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A880 is a USB WiFi 2.4G/5G/BLE Module

It is a highly integrated chip with WiFi 802.11a/b/g/n/ac/ax, BLE 5.4 for wireless application. It combines CMOS single-chip fully-integrated RF, Modem and MAC, a 1T1R capable WLAN baseband, BT Protocol Stack, BT Baseband, modem, and WLAN/BT RF in a combo chip. It provides a complete solution for a high-performance integrated wireless LAN and Bluetooth controller. It supports 2.4GHz/5GHz Wi-Fi 6, it's client only without radar detection. The wireless 5.4. The integrated module provides USB 2.0 interface for Wi-Fi.

1.1 Wi - Fi Features

- CMOS single-chip fully-integrated RF, Modem and MAC
- Support 2.4GHz/5GHz Wi-Fi 6
- Data rates up to 286.8Mbps with 20/40MHz bandwidth
- Support 5MHz/10MHz mode
- RX sensitivity -97dBm in 11b 1M mode
- Tx power up to 23dBm in 11b mode, 18dBm in HT/VHT/HE MCS7 mode
- Support STA, AP, Wi-Fi Direct modes concurrently
- Support STBC, beamforming
- Support Wi-Fi 6 TWT
- Support Two NAV, Buffer Report, Spatial reuse, Multi-BSSID, intra-PPDU power save
- Support LDPC
- Support MU-MIMO, OFDMA
- Support DCM, Mid-amble, UORA
- Support WEP/WPA/WPA2/WPA3-SAE Personal, MFP

1.2 BLE 5.4 Features

- Supports all the mandatory and optional features of Bluetooth low energy 5.4
- Supports advanced master and slave topologies

1.3 Other Features

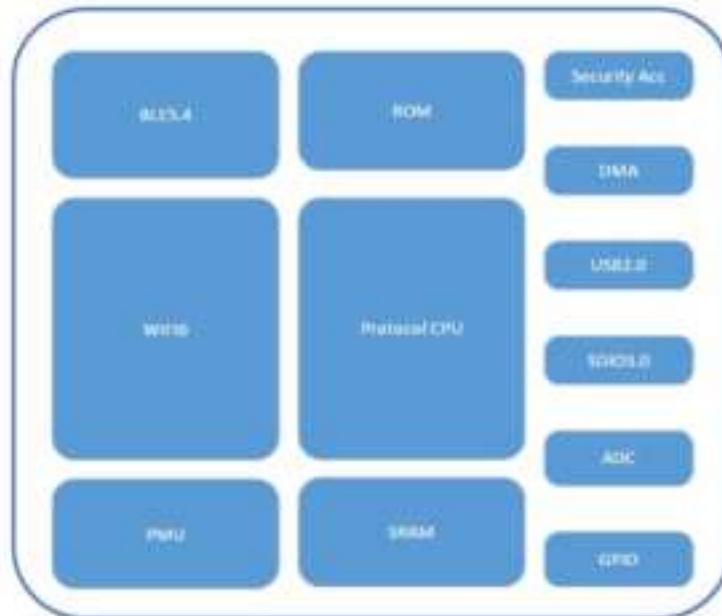
- Integrated low power timer and watchdog
- 512 bits eFuse

1.4 Applications

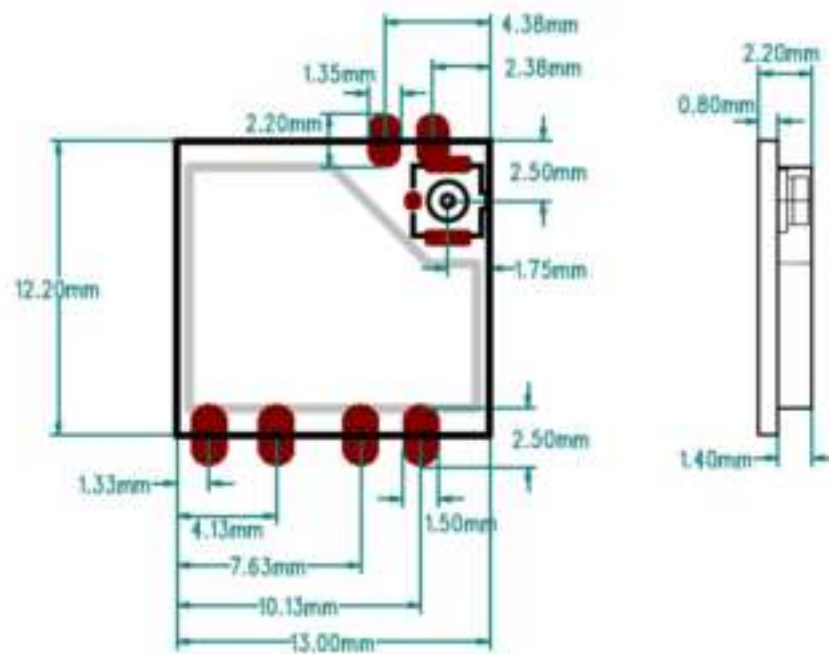
- Wireless device, such as Camera, doorbell, etc.

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2. Application Diagram

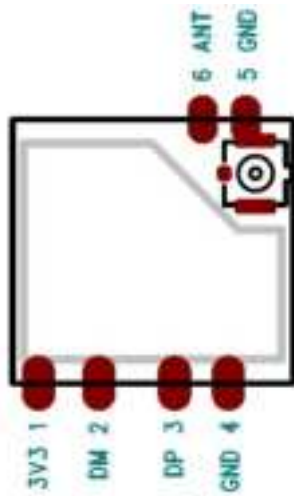


3. Dimensions (Units:mm)



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4. Pin Definition

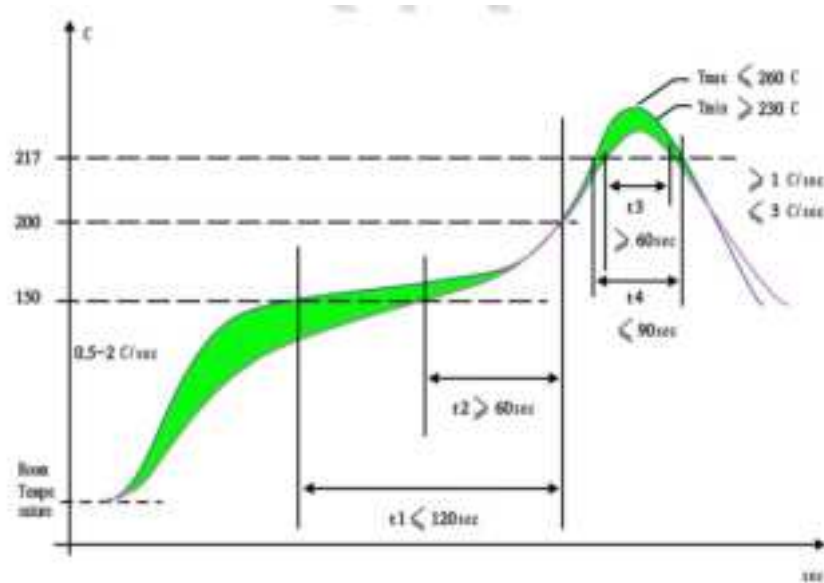


Pin	Function	Type	Description
1	3V3	POW	Module Power Supply
2	DM	I/O	USB_DAT-
3	DP	I/O	USB_DAT+
4	GND	GND	GND
5	GND	GND	GND
6	ANT	I/O	WiFi 2.4GHz & 5GHz & BLE RF TX/RX

5. Recommended Operating Conditions

Parameter	Min	Typ	Max	Unit
Operation Voltage	3.0	3.3	3.6	V
Working Current			500	mA
Operation Temperature	0		70	°C

6. Lead-free reflow soldering process parameter requirements



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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 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.

Caution:

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

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage;
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Radiation Exposure Statement:

This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment.

The module must be installed in the host device.

This End equipment should be installed and operated with a minimum distance of 20cm centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS 102 et la conformité à l'exposition de RSS-102 rf, utilisateurs peut obtenir l'information canadienne sur l'exposition et la conformité de rf.

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Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur.

Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

LE-LAN devices are restricted to indoor operation only in the band 5150-5250 MHz

- (i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
- (ii) the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall comply with the e.i.r.p. limit; and
- (iii) the maximum antenna gain permitted for devices in the band 5725-5825 MHz shall comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate.

Integration instructions for host product manufacturers according to KDB 996369
D03 OEM Manual v01r01

Hangzhou Meari Technology Co., Ltd. is seeking limited modular approval for radio module Model: A880, FCC ID: 2AG7C-A880, IC: 25838-A880. Per KDB 996369, the integration instructions for the radio module within the host product are described below:

2.2 List of applicable rules

CFR 47 FCC Part 15 Subpart C and F & RSS-247 and RSS-102 have been investigated. It is applicable to the modular transmitter

2.3 Specific operational use conditions

This module is stand-alone modular. If the end product will involve the Multiple simultaneously transmitting condition or different operational conditions for a stand-alone modular transmitter in a host, host manufacturer have to consult with module manufacturer for the installation method in end system.

2.4 Limited module procedures

Not applicable

2.5 Trace antenna designs

Not applicable

2.6 RF exposure considerations

The device has been evaluated to meet general RF exposure requirement. The device can be used in mobile exposure condition with a minimum distance of 20cm centimeters between the radiator and your body.

2.7 Antennas

This radio transmitter FCC ID: 2AG7C-A880, IC: 25838-A880 have been approved by Federal Communications Commission and Industry Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Antenna: YJC-6N050-B108

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FPC antenna with IPEX connector, 4.66dBi(Max.) for 2.4G Band and 2.96dBi(Max.) for 5G Band,

Frequency (MHz)	2400-2480	5150-5250	5250-5350	5500-5700	5745-5825
Gain (dBi)	4.66	2.46	2.96	2.01	2.28

Antenna: 112010218

Omni antenna with IPEX connector, 2.91dBi(Max.) for 2.4G Band and 3.81dBi(Max.) for 5G Band,

Frequency (MHz)	2400-2480	5150-5250	5250-5350	5500-5700	5745-5825
Gain (dBi)	2.91	3.81	3.65	3.25	3.63

2.8 Label and compliance information

The final end product must be labeled in a visible area with the following" Contains FCC ID: 2AG7C-A880" and " Contains IC: 25838-A880".

2.9 Information on test modes and additional testing requirements

Host manufacturer installed this modular with single modular approval should perform the test of radiated emission and spurious emission according to FCC part 15C, Part 15E, 15.209, 15.207,RSS-247, RSS-102 ,RSS-GEN requirement, only if the test result comply with FCC part 15C, Part 15E, 15.209, 15.207,RSS-247, RSS-102 ,RSS-GEN requirement, then the host can be sold legally.

2.10 Additional testing, Part 15 Subpart B&ICES-003 disclaimer

Host manufacturer is responsible for compliance of the host system with module installed with all other applicable requirements for the system such as Part 15 B&ICES-003.

2.11 Note EMI Considerations

Host manufacture installed this modular with single modular approval should be recommending "best practice" RF design engineering testing and evaluation in case non- linear interactions generate additional non- compliant limits due to module placement to host components or properties.

Host manufacture installed this modular with single modular approval should be recommending “For EMC/radio-parameter compliance purposes, when an evaluation is done by the grantee or host provider (see Clause IX in KDB Publication 996369 D01& RSS-GEN,RSS-102) and there are no additional emissions generated due to simultaneous-transmission operations compared to single transmitter operations testing (i.e., not transmitting simultaneously), it is not necessary to file the additional simultaneous transmission test data. The host manufacturer is responsible for ensuring compliance with the applicable FCC&IC rules for the transmitters operating individually and simultaneously. This includes compliance for the summation of all emissions from all outputs occupying the same or overlapping frequency ranges, as defined by the applicable rules.

2.12 How to make changes:

Only the Grantee is permitted to make permissive changes. The Grantee may seek permissive changes to permit use of the radio module within additional Meari host products following the same procedure as identified in 2.4.

Each host product model will require AC Powerline Conducted Emissions, Spurious Radiated

Emissions, and conducted output power verification. A C2PC will be completed for the integration into additional host models.

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2.13 Additional testing, Part 15 Subpart B disclaimer

The modular transmitter is only FCC authorized for FCC Part 15 Subpart C 15.247 & 15.207 & 15.209 & RSS-247, RSS-102, RSS-GEN and that the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification. If the grantee markets their product as being Part 15 Subpart B & ICES-003 compliant (when it also contains unintentional-radiator digital circuitry), then the grantee shall provide a notice stating that the final host product still requires Part 15 Subpart B & ICES-003 compliance testing with the modular transmitter installed.

Compliance of this device in all final host configurations is the responsibility of the Grantee.

OEM integrators and end-users must be provided with specific operating instructions for satisfying RF exposure compliance. OEM integrators are instructed to ensure that the end user has no manual instructions to remove or install the device