ZigBee®RF4CE compatible RF module with a built-in 2.4GHz band antenna

Product Name: Transceiver Module
Model number: RXR1000-02XXE

GENERAL

This “ZigBee RF4CE compatible RF module with a built-in 2.4GHz band antenna” which uses the platform of recently established ZigBee RF4CE responds to such requirements. The communication system is based on 2.4GHz band IEEE 802.15.4 PHY/MAC system and is capable of N-to-N high reliability two-way communication, low power consumption, coexisting with other 2.4GHz band RF and security settings.

Features

1) By using the omni-directionality feature of RF, PAN with remote control as its core can be easily structured (N-to-N application is possible).

2). Compatible with ZigBee RF4CE Specification Version 1.00.

3). DSSS employed for modulation system provides high-resistance to noise and interference.

4). The employment of radio communication system using 2.4 GHz ISM band provides equipment with worldwide applicability and helps standardize equipment.

5). Acquisition of qualification for the FCC is planned. Upon successful acquisition, RF applications do not require individual acquisition of qualification for such standards, which creates shorter lead time for equipment development and lower costs.

Integration to the end product

The SMK Transceiver Module, model RXR1000-02XXE has to be installed and used in accordance with the technical description/installation instructions provided by the manufacturer.

The system may only be implemented in the configuration that was authorized. Note that any changes or modifications to this equipment not expressly approved by the manufacturer could void the user’s authority to operate this equipment.

Specification

1). RF Standard: ZigBee RF4CE Specification Version 1.00 compatible

2). Frequency Range: 2400-2483.5 MHz

3). Modulation System: DSSS

4). Antenna: PCB (Monopole) type

Regulatory Information

USA-Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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. If not installed and used in accordance with the instructions, it 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 tuning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:
-Reorient or relocate the receiving antenna.
-Increase the distance between the equipment and the receiver.
-Connect the equipment to outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

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

Labelling
SMK Transceiver module RXR1000-02XXE labelled as below.

FCC ID:GT3FC009

The proposed FCC ID label format is to be placed on the module. If FCC ID is not visible when the module is installed into the system, “Contains FCC ID:GT3FC009” shall be placed on the outside of final host system.

Caution: Exposure to Radio Frequency Radiation.
To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

Instructions to OEM Integrators
A User manual provided to the end user must indicate the operating requirements and conditions that must be observed to ensure compliance with the above-mentioned FCC RF Exposure guideline.

If this module is intended for use in a portable device, integrators are responsible for separate evaluation and/or approval to satisfy FCC RF Exposure requirements.

If an antenna with higher gain or new antenna type is used with this module, integrators must contact SMK for additional testing and submission to the FCC.

If other radio devices are to be integrated with this module, an additional evaluation and FCC submission may be required. Integrators are responsible for such additional evaluation and FCC submission.