

User manual

Product: Bluetooth Low Energy module

Model: HRM1079

For OEM integration only – device cannot be sold to general public.

Therefore we will not supply the User's manual, the installation manual is the official for OEM.

FCC ID: VIYHRM1079

IC: 7305A-HRM1079

■ Operational Information

This module has been tested and found to comply with the limits for a Class B digital device pursuant to Part15 of FCC rules. This module complies with Part15 subpart C of the FCC rules. Customers should check Part15 subpart B compliance with their own final products and conduct certification if needed.

■ Caution

Any changes or modifications are not expressly approved by Hosiden responsible for compliance could void the user's authority to operate the equipment.

■ Requirement of Labeling

Please describe the following item on the final product including this module:

Contains Transmitter Module FCC ID: VIYHRM1079

or

Contains FCC ID: VIYHRM1079

Contains Transmitter Module IC: 7305A-HRM1079

or

Contains IC: 7305A-HRM1079

■ Requirement of User's Manual Statement

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

Federal Communication Commission Interference Statement

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 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 this equipment.

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

Radiation Exposure Statement:

The product comply with the FCC portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

This device is intended only for OEM integrators under the following conditions:

- 1) The transmitter module may not be co-located with any other transmitter or antenna.

As long as 1 condition above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed

IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

The final end product must be labeled in a visible area with the following: “Contains FCC ID: VIYHRM1026A”. The grantee's FCC ID can be used only when all FCC compliance requirements are met.

Manual Information To the End User

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 end user manual shall include all required regulatory information/warning as show in this manual.

Industry Canada Statement

This device complies with Industry Canada's licence-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.

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that is deemed to comply without maximum permissive exposure evaluation (MPE).

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC. Cet équipement émet une énergie RF très faible qui est considérée comme conforme sans évaluation de l'exposition maximale autorisée (MPE).

**This device is intended only for OEM integrators under the following conditions:
(For module device use)**

- 1) The transmitter module may not be co-located with any other transmitter or antenna.

As long as 1 condition above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

Cet appareil est conçu uniquement pour les intégrateurs OEM dans les conditions suivantes: (Pour utilisation de dispositif module)

- 1) Le module émetteur peut ne pas être coïmplanté avec un autre émetteur ou antenne.

Tant que les 1 condition ci-dessus sont remplies, des essais supplémentaires sur l'émetteur ne seront pas nécessaires. Toutefois, l'intégrateur OEM est toujours responsable des essais sur son produit final pour toutes exigences de conformité supplémentaires requis pour ce module installé.

IMPORTANT NOTE:

In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the Canada authorization is no longer considered valid and the IC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate Canada authorization.

NOTE IMPORTANTE:

Dans le cas où ces conditions ne peuvent être satisfaites (par exemple pour certaines configurations d'ordinateur portable ou de certaines co-localisation avec un autre émetteur), l'autorisation du Canada n'est plus considéré comme valide et l'ID IC ne peut pas être utilisé sur le produit final. Dans ces circonstances, l'intégrateur OEM sera chargé de réévaluer le produit final (y compris l'émetteur) et l'obtention d'une autorisation distincte au Canada.

End Product Labeling

The final end product must be labeled in a visible area with the following: "Contains IC: 7305A-HRM1079".

Plaque signalétique du produit final

Le produit final doit être étiqueté dans un endroit visible avec l'inscription suivante: "Contient des IC: 7305A-HRM1079".

Manual Information to the End User

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 end user manual shall include all required regulatory information/warning as show in this manual.

Manuel d'information à l'utilisateur final

L'intégrateur OEM doit être conscient de ne pas fournir des informations à l'utilisateur final quant à la façon d'installer ou de supprimer ce module RF dans le manuel de l'utilisateur du produit final qui intègre ce module.

Le manuel de l'utilisateur final doit inclure toutes les informations réglementaires requises et avertissements comme indiqué dans ce manuel.

Product Specification

1. BLUETOOTH SPECIFICATIONS

BT core spec version:	version 5.0
Supported profiles:	GATT and Original profile
Operation channels:	2,402 + 2N MHz (N=0,1,2,...39, 2MHz step)
RX Sensitivity:	-96dBm (1Mbps, <=37bytes, BER=1E-3)

2. RADIO SPECIFICATIONS

Frequency range:	2,400MHz - 2,483.5MHz
Operation frequency range:	2,402MHz – 2,480MHz
Modulation:	GFSK (Spread spectrum is not used.)
Max tuneup tolerance:	+ 4dBm (Maximum power configurable with BLE chip) Output power can be configurable following values. +4dBm, 0dBm, -4dBm, -8dBm, -12dBm, -16dBm, -20dBm, -40dBm
Channel list:	2,402 + 2N MHz (N=0,1,2,...39), 2MHz step, 40channels
Data rate:	1Mbps, 2Mbps

3. DC ELECTRICAL CHARACTERISTICS

Nominal input voltage:	3.0V
Operating input Voltage:	1.8~3.4V
Absolute maximum voltage:	-0.3V~3.9V