KK-3000 Development Guide

FCC ID: 2AJZ4-KK3000
IC: 23777-KK3000

Version： Ver_1.0.1

Release date： 2018-11-08

receiver：

Contents

Module photo

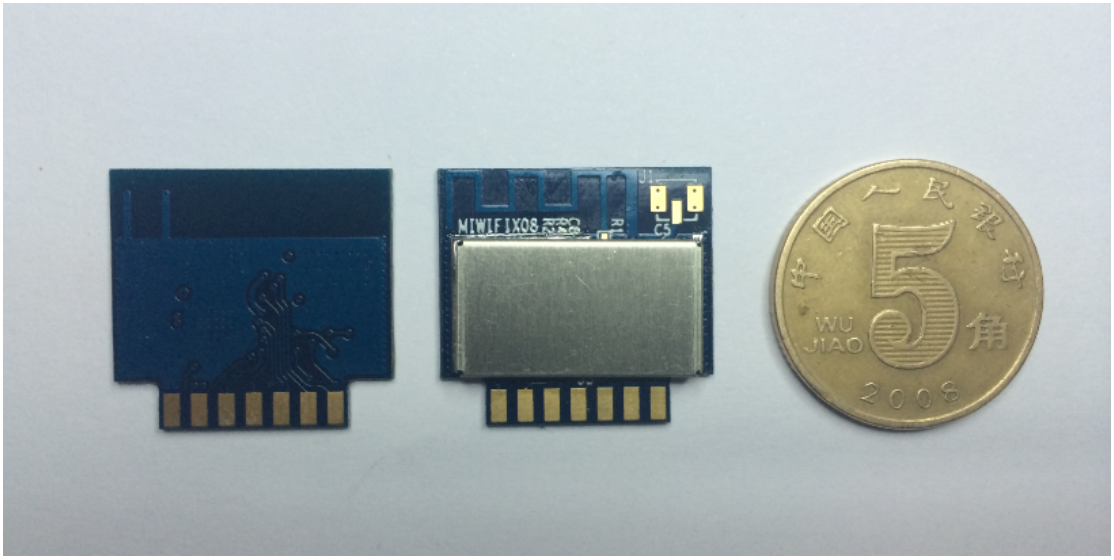

Figure 1 : Module physical map

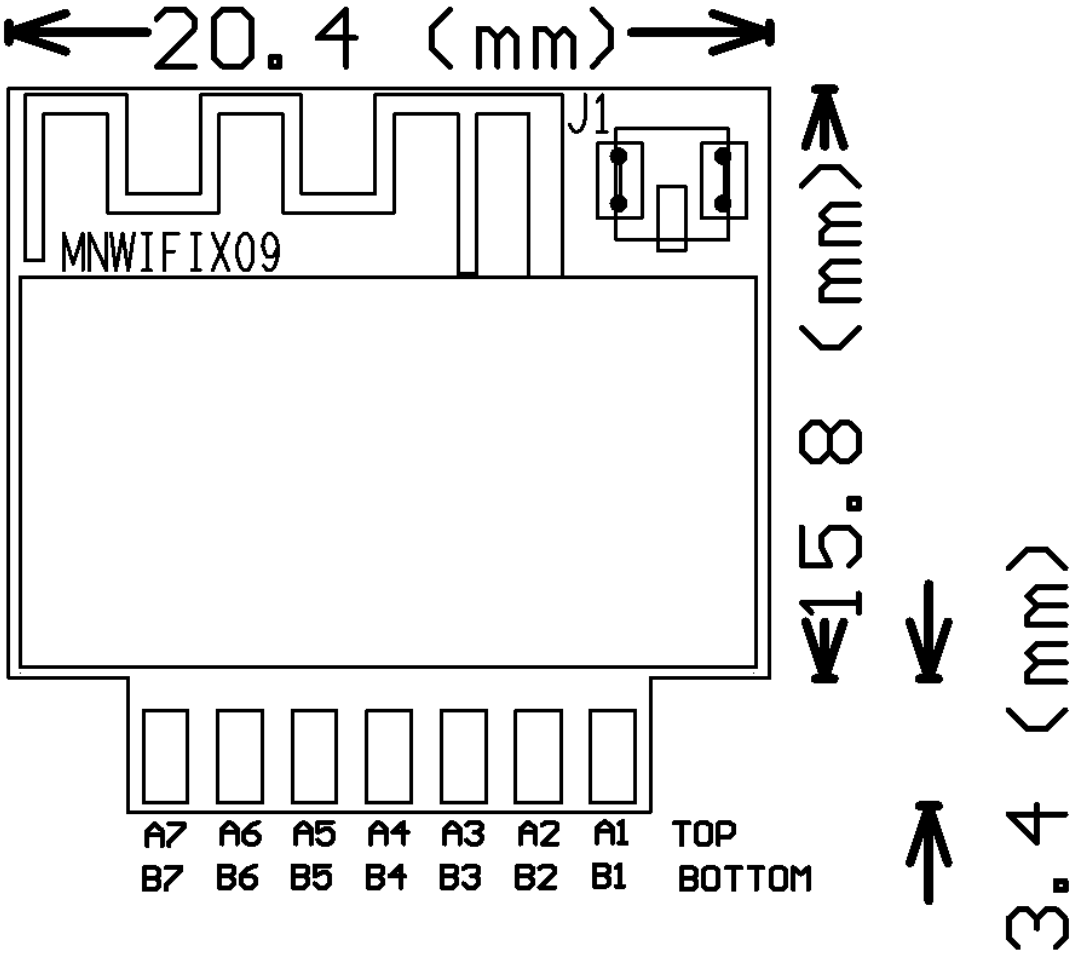

Figure 2 : Module size chart

Basic parameters

Name	Function	Remarks
WIFI	IEEE 802.11b/g/n	
CPU frequency	160MHz (Max)	
Operating System	FreeRTOS	
FLASH	1MB	Increase according to demand
RAM	128KB	
Peripherals	UART/IIC/SPI	
Number of GPIO pins	10	
Dimension (mm)	21 x 19.5 x 1	

Pin Definitions

No.	Function	
TOP		
A1	GND	power supply , Ground
A2	VCC_33	power supply , 3.3V , 300mA（MAX）
A3	UART_TX	UART pin , Analog Signal TX Out
A4	UART_RX	UART pin， RX Signal In
A5	GPIO_A5	
A6	GPIO_A6	
A7	GPIO_A7	
BOTTOM		
B1	GPIO_B1	Do not External Pull-down；when power-up must be pin floating or Pull-up；
B2	GPIO_B2	
B3	GPIO_B3	Do not External Pull-down；when power-up must be pin floating or Pull-up；；

B4	GPIO_B4	Do not External Pull-down； When power-up must be pin floating or Pull-up；
B5	GPIO_B5	
B6	GPIO_B6	
B7	CHIP_SLEEP	power-up must be pin floating or Pull-up When Pull-down, operating in the sleep mode, which enables low-power consumption

Integrated Applications Solution

【Hardware integration】

- Leave a 1.2mm slot on the original control circuit board, insert the module into the slot, and solder the wave solder to the circuit board;
- The original control board supplies 3.3V power to the module to ensure a maximum supply current of 300mA;
- The original control board provides a dedicated UART interface and module interconnection for command transmission.

【Software integration】

- Modify the MCU program of the original control circuit board according to the agreed UART serial port command;

Example work with a humidifier

【Test program】

- The WIFI module will self-test after power-on. If an abnormality is found, a command is sent to the control panel through the serial port, and the control panel prompts the module through the light or the LCD screen;
- The test time is around 30 seconds;

Humidifier Interface protocol

Device sends an AT command to KK-3000 module

Function	AT commond	remarks
Set devices type	AT+DEVICE=BT_JSQ_1	BT_JSQ_1 is devices Item No.
Device self-test mode	AT+WIFITEST	WIFI connection test
Reset	AT+FACTORY	Clear all the WIFI connection information and timer setting
Query WIFI connection status	AT+WIFISTATE	
Send a water shortage alarm signal	AT+WARN0=SET	
Clear the water shortage alarm signal	AT+WARN0=CLEAR	

KK-3000 module sends AT command to the device

Function	AT commond	remarks
Query the device port status	AT+	If the device is normal, return "+OK"
Query device type	AT+DEVICE	Return device type
Set humidifier on/off	AT+POWER=ON AT+POWER=OFF	If operation successfully return "+OK"
Set the amount of humidifier fog	AT+SET0=XX	XX from 0 to 255，255MAX

Smart Plug Pin Definitions

Pin Number	Function	remark
TOP		
A1	GND	power supply , Ground
A2	VCC_33	power supply , 3.3V , 300mA（MAX）
A3	UART_TX	
A4	UART_RX	System LED indicator
A5	GPIO_A5	Relay control signal, relay LED indicator
A6	GPIO_A6	
A7	GPIO_A7	Button

BOTTOM		
B1	GPIO_B1	Do not External Pull-down；when power-up must be pin floating or Pull-up；
B2	GPIO_B2	
B3	GPIO_B3	Do not External Pull-down；when power-up must be pin floating or Pull-up；
B4	GPIO_B4	Do not External Pull-down；when power-up must be pin floating or Pull-up；
B5	GPIO_B5	
B6	GPIO_B6	
B7	CHIP_SLEEP	power-up must be pin floating or Pull-up When Pull-down, operating in the sleep mode, which enables low-power consumption

Example work with a Smart Home Hub

Pin Number	Function	remark
TOP		
A1	GND	power supply , Ground
A2	VCC_33	power supply , 3.3V , 300mA（MAX）
A3	UART_TX	
A4	UART_RX	System LED indicator
A5	GPIO_A5	Relay control signal, relay LED indicator
A6	GPIO_A6	
A7	GPIO_A7	Button

BOTTOM		
B1	GPIO_B1	Do not External Pull-down；when power-up must be pin floating or Pull-up；
B2	GPIO_B2	
B3	GPIO_B3	Do not External Pull-down；when power-up must be pin floating or Pull-up；
B4	GPIO_B4	Do not External Pull-down；when power-up must be pin floating or Pull-up；
B5	GPIO_B5	
B6	GPIO_B6	
B7	CHIP_SLEEP	power-up must be pin floating or Pull-up When Pull-down, operating in the sleep mode, which enables low-power consumption

A certified modular has the option to use a permanently affixed label, or an electronic label. For a permanently affixed label, the module must be labelled with an FCC ID: 2AJZ4-KK3000. The OEM manual must provide clear instructions explaining to the OEM the labelling requirements, options and OEM user manual instructions that are required

For a host using a this FCC certified modular with a standard fixed label, if (1) the module’ s FCC ID is notvisible when installed in the host, or (2) if the host is marketed so that end users do not have straightforward commonly used methods for access to remove the module so that the FCC ID of the module is visible; then an additional permanent label referring to the enclosed module:

“Contains Transmitter Module FCC ID: 2AJZ4-KK3000 or “Contains FCC ID: 2AJZ4-KK3000 ” must be used. The host OEM user manual must also contain clear instructions on how end users can find and/or access the module and the FCC ID.

Host product is required to comply with all applicable FCC equipment authorizations regulations, requirements and equipment functions not associated with the transmitter module portion. compliance must be demonstrated to regulations for other transmitter components within the host product; to requirements for unintentional radiators (Part 15B). To ensure compliance with all non-transmitter functions the host manufacturer is responsible for ensuring compliance with the module(s) installed and fully operational. If a host was previously authorized as an unintentional radiator under the Declaration of Conformity procedure without a transmitter certified module and a module is added, the host manufacturer is responsible for ensuring that the after the module is installed and operational the host continues to be compliant with the Part 15B unintentional radiator requirements. Since this may depend on the details of how the module is integrated with

the host, we suggest the host device to recertify part 15B to ensure complete compliance with FCC requirement: Part 2 Subpart J Equipment Authorization Procedures , KDB784748 D01 v07, and KDB 997198 about importation of radio frequency devices into the United States.

FCC caution

Federal Communication Commission (FCC) Radiation Exposure Statement

When using the product, maintain a distance of 20cm from the body to ensure compliance with RF
exposure requirements.

FCC statements:

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: The manufacturer is not responsible for any radio or TV interference caused by unauthorized
modifications or changes to this equipment. Such modifications or changes could void the user’s
authority to operate the equipment.

15B: NOTE: 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 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.

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