multiple models are electrically identical with the test model. Please refer to the declaration letter for		
more detail, which was provided by manufacturer.		

Accessory Information:

Accessory Description	Manufacturer	Model	Parameters
Adapter	GANGQI	GQ06-120050-ZU	Input: AC 100-240V, 50/60Hz, 0.3A Max Output: DC 12.0V, 0.5A
Adapter	Dachuan	DCT06W120050US-D0	Input: AC 100-240V, 50/60Hz, 0.2A Output: DC 12.0V, 0.5A
Adapter	Sunlight	F06US1200050A	Input: AC 100-240V, 50/60Hz, 0.2A Max Output: DC 12.0V, 0.5A

1.2 Description of Test Configuration

1.2.1 EUT Operation Condition

EUT Operation Mode:	The system was configured for testing in Typical Use Mode, which was provided by the manufacturer. Test Mode: Talking
Equipment Modifications:	No
EUT Exercise Software:	No

1.2.2 Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
TOTO LINK	Router	X5000R	X5000RK9T0560
Yealink	IP phone	SIP-T23G	212319022102620
DIGITAL	PoE	G0720-480-050	3TV4E338182
N/A	Resistance	N/A	N/A

1.2.3 Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	То
AC cable	No	No	1.2	LISN/AC mains	Socket
DC cable	No	No	1.8	Adapter	EUT
RJ45 cable	No	Yes	8.0	EUT/PoE	Router
RJ45 cable	No	Yes	1.0	IP phone	Router
RJ45 cable	No	Yes	0.5	EUT	Resistance
RJ11 cable	No	Yes	1.0	EUT	Handset
AC cable	No	No	1.2	LISN/AC mains	PoE
RJ45 cable	No	Yes	8.0	PoE	EUT

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Radiated emissions:

Adapter:



PoE:



1.3 Measurement Uncertainty

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Parameter	Measurement Uncertainty
Unwanted Emissions redicted	30M~200MHz: 4.15 dB,200M~1GHz: 5.61 dB,1G~6GHz: 5.14 dB,
Uliwanted Emissions, fadiated	6G~18GHz: 5.93 dB,18G~26.5G:5.47 dB,26.5G~40G:5.63 dB
Temperature	± 1 °C
Humidity	±5%
AC Power Lines Conducted Emission	2.8 dB (150 kHz to 30 MHz)

2. SUMMARY OF TEST RESULTS

Standard(s) Section	Description of Test	Result
§15.107	Conducted emissions	Compliant
§15.109	Radiated emissions	Compliant

3. REQUIREMENTS AND TEST PROCEDURES

3.1 AC Line Conducted Emissions

3.1.1 EUT Setup



from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15 B Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The adapter or EUT was connected to the main LISN with a 120 V/60 Hz AC power source.

3.1.2 EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

3.1.3 Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the first LISN and the other support equipments were connected to the outlet of the second LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT, the report shall list the six emissions with the smallest margin relative to the limit, unless the margin is greater than 20 dB.

All data was recorded in the Quasi-peak and average detection mode.

The report shall list the six emissions with the smallest margin relative to the limit, unless the margin is greater than 20 dB.

3.1.4 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor Factor = attenuation caused by cable loss + voltage division factor of AMN

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit - Result

3.2 Radiation Spurious Emissions

3.2.1 EUT Setup

Below 1GHz:



The radiated emissions were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2014. The specification used was with the FCC Part 15 B Class B limits.

3.2.2 EMI Test Receiver Setup

The system was investigated from 30 MHz to 30 GHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Detector
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	Peak
	1 MHz	3 MHz	/	AVG

If the maximized peak measured value complies with under the limit more than 6dB, then it is unnecessary to perform an QP/Average measurement.

3.2.3 Test Procedure

During the radiated emissions, the adapter was connected to the first AC floor outlet and the other support equipments were connected to the second AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The data was recorded in the Quasi-peak detection mode for below 1 GHz.

All emissions under the average limit and under the noise floor have not recorded in the report.

3.2.4 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor Factor = Antenna Factor + Cable Loss- Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

4. TEST DATA AND RESULTS

4.1 AC Line Conducted Emissions

Serial Number:	2EE8-1	Test Date:	2024/1/6
Test Site:	CE	Test Mode:	Talking
Tester:	David Huang	Test Result:	Pass

Environmental Conditions:						
Temperature: (℃)	25.5	Relative Humidity: (%)	45	ATM Pressure: (kPa)	101.4	

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV216	101134	2023/3/31	2024/3/30
R&S	EMI Test Receiver	ESR3	102726	2023/3/31	2024/3/30
MICRO-COAX	Coaxial Cable	UTIFLEX	C-0200-01	2023/8/6	2024/8/5
Audix	Test Software	E3	190306 (V9)	N/A	N/A

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

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Adapter DCT06W120050US-D0



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Adapter F06US1200050A



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4.2 Radiation Spurious Emissions

Serial Number:	2EE8-1	Test Date:	2023/12/26~2023/12/27
Test Site:	966-1, 966-2	Test Mode:	Talking
Tester:	Vic Du, Mack Huang	Test Result:	Pass

Environmental Conditions:

Temperature:	24.2~ 25.5	Relative Humidity:	44~ 58	ATM Pressure:	101.9
(°C)	2.02 2000	(%)		(kPa)	10119

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB6	A082520-6	2023/9/18	2026/9/17
R&S	EMI Test Receiver	ESR3	102724	2023/3/31	2024/3/30
TIMES MICROWAVE	Coaxial Cable	LMR-600- UltraFlex	C-0470-02	2023/7/16	2024/7/15
TIMES MICROWAVE	Coaxial Cable	LMR-600- UltraFlex	C-0780-01	2023/7/16	2024/7/15
Sonoma	Amplifier	310N	186165	2023/7/16	2024/7/15
Audix	Test Software	E3	201021 (V9)	N/A	N/A
АН	Double Ridge Guide Horn Antenna	SAS-571	1394	2023/2/22	2026/2/21
PASTERNACK	Horn Antenna	PE9852/2F-20	112002	2021/2/5	2024/2/4
PASTERNACK	Horn Antenna	PE9850/2F-20	072001	2021/2/5	2024/2/4
R&S	Spectrum Analyzer	FSV40	101591	2023/3/31	2024/3/30
MICRO-COAX	Coaxial Cable	UFA210A-1- 1200-70U300	217423-008	2023/8/6	2024/8/5
MICRO-COAX	Coaxial Cable	UFA210A-1- 2362-300300	235780-001	2023/8/6	2024/8/5
MICRO-COAX	Coaxial Cable	UFB142A-1-2362- 200200	235772-001	2023/8/6	2024/8/5
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2023/11/8	2024/11/7
Quinstar	Preamplifier	QLW-18405536- JO	15964001005	2023/9/15	2024/9/14
Audix	Test Software	E3	201021 (V9)	N/A	N/A
E-Microwave	Band Rejection Filter	2400-2483.5MHz	OE01902424	2023/8/6	2024/8/5
Mini Circuits	High Pass Filter	VHF-6010+	31119	2023/8/6	2024/8/5
E-Microwave	Band Rejection Filter	5150-5850MHz	OE01902423	2023/8/6	2024/8/5

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data:

Please refer to the below table and plots.

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1) 30MHz-1GHz:

Adapter GQ06-120050-ZU



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Adapter F06US1200050A



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2) Above 1GHz: Adapter GQ06-120050-ZU





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Adapter F06US1200050A



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5. EUT PHOTOGRAPHS

Please refer to the attachment CR231171096-EXP EUT EXTERNAL PHOTOGRAPHS and CR231171096-INP EUT INTERNAL PHOTOGRAPHS.

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6. TEST SETUP PHOTOGRAPHS

Please refer to the attachment CR231171096-00C-TSP TEST SETUP PHOTOGRAPHS.

===== END OF REPORT =====