FCC TEST REPORT

for

Rimova International Inc.

Smart watch

Model Number: Igni

FCC ID: 2ACOY-IGNI

Prepared for	:	Rimova International Inc.
Address	:	2121 Avenue of the Stars, Suite 2300, Los Angeles CA, 90067. United States of America
Prepared by	:	Keyway Testing Technology Co., Ltd.
Address	:	Baishun Industrial Zone, Zhangmutou Town, Dongguan, Guangdong, China
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Report No.	**:**	14KWE07158701R
Date of Test	**:**	Jul. 1~7, 2014
Date of Report	**:**	Jul. 7, 2014

TABLE OF CONTENTS

Keyway Testing Technology Co., Ltd.

Applicant: **Address:**	Rimova International Inc. 2121 Avenue of the Stars, Suite 2300, Los Angeles CA, 90067. United States of America		
Manufacturer: **Address:**	Gayeek International Co., Ltd. 5F, TongSheng Technology Building A, Huahui RD., Shanghenglang Village, LongHua, Shenzhen, China.		
E.U.T:	Smart watch		
Model Number:	Igni		
Trade Name:	Igni	**Serial No.:**	------
Date of Receipt:	Jul. 1, 2014	**Date of Test:**	Jul. 1~7, 2014
Test Specification:	FCC Part 15, Subpart B: Oct. 1, 2013 ANSI C63.4:2009		
Test Result:	The equipment under test was found to be compliance with the requirements of the standards applied. **Issue Date: Jul. 7, 2014**		

Tested by:	Reviewed by:	Approved by:
Andy Gao / Engineer	Jade Yang / Supervisor	Chris Du / Manager

Other Aspects:

None.

Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested

1. TEST SUMMARY

Test Items	Test Requirement	Uncertainty	Result
Conducted Emissions	15.107 ANSI C63.4	±2.6dB	PASS
Radiated Emissions	15.109 ANSI C63.4	±3.6dB	PASS

2. GENERAL PRODUCT INFORMATION

2.1. Product Function

Refer to Technical Construction Form and User Manual.

2.2. Description of Device (EUT)

Product Name:	Smart watch
Model No.:	Igni
Operation Frequency:	Bluetooth:2402~2480MHz WIFI:2412MHz~2462MHz (802.11b/802.11g/802.11n(H20)) 2422MHz~2452MHz (802.11n(H40)) GSM 850MHz: Tx: 824.20 - 848.80MHz (at intervals of 200kHz); Rx: 869.20 - 893.80MHz (at intervals of 200kHz) GSM 1900MHz: Tx: 1850.20 - 1909.80MHz (at intervals of 200kHz); Rx: 1930.20 - 1989.80MHz (at intervals of 200kHz) WCDMA Band II: TX: 1852.4MHz - 1907.6MHz, RX: 1932.4MHz - 1987.6MHz
Channel numbers:	Bluetooth:79 Channels WIFI:13 Channel for 802.11b/g/n(HT20), 7 Channel for 802.11n(HT40)
Channel separation:	Bluetooth:1M WIFI:5M
Modulation technology:	Bluetooth: FHSS(GFSK 1Mbps),Pi/4DQPSK(EDR 2Mbps), 8-DQPSK(EDR 3Mbps) WIFI DBPSK/ DQPSK/CCK/BPSK/ QPSK/ 16QAM/ 64QAM GSM/GPRS Mode with GMSK Modulation WCDMA Mode with BPSK Modulation HSDPA Mode with QPSK, 16QAM Modulation HSUPA Mode with QPSK, 16QAM Modulation
Antenna Type:	Integral Antenna
Antenna gain:	1dBi (BT &WIFI), 1.2dBi（GSM850）, 1.5dBi (WCDMA/PCS1900）
Power supply:	DC 5V from adapter Rechargeable lithium-ion battery 3.7V
Multislot Class:	12
EGPRS Class:	12

2.3. Difference between Model Numbers

None. .

2.4. Independent Operation Modes

Test mode:	
Playing mode	Keep the EUT in Playing mode
Video Record mode	Keep the EUT in Video Recording mode
Charging mode	Keep the EUT in Charging mode
Camera mode	Keep the EUT in Camera mode
GPS mode	Keep the EUT in GPS receive mode
Data transmitting	Keep the EUT in data transmitting mode
Pre-scan all modes, and found the data transmitting mode which is the worst mode, so only the data of worst mode was show on the test report.	

2.5. Test Supporting System

2.5.1. TF card

Manufacturer: HC
M/N: 11089060470CV

2.5.2. PC

Manufacturer: Lenovo
M/N: Lenovo G475
FCC Approve: FCC DOC

2.5.3. AC Adapter:

Provide: Keyway
M/N: JK060500550V
FCC Approve: FCC VOC

2.5.4. Modem

Manufacturer: Keyway
Model Number: MS14
FCC Approve: FCC DOC

2.5.5. Mouse

Manufacturer SHENGLIAN
Model Number MS111-L
FCC Approve: FCC DOC

2.5.6. Keyboard

Manufacturer DELL
Model Number KB212-B
FCC Approve: FCC DOC

3. TEST SITES

3.1. Test Facilities

Lab Qualifications : 944 Shielded Room built by ETS-Lindgren, USA
Date of completion: March 28, 2011

966 Chamber built by ETS-Lindgren, USA
Date of completion: March 28, 2011

Certificated by TUV Rheinland, Germany.
Registration No.: UA 50207153
Date of registration: July 13, 2011

Certificated by UL, USA
Registration No.: 100567237
Date of registration: September 5, 2012

Certificated by Intertek
Registration No.: 2011-RTL-L1-31
Date of registration: October 11, 2011

Certificated by Industry Canada
Registration No.: 9868A
Date of registration: December 8, 2011

Certificated by FCC, USA
Registration No.: 370994
Date of registration: February 21, 2012

Certificated by CNAS China
Registration No.: CNAS L5783
Date of registration: August 8, 2012

Name of Firm : Keyway Testing Technology Co., Ltd.

Site Location : Baishun Industrial Zone, Zhangmutou Town,
Dongguan, Guangdong, China

3.2. List of Test and Measurement Instruments

3.2.1. For conducted emission at the mains terminals test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 27,14	Apr. 27,15
Artificial Mains Network	Rohde&Schwarz	ENV216	101315	Apr. 27,14	Apr. 27,15
Artificial Mains Network (AUX)	Rohde&Schwarz	ENV216	101314	Apr. 27,14	Apr. 27,15
RF Cable	FUJIKURA	3D-2W	944 Cable	Apr. 27,14	Apr. 27,15

3.2.2. For radiated emission test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 27,14	Apr. 27,15
System Simulator	Agilent	E5515C	GB43130245	Apr. 30,14	Apr. 30,15
Power Splitter	Weinschel	1506A	NW425	Apr. 30,14	Apr. 30,15
Bilog Antenna	ETS-LINDGREEN	3142D	135452	Apr. 27,14	Apr. 27,15
Loop antenna	teseq	HLA6120	22032	Apr. 30,14	Apr. 30,15
Spectrum Analyzer	Agilent	E4411B	MY4511304	Apr. 27,14	Apr. 27,15
3m Semi-anechoic Chamber	ETS-LINDGREEN	966	KW01	Apr. 27,14	Apr. 27,15
Signal Amplifier	SONOMA	310	187016	Apr. 27,14	Apr. 27,15
Signal Amplifier	Agilent	8449B	3008A00251	Apr. 27,14	Apr. 27,15
RF Cable	IMRO	IMRO-400	966 Cable 1#	N/A	N/A
MULTI-DEVICE Controller	ETS-LINDGREEN	2090	126913	N/A	N/A
Horn Antenna	DAZE	ZN30701	11003	Apr. 27,14	Apr. 27,15
Horn Antenna	SCHWARZBECK	BBHA9170	9170-068	Apr. 27,14	Apr. 27,15
Spectrum Analyzer	Agilent	8593E	3911A04271	Apr. 27,14	Apr. 27,15
Spectrum Analyzer	Agilent	E4408B	MY44211125	Apr. 30,14	Apr. 30,15
Signal Amplifier	DAZE	ZN3380C	11001	Apr. 27,14	Apr. 27,15
High Pass filter	Micro	HPM50111	324216	Apr. 30,14	Apr. 30,15
Filter	COM-MW	ZBSF-C836.5-25-X	KW032	Apr. 30,14	Apr. 30,15
Filter	COM-MW	ZBSF-C1747.5-75-X2	KW035	Apr. 30,14	Apr. 30,15
Filter	COM-MW	ZBSF-C1880-60-X2	KW037	Apr. 30,14	Apr. 30,15
DC Power Supply	LongWei	PS-305D	010964729	Apr. 27,14	Apr. 27,15
Constant temperature and humidity box	GF	GTH-800-40-1P	MAA9906-005	Apr. 27,14	Apr. 27,15
Universal radio communication tester	Rohde&Schwarz	CMU200	3215420	Apr. 27,14	Apr. 27,15
Splitter	Agilent	11636B	0025164	Apr. 27,14	Apr. 27,15

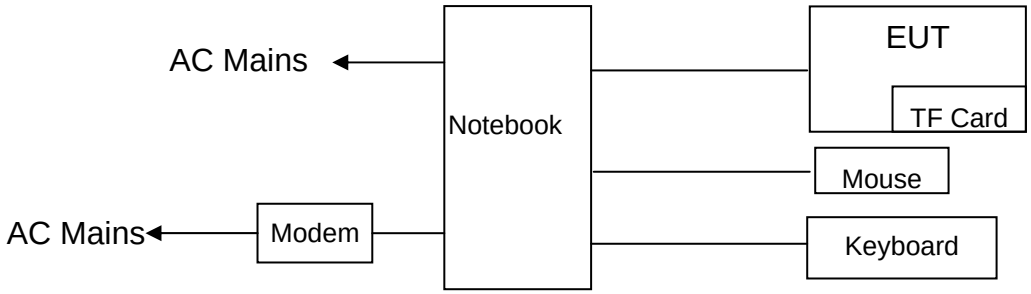
4. TEST SET-UP AND OPERATION MODES

4.1. Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the Operating Instructions.

4.2. Block Diagram of Test Set-up

System Diagram of Connections between EUT and Simulators



(EUT: Smart watch)

4.3. Test Operation Mode and Test Software

Refer to Test Setup in clause 4.

4.4. Special Accessories and Auxiliary Equipment

None.

4.5. Countermeasures to Achieve EMC Compliance

None.

5. EMISSION TEST RESULTS

5.1. Conducted Emission at the Mains Terminals Test

Result	**:**	**Pass**
Test Procedure	:	ANSI C63.4:2009
Frequency Range	:	0.15 to 30 MHz
Test Site	:	944 Shielded Room
Limits	:	FCC Part 15, Subpart B: Oct. 1, 2013

Test Setup

The EUT was put on a wooden table which was 0.8 m high above the ground and connected to the AC mains through the Artificial Mains Network (AMN). Where the mains cable supplied by the manufacture was longer than 1 m, the excess was folded back and forth parallel to the cable at the centre so as to form a bundle no longer than 0.4 m.

The EUT was kept 0.4 m from any other earthed conducting surface. Both sides of AC line were checked to find out the maximum conducted emission levels according to the test procedure during the conducted emission test.

The frequency range from 150 kHz to 30 MHz was investigated.

The bandwidth of the test receiver was set at 9 kHz.

The test data of the worst case condition(s) was reported on the following page.

Test Data

Line

	Freq	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	
1	0.170	43.19	54.94	-11.75	Average
2	0.170	53.60	64.94	-11.34	QP
3	0.285	34.71	50.68	-15.97	Average
4	0.285	45.60	60.68	-15.08	QP
5	0.567	32.42	46.00	-13.58	Average
6	0.567	40.30	56.00	-15.70	QP
7	1.317	22.47	46.00	-23.53	Average
8	1.317	39.20	56.00	-16.80	QP
9	3.584	27.54	46.00	-18.46	Average
10	3.584	40.05	56.00	-15.95	QP
11	9.156	24.29	50.00	-25.71	Average
12	9.156	30.20	60.00	-29.80	QP

Neutral

	Freq	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	
1	0.173	38.05	54.81	-16.76	Average
2	0.173	50.60	64.81	-14.21	QP
3	0.285	35.56	50.68	-15.12	Average
4	0.285	43.80	60.68	-16.88	QP
5	0.456	34.82	46.76	-11.94	Average
6	0.456	41.60	56.76	-15.16	QP
7	1.082	32.98	46.00	-13.02	Average
8	1.082	36.90	56.00	-19.10	QP
9	3.241	26.68	46.00	-19.32	Average
10	3.241	32.60	56.00	-23.40	QP
11	13.127	13.12	50.00	-36.88	Average
12	13.127	25.69	60.00	-34.31	QP

5.2. Radiated Emission Test

Result	**:**	**Pass**
Test Procedure	:	ANSI C63.4:2009
Frequency Range	:	30 to 13000 MHz
Test Site	:	966 Chamber
Limits	:	FCC Part 15, Subpart B: Oct. 1, 2013

Test Setup

The EUT was placed on a turn table which was 0.8 m above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 m away from the receiving antenna which was mounted on an antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 m to 4 m for both horizontal and vertical polarizations.

The EUT was tested in the Chamber Site. It was pre-scanned with a Peak detector from the spectrum, and all the final readings from the test receiver were measured with the Quasi-Peak detector.

The bandwidth of the EMI test receiver is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz.

Notes:

1. Emission Level = Antenna Factor + Cable Loss + Meter Reading-Preamp Factor.
2. Measurement Uncertainty: ±3.6 dB at a level of confidence of 95%.
3. For above 1GHz test, the peak level below the average limit, so no data show it.
4. Pre-scan all modes, and found the data transmitting mode which is the worst mode, so only the data of worst mode was show on the test report

Test Data

Horizontal polarizations

	Freq	Preamp Factor	Read Level	Cable Loss	Antenna Factor	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	49.40	31.38	41.23	0.75	9.05	19.65	40.00	-20.35	QP
2	235.64	30.94	41.59	1.61	12.50	24.76	46.00	-21.24	QP
3	289.96	30.93	42.35	1.87	13.48	26.77	46.00	-19.23	QP
4	445.16	30.61	41.57	2.62	17.50	31.08	46.00	-14.92	QP
5	497.54	30.59	41.22	2.85	18.66	32.14	46.00	-13.86	QP
6	548.95	30.87	40.58	3.03	19.49	32.23	46.00	-13.77	QP

Vertical polarizations

	Freq	Preamp Factor	Read Level	Cable Loss	Antenna Factor	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	49.40	31.38	48.26	0.75	9.05	26.68	40.00	-13.32	QP
2	76.56	31.33	42.49	0.85	7.83	19.84	40.00	-20.16	QP
3	235.64	30.94	41.25	1.61	12.50	24.42	46.00	-21.58	QP
4	445.16	30.61	38.99	2.62	17.50	28.50	46.00	-17.50	QP
5	548.95	30.87	40.82	3.03	19.49	32.47	46.00	-13.53	QP
6	652.74	30.82	40.12	3.58	21.47	34.35	46.00	-11.65	QP

6. PHOTOGRAPHS OF TEST SET-UP

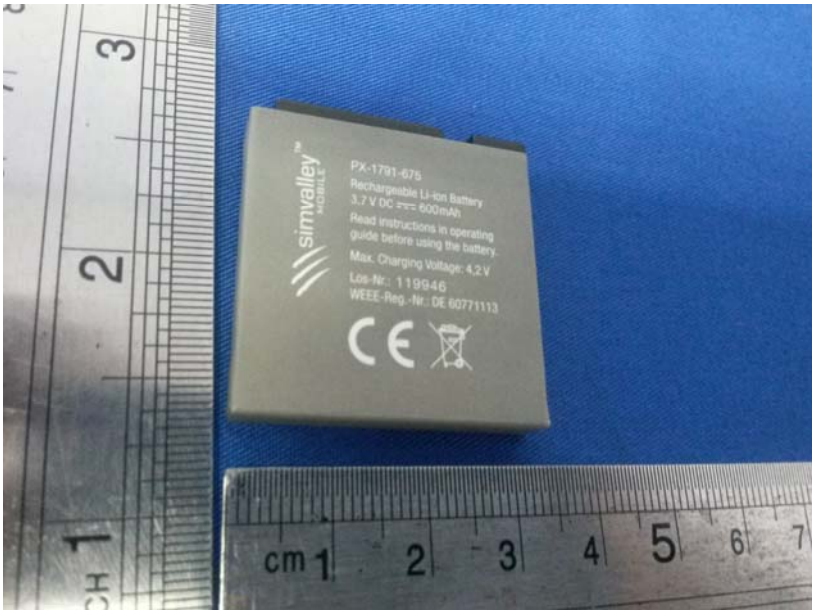
6.1. Set-up for Conducted Emission Test

6.2. Set-up for Radiated Emission Test

7. PHOTOGRAPHS OF THE EUT


STAINLESS STEEL
100
50
100
200
250


ignit


simvalley MOBILE
PX-1791-675
Rechargeable Li-Ion Battery
3.7 V DC 600mAh
Read instructions in operating guide before using the battery.
Max. Charging Voltage: 4.2 V
Los-Nr.: 119946
WEEE-Reg.-Nr.: DE 60771113

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