

SMK User Manual

Bluetooth® module with a built-in 2.4GHz band antenna Model Name: Bluetooth Module Model number: BT401

GENERAL

BT401 is a Bluetooth communication module complying with Bluetooth Version 3.0. It operates in the two modes, Command Mode and Automatic Mode, and makes automatic connection in Automatic Mode. It supports master and slave operations. It becomes an adapter which transfers various data wirelessly between master and slave devices. Therefore, wireless data communication can be realized by only replacing the cable between apparatuses with BT401, without changing a host system.

Features

- 1) Surface mounting module with a built-in antenna.
- 2) Unique automatic connection method and command connection mode can be selected as control methods.
- 3) Support various profiles and protocols at user's requests.

Integration to the end product

The SMK Transceiver Module, model BT401 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) Bluetooth® Specifications Ver.3.0-compliant
(The high speed option is not supported.)
- 2) Frequency Range: 2402-2480 MHz
- 3) Modulation System: GFSK, $\pi/4$ -DQPSK, 8-DPSK
- 4) Max. Data rate: 3Mbps
- 5) Antenna: PCB (Monopole) type



User Manual

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 BT401 labelled as below.

FCC ID:GT3FC018

The proposed FCC ID label format is to be placed on the module. If FCC ID is not visible

SMK

User Manual

when the module is installed into the system, “Contains FCC ID:GT3FC018” shall be placed on the outside of final host system.

Caution: Exposure to Radio Frequency Radiation.

(1) When use in mobile devices

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

(2) When use in portable devices

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This equipment has very low levels of RF energy that is deemed to comply without testing of specific absorption rate (SAR).

Canada-Industry Canada (IC)

This device complies with RSS 210 of Industry Canada.

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 this device.

L' utilisation de ce dispositif est autorisée seulement aux conditions suivantes :

- (1) il ne doit pas produire de brouillage et
- (2) l' utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication.

Caution: Exposure to Radio Frequency Radiation.

To comply with IC RF exposure compliance requirements, a separation distance of at least



User Manual

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 /IC RF Exposure guideline.

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/IC.

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