

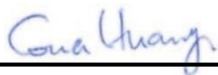
RF EXPOSURE EVALUATION REPORT

FCC ID : NKR-XRBH-1
Equipment : BLE Module
Brand Name : WNC
Model Name : XRBH-1
Applicant : Wistron NeWeb Corp.
20 Park Avenue II, Hsinchu Science
Park, Hsinchu 308, Taiwan,R.O.C
Manufacturer : Wistron NeWeb Corp.
20 Park Avenue II, Hsinchu Science
Park, Hsinchu 308, Taiwan,R.O.C
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part 2.1091 and it complies with applicable limit.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.



Approved by: Cona Huang / Deputy Manager

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History of this test report

Report No.	Version	Description	Issued Date
FA9O2516-01	Rev. 01	Initial issue of report	May 22, 2020
FA9O2516-01	Rev. 02	Update Applicant	Sep. 18, 2020

**1. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	BLE Module
Brand Name	WNC
Model Name	XRBH-1
FCC ID	NKR-XRBH-1
Wireless Technology and Frequency Range	Bluetooth: 2400 MHz ~ 2483.5 MHz
Mode	Bluetooth LE

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Host Information	
EUT Type	Mobile Reader Edge
Brand Name	Proxy
Model Name	Mobile Reader Edge
HW Version	1.0.04
SW Version	1.6.4.1878+ec96fcf
EUT Stage	Production Unit

Reviewed by: Jason Wang

Report Producer: Wan Liu

2. Maximum RF average output power among production units

Mode	Maximum Average power(dBm)
Bluetooth	5



3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
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
300-1500			f/300	6
1500-100,000			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
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna



4. Radio Frequency Radiation Exposure Evaluation

4.1. Standalone Power Density Calculation

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
Bluetooth	-0.10	5.00	4.900	0.003	3.090	0.001	1.000

4.2. Collocated Power Density Calculation

FCC ID: NKR-XRBH-1 Bluetooth Power Density / Limit	FCC ID: 2AP6E-PROXYEDGE-13 WLAN Power Density / Limit	Σ (Power Density / Limit) of WLAN+Bluetooth
0.001	0.01	0.011

Note:

1. The WLAN/BT module is also integrated into this host refer to FCC ID: 2AP6E-PROXYEDGE-13, Sporton Report No.: FA9O2516, and the power density / limit result is used perform Sim-Tx analysis
2. Σ (Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for WLAN + Bluetooth.
3. Considering the Bluetooth collocation with the WLAN transmitter of the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE of 2 collocated transmitters is compliant

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.