BT/BLE/WiFi 6 *radio module*
SKI.WB800D.3
User Manual

1. General Description

SKI.WB800D.3 is a highly integrated SoC with dual band Wi-Fi6, BT5.0 and high-performance Cortex-M4F 480MHz for wireless application.

SKI.WB800D.3 uses a compact 5×5mm² QFN48 package.

2. Electrical Characteristics

Table 3-1 DC Electrical Specification (Recommended Operation Conditions):

SYMBOL	DESCRIPTION	MIN	TYP	MAX	UNIT
VBAT	Supply Voltage from battery or LDO	3.0	3.8	5	V
T_{amb}	Ambient Temperature	-20	27	+80	℃
V_{IL}	CMOS Low Level Input Voltage	0		0.3*VIO	V
V_{IH}	CMOS High Level Input Voltage	0.7*VIO		VIO	V
V_{TH}	CMOS Threshold Voltage		0.5*VIO		V

Table 3-2 Output Power (e.i.r.p)

Type	Frequency	MIN	TYP	MAX	UNIT
BT	2402-2480MHz	4.05	6.05	8.05	dBm
BLE	2402-2480MHz	3.67	5.67	7.67	dBm
2.4G	2412-2472MHz	17.45	19.45	21.45	dBm
5G	5150-5250MHz 5250-5350MHz 5470-5600MHz 5650-5725MHz	B1： 18.68 B2： 18.93 B3： 18.46	B1： 20.68 B2： 20.93 B3： 20.46	B1： 22.68 B2： 22.93 B3： 22.46	dBm
5.8G	5725-5850MHz	11.74	13.74	15.74	dBm

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and consider removing the no-collocation statement.

Caution!

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The final end product must be labelled in a visible area with the following:
"Contains FCC ID: QCI-SKIWB800D3".
"Contains IC: 4302A-SKIWB800D3".

When the module is loaded into the host for use, the OEM has the responsibility to further evaluate and test to ensure that the host and module are compliant

Canada Statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1) L'appareil ne doit pas produire de brouillage;

2) L' appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d' en compromettre le fonctionnement.

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS- 102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS 102 et la conformité à l'exposition de RSS- 102 rf, utilisateurs peut obtenir l'information canadienne sur l'exposition et la conformité de rf.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

1. the device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
2. for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit;
3. for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate.

1. les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux

systèmes de satellites mobiles utilisant les mêmes canaux;

2. le gain maximal d'antenne permis pour les dispositifs utilisant les bandes 5250-5350 MHz et 5470-5725 MHz doit se conformer à la limite de p.i.r.e.;

3. le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5725-5850 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point, selon le cas.

OPERATING FREQUENCY (the maximum transmitted power)
BT：
2402 MHz ~ 2480 MHz (6.42±2dBm)
BLE：
2402 MHz ~ 2480 MHz (5.67±2dBm)
2.4G：
2412 MHz ~ 2472 MHz (19.45±2dBm)
5G：
5150 MHz ~ 5250 MHz (20.68±2dBm)
5250 MHz ~ 5350 MHz (20.93±2dBm)
5470 MHz ~ 5725 MHz (20.46±2dBm)
5725 MHz ~ 5850 MHz(13.74±2dBm)

NCC警語

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。
前述合法通信，指依電信管理法規定作業之無線電通信。
低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

5.7.9.1 應避免影響附近雷達系統之操作。
5.7.9.2 高增益指向性天線只得應用於固定式點對點系統。

本模組於取得認證後，將依規定於模組本體標示審驗合格標籤, 並要求平台廠商於平台上標示「本產品內含射頻模組