JZ7XYR User Information

1. JZ7XYR RF Module - User Information

Model: JZ7XYR

2. Radio Frequency Bands and Output Power

Radio Mode	Frequency	Transmit modulation	Output Power – Conducted			
			Output power USA (dBm)	Canada (dBm)	EU and UK (dBm)	Australia and NZ (dBm)
	902-928 MHz	GFSK2	14	14	N/A	N/A
	915-928 MHz	GFSK2	N/A	N/A	N/A	14
Proprietary Sub-GHz protocol	863-865 MHz 865-868 MHz 868-868.6 MHz 868.7 to 869.2 MHz 869.4 to 869.65 MHz 869.7 to 870 MHz	GFSK2	N/A	N/A	14	N/A

3. Power Specifications

Input voltage: 5V

Max current: 100mA

4. Regulatory Information

Responsible party (contact for FCC matters only): Nalloy LLC, 859 Willard Street, Suite 400, Quincy, Massachusetts 02169

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.

CANADA ICES-3(B)/NMB-3(B)

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

Changes or modifications to this product not authorized by Nalloy LLC could void the users authority to operate this device and could void the compliance certification of the device.

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). 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."

"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; et

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

5. Module Integration Guidelines for OEM's

The module is intended to be only used by OEM's for installation in host products.

The module is supplied with a unique antenna connector (RP-SMA). OEM's integrating the module must use unique antenna connector as specified in FCC 15.203. If a cable is used to extend the antenna port, the cable and the antenna connector should also use a unique antenna connector as specified in FCC 15.203. The power levels shall not exceed the power level specified in section 1.0 of this document.

The module is certified to be used with Inpaq 17-002768 Dipole with peak gain less than 1.57 dBi. Users are required to use the antenna provided with the unit or an antenna of same type with equal or lower gain.

The module shall not be collocated with another transmitter.

If the host manufacturer/host responsibility collocates the module with other transmitter inside their host, necessary evaluation must be performed win both standalone and simultaneous operational condition as specified in KDB 996369 D04.

The module has full modular approval.

The module is certified to FCC Part 15 Subpart C (15.247) requirements and bears the certification number FCC ID: 2AVOB-JZ7XYR

The module is certified to ISED RSS-247 requirements and bears the certification number IC: 29754-JZ7XYR

OEM integrating the module shall power the equipment with a 5VDC input through connector P4 (MPN 5015680807). The connector provides access to I2C and GPIO output ports of the SOC. Analog inputs can be connected to the board using the 15 channel analog input ports.

"Information Regarding Exposure to Radio Frequency Energy:

The module is tested for standalone mobile RF exposure use condition. Any other use condition such as colocation with other transmitters or being used in portable condition will need a separate assessment through a Class II permissive change application or a new certification.

The equipment complies with FCC mobile radiation exposure limits set forth for an uncontrolled environment. The equipment should be installed and operated with a minimum distance of 20cm between the radio and your body. If the module is installed in a portable host, a separate SAR evaluation is required to confirm compliance with relevant RF exposure rules specified in FCC Part 2 and RSS 102.

This equipment complies with IC RSS-102 RF exposure limits set forth for an uncontrolled environment."

"Renseignements relatifs l'exposition l'énergie des radiofréquences
Cet équipement est conforme aux limites d'exposition IC CNR-102 prévues pour environnements non contrôlés

To meet RF exposure requirements, this radio module needs to be placed at least 20 cm away from the body of the user as well as other radio antennas.

Pour répondre aux exigences d'exposition RF, ce module radio doit être placé à au moins 20 cm du corps de l'utilisateur ainsi que des autres antennes radio.

Integrators of radio module are required to perform necessary evaluation required by FCC when collocated with other transmitter to FCC Part 15 Subpart C requirements. If the final host / module combination is intended for use as a portable device the host manufacturer is responsible for separate approvals for the SAR requirements from FCC Part 2.1093 and RSS-102.

This radio transmitter IC: 29754-JZ7XYR has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Le présent émetteur radio IC: 29754-JZ7XYR a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The OEM integrator shall label the product as stated in KDB 784748. This includes drawing up declaration of conformity and labeling of host product as required by FCC 15.19. The end user manual shall include all regulatory information shown in this manual.

No configuration controls are provided for the module allowing any change in the frequency of operations outside the FCC grant of authorization for U.S.

The transmitter module is tested as a subsystem and its certification does not cover FCC Part 15 Subpart B (or ICES-series) rule requirements applicable to the final host. The final host will still need to be reassessed for compliance with the portion of the applicable rule requirements.

6. Responsibility of follow up testing:

Once the module is installed into the finished host, the combination system is not automatically authorized for sale or use. Integrators of radio module are responsible for demonstration of continued compliance by performing FCC Part 15 Subpart B, ICES-series and transmitter spurious emissions verifications to 15.247 and/or RSS-247 per KDB 996369. The vendors can use SILabs RAIL test firmware to program the module to the settings highlighted in section 2 of this document. The RAIL test guide can be used to set the device to radio test modes: https://www.silabs.com/documents/public/user-guides/ug409-railtest-users-guide.pdf. The settings used for the power are listed in section 1.0 of this document.

7. Contact Information:

If the module is intended to be used outside the specifications of the FCC grant including but not limited to alternate antennas, change of RF exposure configuration, host manufacturers can reach out to Nalloy LLC at negmmh@gmail.com for further guidance and filing permissive changes.

8. Required Host Regulatory Statements

Statements on exterior of host product:

Integrators of the radio module are required to label the host device in a conspicuous location on a non-removable part with 4 pt size as follows:

"Contains: FCC ID: 2AVOB-JZ7XYR".

The grantee's FCC ID can only be used when all compliance requirements are met. Integrators of the radio module are required to label the host device in a conspicuous location on a non-removable part in 4pt size as follows:

"Contains IC: 29754-JZ7XYR"

Les intégrateurs du module radio sont tenus d'étiqueter l'appareil hôte à un endroit bien en vue comme

"Contains IC: 29754-JZ7XYR" ou "Contient IC: 29754-XVZQ49"

The grantee's Certification Number can only be used when all compliance requirements are met.

The following statement is required for any product required to meet Canada ICES-series standards. The following assumes ICES-003 class B is met. For class A devices, replace B with A. If host product meets a different ICES-series standard, see ICES-GEN for sDoC labelling requirements.

CANADA ICES-3(B)/NMB-3(B)

The following statement is required to be on the exterior of the host product unless the product is too small, or for other reasons (see 47 CFR 15.19)

> "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."

Statements in the host product's user's manual.

The following content is required to be placed in the host product's user's manual:

> 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 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:

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indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

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