RF EXPOSURE REPORT

Applicant:	SMART Technologies Inc.
Address:	Suite 600, 214 11 Avenue SW Calgary T2R 0K1 Canada
Manufacturer:	SMART Technologies Inc.
Address:	Suite 600, 214 11 Avenue SW Calgary T2R 0K1 Canada
Product Description:	GX-V4 Plus BT/BLE/WiFi 6 Radio Module
Brand Name:	SMART
Tested Model:	SKI.WB800D80U.5
FCC ID:	QCI-SKIWB8D8U5
Report No.:	JCF250106074-004
Received Date:	Jan. 06, 2025
Tested Date:	Jan. 06, 2025 ~ Feb. 28, 2025
Issued Date:	Feb. 28, 2025
Test Standards:	KDB 447498 D01 General RF Exposure Guidance v06
Test Result:	Pass

Prepared By:

Roger Li

Roger Li/Engineer **Date:** Feb. 28, 2025

Reviewed By:

Kennys Zhang

Kennys Zhang/Engineer **Date:** Feb. 28, 2025

Approved By:

Talent Zhang

Talent Zhang/Engineer **Date:** Feb. 28, 2025

Note: The test results in this report apply exclusively to the tested model / sample. Without written approval of Guangzhou Jingce Testing Technology Co., Ltd. the test report shall not be reproduced except in full.

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Feb. 28, 2025	Original Report	/

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1. Test Report Declare

Applicant:	SMART Technologies Inc.
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Manufacturer:	SMART Technologies Inc.
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Product Name	GX-V4 Plus BT/BLE/WiFi 6 Radio Module
Brand Name:	SMART
Model Name:	SKI.WB800D80U.5
Difference Description:	NA

We Declare:

The equipment described above is tested by Guangzhou Jingce Testing Technology Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangzhou Jingce Testing Technology Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests except as provided information by clients.

2. Equipment Under Test

2.1. Description of EUT

EUT* Name:	GX-V4 Plus BT/BLE/WiFi 6 Radio Module
Model Number:	SKI.WB800D80U.5
EUT Function Description:	Please refer to the user manual of this device
Power Supply:	DC 5V, 1A
Hardware Version:	NA
Software Version:	NA
Radio Specification:	Bluetooth V5.4, IEEE 802.11a/b/g/n/ac/ax
Operation Frequency:	Bluetooth: 2402MHz-2480MHz IEEE802.11b/g/n/a/ac/ax: 2412MHz-2462MHz, 5180MHz-5825MHz
Modulation:	GFSK, π/4-DQPSK, 8DPSK IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11a/g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20, HT40: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac (VHT20/40/80): OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ax (HE20/40/80): OFDMA (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)
Data Rate:	Bluetooth: 1Mbps, 2Mbps, 3Mbps IEEE 802.11b: up to 11Mbps IEEE 802.11g: up to 54Mbps IEEE 802.11n HT20: up to 72.2Mbps IEEE 802.11n HT40: up to 150.0Mbps IEEE 802.11a: up to 54Mbps IEEE 802.11ac VHT20: up to 86.7Mbps IEEE 802.11ac VHT40: up to 200Mbps IEEE 802.11ac VHT80: up to 433.3Mbps IEEE 802.11ax HE20: up to 143.4Mbps IEEE 802.11ax HE40: up to 286.8Mbps IEEE 802.11ax HE80: up to 600.5Mbps
Antenna Type:	Bluetooth: Coaxial Antenna, 4.06 dBi 2.4G WIFI: Coaxia Antenna, 4.06 dBi 5G WIFI: Coaxial Antenna, 3.35 dBi
Product Type:	☐Portable device ☑Mobile device ☐Fixed device

Note 1: EUT is the ab. of equipment under test.

Note 2: The antenna gain is declared by the customer and the laboratory is not responsible for the accuracy of the antenna gain.

2.2. Description of Available Antennas

Test Mode	Transmit and Receive Mode	Description
BT&BLE	☒ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
2.4G WIFI	☒ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
5G WIFI	☒ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.

3. Test Laboratory

Guangzhou Jingce Testing Technology Co., Ltd.

Add.: No.10, Hefeng No.1 street, Huangpu District, Guangzhou, Guangdong, People's Republic of China

Association for Laboratory Accreditation(A2LA). Certificate Number: 6594.03

FCC Designation Number: CN1381. Test Firm Registration Number: 486550

IC Test Firm Registration Number: 31808

Conformity Assessment Body identifier: CN0173

4. RF Exposure Measurement

4.1. Requirement

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

4.2. 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				
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

F = Frequency in MHz

* = Plane-wave equivalent power density.

4.3. MPE Calculation Formula

Pd = (Pout*G) / ($4*pi*R^2$)

where

Pd = power density in mW/cm^2

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

4.4. 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.

4.5. Conducted Power

Band	Channel Frequency (MHz)	Average Power (dBm)
BT&BLE	2402	1.97
2.4G WIFI	2437	12.46
5G WIFI	5180	13.82

5. RF Exposure Calculation

We used the maximum power between the conducted power and ERP/EIRP to perform RF exposure exemption evaluation.

Band	Channel Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Power Density (mW/cm^2)	Limit (mW/cm^2)	PASS/FAIL
BT&BLE	2441	1.97	4.06	0.0008	1	PASS
2.4G WIFI	2437	12.46	4.06	0.0089	1	PASS
5G WIFI	5745	13.82	3.35	0.0104	1	PASS

Both of the WLAN and plug-in device can transmit simultaneously, the formula of calculated the MPE is:

CPD1/LPD1+CPD2/LPD2+……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

Therefore the worst-case situation is 0.0008/1.00+0.0089/1.00+0.0104/1.00=0.0201, which is less than “1”, This confirmed that the device comply with FCC 1.1310 MPE limit.

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