

TECHNICAL SPECIFICATIONS

FOR

WIRELESS LAN MODULE

MODEL: CMN-727B

JRC *Japan Radio Co., Ltd.*

CAUTION

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

Compliance statement and notification

<FCC / IC>

Declaration of Conformity

Product Name: Wireless Lan Module

Model Number: CMN-727B

This device complies with Part 15 of FCC Rules and RSS-Gen of IC 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, including interference that may cause undesired operation of this device.

RF exposure compliance:

This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65 and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that it deemed to comply without maximum permissive exposure evaluation (MPE) . But it is desirable that it should be installed and operated keeping the radiator at least 20cm or more away from person's body (excluding extremities: hands, wrists, feet and ankles) .

< FCC >

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 AC outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

In accordance with 47 CFR Part 15.407 (e) U-NII devices operating in 5.15-5.25GHz frequency bands are restricted to indoor operations only.

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

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains FCC ID: CKECMN727B " and "Contains IC: 768B-CMN727B"

Information for the OEMs and Integrators

The following statement must be included with all versions of this document supplied to an OEM or integrator, but should not be distributed to the end user.

1) This device is intended for OEM integrators only. 2) Please see the full Grant of Equipment document for other restrictions.

This radio transmitter FCC ID: CKECMN727B and IC: 768B-CMN727B has been approved by FCC/ Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	SANSEI ELECTRIC	NZA-606R (Main) NZA-606R (Aux)	Dipole	1.0 dBi for 2.4 GHz 0.9 dBi for 5 GHz
2	HOKO ELECTRONICS	7ACWN0048R (Main) 7ACWN0048R (Aux)	IFA	0.5 dBi for 2.4 GHz 2.0 dBi for 5 GHz

Note: The antenna connector is Reverse SMA type.

< IC >

Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause Undesired operation of the device.

Canada, avis d'Industry Canada (IC)

Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003 et RSS-210.

Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

Informations concernant l'exposition aux fréquences radio (RF)

La puissance de sortie émise par l'appareil de sans fil est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Utilisez l'appareil de sans fil de façon à minimiser les contacts humains lors du fonctionnement normal.

Ce périphérique a également été évalué et démontré conforme aux limites d'exposition aux RF d'IC dans des conditions d'exposition à des appareils mobiles (les antennes se situent à moins de 20 cm du corps d'une personne).

<R&TTE>

CE Marking:



Please describe the following sentences to the label or the user manual of the product in each language in the sales country:

Hereby, *Japan Radio CO., Ltd.* declares that this CMN-727B is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

<NCC>

經型式認證合格之低功率射頻電機，非經許可，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。

低功率射頻電機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。

前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機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。

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，並要求最終產品平台廠商

(OEM Integrator)於最終產品平台(End Product)上標示”本產品內含射頻模組，其 NCC 型式認證號碼為: CCXXxxYYyyyZzW

1. General

- 1) Input Power : DC IN; DC 3.3V+/-5%
- 2) Frequency Range : 2.4GHz ISM band (2412 to 2462MHz)
5GHz band (W52) (5150 to 5250MHz)
- 3) Radio Communication Standard : IEEE802.11a/b/g
- 4) Operating Temperature : -40 to +85 degree C
- 5) Power Consumption : Less than 2.8W

2. Electrical Specification

- 1) Output Power : 8mW/MHz +20%, -80% (2.4GHz band)
3mW/MHz +20%, -80% (5GHz band (W52))
- 2) Number of Channel :
 - 2.4GHz band; 11-channels
CH1: 2412MHz, CH2: 2417MHz, CH3: 2422MHz, CH4: 2427MHz,
CH5: 2432MHz, CH6: 2437MHz, CH7: 2442MHz, CH8: 2447MHz,
CH9: 2452MHz, CH10: 2457MHz, CH11: 2462MHz
 - 5GHz band; 4-channels
CH36:5180MHz, CH40:5200MHz, CH44:5220MHz, CH48:5240MHz,
- 3) Channel Separation : 5MHz (2.4GHz band)
20MHz (5GHz band (W52))
- 4) Modulation : DSSS/OFDM
- 5) Access Method : Carrier Sense Multiple Access (CSMA)
- 6) Variable method of Transmission rate
 - i) IEEE802.11b mode : Automatic : 1,2,5.5,11Mbps
: Fixed : 1,2,5.5 or 11Mbps
 - i) IEEE802.11ag mode : Automatic : 6,9,12,18,24,36,48,54Mbps
: Fixed : 6,9,12,18,24,36,48, or 54Mbps
- 7) Band Width : Less than 26MHz (2.4GHz band)
Less than 19MHz (5GHz band (W52))
- 8) Host interface : Mini-PCI (3.3V)
The connector is original specification.

- 9) Antenna Impedance : 50ohms
10) Communication mode : AP/STA/Adhoc

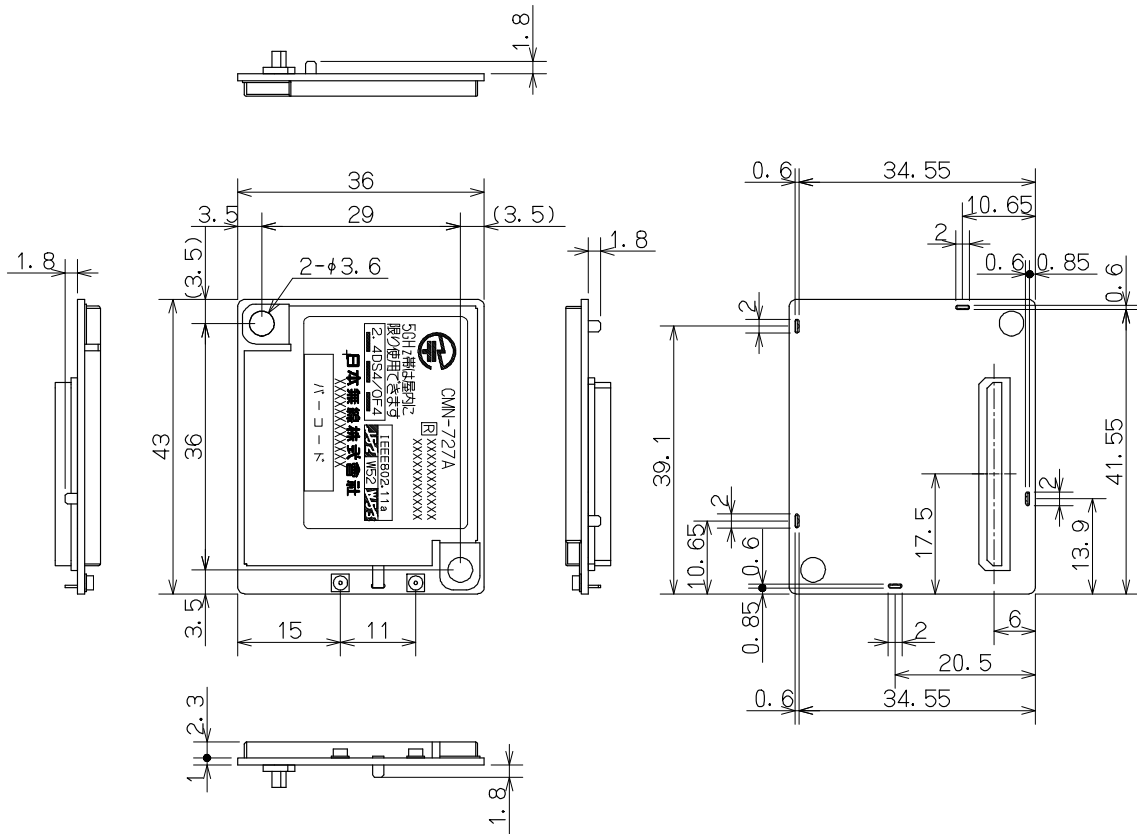
3. Mechanical Specification

- 1) Antenna Connector : U.FL-R
2) Host interface Connector : AXK6S00447TG (Panasonic)
3) Antenna Connection Port : Two (2) port (One is for Diversity)
4) Dimension : 36(W) x 43(H) x 5(D) mm
5) Weight : Approx. 13g

4. Function

It is based on the host side driver and its setup.

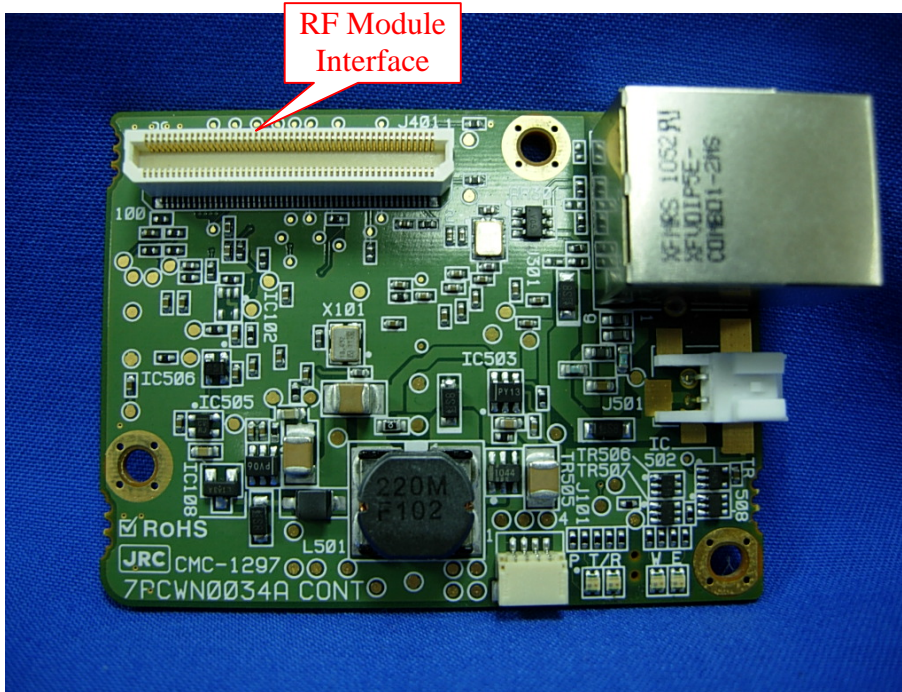
5. Outline Drawing



外形寸法		寸法許容差
を超え	以下	
-	6	± 0.5
6	30	± 1
30	120	± 1.5
120	400	± 2.5
400	1000	± 4
1000	2000	± 6
2000	4000	± 8

6. Hosted Information

The “JRL-720H2R” is a test-hosted board for JRC “CMN-727B” RF module. The hosted board manufacture and model name is Japan Radio Co.,Ltd. / JRL-720H2R.



The CMN-727B has received Limited Module Approval (LMA) from FCC. This is because the CMN-727B does not have a built-in +3.3V regulator circuit. JRC recommends that customers follow the +3.3V supply voltage requirements given in this data sheet.

If the power supply recommendations are followed, then customers will not need to go through formal certification of the product for WiFi related RF behavior for FCC. It is the product manufacturers responsibility to make sure that the power supply recommendations are followed, and that the RF behavior meets the certification requirements when the module is installed in the final product.