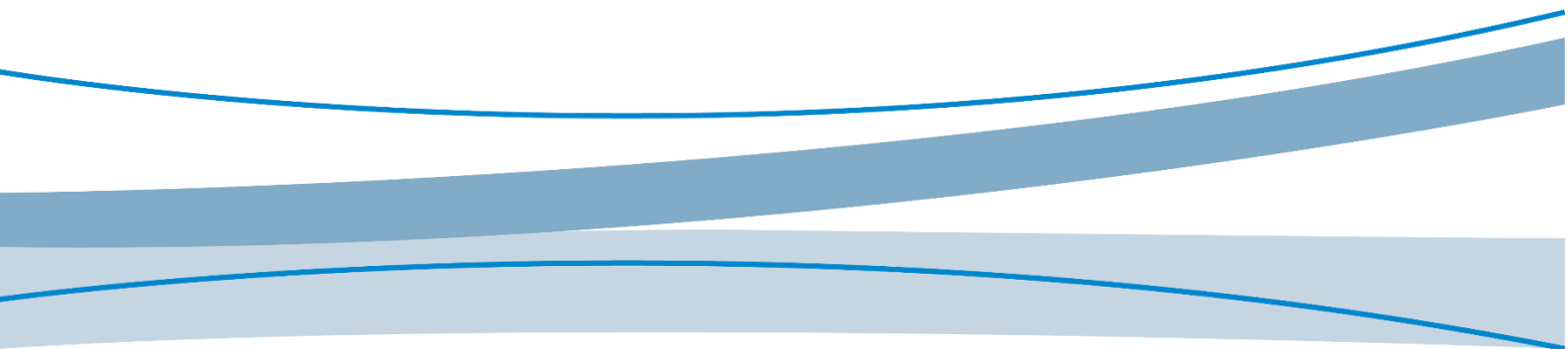




APM835-W User manual

V1.0



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Revision History

V1.0 (2025-06-27)	Initial version
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1 Product Overview

1.1 Introduction

The APM835-W PCBA board integrates peripheral interfaces including SOC to RTK interface, USB2.0 interface, power and UART interface, CAN interface, speaker interface, Debug interface and MIPI camera interface, facilitating the development, debugging and usage of the SOC platform.

1.1 .1 Key Performance

Performance parameters	Description
PCBA size	85 mm × 60 mm × 1.2 mm
Working voltage	7V~ 36V; Rated power: 12V
Working current	MAX 3A
Temperature range	Normal operating temperature: 0 ~ +50°C
	Storage temperature: -20 ~ +65°C
Humidity	Work humidity 0-90%
	Storage humidity 35-70%
CPU	16nm Technology / Process
	4-core ARM Cortex-A53 @ 1.5GHz, dual-core @ 1.2GHz
	Computing power: 5 TOPS (INT8)
Memory	2GB LPDDR4+ 8GB eMMC
USB2.0 host/device	USB2.0 High Speed (HS) interface, supporting device mode, with maximum transmission rate of 480 Mbps
Serial port communication	UART

2 Electrical characteristics

2.1 WIFI/BT Transmission power

The transmission power of APM835-W PCBA for WIFI and BT is as shown in the table below:

Table 1. WIFI/BT Max Transmission Power

Wireless Mode	Frequency(MHz)	Max Power (dBm)
WLAN 2,4G	2412-2472	18±2
BT BLE	2402-2480	7±2
WLAN 5G	5150-5250	18±2
	5250-5350	18±2
	5470-5725	18±2
SRD 5.8G	5745-5825	10±2

3 CE Regulatory Compliance Statement

RF exposure

This equipment complies with CE radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

Hereby, Fibocom Wireless Inc. declares that the radio equipment type of APM835-W is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: <https://www.fibocom.com/en/downloadcenter>.

Frequency band: 5150 - 5250 MHz:

Indoor use: Inside buildings only. Installations and use inside road vehicles and train carriages are not permitted. Limited outdoor use: If used outdoors, equipment shall not be attached to a fixed installation or to the external body of road vehicles, a fixed infrastructure or a fixed outdoor antenna. Use by unmanned aircraft systems (UAS) is limited to within the 5170 - 5250 MHz band.

Frequency band: 5250 - 5350 MHz:

Indoor use: Inside buildings only. Installations and use in road vehicles, trains and aircraft are not permitted. Outdoor use is not permitted.

Frequency band: 5470 - 5725 MHz:

Installations and use in road vehicles, trains and aircraft and use for unmanned aircraft systems (UAS) are not permitted.



FCC Conformance information

Federal Communication Commission Interference 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.

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.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device is intended only for OEM integrators under the following conditions: (For module device use)

1) The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

Important Notice to OEM integrators

1. This module is limited to OEM installation ONLY.
2. This module is limited to installation in mobile applications, according to Part 2.1091(b).
3. The separate approval is required for all other operating configurations, including portable configurations with respect to Part 2.1093 and different antenna configurations
4. For FCC Part 15.31 (h) and (k): The host manufacturer is responsible for additional testing to verify compliance as a composite system. When testing the host device for compliance with Part 15 Subpart B, the host manufacturer is required to show compliance with Part 15 Subpart B while the transmitter module(s) are installed and operating. The modules should be transmitting and the evaluation should confirm that the module's intentional emissions are compliant (i.e. fundamental and out of band emissions). The host manufacturer must verify that there are no additional unintentional emissions other than what is permitted in Part 15 Subpart B or emissions are complaint with the transmitter(s) rule(s).

The Grantee will provide guidance to the host manufacturer for Part 15 B requirements if needed.

Important Note

notice that any deviation(s) from the defined parameters of the antenna trace, as described by the instructions, require that the host product manufacturer must notify to Fibocom Wireless Inc. that they wish to change the antenna trace design. In this case, a Class II permissive change application is required to be filed by the USI, or the host manufacturer can take responsibility through the change in FCC ID (new application) procedure followed by a Class II permissive change application.

End Product Labeling

When the module is installed in the host device, the FCC label must be visible through a window on the final device or it must be visible when an access panel, door or cover is easily re-moved. If not, a second label must be placed on the outside of the final device that contains the following text: "Contains FCC ID: ZMOAPM835W"

The FCC ID can be used only when all FCC compliance requirements are met.

Antenna Installation

- (1) The transmitter module may not be co-located with any other transmitter or antenna.
 - (2) Only antennas of the same type and with equal or less gains as shown below may be used with this module. Other types of antennas and/or higher gain antennas may require additional authorization for operation.
- In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

Manual Information to the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual.

Radiation Exposure Statement

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