

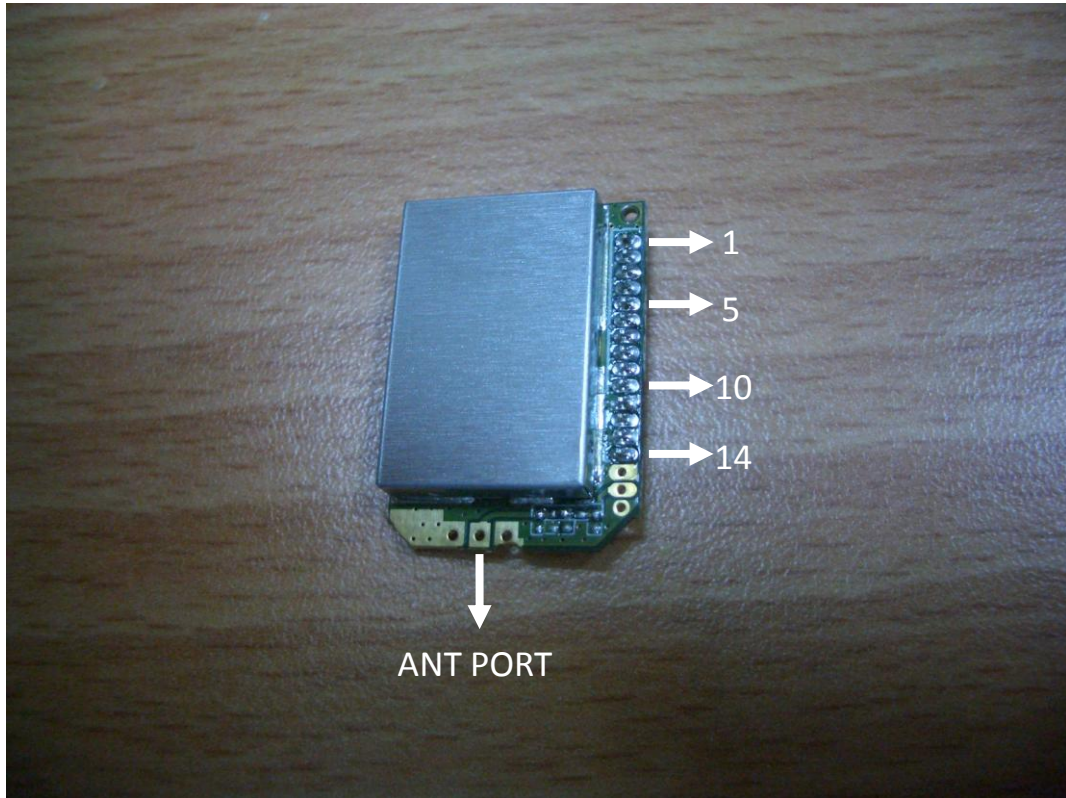
# K71216 2.4GHz GFSK Transceiver module Manual

## 1. Introduction

K71216 is a 2.4GHz ISM band transceiver.

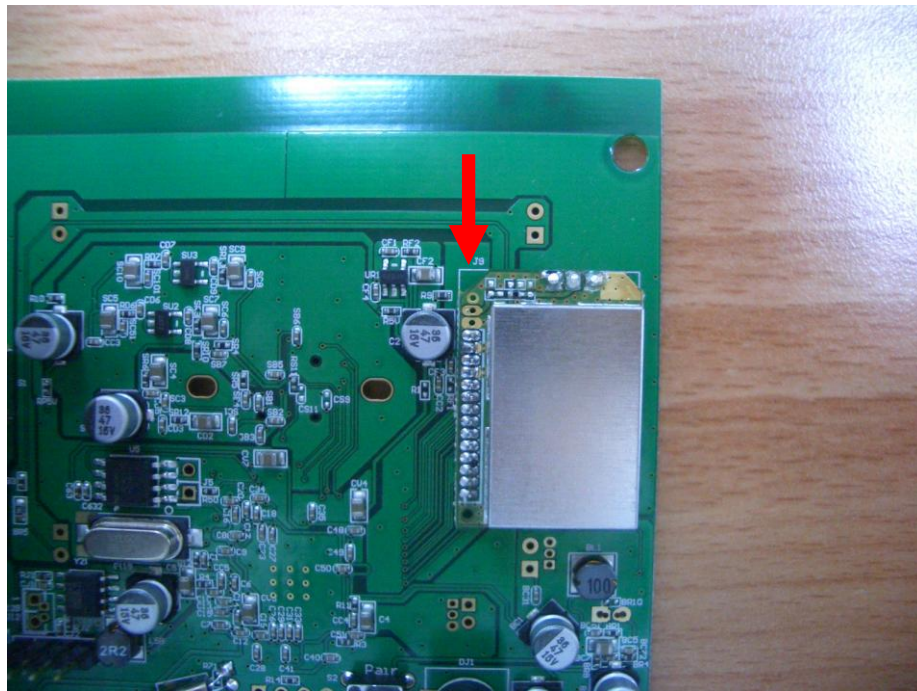
It provides one type of digital modulation GFSK, and on-air data rate support 3Mbps. The proprietary low MAC feature coupled with high-speed multimedia processor enables a very high quality wireless multimedia application and a great interference immunity capability.

## 2. Pin Assignment



Pin #	Pin Name	Comment
1	BB_CLK	Clock output
2	MS1	Transceiver operation mode selection input
3	MS0	Transceiver operation mode selection input
4	TRXD	Input: TX data input Output: RX data output
5	CD_TXEN	TX mode: Modulation enable Rx mode: Carrier detector
6	SPI_OUT	SPI data output
7	SPI_IN	SPI data input
8	SPI_CLK	SPI clock
9	SPI_CS	SPI chip select
10	VCC	DC 3.3V(module voltage input)
11	GND	GND
12	TX_SEL	PA on/off control, Tx/Rx switch control
13	GND	GND
14	RX_SEL	LNA on/off control, Tx/Rx switch control

### 3. Installation



Putting the module on the carrier board with socket.

### 4. SPI Digital Interface

All configurations of K71216 are defined by the values of register map.

The register map can be accessed via SPI digital interface coupled with external MCU.

All configuration values need to be properly set into four types of register maps.

### 5. SPI format

Address Byte(8 bits)								Data words(16 bits)							
R/W	Address							Reserved	Data						
	7	6	5	4	3	2	1	0	15	14	13	12	11	10	9

#### Address bytes:

##### Bit 7: R/W bit

[1]: 將data words寫入至控制暫存器。

[0]: 從控制暫存器讀出data words。

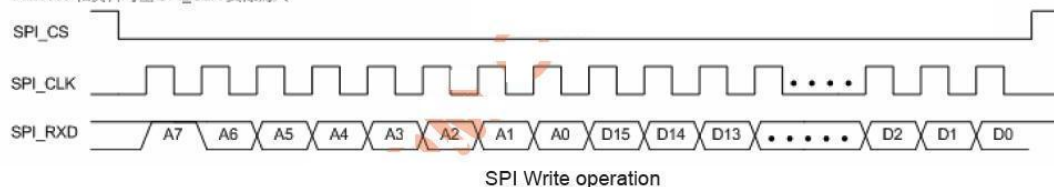
##### Bit [6:2]: 控制暫存器位址

##### Bit[1:0]: 保留位元

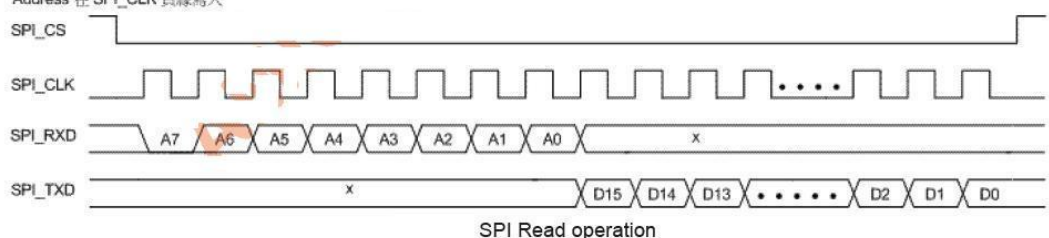
#### Data words:

##### Bit[15:0]: 資料位元

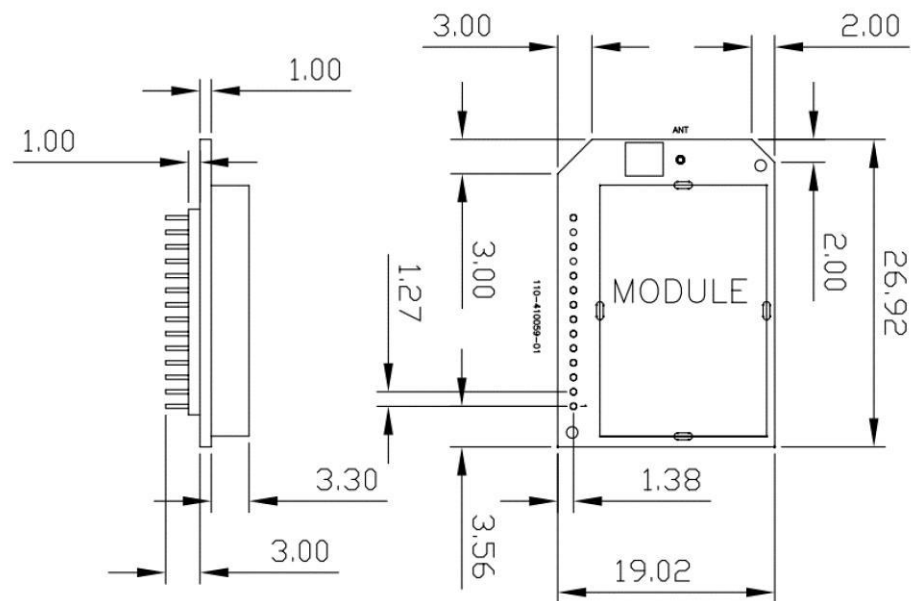
Address 和資料均在 SPI\_CLK 負緣寫入。



Address 在 SPI\_CLK 負緣寫入。



## 6. Dimension



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

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, No change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

FCC ID Label Graph:

FCC ID : TJI-K71216

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.

NOTE: If the product is too small to make so many text labels, only need to indicate the FCC ID number on the label, but the above text will be printed in the manual or packaging box.

**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 UNDESIRE OPERATION.**

Federal Communications Commission Requirements

The equipment has been tested and found to comply with the limits for 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 instruction, may cause harmful interference to radio communication. 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 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.

**THE CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.**

**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 receiver.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

#### **FCC Radiation Exposure Statement**

The equipment complies with FCC radiation exposure limits set forth for uncontrolled equipment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65. The equipment has very low levels of RF energy that it is deemed to comply without testing of specific absorption ratio (SAR)

#### **Modular approval RF Exposure :**

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. End-users and installers must be provide with antenna installation instructions and consider removing the no-collocation statement.

#### End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains FCC ID:TJI-K71216".

#### 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 shown in this manual.