



## TBA Module Installation Guide

### Overview

The TBA module is a highly reliable, frequency hopping, spread-spectrum radio transceiver that operates within the 902 to 928 MHz license-free band. In order to ensure proper integration into the final product and maintain compliance with the rules and regulations under which this module has been granted certification, the requirements listed below must be followed.

### Compliance Requirements:

The TBA module complies with FCC, Title 47, Chapter 1, Subchapter A, Part 15, Subpart C, Section 15.212 (a)(1)(i through viii). The final host/module combination may also need to be evaluated against the FCC Part 15B criteria for unintentional radiators in order to be properly authorized for operation as a Part 15 digital device.

Additional Compliance Information per FCC 47 CFR, Section 2.1077:

1. Product Identification – TBA (T = Transmitter-Receiver Module; B = Second generation TRM; A = First FCC/IC revision)
2. The TBA module is in compliance with 47 CFR, Section 15.19(a)(3) as follows:

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.

3. Responsible party for Supplier's Declaration of Conformity:
  - a. Name of Responsible Party: Inovonics Corporation
  - b. Address of Responsible Party: 11000 Westmoor Dr, Building 10, Suite 250, Westminster CO 80021
  - c. Telephone Numbers: (800) 782-2709; (303) 939-9336
  - d. E-mail: support@inovonics.com

- The TBA module is intended only for use in products installed and maintained by professional security technicians.
- Manually test all TBA module based products weekly.

**NOTE:** It is Inovonics policy to maintain complete control of all firmware associated with this device.

- The TBA module can operate only with the built-in ceramic chip antenna.
- When installed in a host's end-device, the antenna must maintain a minimum separation distance of 20 cm from all persons.
- In accordance with FCC multi-transmitter product procedures, the TBA module must not transmit simultaneously with any other co-located or transmitter, except in accordance with FCC multi-transmitter product procedures.



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- The TBA module does not contain any user serviceable components.
- A label must be affixed to the outside of the host product with the following statements:

Contains FCC ID: HCQTBA

Contains IC: 2309A-TBA

## FCC and Industry Canada Compliance

FCC Part 15 and Industry Canada Statements:

- a. CFR 47 Part 15.19 Labeling Requirements – Host product must bear the following in a conspicuous location on the device.

*This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). 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.*

*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, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

- b. Part 15.21 Information to the user – The user's manual shall contain the following caution:

*This device complies with part 15 of the FCC Rules, and any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

## FCC and Industry Canada RF Exposure Requirements

The user's manual for the host product must clearly indicate the operating requirements and conditions that must be observed to ensure compliance with current FCC / IC RF exposure guidelines.

**IMPORTANT:** The following statements must be included in the User's Manual:

### **FCC Statement:**

*This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm during normal operation and must not be co-located or operating in conjunction with any other antenna or transmitter. The TBA module must not transmit simultaneously with any other co-located or transmitter, except in accordance with FCC multi-transmitter product procedures.*



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### **Industry Canada Statement:**

*This equipment complies with ISED RSS-102 radiation exposure limits set forth for an uncontrolled environment. 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. The TBA module must not transmit simultaneously with any other co-located or transmitter, except in accordance with ISED multi-transmitter product procedures.*

*Cet équipement est conforme avec ISED RSS-102 des limites d'exposition aux rayonnements définies pour un environnement non contrôlé. Cet émetteur doit être installé à au moins 20 cm de toute personne et ne doit pas être colocalisé ou fonctionner en association avec une autre antenne ou émetteur. Le module TBA ne doit pas émettre simultanément avec tout autre co-localisé ou émetteur, sauf conformément aux procédures des produits multi-émetteurs ISED.*

**IMPORTANT:** The Integrator's Manual must include the appropriate language relating to the specific Class of Unintentional Radiation:

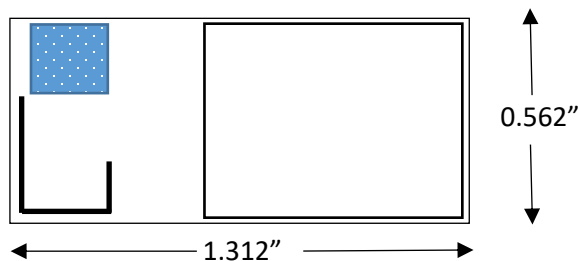
## Specifications

Model #	TBA
Frequency Range	902-928 MHz ISM Band
Power Supply	2.5-5.5 Vdc
Tx Power	93 mW (19.68 dBm) Conducted
Antenna Type	Ceramic Chip
Antenna Gain	<0 dBi
Tx Current	100 mA, typical
Rx Current	<50 mA
RF Technology	Frequency Hopping Spread Spectrum
Number of Hop Channels	25
Operating Temperature Range	-20°C to +60°C, non-condensing
Spurious Emissions (Worst Case)	<51 dBµV/m



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### Special Instructions

The integrated antenna must not be tampered with; no connection to an alternate antenna is permitted.

**IMPORTANT NOTE:** In the event that these conditions cannot be met, the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transceiver) and obtaining a separate FCC certification.

When the module is installed inside another device and the FCC ID is not visible, the outside of the device into which the module is installed must display a label referring to the enclosed module. This exterior label must use the wording described on the second page of this document.

### Manual Information to the End User

The OEM integrator must not provide information in his User's Manual regarding the installation and / or the removal of the TBA module. The end user manual shall include all required regulatory information/warnings as shown in this manual.

### Additional End User Information

The TBA radio module alone is non-functional without supporting application board and firmware. When the integrator installs the TBA module into an end-device, the integrator is responsible for subjecting the final assembled device to unintentional radiator testing, per FCC Title 47 CFR Subpart B, Unintentional Radiators. Further, it is required by the integrator to create a Self Declaration of Conformity (SDOC) upon completion of unintentional radiator testing, per 47 CFR § 2.1077. Integrator is also responsible to periodically conduct transmitter testing per KDB 996369 D04 requirements.

Please contact Inovonics for further details when additional testing is to take place. Appropriate instructions and other support will be provided upon request.



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### **Inovonics Wireless Contact Information**

If you have any problems with this procedure, contact Inovonics Wireless technical services:

- E-mail: [support@inovonics.com](mailto:support@inovonics.com).
- Phone: (800) 782-2709; (303) 939-9336.