TEST REPORT

of

FCC CFR 47 part 1, 1.1307(b), 1.1310

FCC ID: 2AMKA-R750NRCBB

Equipment Under Test	:	InforTab
Model Name	:	R750
Variant Model Name	:	R420
Applicant	:	RAINUS Co., Ltd.
Manufacturer	:	RAINUS Co., Ltd.
Date of Receipt	:	2018.01.04
Date of Test(s)	:	2018.02.01 ~ 2018.07.11
Date of Issue	:	2018.07.30

In the configuration tested, the EUT complied with the standards specified above.

Tested By:  **Date:** **2018.07.30**

Nancy Park

Technical Manager:  **Date:** **2018.07.30**

Jungmin Yang

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1. General information

1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)
- Wireless Div. 2FL, 10-2, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- Designation number: KR0150

All SGS services are rendered in accordance with the applicable SGS conditions of service available on request and accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx.

Telephone : +82 31 688 0901
FAX : +82 31 688 0921

1.2. Details of Applicant

Applicant : RAINUS Co., Ltd.
Address : 3rd-Floor, 173-36, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi-do, Korea
Contact Person : Do, Gi-tae
Phone No. : +82 31 548 0782

1.3. Details of manufacturer

Company : Same as applicant
Address : Same as applicant

1.4. Description of EUT

Kind of Product	InforTab
Model Name	R750
Variant Model Names	R420
Power Supply	DC 3.0 V
Frequency Range	2 405 ㎒ ~ 2 480 ㎒
Modulation Technique	DSSS
Number of Channels	16 channels
Antenna Type	PCB Antenna
Antenna Gain	0.88 ㏈i

1.5. Information of Variant models

Model Name		Information
Basic Model	R750	- Basic Model
Variant Model	R420	- Same to Basic model, but the only difference is other signal line patterns for the each PCB size.

1.6. Test report revision

Revision	Report number	Date of Issue	Description
0	F690501/RF-RTL012913	2018.07.30	Initial

2. RF Exposure Evaluation

2.1. Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(b), 1.1310

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (㎒)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (㎽/㎠)	Average Time
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f^2	6
30-300	61.4	0.163	1.0	6
300-1 500	-	-	f/300	6
1 500-100 000	-	-	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f^2	30
30-300	27.5	0.073	0.2	30
300-1 500	-	-	f/1500	30
1 500-100 000	-	-	**1.0**	**30**

2.1.1. Friis transmission formula: Pd = (Pout*G)/(4*pi*R^2)

Where Pd = power density in ㎽/㎠

Pout = output power to antenna in ㎽

G = gain of antenna in linear scale

Pi = 3.1416

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

Pd the limit of MPE, 1 ㎽/㎠. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

2.1.2. Test Result of RF Exposure Evaluation

Test Item : RF Exposure Evaluation Data
Test Mode : Normal Operation

2.1.3. Output Power into Antenna & RF Exposure Evaluation Distance

Zigbee
- Maximum tune up tolerance

Frequency Range (㎒)	Output Average Power to Antenna (dB m)	Antenna Gain (dB i)	Power Density at 20 ㎝ (㎽/㎠)	Limits (㎽/㎠)
2 405 ~ 2 480	-11.00	0.88	0.000 019	1

Remark:

- The power density Pd (5th column) at a distance of 20 ㎝ calculated from the friis transmission formula is far below the limit of 1 ㎽/㎠.

- End of the Test Report -