



Specification

Product name: WIFI module.

Product model: C-8068
FCC ID: 2AG94-C-8068

document number: XZX-SPEC-WF-RD-04

version: V1.1

Effective date: 2018-01-18

authorized strength	audit	ratify

The document contains the core (C-CHIP) confidential documents, without permission, cannot be exported.



change resume				
Version	revise contents	age numbering	revision date	reviser
V1.0	For the first time to make	/	2017-9-15	wudelong
V1.1	Change production of PCB.	/	2018-01-18	wudelong

1. product overview

The f-8687 is a wireless communication module with embedded low power consumption WIFI, which is suitable for smart families. It can provide network services for home appliance devices easily. The hardware interface of this module is simple and the protocol is clear, so that the module can be integrated into the home appliance products at the fastest speed. The module chip is used in the industry integration of the highest high IEEE 802.11 n, SoC support IEEE802.11 b/g/n wireless standards, TCP/IP network protocol stack, support wireless work in STA/AP mode, has low cost, low power consumption characteristics, very suitable for smart home, the Internet of things, low flow control and data acquisition applications such as industrial control, etc.

2. application area

- ※ Web of Things
- ※ smart home
- ※ industrial control
- ※ smart socket
- ※ network equipment

三、 fundamental characteristics

- ※Support 802.11b/g/n wireless network.
- ※support 1T1R
- ※support TCP/IP Equivalent network protocol
- ※support STA/AP network model
- ※support WEP,WPA,WPA2,WAPI security mechanism
- ※support multi- BSSID
- ※support UART

3. performance parameter



radio parameter	model	C-8068
	standard certification	FCC/CE
	WLAN STANDARD	802.11b/g/n,1T1R
	frequency domain	2.412 GHz~2.462GHz
	transmitted power	IEEE 802.11b:11.59dBm; IEEE 802.11g:10.61dBm; IEEE 802.11n(20):10.66dBm; IEEE 802.11n(40):9.59dBm
	EVM	802.11b: -26±1.5dB
		802.11g: -28±1.5dB
		802.11n: -30±1.5dB
	receive sensitivity	802.11b: < -80dBm
		802.11g: < -70dBm
		802.11n(HT20): < -83dBm(MCS0)
		802.11n(HT20): < -65dBm(MCS7)
hardw are parameter	antenna	external antenna
	working voltage	3.3V
	Biggest starting current	3.3V 500MA
	working current	140MA
	operating temperature	-10℃~55℃
	storage temperature	-20℃~80℃
	WiFi transmission distance	50 meter
	expansion interface	UART, GPIO, PWM,ADC
The software parameters	measure	25*18.2*3MM Into the double row 2.0MM
	Wireless network type	AP Client pattern
	security mechanism	WEP/WPA/WPA2/WAPI
	Encryption Type	WEP64/WEP128
	online update	support

Pin function description:



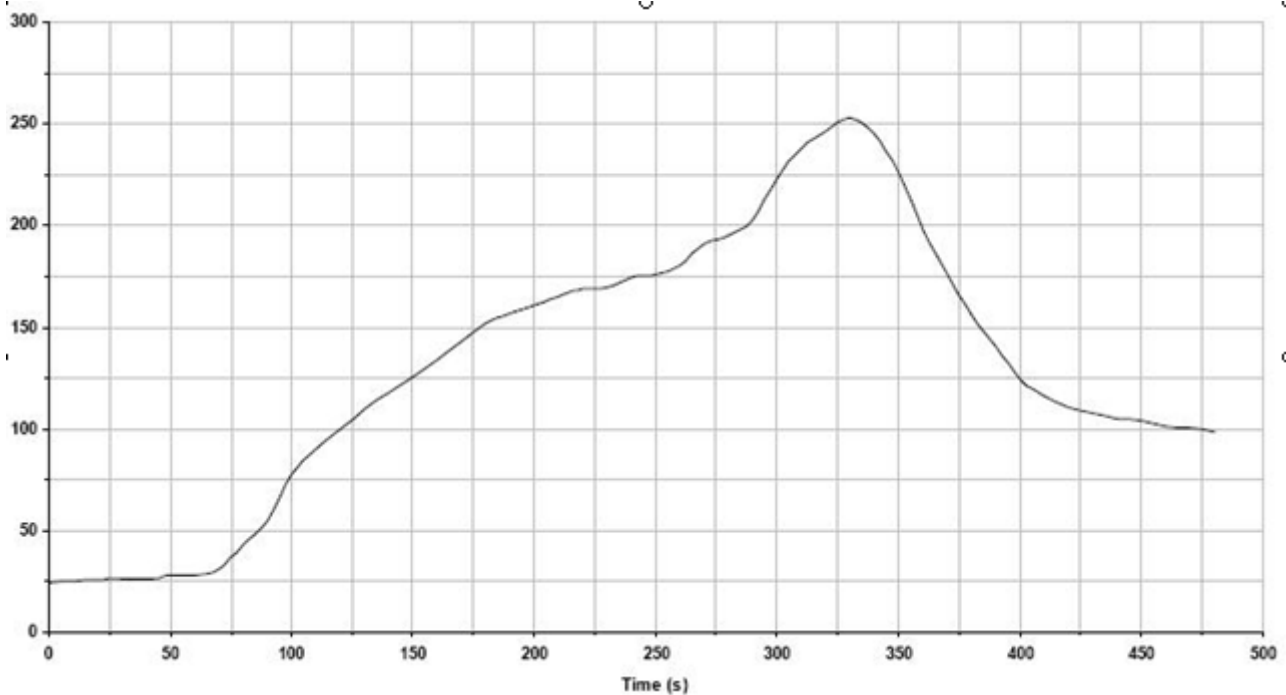
Pin	Symb	I/O	Description
1	GPIO2	I/O	General purpose input/output
2	GPIO3	I/O	General purpose input/output
3	GPIO16	I/O	General purpose input/output
4	GPIO14	I/O	General purpose input/output
5	GPIO4	I/O	General purpose input/output
6	GPIO9	I/O	General purpose input/output
7	GPIO8	I/O	General purpose input/output
8	GND	G	Power Ground
9	3V3	P	Power input
10	MADC_IN1	I	ADC1 input
11	UART1_RX	I	UART1 receive pin
12	UART1_TX	O	UART1 transmit pin
13	UART0_TX	O	UART0 transmit pin
14	UART0_RX	I	UART0 receive pin
15	PD_N0	I	Reset pin
16	GND	G	Power Ground

4. matters need attention

- A. About the use of WIFI environment, wireless signal easily influenced by the surrounding environment is very big, such as trees, such as metal barrier will have certain absorption of the wireless signal, which in practice, data transmission is affected by a certain distance. B. Because the metal shell is shielded from the radio frequency signal, it is recommended not to be installed in the metal enclosure. C. PCB cloth plate: because the metal will weaken the function of the antenna, when giving the module cloth board, it is forbidden to spread the ground and the line under the module antenna, if it can be hollowed out better.



5. Recommended reflux temperature



Key features of the profile:

- Initial Ramp=1-2.5°C/sec to 175°C equilibrium
- Equilibrium time=60 to 80 seconds
- Ramp to Maximum temperature (250°C)=3°C/sec Max
- Time above liquidus temperature(217°C): 45 - 90 seconds
- Device absolute maximum reflow temperature: 250°C



FCC Statements

(OEM) Integrator has to assure compliance of the entire end-product incl. the integrated RF Module. For 15 B (§15.107 and if applicable §15.109) compliance, the host manufacturer is required to show compliance with 15 while the module is installed and operating.

Furthermore the module should be transmitting and the evaluation should confirm that the module's intentional emissions (15C) are compliant (fundamental / out-of-band). Finally the integrator has to apply the appropriate equipment authorization (e.g. Verification) for the new host device per definition in §15.101.

Integrator is reminded to assure that these installation instructions will not be made available to the end-user of the final host device.

The final host device, into which this RF Module is integrated" has to be labeled with an auxiliary label stating the FCC ID of the RF Module, such as "Contains FCC ID: 2AG94-C-8068

This device is acting as slave and operating in the 2.4 GHz (2412 ~2462 MHz) band.

"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."

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

the Integrator will be responsible to satisfy SAR/ RF Exposure requirements, when the module integrated into the host device.

Module statement

The single-modular transmitter is a self-contained, physically delineated, component for which compliance can be demonstrated independent of the host operating conditions, and which complies with all eight requirements of § 15.212(a)(1) as summarized below.

- 1) The radio elements have the radio frequency circuitry shielded.
- 2) The module has buffered modulation/data inputs to ensure that the device will comply with Part 15 requirements with any type of input signal.
- 3) The module contains power supply regulation on the module.
- 4) The module contains a permanently attached antenna.
- 5) The module demonstrates compliance in a stand-alone configuration.
- 6) The module is labeled with its permanently affixed FCC ID label.
- 7) The module complies with all specific rules applicable to the transmitter, including all the conditions provided in the integration instructions by the grantee.
- 8) The module complies with RF exposure requirements.

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

RF Exposure Warning Statements:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This equipment shall be installed and operated with minimum distance 20cm between the radiator & body.

This equipment could not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with the FCC multi-transmitter product procedures.