Test Lab
Cert 2951.01

RF EXPOSURE REPORT

Product:	3G/WCDMA Alarm System
Model Name:	X330
FCC ID:	RJY-X330
Applicant:	Chuango Security Technology Corporation
Address:	Room 6-17, Overseas Students Pioneer Park, No. 108, Jiangbin East Road, Economic & Technological Development Zone, Fuzhou 350015, China
Manufacturer:	Chuango Security Technology Corporation
Address:	Room 6-17, Overseas Students Pioneer Park, No. 108, Jiangbin East Road, Economic & Technological Development Zone, Fuzhou 350015, China
Prepared by:	Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch
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Report No.:	SA160115W002
Received Date:	Sep. 25, 2016
Test Date:	Sep, 29, 2016 ~ Oct. 28, 2016
Issued Date:	Oct. 29, 2016

This report should not be used by the client to claim product certification, approval, or endorsement by A2LA or any government agencies.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA160115W002	Original release	Oct. 29, 2016

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Dongguan Branch

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1 CERTIFICATION

PRODUCT:	3G/WCDMA Alarm System
BRAND NAME:	smanos
MODEL NAME:	X330
APPLICANT:	Chuango Security Technology Corporation
TESTED:	Sep, 29, 2016 ~ Oct. 28, 2016
TEST SAMPLE:	Identical Prototype
STANDARDS:	**FCC Part 2 (Section 2.1091)** **FCC OET Bulletin 65, Supplement C (01-01)** IEEE C95.1

The above equipment has been tested by **Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : _____ , **DATE:** Oct. 29, 2016
(Yuqiang Yin / Engineer)

APPROVED BY : _____ , **DATE:** Oct. 29, 2016
(Bill Yao / Manager)

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	3G/WCDMA Alarm System	
BRAND NAME	smanos	
MODEL NAME	X330	
NOMINAL VOLTAGE	12.0Vdc (adapter)	
MODULATION TYPE	**GSM**	GMSK
	WCDMA	BPSK/QPSK
OPERATIONAL FREQUENCY	**GSM**	824.2MHz ~ 848.8MHz (FOR GSM 850) 1850.2MHz ~ 1909.8MHz (FOR PCS 1900)
	WCDMA	1852.4MHz ~1907.6MHz(FOR WCDMA Band II) 826.4MHz ~ 846.6MHz (FOR WCDMA Band V)
ANTENNA TYPE	Fixed Internal Antenna	
MAX. ANTENNA GAIN	1.8dBi For PCS 1900/WCDMA Band II 1.7dBi For GSM 850/WCDMA Band V	
HW Version	V2.3	
SW Version	X330_V2.3_STM32_1509151100	
I/O PORTS	Refer to user's manual	
ACCESSORY DEVICES	Refer to note as below	

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. The EUT was powered by the following adapter:

ADAPTER	
BRAND:	smanos
MODEL:	SA-US12V
INPUT:	AC 100-240V, 300mA
OUTPUT:	DC 12V, 500mA
POWER CORD:	1.5 meter

3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

3 RF EXPOSURE

3.1 LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm^2)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

3.2 MPE CALCULATION FORMULA

Pd = (Pout*G) / (4*pi*r2)

where

Pd = power density in mW/cm2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

3.3 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

3.4 CONDUCTED POWER

GSM

Band	GSM850			GSM1900		
Channel	128	189	251	512	661	810
Frequency	824.2	836.4	848.8	1850.2	1880	1909.8
GPRS 8	**33.10**	33.09	33.03	**28.88**	28.85	28.14
GPRS 10	30.94	30.94	30.91	26.99	26.74	26.43
GPRS 11	29.94	29.94	29.92	25.94	25.80	25.49
GPRS 12	28.96	28.95	28.93	24.97	24.84	24.56
Source-Based Time-Averaged Power						
Band	GSM850			GSM1900		
Channel	128	189	251	512	661	810
GPRS 8	24.10	24.09	24.03	19.88	19.85	19.14
GPRS 10	24.94	24.94	24.91	20.99	20.74	20.43
GPRS 11	25.68	25.68	25.66	21.68	21.54	21.23
GPRS 12	**25.96**	25.95	25.93	**21.97**	21.84	21.56

WCDMA

BAND	WCDMA II			WCDMA V		
CHANNEL	9262	9400	9538	4132	4182	4233
FREQUENCY (MHz)	1852.4	1880.0	1907.6	826.4	836.4	846.6
RMC 12.2K	**21.74**	21.13	20.85	22.64	22.59	**22.96**
HSPA						
HSDPA Subtest-1	21.70	21.16	20.67	22.69	22.48	22.89
HSDPA Subtest-2	21.66	21.21	20.66	22.69	22.54	22.90
HSDPA Subtest-3	21.62	21.18	20.71	22.67	22.53	22.89
HSDPA Subtest-4	20.99	20.68	20.25	22.22	21.94	22.37

3.5 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

GSM

Band	Frequency (MHz)	Operating Mode	Antenna Gain (dBi)	Tune-up Power (dBm)	E.I.R.P Power(1/8) (mW)	Power Density (mW/cm^2)	limit (mW/cm^2)	PASS / FAIL
GSM850	824.2	GPRS12	1.70	34.5	521.087	0.104	0.55	PASS
GSM1900	1850.2	GPRS12	1.80	30.0	189.195	0.038	1.00	PASS

WCDMA

Band	Frequency (MHz)	Operating Mode	Antenna Gain (dBi)	Tune-up Power (dBm)	E.I.R.P Power (mW)	Power Density (mW/cm^2)	limit (mW/cm^2)	PASS / FAIL
WCDMA850	846.6	RMC12.2k	1.7	24.0	371.535	0.074	0.56	PASS
WCDMA1900	1852.4	RMC12.2k	1.8	23.0	301.995	0.060	1.00	PASS