Cdtec CDW-B18189F-Q1 WiFi Module User Manual

WiFi Module
CDW-B18189F-Q1

Contents

Overview

The CDW-B18189F-02 is a highly integrated WI-FI single chip which supports 72.2Mbps PHY rate. It fully complies with IEEE 802.11n and IEEE 802.11b/g standards, offering feature-rich wireless connectivity at high standards, and delivering reliable, cost-effective though put from an extended distance. Optimized RF architecture and baseband algorithms provide superb performance and low power consumption. Intelligent MAC design deploys a high efficient DMA engine and hardware data processing accelerators which offloads the host processor.
The CDW-B18189F-02 is designed to support standard-based features in the areas of security, quality of service, and international regulations, giving end users the greatest performance any time and in any circumstance.

Features

- IEEE 802.11b/g/n
- Embedded high-performance 32-bit RISC microprocessor
- Highly integrated RF with 55nm CMOS technology
- 1T1R mode with support of 72.2Mbps PHY rate
- Integrate high efficiency switching regulator
- Best –in-class power consumption performance
- 802.11d/h/k compliant
- Security support for WGA WPA/WPA2 personal,WPS2.0,WAPI
- Supports 802.11n protected managed frames
- QoS support of WFA WMM,WMM PS
- Supports Wi-Fi Direct
- Fully compliance with SDIO 2.0 High-speed mode

General Specification

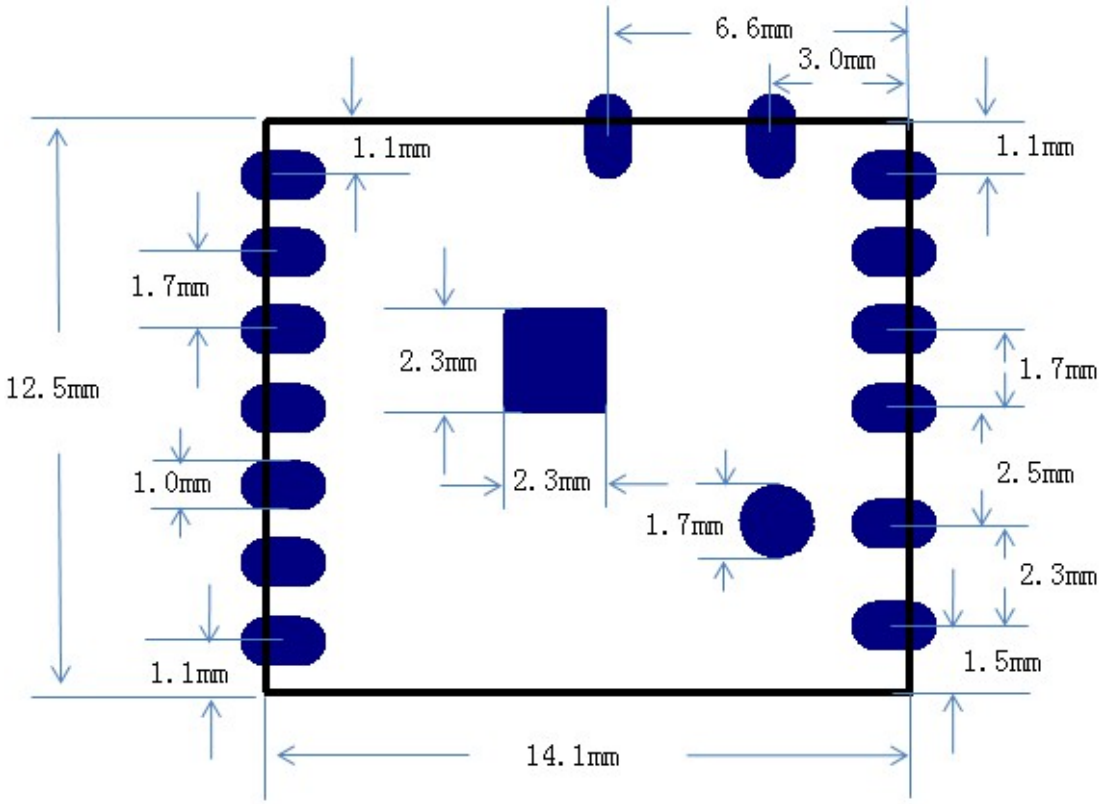
Model	**CDW-B18189F-02**
Product Name	CAMWIFI
Major Chipset	RTL8189FTV-VC-CG
Standard	802.11b/gln, 802.3, 802.3u
Data Transfer Rate	1,2,5.5,6,11,12,18,2224,30,36,48,54,60,90,120 and maximum of 72.2Mbps
Modulation Method	BPSK/ QPSK/ 16-QAM/ 64-QAM
Frequency Band	2.4-2.4835 GHz ISM Band
Spread Spectrum	IEEE 802.11b: DSSS (Direct Sequence Spread Spectrum)IEEE802.11g/n:OFDM(OrthogonalFrequency Division Multiplexing)
RF Output Power	11n > 12dBm. 11g > 13dBm. 11b > 16dBm
Operation Mode	Ad hoc, Infrastructure
Receiver Sensitivity	11b CCK11(PER<8%) < -85dBm , 11g OFDM54(PER<10%) < -73dBm , 11n HT2 0 MCS7(PER<10%) < -69dBm
Operation Range	Up to 180 meters in open space
OS Support	Windows2000,XP32-64,Vista32/64,Win732/64, Linux, Mac, Android. WIN CE
Security	WEP, TKIP, AES, WPA, WPA2
Interface	SDIO2.0
Power Consumption	DC3.3V 600mA
Operating Temperature	0- +70°C ambient temperature
Storage Temperature	-20 – 125°C ambient temperature
Humidity	5 to 90 % maximum (non-condensing)
Dimension	14.1 x 12.5 x0.6 mm (LxW) ±0.15mm

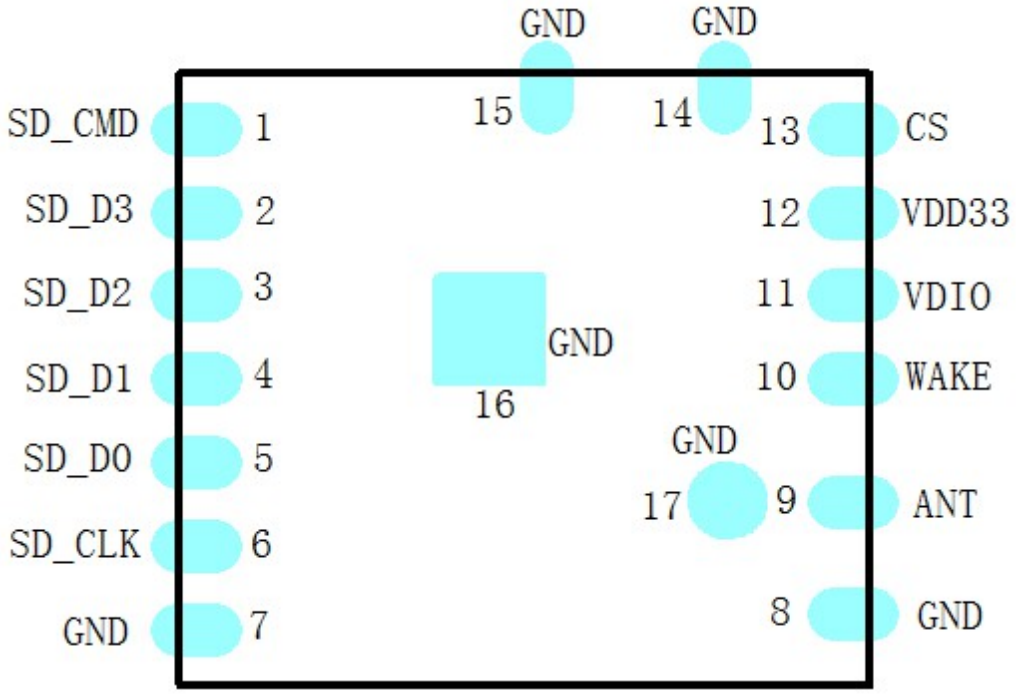
DC Characteristics

Description	TYP	Unit
Sleep mode	2.	mA
RX Active,HT40,MCS7	220	mA
RX Power saving, DTIM=1	20	mA
RX Listen	10	mA
TX HT40,mcs7 @13dBm	230	mA
TX CCK,11Mbps @17dBm	280	mA

Note: All result is measured at the antenna port and VDD33 is 3.3V 3.3V Rating Current 600mA.

Pin Description and PCB size

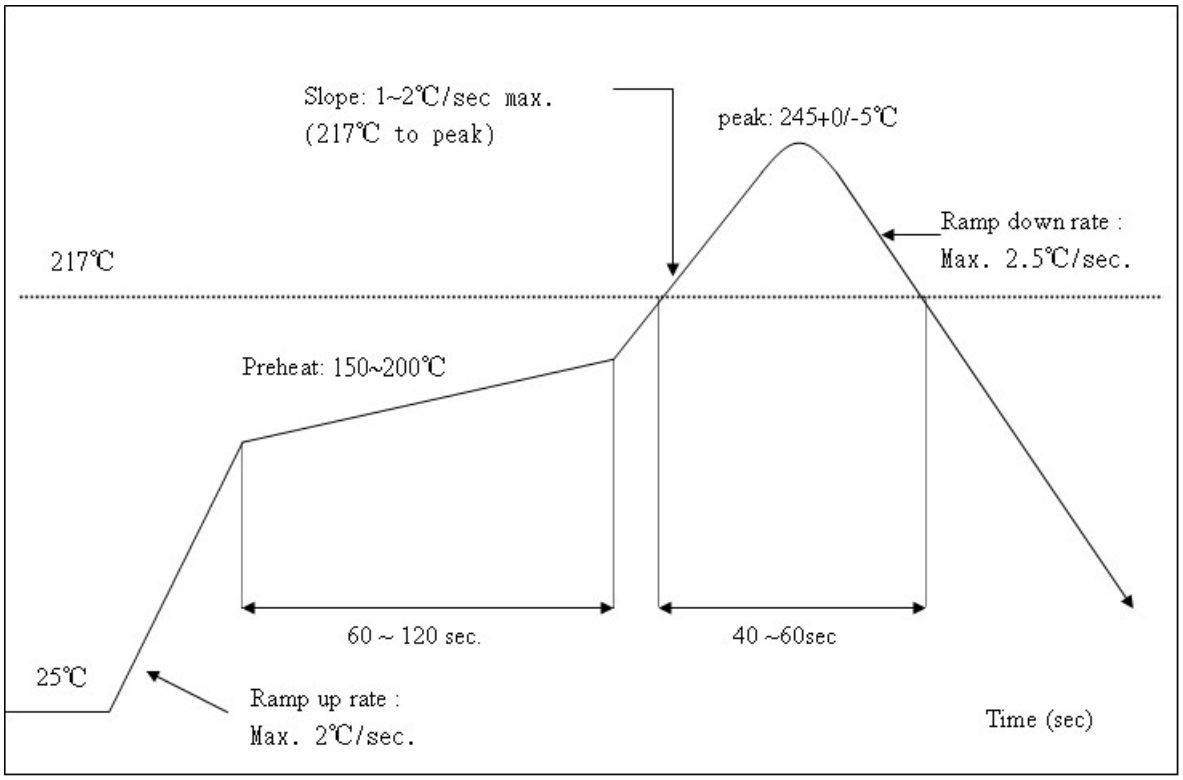




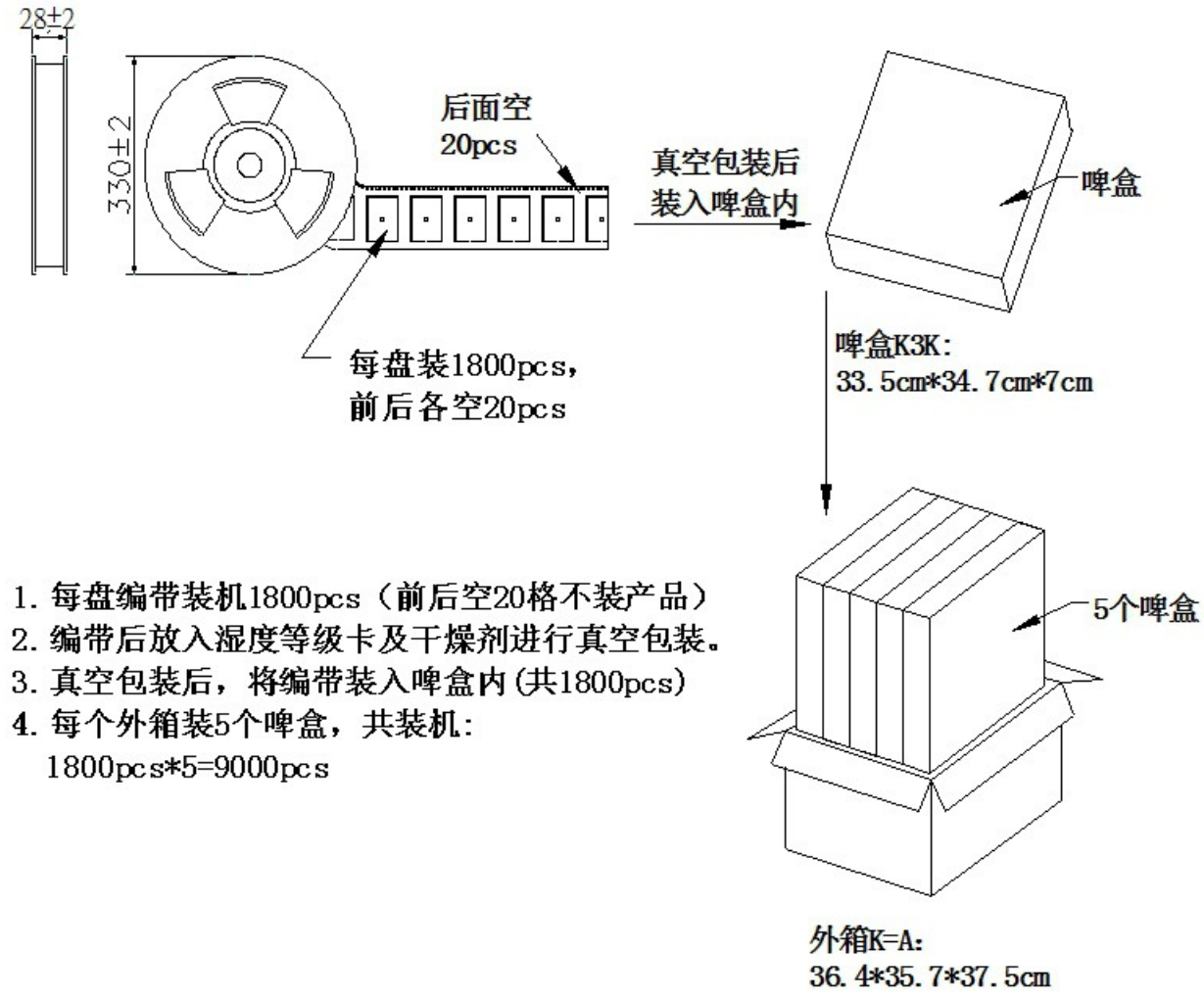
NO.	Name	Description
1	SD CMD	SDIO Command Input
2	SD D3	SDIO Data Line 3
3	SD D2	SDIO Data Line 2
4	SD D1	SDIO Data Line 1
5	SD DO	SDIO Data Line 0
6	SD CLK	SDIO Clock Input
7	GND	Ground
8	GND	Ground
9	ANT	WIFI radio antenna. Impedence control to 50oh
10	WAKE	WIFI WAKE Device
11	VDIO	VDD for SDIO Pin. The power supply is the same as the signal level of SDIO b us(3.3V – 1.8V)
12	VDD33	Power supply 3.3V
13	CS	This pin can Externally Shutdown theRTL8189FTVwithoutrequiring an extra power switch
14,15	GND	Ground
16.17	GND	Ground , no connect

Recommended Reflow Profile

Referred IPC/JEDEC standard.
Peak Temperature : <250°C
Number of Times : 2 times



Packing information



1. 每盘编带装机1800pcs（前后空20格不装产品）
2. 编带后放入湿度等级卡及干燥剂进行真空包装。
3. 真空包装后，将编带装入啤盒内(共1800pcs)
4. 每个外箱装5个啤盒，共装机:
   1800pcs*5=9000pcs

ESD CAUTION

The CDW-B18189F-02 is ESD (electrostatic discharge) sensitive device and may be damaged with ESD or spike voltage. Although CDW-B18189F-02 is with built-in ESD protection circuitry, please handle with care to avoid the permanent malfunction or the performance degradation.

FCC Statement

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.

The CAM WIFI is designed to comply with the FCC statement. FCC ID is WUI-BT532767. The host system using CAM WIFI Module should have label indicated it contain modular's FCC ID WUI-BT532767 . This radio module must not installed to colocate and operating simultaneously with other radios in host system additional testing and equipment authorization may be required to operating simultaneously with other radio.
The CAM WIFI is deaigned for a compact PCB design.It should be installed and operated with Dash Cam or other minimum distance of 20 centimeters between the radiator and your body." To comply with FCC regulations limiting both maximum RF output power and human exposure to RF radiation, the maximum antenna gain including cable loss in a mobile-only exposure condition must not exceed 0dBi in the 2.4G band. The CAM WIFI and its antenna must not be co-located or operating in conjunction with any other transmitter or antenna within a host device. The OEM can use metal antennas or FPC antennas, and the antenna gain is less than 0dBi for this module.
If difference antenna types or host are used, C2PC should be applied. Notice to OEM integrator The end user manual shall include all required regulatory information/warning as show in this manual. The OEM integrator is responsible for testing their end-product for any additional compliance requirements required with this module installed. The device must be professionally installed The intended use is generally not for the general public.It is generally for industry/commercial use. The connector is within the transmitter enclosure and can only be accessed by disassembly of the transmitter that is not nomally required, the user has no access to the connector. Installation must be controlled. Installation requires special training This device complies with Part 15, Subpart C, Section 15.247 of the FCC Rules.

RF warning for Mobile device:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Documents / Resources

	**Cdtec CDW-B18189F-Q1 WiFi Module** [pdf] User Manual CDW-B18189F-Q1 WiFi Module, WiFi Module

References

- Sign in - Google Accounts