

# WiFi Module User Manual

FCC ID:2AK44-KWH-88W8-80XX

**Model No :** KWH-88W8-802

Approval option :  Specification  
 Sample

■Customer's Confirmation

<b>Customer:</b>
<b>Approved by:</b>
<b>Date:</b>
<b>Note:</b>

Approved	Checked by	Made by

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## 0. Revision History

Date	Document revision	Product revision	Change Description
2016-07-18	1.0	V1.0	Draft initial release

## 1. General Description

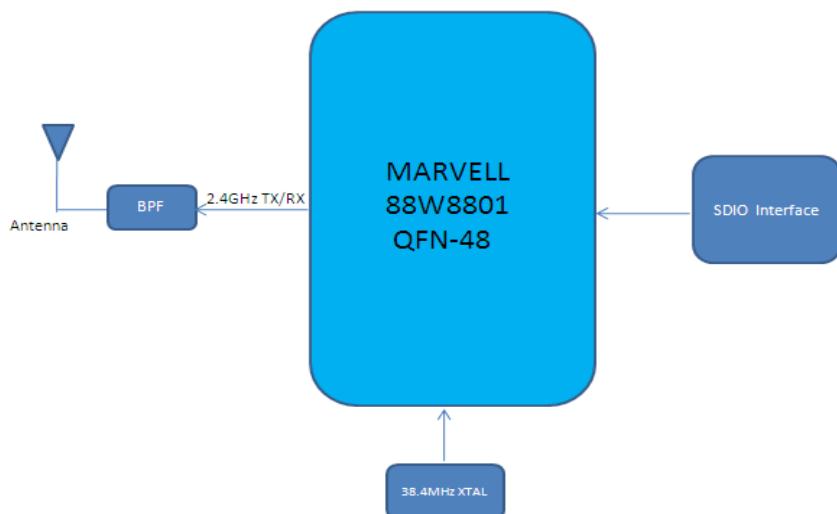
KWH-88W8-802 product is designed base on MARVELL 88W8801 chipset .It is a highly integrated single-band (2.4GHz) IEEE 802.11n 1X1 System-on-Chip (SoC), specifically designed to support High Throughput data rates for next generation WLAN products. It supports IEEE802.11i safety protocol, along with IEEE 802.11e standard service quality. It supports the new data encryption on 64/128 bit WEP and safety mechanism on WPA-PSK/WPA2-PSK, WPA/WPA2. It can implement the wireless network function on the laptop/desktop/MID and other wireless devices easily .

## 2. The range of applying

MID, networking camera, STB GPS, E-book, Hard disk player, Network Radios, PSP and other device which need be supported by wireless networking.

## 3. Product Specification

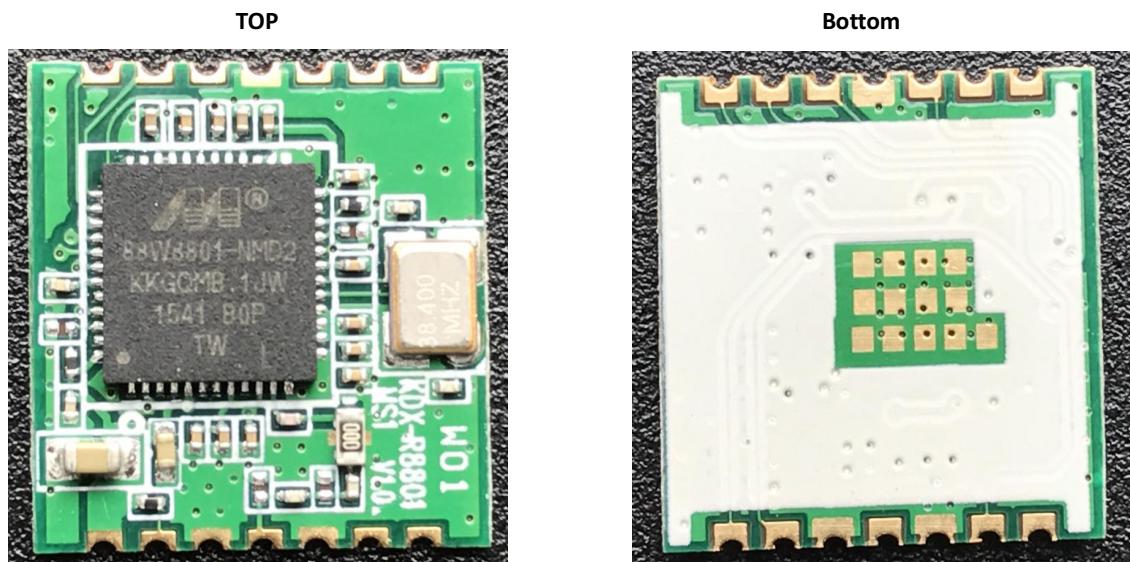
### 3.1 Function Block diagram



### 3.2 Electrical and Performance Specification

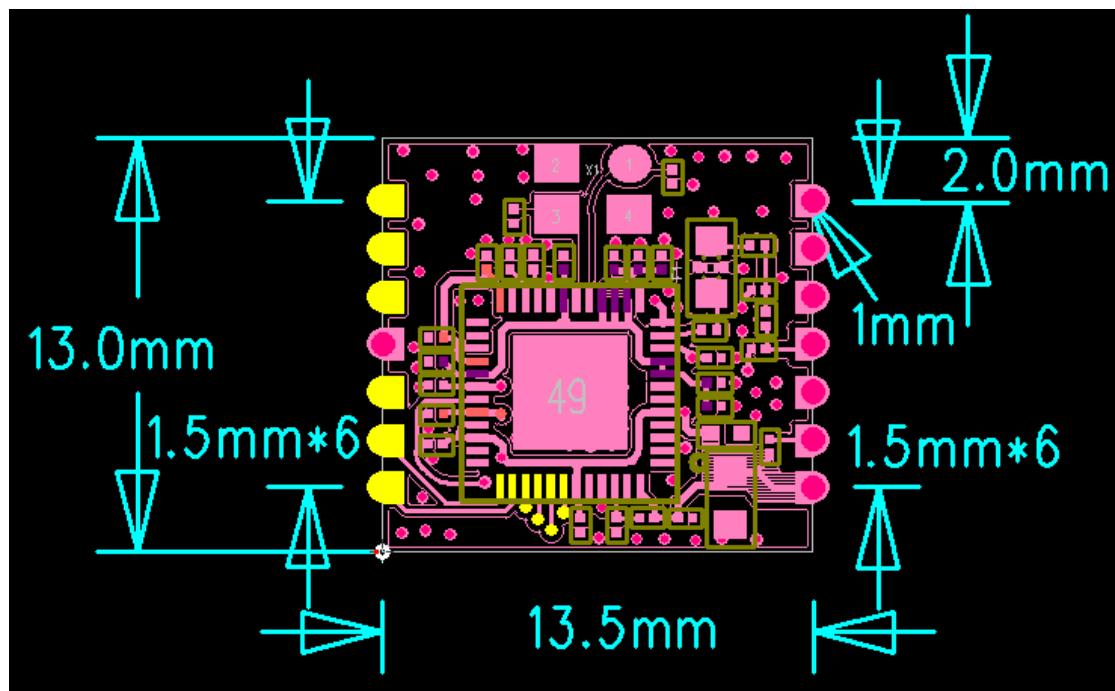
Item	Description
Product Name	KWH-88W8-802
Major Chipset	MARVELL 88W8801
Host Interface	SDIO
Standard	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n,
Frequency Range	2412-2462MHz
Modulation Type	802.11b: CCK, DQPSK, DBPSK 802.11g: 64-QAM, 16-QAM, QPSK, BPSK 802.11n: 64-QAM, 16-QAM, QPSK, BPSK
Working Mode	Infrastructure, Ad-Hoc
Data Transfer Rate	1, 2, 5.5, 6, 11, 12, 18, 22, 24, 30, 36, 48, 54, and maximum of 72.2Mbps
Spread Spectrum	IEEE 802.11b: DSSS (Direct Sequence Spread Spectrum) IEEE 802.11g/n: OFDM (Orthogonal Frequency Division Multiplexing)
Sensitivity @PER	1M: <u>-92dBm@8%PER</u> 6M: <u>-88dBm@10%PER</u> 11M: <u>-86dBm@8%PER</u> 54M: -72dBm@10%PER 72.2M: -68dBm@10%PER
RF Power	19.21dBm@11b, 18.61dBm@11g, 17.11dBm@11n20
Antenna type	Connect to the external antenna through the half hole
The transmit distance	Indoor 100M, Outdoor 300M, according the local environment
Dimension(L*W*H)	13 x 13.5 x 1.46mm (LxWxH); Tolerance: +/-0.15mm
Power supply	3.3V +/-0.2V
Power Consumption	standby mode 80mA@3.3V, TX mode 250mA@3.3V
Clock source	38.4MHz
Working Temperature	-0°C to +70°C
Storage temperature	-55°C ~ +125°C

### 3.3 Product Photo

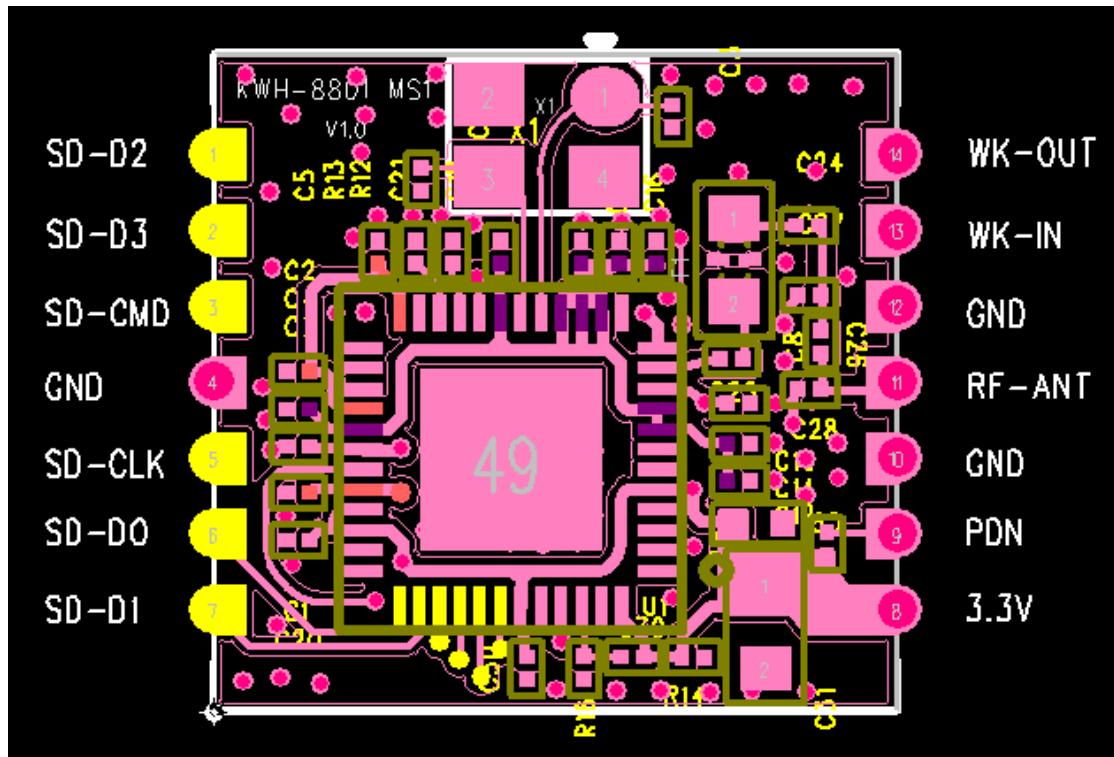


### 3.4 Mechanical Specification

Module dimension: Typical (W x L x H): 13mmx13.5mmx1.46mm Tolerance : +/-0.15mm



### 3.5 Product Pin Definition

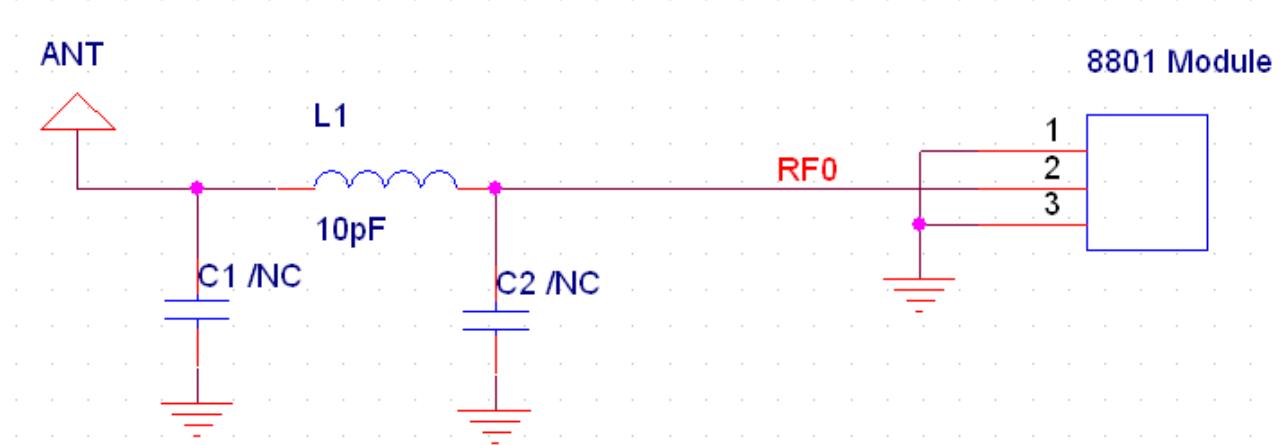


### 4. Supported platform

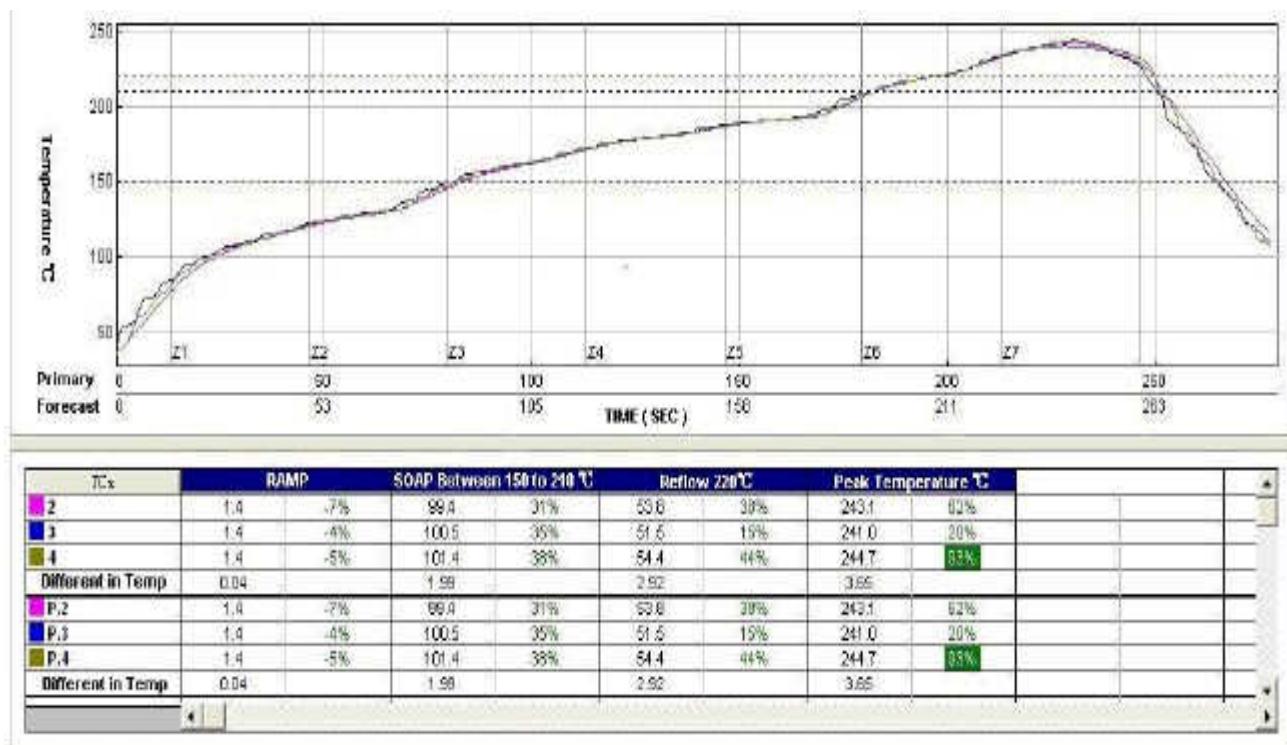
Support Linux platform.

### 5. Peripheral Schematic Reference Design

#### 5.1 WiFi RF Circuit reference pictures



## 6. Typical Solder Reflow Profile



## 7. Package Information



**IMPORTANT NOTE:**

This module has been granted as limited modular approval.

The manufacturer is responsible to follow the instruction hereafter for the FCC compliance requirement of the end product. Under such configuration, the FCC radiation exposure limits set forth for an uncontrolled environment can be satisfied. The device with a PIFA antenna gain with maximum gain 5dBi.

This device may only operate using an antenna of a type and maximum (or lesser) gain approved by Formike. Antenna types difference or having a gain greater than the maximum gain indicated for that type are strictly prohibited for use with this transmitter.

**Warning:**

Any 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 (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.

**FCC Radiation Exposure Statement:**

This equipment complies with FCC 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 equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This radio transmitter (identify the device by certification number) has been approved by FCC to operate with the antenna types with the maximum permissible gain indicated.

The final end product must be labeled in a visible area with the following: Contains Transmitter Module FCC ID:2AK44-KWH-88W8-80XX.

**Label:**

FCC ID:2AK44-KWH-88W8-80XX