EWT103-W15 Series Development Board

User Manual



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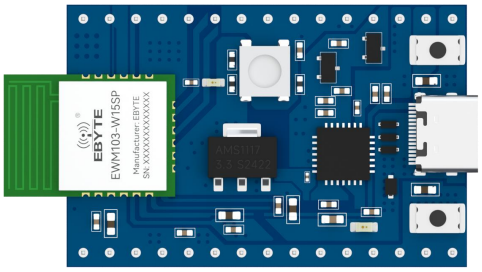
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1. Module Introduction

1.1 Features

EWT103-W15SP&EWT103-W15SX are two entry-level development boards, the core of which uses an ultra-small WiFi module EWM103-W15SP &EWM103-W15SX module. This development board has complete Wi-Fi functions , and most of the pins of the module on the board have been led out to the pin headers on both sides. Developers can easily connect a variety of peripheral devices through jumpers according to actual needs, and the development board can also be plugged into a breadboard for use.



1.2 Parameter Introduction

Serial number	Parameter name	Parameter Value	Notes
1	Support modules	EWM103-W15SP EWM103-W15SX	WiFi Serial Port Module
2	Module size	38.91 * 25.4 mm	With USB connector
3	Production process	Lead-free process, machine mounting	Wireless products must be machine-mounted to ensure batch consistency and reliability
4	Power supply interface	USB	-
5	Communication interface	TYPE-C	-
6	Operating temperature	-40 ~ +85℃	Industrial Grade
7	Operating humidity	10% ~ 90%	Relative humidity, non-condensing
8	Storage temperature	-40 ~ +125℃	Industrial Grade

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2. Functional Description

2.1 Component Introduction

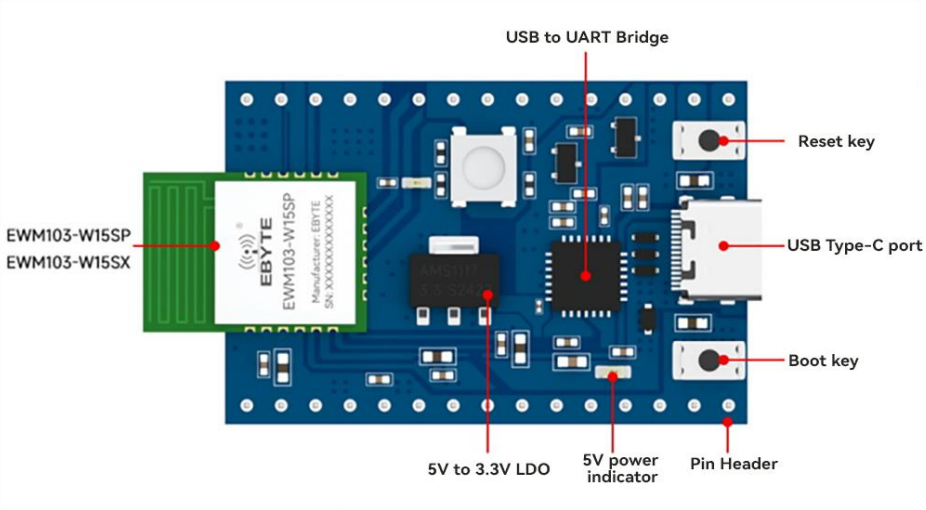


Figure 1 Main component diagram takes EWT103-W15SP as an example

Serial number	Main firmware	introduce
1	EWM103-W15SP EWM103-W15SX	EWM103-W15SP&EWM103-W15SX are universal Wi-Fi and Bluetooth 5.1 dual-mode modules. The two products use PCB onboard antennas and IPEX third-generation antennas respectively . This series of modules integrates a high-performance chip with 2 MB embedded flash . Since the flash is directly packaged in the chip, the module has a smaller package size.
2	5V to 3.3V LDO	Power converter, 5 V input, 3.3 V output.
3	5V power indicator	This indicator lights up when the development board is connected to a USB power source.
4	Pin Header	All available GPIO pins (except the flash SPI bus) are broken out to the board's pin headers. See Pin Headers for more information.
5	Boot key	Download button. Press the Reset button while holding down the Boot button to enter the "Firmware Download" mode and download the firmware through the serial port.
6	USB Type-C port	USB interface. Can be used as the power supply for the development board or as the communication interface between the PC and the module .
7	Reset key	Reset button.
8	USB to UART Bridge	Single-chip USB to UART bridge providing transfer rates up to 1 Mbps.

Note: For specific function instructions, please refer to the user manual of EWM103-W15SP & EWM103-W15SX.

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2.2 Pin Definition

The following figure shows the front view of EWT103-W15SP as an example:

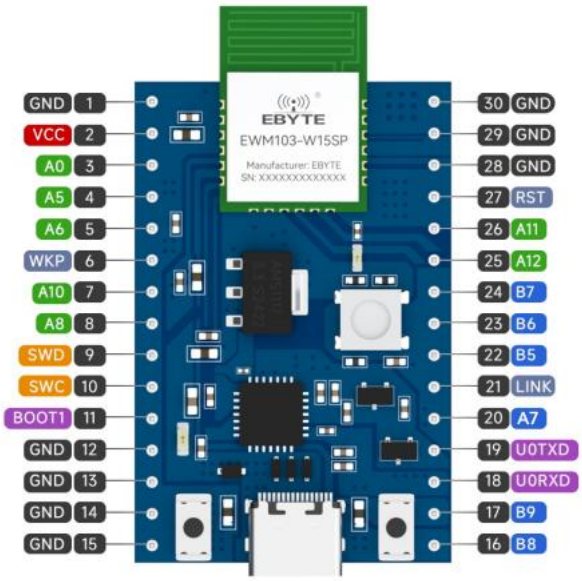


Figure 2 Current test interface diagram

Pin number	Pin Name	type	Pin Purpose
1	GND	G	-
2	VCC	P	-
3	A0	I/O/T	GPIO
4	A5	I/O/T	GPIO
5	A6	I/O/T	GPIO
6	B4	I/O/T	GPIO
7	A10	I/O/T	GPIO
8	A8	I/O/T	GPIO
9	SWD	-	-
10	SWC	-	-
11	BOOT1	I/O/T	-
12	GND	G	-
13	GND	G	-
14	GND	G	-
15	GND	G	-
16	B8	I/O/T	GPIO
17	B9	I/O/T	GPIO
18	U0RXD	O	Module serial port sending
19	U0TXD	I	Module serial port receiving
20	A7	I	Default SLEEP wake-up pin (rising edge or

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			falling edge is valid, depending on the actual configuration of the customer)
21	LINK	O	
22	B5	I/O/T	GPIO
23	B6	I/O/T	GPIO
24	B7	I/O/T	GPIO
25	A12	I/O/T	GPIO
26	A11	I/O/T	GPIO
27	RST	-	The chip enable pin is valid at a high level (the module is internally pulled up, and customers can use this pin to implement the hardware reset pin function).
28	GND	G	-
29	GND	G	-
30	GND	G	-

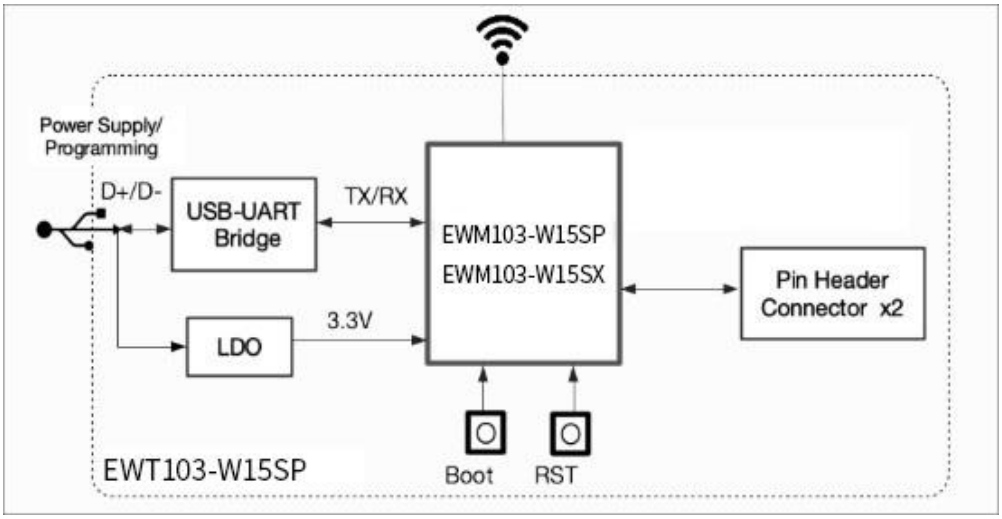
Note: 1. P : power supply; I: input; O: output; T: can be set to high impedance.

2. The power supply modes are Type-C USB port power supply (default), 5V and GND pin

header power supply, and 3V3 and GND pin header power supply.

2.3 Function Introduction

The main components and connections of EWT103-W15SP & EWT103-W15SX are shown in the figure below:



3 . Program burning and usage guide

- Before powering on, please make sure that the EWT103-W15SP & EWT103-W15SX are intact.
- Tools: EWT103-W15SP or EWT103-W15SX , TYPE-C data cable , computer (Windows, Linux or macOS). (Please make sure to use the appropriate USB data cable, some data cables can only

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be used for charging, not for data transmission and programming.)

- Connect the USB data cable and burn the program on the host computer software;

4 . Version Information

Version	Revision Date	Revision Notes	Maintainer
1.0	2025-2-25	Initial release	Hao

5 . About us

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