

Datasheet

Module Name: FLW3881VSA7-A

Manufacture: Jiang Su Fulian Communication Technology Co., Ltd

Approved	Verify	Draw	Version	Date
			V1.0	2021.03.01

一、 Version

Date time	Version	Change content
2021-03-01	V1.0	Initial version

1.1. Overview

Hi3881 V100 is a highly integrated 2.4 GHz Wi-Fi station chip that packs the IEEE 802.11b/g/n baseband and RF circuit. The RF circuit consists of the power amplifier (PA), low noise amplifier (LNA), RF balun, antenna switch, and power management module. It supports 20 MHz standard bandwidth and 5 MHz/10 MHz narrow bandwidth, and provides a physical layer rate up to 72.2 Mbit/s.

The Hi3881 V100 Wi-Fi baseband supports the orthogonal frequency division multiplexing (OFDM) technology and is backward compatible with the direct sequence spread spectrum (DSSS) and complementary code keying (CCK) technologies, offering various data rates defined in the IEEE 802.11 b/g/n protocol.

Hi3881 V100 integrates a high-performance 32-bit microprocessor and provides SDIO2.0, UART, and GPIO interfaces, with clock frequency up to 50 MHz. As a slave chip, Hi3881 V100 runs by connecting to the master chip over SDIO interfaces.

This chip supports Huawei LiteOS and Linux OS and provides an open development environment and a faster system running environment.

This chip is applicable to IoT terminal fields such as IP camera and OTT.

1.2. Key Specifications

General Specifications

- 1x1 2.4 GHz frequency band (channels 1–14) Wi-Fi station
- PHY supporting IEEE 802.11b/g/n
MAC supporting IEEE802.11 d/e/h/i/k/v/w
- Built-in PA and LNA, integrated with TX/RX switch and balun
- Station (STA) and access point (AP) modes, up to six STAs as an AP
- WFA WPA, WFA WPA2 personal, and WPS2.0
- 2/3/4-line PTA solution with BT and BLE UNABLE
- Input voltage range: 2.3–3.6 V
- I/O power voltage: 1.8 V or 3.3 V
RF auto-calibration solution

PHY Features

- All single-antenna data rates of IEEE802.11b/g/n
- Maximum rate of 72.2 Mbit/s@HT20 MCS7
- Standard 20 MHz bandwidth and 5 MHz/10 MHz narrow bandwidth
- STBC RX
- Short GI

MAC Features

- A-MPDU and A-MSDU
- Blk-ACK

- QoS

CPU Subsystem

- High-performance 32-bit microprocessor with a maximum operating frequency of 160 MHz
- Built-in 352 KB SRAM and 288 KB ROM

1.3. specification

Item	Parameter Description
Module Name	FLW3881VSA7-A
Type	WLAN 11n SDIO 1T1R module
Chip	Hi3881V100
Stand	802.11b/g/n
Physical frequency band	2.4~2.4835 GHz
Support OS	Windows2000, XP, Vista, Win7, Linux, Mac, Android, Win CE
Safety	WEP, TKIP, AES, WPA, WPA2
Interface	SDIO1.1/2.0 兼容
Power Supply	DC3.3V （最小 3.0V-最大 3.6V）
Operating temperature	0~+70° C
Storage temperature	-20 ~ 125° C
Dimension	21x23x3.3mm (±0.2mm) (Include Shield cover)

1.4. Functional Block Diagram

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图 1. FLW3881VSA7-A 硬件框图

1.5. Dimension

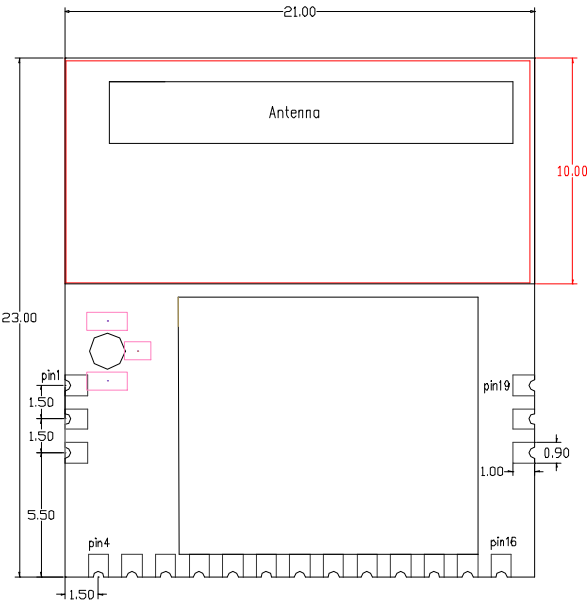


图 2. FLW3881VSA7-A 尺寸图

1.6. Pin description

表 1

Index	Pin Name	Pin description
1-3	GND	GND
4	VBAT	3.3V
5	NC	NC
6	VDDIO	1.8-3.3V, IO Supply, Max3.6V
7	GND	GND
8	CHIP_EN	Chip EN
9	GPI002	WL_DEV_WAKE_HOST
10	SD_D2	SD_D2
11	SD_D3	SD_D3
12	SD_CMD	SD_CMD
13	SD_CLK	SD_CLK
14	SD_D0	SD_D0
15	SD_D1	SD_D1
16-19	GND	GND

1.7. Secondary reflow soldering temperature curve

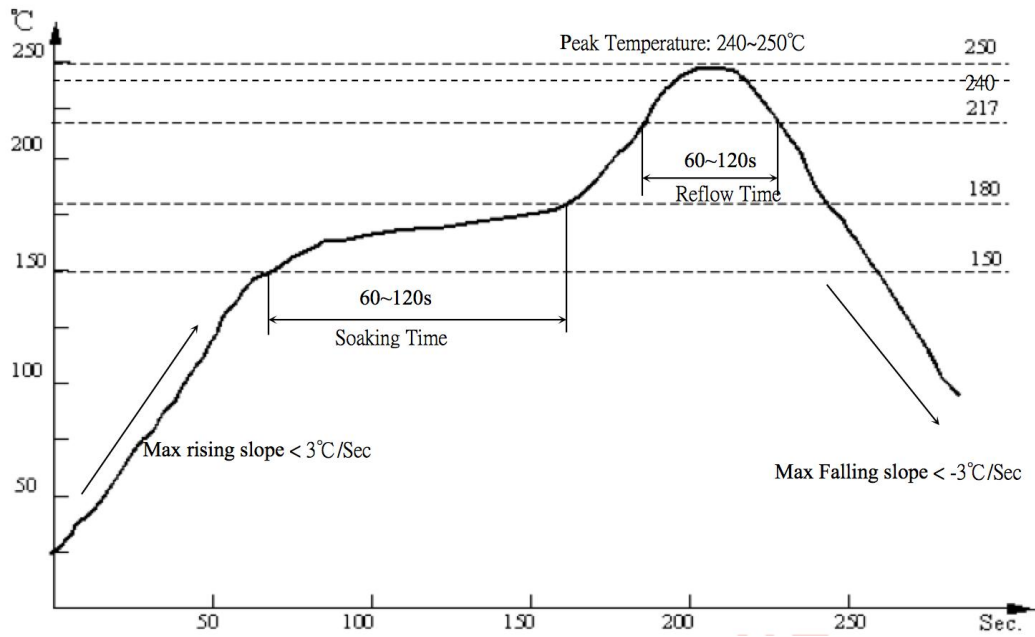


图 3. FLW3881VSA7-A Reflow soldering temperature curve

1.8. Packing

It is shipped in reel packaging, which is convenient for customers to SMT, built-in humidity card and desiccant, vacuumed in electrostatic bags, and packaged in cartons for shipment. Both the reel and the outer box are affixed with factory notes and check out QR codes for easy tracking .



图 4. FLW3881VSA7-A Packing

1.9. Sales and technical support information

If you need to consult or purchase this product, please call Jiangsu Fulian Communication Technology Co., Ltd. during office hours.

Office hours: Monday to Saturday, morning: 8:00~12:00, afternoon: 13:00~17:00

Post Code: 212310

Phone Number: 0511-80760088

Email: sales@fulian-link.com

Address: Yongan Community, the south of Lanling Road, Danyang Development District,
Jiangsu Province, China.

FCC Statement

FCC standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Integral antenna , Antenna gain 1dBi

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.

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.

FCC Radiation Exposure Statement

The modular can be installed or integrated in mobile or fix devices only. This modular cannot be installed in any portable device if without further certify such as C2PC with SAR. This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: “Contains Transmitter Module FCC ID: 2AXS5-FLW3881VSA7-A Or Contains FCC ID: 2AXS5-FLW3881VSA7-A”

When the module is installed inside another device, the user manual of the host must contain below warning statements;

1. 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;

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

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.

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

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.

Any company of the host device which install this modular with modular approval should perform the test of radiated & conducted emission and spurious emission, etc. according to FCC part 15C : 15.247 and 15.209 & 15.207 ,15B Class B requirement, Only if the test result comply with FCC part 15C : 15.247 and 15.209 & 15.207 ,15B Class B requirement, then the host can be sold legally.