

# RS9116 B00 Technical Reference Manual Compliance and Certification Addendum

This document is and Addendum to the RS9116N Open Source Technical Reference Manual, and is used for the Compliance and Certification Standards for the RS9116 B00 module. The document highlights the FCC and IC statements required for certification purposes. The RS9116N Open Source Driver is a group of simple and efficient kernel modules which currently supports RS9116N chipsets and it can be ported to any embedded platform in-addition to X-86 platform. It supports the following protocols:

- Wi-Fi (Client and Access Point mode)
- Bluetooth Classic
- Bluetooth Low Energy

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# 1 RS9116 B00 Compliance and Certification Update

RS9116 - B00 module is FCC/IC/CE certified. This section outlines the regulatory information for the RS9116 - B00 module. This allows integrating the module in an end product without the need to obtain subsequent and separate approvals from these regulatory agencies. This is valid in the case no other intentional or un-intentional radiator components are incorporated into the product and no change in the module circuitry. Without these certifications, an end product cannot be marketed in the relevant regions.

RF Testing Software is provided for any end product certification requirements.

## 1.1 Federal Communication Commission Statement

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- 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 Federal Communications Commission (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 causes 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 doing 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.

### FCC 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 antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

### Radiation Exposure Statement:

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.

### FCC Label Instructions:

The outside of final products that contains this module device must display a label referring to the enclosed module. This exterior label can use wording such as: "Contains Transmitter Module FCC ID: XF6-B001P5V2P1", or "Contains FCC ID: XF6-B001P5V2P1", Any similar wording that expresses the same meaning may be used.

## 1.2 Industry Canada / ISED Statement

This product meets the applicable Innovation, Science and Economic Development Canada technical specifications.

Ce produit répond aux spécifications techniques applicables à l'innovation, Science et Développement économique Canada.

### ◆ Radiation Exposure Statement:

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

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

This device complies with Industry Canada license-exempt RSSs. 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.

Le présent appareil est conforme aux CNR d'Industrie 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'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

### 1.2.1 Labeling and User Information

**Innovation, Science and Economic Development Canada ICES003 Compliance Label:** *CAN ICES-3 (B)/NMB-3(B)*

The RS9116 - B00 module has been labeled with its own IC ID number (8407A-B001P5V2P1) and if the IC ID is not visible when the module is installed inside another device, then the outside of the finished product into which the module is installed must also display a label referring to the enclosed module. This exterior label can use following wording: Contains Transmitter Module IC : 8407A-B001P5V2P1 or Contains IC : 8407A-B001P4V2P1 User manuals for license-exempt radio apparatus shall contain the above mentioned statement or equivalent notice in a conspicuous location in the user manual or alternatively on the device or both

Le module RS9116 - B00 a été étiqueté avec son propre numéro d'ID IC (8407A-B001P5V2P1) et si l'ID IC n'est pas visible lorsque le module est installé dans un autre périphérique, alors l'extérieur du produit fini dans lequel le module est installé doit également afficher une étiquette faisant référence au module inclus. Cette étiquette extérieure peut être libellée comme suit: Contient le module émetteur IC: 8407A-B001P4V2P1 ou contient IC: 8407A-B001P5V2P1. Les manuels d'utilisation d'appareils radio exempts de licence doivent contenir l'énoncé susmentionné ou une notification équivalente à un endroit bien en évidence dans le manuel d'utilisation. ou alternativement sur l'appareil ou les deux

## 1.3 Regulatory Module Integration Instructions

### List of applicable FCC rules

This device complies with part 15.247 of the FCC Rules.

### Summarize the specific operational use conditions

This module can be used in household electrical appliances as well as lighting equipment(s). The input voltage to the module should be nominally 1.8-3.3 Vdc, typical and the ambient temperature of the module should not exceed 85°C. This module using two kinds of antennas, PCB antenna with maximum gain is 1.00 dBi. Other antenna arrangement is not covered

### Limited module procedures

Not applicable

### Trace antenna designs

Not applicable

### RF exposure considerations

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. If the device built into a host as a portable usage, the additional RF exposure evaluation may be required as specified by § [2.1093](#) by this certification. The antenna is not field replaceable. If the antenna needs to be changed, the certification should be re-applied.

### Antennas

Provision for Chip Antenna or other Antennae

## Label and compliance information

Already in the manual

## Information on test modes and additional testing requirements

- a)** The modular transmitter has been fully tested by the module grantee on the required number of channels, modulation types, and modes, it should not be necessary for the host installer to re-test all the available transmitter modes or settings. It is recommended that the host product manufacturer, installing the modular transmitter, perform some investigative measurements to confirm that the resulting composite system does not exceed the spurious emissions limits or band edge limits (e.g., where a different antenna may be causing additional emissions).
- b)** The testing should check for emissions that may occur due to the intermixing of emissions with the other transmitters, digital circuitry, or due to physical properties of the host product (enclosure). This investigation is especially important when integrating multiple modular transmitters where the certification is based on testing each of them in a stand-alone configuration. It is important to note that host product manufacturers should not assume that because the modular transmitter is certified that they do not have any responsibility for final product compliance.
- c)** If the investigation indicates a compliance concern the host product manufacturer is obligated to mitigate the issue. Host products using a modular transmitter are subject to all the applicable individual technical rules as well as to the general conditions of

operation in Sections 15.5, 15.15, and 15.29 to not cause interference. The operator of the host product will be obligated to stop operating the device until the interference has been corrected

## 2.10 Additional testing, Part 15 sub part B disclaimer

The final host / module combination need to be evaluated against the FCC Part 15B criteria for unintentional radiators in order to be properly authorized for operation as a Part15 digital device.

## Below are steps for TX verification :

Already in the manual

## Other in User Manual

The host integrator installing this module into their product must ensure that the final composite product complies with the FCC requirements by a technical assessment or evaluation to the FCC rules, including the transmitter operation and should refer to guidance in KDB 996369.

## Frequency spectrum to be investigated

For host products with certified modular transmitter, the frequency range of investigation of the composite system is specified by rule in Sections 15.33(a)(1) through (a)(3), or the range applicable to the digital device, as shown in Section 15.33(b)(1), whichever is the higher frequency range of investigation.

## Operating the host product

When testing the host product, all the transmitters must be operating. The transmitters can be enabled by using publicly-available drivers and turned on, so the transmitters are reactive. In certain conditions it might be appropriate to use a technology-specific call box (test set) where accessory devices or drivers are not available. When testing for emissions from the unintentional radiator, the transmitter shall be placed in the receive mode or idle mode, if possible. If receive mode only is not possible then, the radio shall be passive (preferred) and/or active scanning. In these cases, this would need to enable activity on the communication BUS (i.e., PCIe, SDIO, USB) to ensure the unintentional radiator circuitry is enabled. Testing laboratories may need to add attenuation or filters depending on the signal strength of any active beacons (if applicable) from the enabled radio(s). See ANSI C63.4, ANSI C63.10 and ANSI C63.26 for further general testing details.

## Module Label



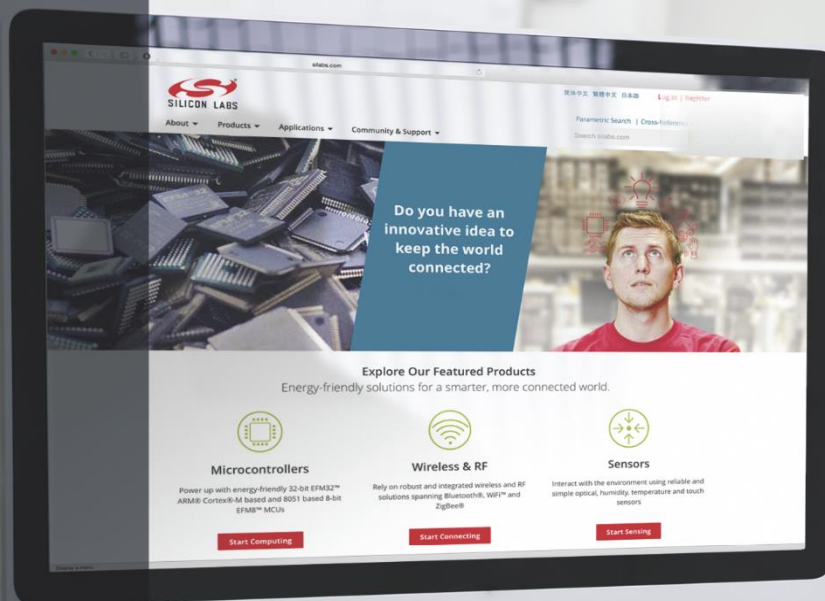
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## 2 RS9116 B00 Technical Reference Manual Addendum Revision History

Revision 1.0

January, 2021

Initial release.



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Energy-Friendly



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