



RF EXPOSURE REPORT

REPORT NO.: SA130829C06

MODEL NO.: K530S

FCC ID: UZI-30SK58

RECEIVED: Aug. 29, 2013

TESTED: Sep. 09 ~ Sep. 10, 2013

ISSUED: Sep. 12, 2013

APPLICANT: BandRich Inc.

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ISSUED BY: Bureau Veritas Consumer Products Services
(H.K.) Ltd., Taoyuan Branch

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TEST LOCATION: No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei
Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA130829C06	Original release.	Sep. 12, 2013



1. CERTIFICATION

PRODUCT: LTE M2M & Vehicle Mount Router
MODEL: K530S
BRAND: BandLuxe
APPLICANT: BandRich Inc.
TESTED: Sep. 09 ~ Sep. 10, 2013
TEST SAMPLE: ENGINEERING SAMPLE
STANDARDS: **FCC Part 2 (Section 2.1091)**
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (Model: K530S) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan 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 : Celine Chou , **DATE :** Sep. 12, 2013
Celine Chou / Specialist

APPROVED BY : Ken Liu , **DATE :** Sep. 12, 2013
Ken Liu / Senior Manager

2. RF EXPOSURE

2.1 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

2.2 MPE CALCULATION FORMULA

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

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

2.3 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**.

2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412-2462	26.40	2	20	0.138	1

FREQUENCY BAND (MHz)	ERP (dBm)	EIRP (dBm)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
CDMA 824.7~848.31MHz	23.51	25.66	20	0.073	0.549
LTE Band 26 (Channel Bandwidth 1.4MHz) 824.7 ~ 848.3MHz	23.48	25.63	20	0.073	0.550
LTE Band 26 (Channel Bandwidth 3MHz) 825.5 ~ 847.5MHz	23.51	25.66	20	0.073	0.550
LTE Band 26 (Channel Bandwidth 5MHz) 826.5 ~ 846.5MHz	23.55	25.7	20	0.074	0.551
LTE Band 26 (Channel Bandwidth 10MHz) 829.0 ~ 844.0MHz	23.87	26.02	20	0.080	0.553

NOTE: ERP=EIRP-2.15

FREQUENCY BAND (MHz)	ERP (dBm)	EIRP (dBm)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
CDMA 817.9 ~ 822.75MHz	24.13	26.28	20	0.084	0.545
LTE Band 26 (Channel Bandwidth 1.4MHz) 814.7 ~ 823MHz	23.67	25.82	20	0.076	0.543
LTE Band 26 (Channel Bandwidth 3MHz) 815.5 ~ 822.5MHz	23.71	25.86	20	0.077	0.544
LTE Band 26 (Channel Bandwidth 5MHz) 816.5~ 821.5MHz	23.61	25.76	20	0.075	0.544
LTE Band 26 (Channel Bandwidth 10MHz) 819MHz	23.07	25.22	20	0.066	0.546

NOTE: ERP=EIRP-2.15



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FREQUENCY BAND (MHz)	EIRP (dBm)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
CDMA 1851.25~1908.75 MHz	25.80	20	0.076	1
LTE Band 25 (Channel Bandwidth: 3MHz) 1851.5 ~ 1913.5MHz	23.43	20	0.044	1
LTE Band 25 (Channel Bandwidth: 5MHz) 1852.5 ~ 1912.5MHz	22.97	20	0.039	1
LTE Band 25 (Channel Bandwidth: 10MHz) 1855.0 ~ 1910.0MHz	23.29	20	0.042	1

FREQUENCY BAND (MHz)	EIRP (dBm)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
LTE Band 41 (Channel Bandwidth: 10MHz) 2501 ~ 2685MHz	25.87	20	0.077	1
LTE Band 41 (Channel Bandwidth: 15MHz) 2503.5 ~ 2682.5MHz	25.74	20	0.075	1
LTE Band 41 (Channel Bandwidth: 20MHz) 2506MHz ~ 2680MHz	25.27	20	0.067	1

CONCLUSION:

Both of the WLAN 2.4G & LTE can transmit simultaneously, the formula of calculated the MPE is:

$$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

$$\text{WLAN 2.4G} + \text{LTE} = 0.138 + 0.084 = 0.222$$

Therefore, the maximum calculation of this situation is 0.222, which is less than the "1" limit.

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