

CDI-WX27931A-00

DATASHEET

Software:

客 户 Customer	客户承认 Approve（请盖印章）	日 期 Date

拟制 Design	审核 Check	批准 Approve	版本 Version	日期 Date
			V1.1	2025.04.26

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更改记录:

Reversion History:

版本 Version	日期 Date	更改内容 Modification
1.0	2024.12.28	First release
1.1	2025.04.26	Update the RF metric

1. Overview

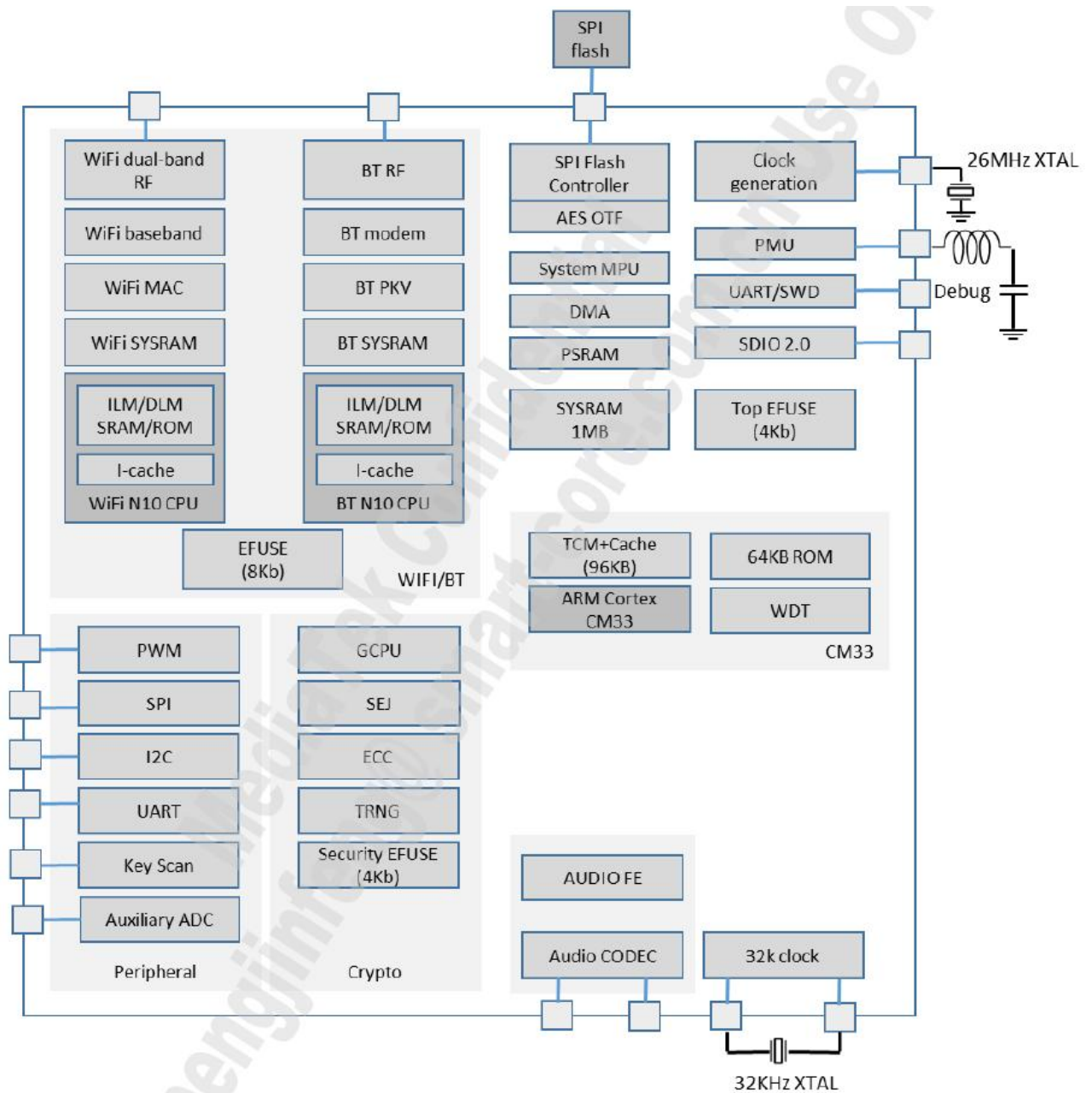
CDI-WX27931A-00 is 802.11a/b/g/n/ac/ax and BLE5.0 1T1R IOT Module. It is based on MT7931AN low-power chipset that complied with IEEE 802.11n, and it is also backward complied with IEEE 802.11b/g standard from 2.4~2.5GHz. It is also backward complied with IEEE 802.11a standard from 5.15~5.825GHz wideband and IEEE 802.11b/g standard from 2.4~2.5GHz. It can be used to provide up to 54Mbps for IEEE 802.11a and IEEE 802.11g, 11Mbps for IEEE 802.11b and 72.2Mbps for IEEE802.11n. The BLE part supports latest 5.0.

CDI-WX27931A-00 is a highly integrated single chip that features an ARM® Cortex-M33 application processor, a low power 1x1 802.11a/b/g/n/ac/ax dual-band Wi-Fi subsystem, a Bluetooth v5.0 subsystem and a Power Management Unit (PMU). The Wi-Fi subsystem and a Bluetooth v5.0 subsystem offer feature-rich wireless connectivity at high standards, and deliver reliable, cost-effective throughput from an extended distance. Optimized RF architecture and baseband algorithms provide superb performance and low power consumption. CDI-WX27931A-00 is designed to support standard based features in the areas of security, quality of service and international regulations, giving end users the greatest performance any time and in any circumstance. CDI-WX27931A-00 is based on ARM® Cortex-M33 with floating point microcontroller (MCU) including SRAM/ROM memory. The chip also supports rich peripheral interfaces, including SDIO, SPI master, I2C, I2S, IR input, UART, AUXADC, PWM, and GPIOs.

2. Features

- ARM® Cortex-M33 MCU with FPU with up to 300MHz clock speed
- Support for 2.4GHz + 5GHz Wi-Fi 6 (IEEE 802.11 a / b / g / n / ac/ax), 1x1 compliant
- Compliance to BLE 5.0 specification
- Supports 1x1 20MHz bandwidth, MCS0~8(256-QAM) in 2.4/5 GHz band
- Support uplink MU-OFDMA TX and downlink MU-OFDMA RX
- Embedded 4MB pSRAM for applications
- Support BT5.0 2M_PHY/Long Range/Advertising Extension/SAM/CS#2/High Duty Cycle Non-Connectable ADV
- Wi-Fi security WPA/WPA2/WPA3 personal, WPS2.0
- Support WiFi and BT co-existence
- Rich peripherals such as SDIO, SPI master, I2C, I2S, IR input, UART, AUXADC, PWM, and GPIOs

3. Block Diagram



4. Applications

This processor can be used in areas such as:

- Home appliances:Light control, Smart plugs, Smart door locks, Smart remote control
- Industrial control
- Smart agriculture
- Wi-Fi enabled toys:Educational toys,Proximity sensing toys

5. General Specification

Model	CDI-WX27931A-00
Product Name	WLAN 802.11a/b/g/n/ac/ax UART 1T1R +BLE 5.0 module
Major Chipset	MT7931AN
Standard	802.11a/b/g/n/ac/ax
WiFi Interface	UART、SPI、SDIO
Operating Temperature	-20° C ~ 70° C
Storage Temperature	-30° C ~ 85°C
Humidity	5% to 90% maximum
ESD Protection	TBD
Dimension	21.0x18.0x3.0mm (LxWxH) ±0.2mm

6. RF Specification

A. 2.4GHz RF Specification

Feature	Description
WLAN Standard	IEEE 802.11b/g/n/ax WiFi compliant
Frequency Range	2.400 GHz ~ 2.483.5 GHz (2.4 GHz ISM Band)
Number of Channels	2.4GHz : Ch1 ~ Ch14
Modulation	802.11b : DQPSK, DBPSK, CCK 802.11 g/n : OFDM /64-QAM,16-QAM, QPSK, BPSK 802.11ax : OFDMA /1024-QAM、256-QAM、64-QAM、16-QAM、QPSK、BPSK
Output Power	802.11b /11Mbps : 17dBm $\pm$ 2 dB @ EVM $\leq$ -15dB
	802.11g /54Mbps : 15 dBm $\pm$ 2 dB @ EVM $\leq$ -28dB
	802.11n /MCS7 : 14 dBm $\pm$ 2 dB @ EVM $\leq$ -30dB
	802.11ax /MCS9 : 13 dBm $\pm$ 2 dB @ EVM $\leq$ -35dB
Receive Sensitivity (11b,20MHz) @8% PER	- 11Mbps PER @ -85 dBm, typical
Receive Sensitivity (11g,20MHz) @10% PER	- 54Mbps PER @ -70 dBm, typical
Receive Sensitivity (11n,20MHz) @10% PER	- MCS=7 PER @ -68 dBm, typical
Receive Sensitivity (11ax,20MHz) @10% PER	- MCS=9 PER @ -60 dBm, typical

B. 5GHz RF Specification

Feature	Description
WLAN Standard	IEEE 802.11b/g/n/ax WiFi compliant
Frequency Range	5.180 GHz ~ 5.885 GHz (5 GHz ISM Band)
Number of Channels	5GHz : Ch1 ~ Ch14
Modulation	802.11a : OFDM /64-QAM,16-QAM, QPSK, BPSK 802.11n : OFDM /64-QAM,16-QAM, QPSK, BPSK 802.11ac : OFDM /256-QAM 802.11ax : OFDMA /1024-QAM、256-QAM、64-QAM、16-QAM、QPSK、BPSK
Output Power	802.11a : 54Mbps OFDM : 15dBm $\pm$ 2 dB @ EVM $\leq$ -15dB
	802.11n : MCS7 : 14 dBm $\pm$ 2 dB @ EVM $\leq$ -28dB
	802.11ac :MCS8: 13 dBm $\pm$ 2 dB @ EVM $\leq$ -30dB
	802.11ax :MCS9: 13 dBm $\pm$ 2 dB @ EVM $\leq$ -30dB
Receive Sensitivity (11a,20MHz) @8% PER	- 54Mbps PER @ -70 dBm, typical
Receive Sensitivity (11n,20MHz) @10% PER	- MCS=7 PER @ -68 dBm, typical
Receive Sensitivity (11ac,20MHz) @10% PER	- MCS=8 PER @ -64 dBm, typical
Receive Sensitivity (11ax,20MHz) @10% PER	- MCS=9 PER @ -60 dBm, typical

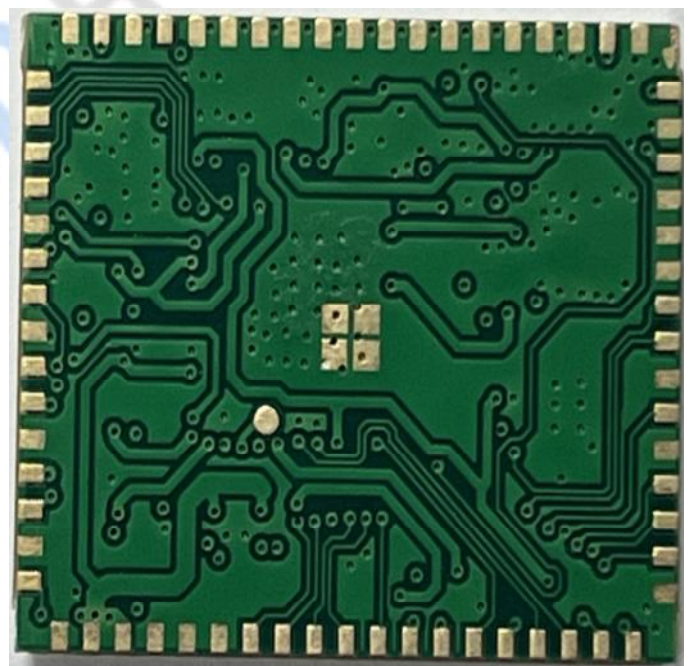
C. Bluetooth Specification

Wireless Standard	BLE V5.3 specification
Frequency Band	2.402~2.480 GHz
RF TX Output Power	2~10dBm
RX Sensitivity	-90dBm (typical)

7. PIN Description



(TOP VIEW)

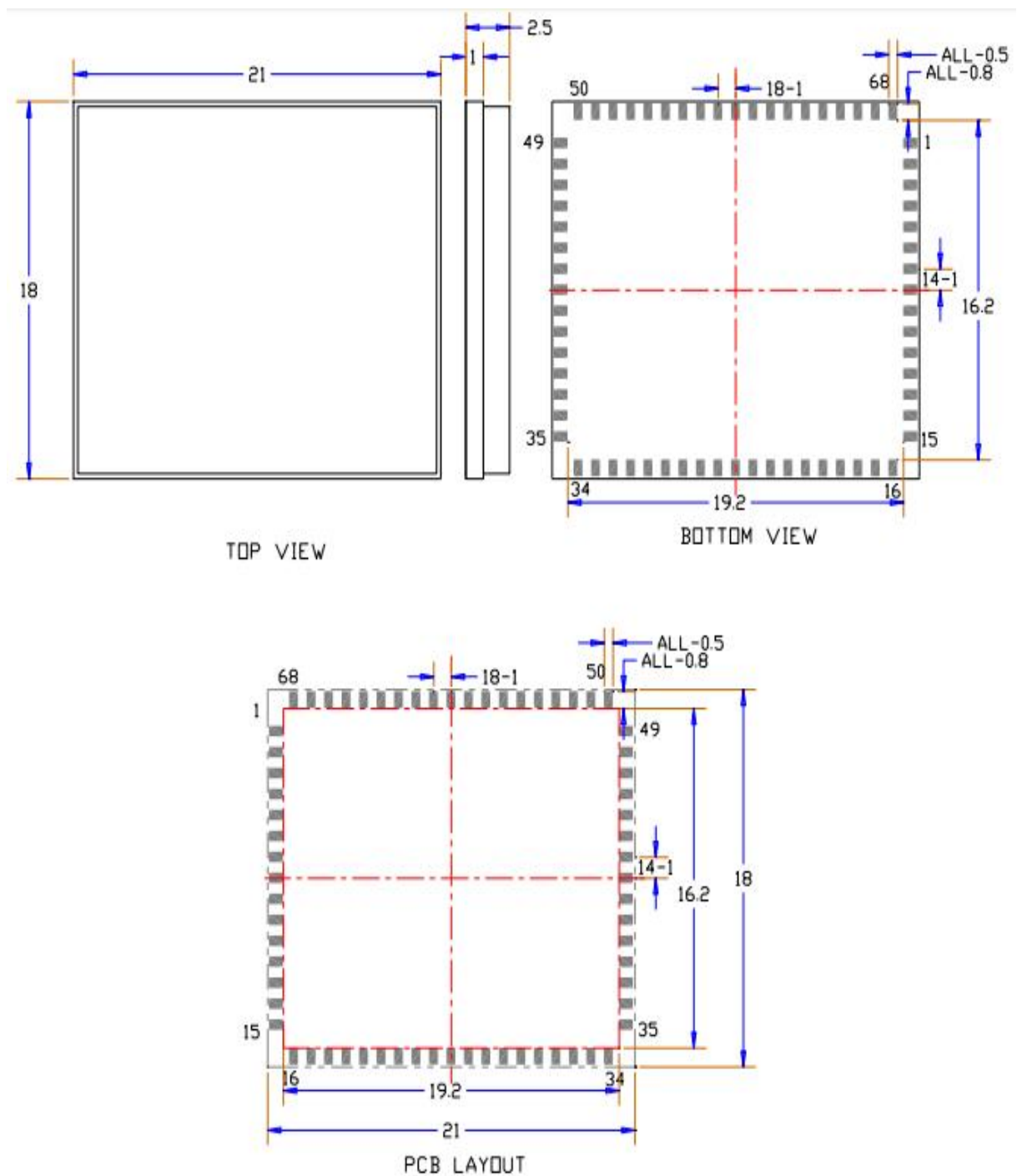


(BOTTOM VIEW)

PIN NO.	NAME	TYPE	FUNCTION
1	VDD33_RTC	Power VBAT	32K Clock 3.3V power
2	GND	Power ground	GND
3	VDDIO	Power VBAT	Digital I/O power
4	GND	Power ground	Ground
5	GND	Power ground	Ground
6	GND	Power ground	Ground
7	SDIO_D1	I/O	SDIO_DAT1
8	SDIO_D0	I/O	SDIO_DAT0
9	GND	Power ground	Ground
10	SDIO_CLK	I/O	SDIO_CLK
11	GND	Power ground	Ground
12	SDIO_CMD	I/O	SDIO_CMD
13	SDIO_D3	I/O	SDIO_DAT3
14	SDIO_D2	I/O	SDIO_DAT2
15	GND	Power ground	Ground
16	RST	RESET	RESET
17	GPIO_B_0	I/O	GPIO12
18	GPIO_B_10	I/O	GPIO22
19	GPIO_B_12	I/O	GPIO24
20	GPIO_B_2	I/O	GPIO14
21	GPIO_B_4	I/O	GPIO16
22	GPIO_B_3	I/O	GPIO15
23	GPIO_B_5	I/O	GPIO17
24	GPIO_B_6	I/O	GPIO18
25	GPIO_B_7	I/O	GPIO19
26	GPIO_B_8	I/O	GPIO20
27	GPIO_B_9	I/O	GPIO21
28	GPIO_B_11	I/O	GPIO23
29	GND	Power ground	Ground
30	GND	Power ground	Ground
31	GND	Power ground	Ground
32	VDD33	Power VBAT	Input power 3.3V
33	VDD33	Power VBAT	Input power 3.3V
34	GND	Power ground	Ground
35	MICBIAS	MICBIAS	CODEC_ADC ADC0 MICBIAS OUTPUT
36	GND	Power ground	Ground
37	AU_VIN1_N	A	CODEC_ADC ADC1 RCH N_port input

38	AU_VIN1_P	A	CODEC_ADC ADC1 RCH P_port input
39	GND	Power ground	Ground
40	AU_VINO_N	A	CODEC_ADC ADC0 LCH N_port input
41	AU_VINO_P	A	CODEC_ADC ADC0 LCH P_port input
42	GND	Power ground	Ground
43	AU_VOLP	A	CODEC_DAC Left_chanel P_port output signal
44	AU_VORP	A	CODEC_DAC Right_chanel P_port output signal
45	GND	Power ground	Ground
46	GPIO_T_1	I/O	GPI042
47	GPIO_T_3	I/O	GPI044
48	KPROW_1	I/O	GPI048
49	KPCOL_0	I/O	GPI050
50	GND	Power ground	Ground
51	NC/BT_RF	RF	Option. Select this pin when requiring BT separate antenna
52	GND	Power ground	Ground
53	NC	NC	NC
54	GND	Power ground	Ground
55	GND	Power ground	Ground
56	GND	Power ground	Ground
57	GND	Power ground	Ground
58	GND	Power ground	Ground
59	GND	Power ground	Ground
60	GND	Power ground	Ground
61	GND	Power ground	Ground
62	GND	Power ground	Ground
63	GND	Power ground	Ground
64	GND	Power ground	Ground
65	GND	Power ground	Ground
66	GND	Power ground	Ground
67	WIFI_RF	RF	WIFI_RF
68	GND	Power ground	Ground

8. Physical Dimensions



Unit: mm $\pm 0.2\text{mm}$

9. Electrical specification

9.1 Operation Conditions

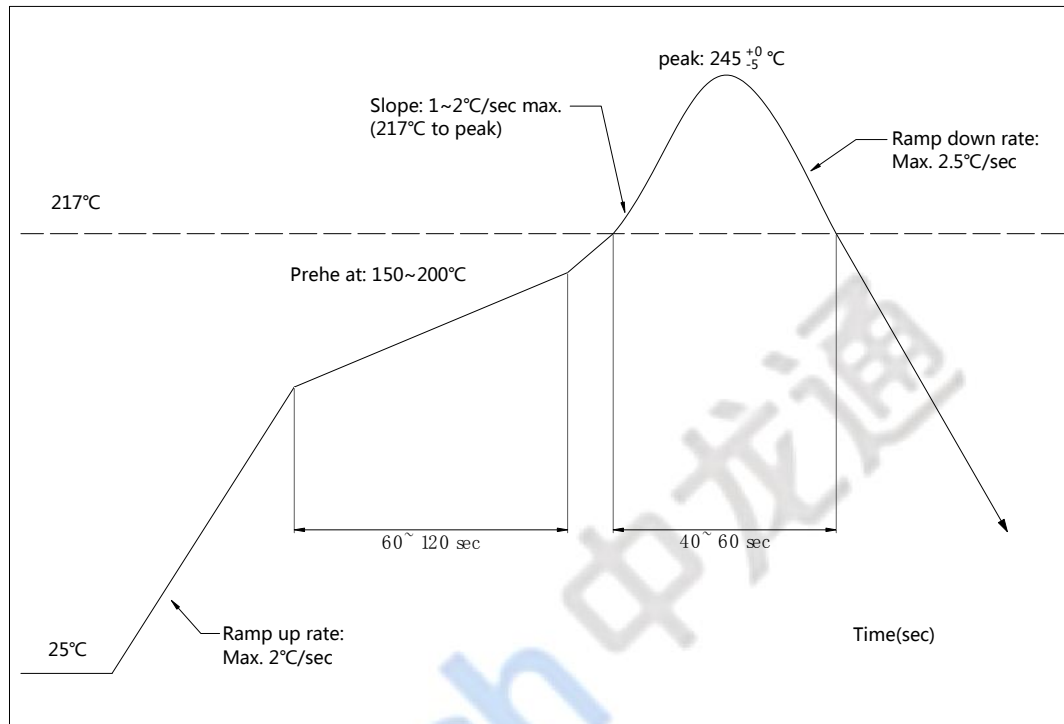
Symbol	Parameter	Min	Typ	Max	unit
VDD33	3.3V Supply Voltage	2.97	3.3	3.63	V
VIL	Low level input	-0.3		0.25*VDD33	V
VIH	high-level input	0.625*VDD3.3		3.63	V
VOL	Low level output	-0.3		0.45	V
VOH	High level output	VDD3.3-0.45		VDD3.3+0.3	V

10. Recommended Reflow Profile

Referred IPC/JEDEC standard.

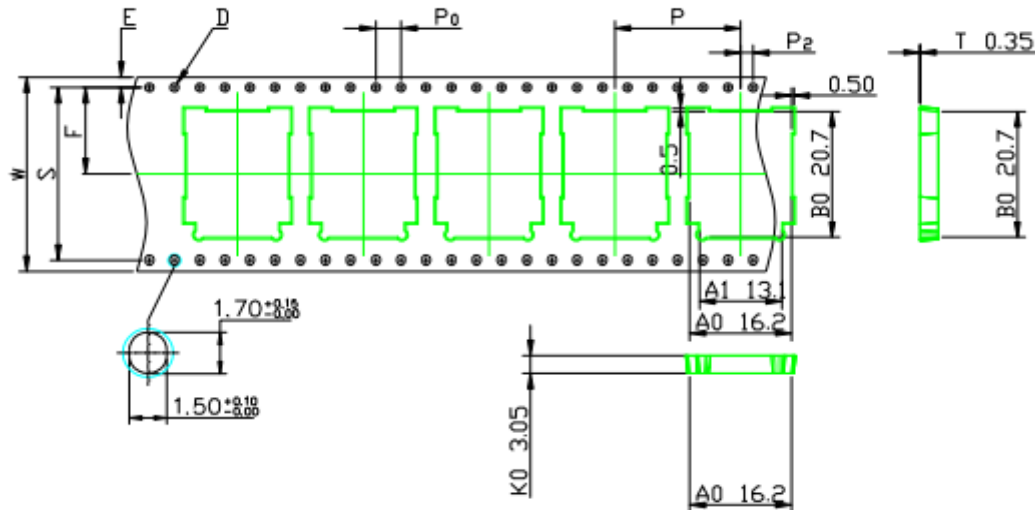
Peak Temperature : $<250^{\circ}\text{C}$

Number of Times : ≤ 2 times

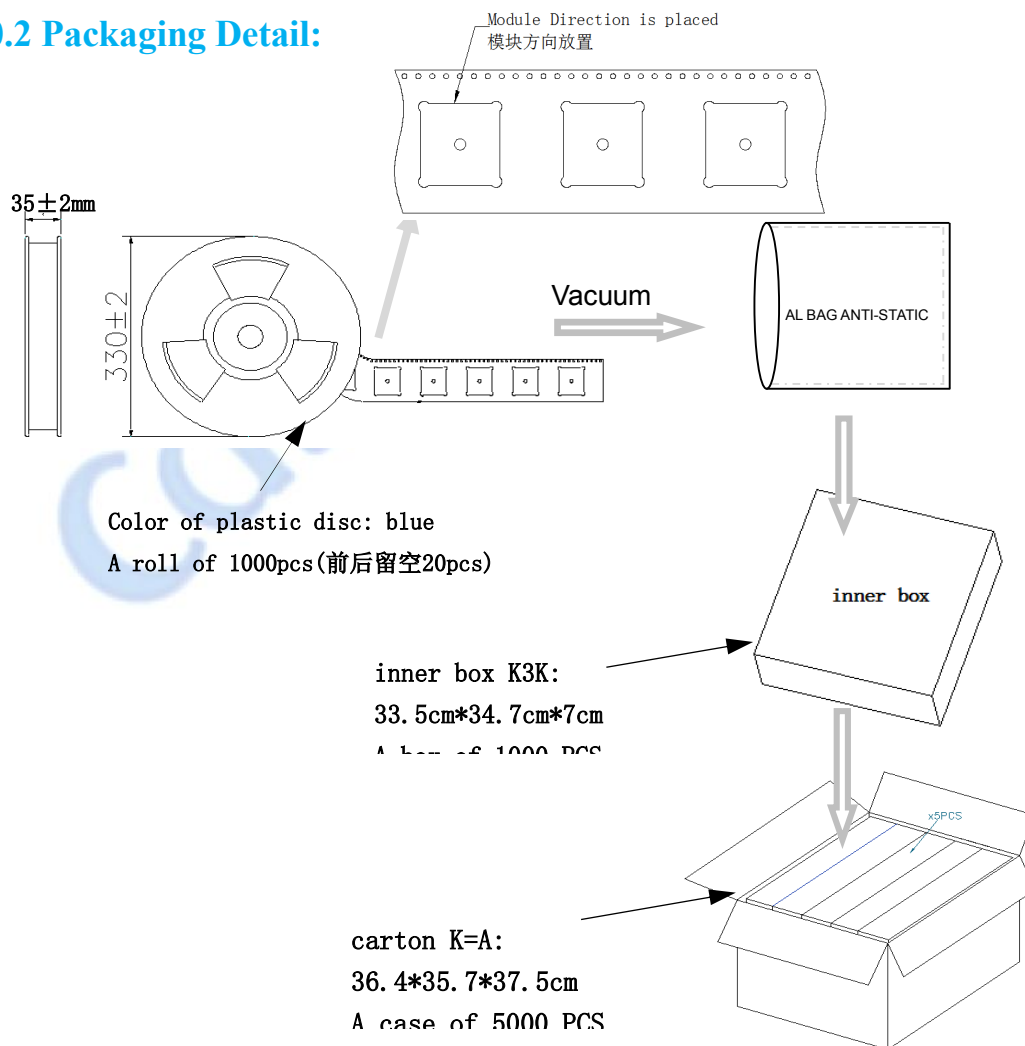


11. Packing information

11.1 Carrier size Detail:



10.2 Packaging Detail:



**ESD CAUTION**

The CDI-WX27931A-00 module is ESD (electrostatic discharge) sensitive device and may be damaged with ESD or spike voltage. Although CDI-WX27931A-00 module is with built-in ESD protection circuitry, please handle with care to avoid the permanent malfunction or the performance degradation.

Cdtech 中龙通

FCC WARNING

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

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.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

15.105 Information to the user.

(b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: 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 equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination.

The firmware setting is not accessible by the end user.

The final end product must be labelled in a visible area with the following:

“Contains Transmitter Module FCC ID:2BN5S-2509B

Requirement per KDB996369 D03

2.2 List of applicable FCC rules

List the FCC rules that are applicable to the modular transmitter. These are the rules that specifically establish the bands of operation, the power, spurious emissions, and operating fundamental frequencies. DO NOT list compliance to unintentional-radiator rules (Part 15 Subpart B) since that is not a condition of a module grant that is extended to a host manufacturer. See also Section 2.10 below concerning the need to notify host manufacturers that further testing is required.³

Explanation: This module meets the requirements of FCC part 15C(15.247).FCC Part 15.407

2.3 Summarize the specific operational use conditions

Describe use conditions that are applicable to the modular transmitter, including for example any limits on antennas, etc. For example, if point-to-point antennas are used that require reduction in power or compensation for cable loss, then this information must be in the instructions. If the use condition limitations extend to professional users, then instructions must state that this information also extends to the host manufacturer's instruction manual. In addition, certain information may also be needed, such as peak gain per frequency band and minimum gain.

Explanation: The test unit of this device is equipped with an external antenna. Its maximum antenna gain in the 2.4G frequency band is 4.4 dBi, and in the 5G frequency band it is 3.42 dBi. This prototype is designed for use in a mobile environment.

2.4 Limited module procedures

If a modular transmitter is approved as a "limited module," then the module manufacturer is responsible for approving the host environment that the limited module is used with. The manufacturer of a limited module must describe, both in the filing and in the installation instructions, the alternative means that the limited module manufacturer uses to verify that the host meets the necessary requirements to satisfy the module limiting conditions.

A limited module manufacturer has the flexibility to define its alternative method to address the conditions that limit the initial approval, such as: shielding, minimum signaling amplitude, buffered modulation/data inputs, or power supply regulation. The alternative method could include that the limited module manufacturer reviews detailed test data or host designs prior to giving the host manufacturer approval.

This limited module procedure is also applicable for RF exposure evaluation when it is necessary to demonstrate compliance in a specific host. The module manufacturer must state how control of the product into which the modular transmitter will be installed will be maintained such that full compliance of the product is always ensured. For additional hosts other than the specific host originally granted with a limited

module, a Class II permissive change is required on the module grant to register the additional host as a specific host also approved with the module.

Explanation: The module is a single module.

2.5 Trace antenna designs

For a modular transmitter with trace antenna designs, see the guidance in Question 11 of KDB Publication 996369 D02 FAQ – Modules for Micro-Strip Antennas and traces. The integration information shall include for the TCB review the integration instructions for the following aspects: layout of trace design, parts list (BOM), antenna, connectors, and isolation requirements.

- a) Information that includes permitted variances (e.g., trace boundary limits, thickness, length, width, shape(s), dielectric constant, and impedance as applicable for each type of antenna);
- b) Each design shall be considered a different type (e.g., antenna length in multiple(s) of frequency, the wavelength, and antenna shape (traces in phase) can affect antenna gain and must be considered);
- c) The parameters shall be provided in a manner permitting host manufacturers to design the printed circuit (PC) board layout;
- d) Appropriate parts by manufacturer and specifications;
- e) Test procedures for design verification; and
- f) Production test procedures for ensuring compliance.

The module grantee shall provide a notice that any deviation(s) from the defined parameters of the antenna trace, as described by the instructions, require that the host product manufacturer must notify the module grantee that they wish to change the antenna trace design. In this case, a Class II permissive change application is required to be filed by the grantee, or the host manufacturer can take responsibility through the change in FCC ID (new application) procedure followed by a Class II permissive change application.

Explanation: No, The module has no tracking antenna design, is External antenna.

2.6 RF exposure considerations

It is essential for module grantees to clearly and explicitly state the RF exposure conditions that permit a host product manufacturer to use the module. Two types of instructions are required for RF exposure information: (1) to the host product manufacturer, to define the application conditions (mobile, portable – xx cm from a person's body); and (2) additional text needed for the host product manufacturer to provide to end users in their end-product manuals. If RF exposure statements and use conditions are not provided, then the host product manufacturer is required to take responsibility of the module through a change in FCC ID (new application).

Explanation: This module complies with FCC RF radiation exposure limits set forth for an uncontrolled environment, This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body." This module is designed to comply with the FCC statement,

FCC ID: 2BN5S-2509B

2.7 Antennas

A list of antennas included in the application for certification must be provided in the instructions. For modular transmitters approved as limited modules, all applicable professional installer instructions must be included as part of the information to the host product manufacturer. The antenna list shall also identify the antenna types (monopole, PIFA, dipole, etc. (note that for example an “omni-directional antenna” is not considered to be a specific “antenna type”)).

For situations where the host product manufacturer is responsible for an external connector, for example with an RF pin and antenna trace design, the integration instructions shall inform the installer that unique antenna connector must be used on the Part 15 authorized transmitters used in the host product. The module manufacturers shall provide a list of acceptable unique connectors.

Explanation: The EUT contains one External antennas. Yes, this module includes a external antenna with a maximum antenna gain of 4.4dBi for 2.4G and 3.42dBi for 5G. The prototype is used under mobile conditions.

2.8 Label and compliance information

Grantees are responsible for the continued compliance of their modules to the FCC rules. This

includes advising host product manufacturers that they need to provide a physical or e-label stating “Contains FCC ID” with their finished product. See Guidelines for Labeling and User Information for RF Devices – KDB Publication 784748.

Explanation: The host system using this module, should have label in a visible area indicated the following texts: "Contains FCC ID: 2BN5S-2509B

2.9 Information on test modes and additional testing requirements

Additional guidance for testing host products is given in KDB Publication 996369 D04 Module Integration Guide. Test modes should take into consideration different operational conditions for a stand-alone modular transmitter in a host, as well as for multiple simultaneously transmitting modules or other transmitters in a host product.

The grantee should provide information on how to configure test modes for host product evaluation for different operational conditions for a stand-alone modular transmitter in a host, versus with multiple, simultaneously transmitting modules or other transmitters in a host.

Grantees can increase the utility of their modular transmitters by providing special means, modes, or instructions that simulates or characterizes a connection by enabling a transmitter. This can greatly simplify a host manufacturer's determination that a module as installed in a host complies with FCC requirements.

Explanation: Any company of the host device which install this modular with limit modular approval should perform the test of radiated & conducted emission and spurious emission, etc. according to FCC part 15C: 15.247 and 15.209 & 15.207, 15B Class B requirement, Only if the test result comply with FCC part 15C: 15.247 and 15.209 & 15.207, 15B Class B requirement, then the host can be sold legally. The module is installed in the host and can be transmitted independently.

2.10 Additional testing, Part 15 Subpart B disclaimer

The grantee should include a statement that the modular transmitter is only FCC authorized for the specific rule parts (i.e., FCC transmitter rules) listed on the grant, and that the host product manufacturer is responsible for compliance to any other FCC rules

that apply to the host not covered by the modular transmitter grant of certification. If the grantee markets their product as being Part 15

Subpart B compliant (when it also contains unintentional-radiator digital circuitry), then the grantee shall provide a notice stating that the final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed.

Explanation: The host should be evaluated by the FCC Subpart B.

This product adopts External antennas. The maximum antenna gain is 4.4dBi for the 2.4G antenna and 3.42dBi for the 5G antenna B.

IC 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.

The term "IC: " before the certification/registration number only signifies that the Industry Canada

technical specifications were met.

This product meets the applicable Industry Canada technical specifications.

Cet appareil contient des émetteurs / récepteurs exemptés de licence conformes aux RSS (RSS)

d'Innovation, Sciences et Développement économique Canada. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible

d'en compromettre le fonctionnement.

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.

Please notice that if the ISED certification number is not visible when the module is installed inside

another device, then the outside of the device into which the module is installed or display a label referring to the enclosed module. This exterior label can use wording such as the following:

"Contains IC: 33667-2509B" any similar wording that expresses the same meaning may be used.

L'appareil hôte doit porter une étiquette donnant le numéro de certification du module d'Industrie

Canada, précédé des mots «Contient un module d'émission », du mot « IC: 33667-2509B » ou d'une formulation similaire exprimant le même sens, comme suit

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.

Operation of this device is restricted to indoor use only. (5150-5250MHz)

Le fonctionnement de cet appareil est limité à une utilisation en intérieur uniquement.

(5150-5250MHz)

Cet émetteur radio IC : 33667-2509B a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci-dessous, avec le gain maximal admissible indiqué. Les types d'antenne non inclus dans cette liste qui ont un gain supérieur au gain maximum indiqué pour tout type répertorié sont strictement interdits pour une utilisation avec cet appareil.

The radio transmitter IC: 33667-2509B has been approved by The Ministry of Innovation, Science and Economic Development of Canada to use the following antenna types with the specified maximum allowed gain. Antenna types not included in this list, whose gain is higher than the maximum gain of any type listed, are strictly prohibited from use with this device.

Cet émetteur radio IC : **33667-2509B** a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci-dessous, avec le gain maximal admissible indiqué. Les types d'antenne non inclus dans cette liste qui ont un gain supérieur au gain maximum indiqué pour tout type répertorié sont strictement interdits pour une utilisation avec cet appareil.

The radio transmitter IC: **33667-2509B** has been approved by The Ministry of Innovation, Science and Economic Development of Canada to use the following antenna types with the specified maximum allowed gain. Antenna types not included in this list, whose gain is higher than the maximum gain of any type listed, are strictly prohibited from use with this device.

Type of antenna:	External antenna
Antenna Gain:	2.4G :2400-2500(4.4dBi) 5G :5150-5850MHz(3.42dBi)
Impedance:	50hm
Manufacture:	Shenzhen Be-Comfortable Technology Co. Ltd
Model:	N12-9441-R0A