



## **GWESP3252B Datasheet V1.1**

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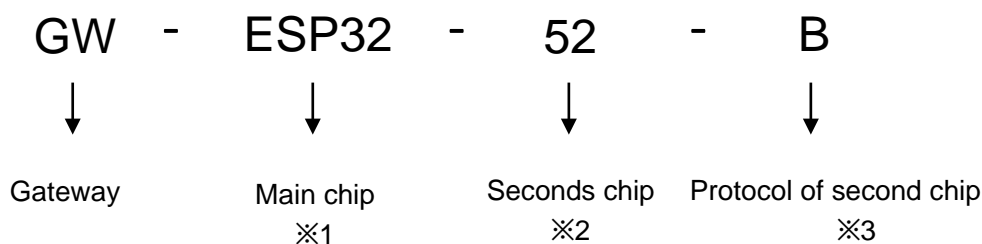
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## History

Date	Version	Description	Draft	Approval
2022-10-27	V1.0	Release	Weili Wang	Weili Wang
2022-11-21	V1.1	Modify Document.	Weili Wang	Weili Wang

## Gateway Name Information



※1 ESP32 means ESP32-D0WD

※2 52 means CC2652R

※3 B means BLE protocol

## Description

GWESP3252B uses two modules ESP32 + CC2652, mainly used in most home automation solutions. The gateway can be fully compatible with ZigBee2MQTT (open source software), Tasmota and other platforms or for SYSLS (not open source but free to use hex). The gateway can connect all smart sensors on the market, the main benefit of developing the gateway is that, at present, there may be Ikea, Xiaomi, Tmall, Philips, OSRAM..., etc., but in every smart home, all need to use their own network, and connected to each vendor's cloud, and the gateway that we have developed. The main characteristics are that, we can go to the ZigBee devices compatible with each house, and without access to every owner's cloud.

In the customer group part, if the general consumer, they can choose the gateway if they do not want to upload any data to the cloud. If the customer group is a system integration industry, they want to play a role like the Xiaomi ecosystem, and if they want to build their own monitoring cloud and sell the ZigBee Gateway by themselves, they can also choose the gateway. Our gateway has support for ZigBee2MQTT protocol and can directly connect with the cloud.

## Features

- Support docking with customers' own MQTT server.
- Support most WI-FI encryption methods and algorithms, WAP2-PSK/WAP-PSK, encryption type TKIP/AES.
- Support standard ZigBee router and End device.

## Applications

- Smart campus: campus resumption body temperature monitoring system, student positioning, check-in.
- Smart medical treatment: infusion monitoring and early warning system, body temperature monitoring system, patient positioning, health monitoring.
- Smart elderly care: health monitoring and early warning, elderly positioning.
- Smart city: environmental monitoring.
- Smart agriculture and animal husbandry: livestock positioning, livestock identification, greenhouse temperature and humidity monitoring.
- More scenes are waiting for you to discover...

## Processor and System

- Main control chip: ESP32-D0WD
- Communication protocol: MQTT IoT communication protocol (based on TCP/IP)

## ZigBee Parameters

The CC2652R device is a multi-protocol wireless 2.4GHz MCU for thread, ZigBee®, low-power Bluetooth® 5, IEEE 802.15.4g, IPv6-capable smart objects (6LoWPAN), Wi-SUN®, and proprietary systems, including TI 15.4-Stack.

The CC2652R device is a member of the SimpleLink™ MCU platform for cost-effective, ultra-low power, 2.4GHz and sub-1GHz RF devices. Very low active RF and microcontroller (MCU) current and sleep currents below 1µA and parity-protected RAM retention of up to 80KB provide excellent battery life and support energy harvesting on small coin cells Long-running work in the application.

Parameter		Min	Typ	Max	Unit
Operating Voltage		1.8	-	3.8	V
Operating Temperature		-20	-	+70	°C
Current Consumption	Sleep Mode	-	1		uA
	Receive Mode	-	6.9	-	mA
	Transmit Mode	-	9.6	-	mA
TX Power (For Carrier)		-		4	dBm
RX Sensitivity (For Lora Modulation)		-	-	-97	dBm
Distance		150			m

## Wi-Fi Parameters

- 802.11 b/g/n ,802.11 n (2.4 GHz) with speeds up to 150 Mbps
- Wireless multimedia (WMM)
- Frame aggregation (TX/RX A-MPDU, RX A-MSDU)
- Defragmentation
- Beacon automatic monitoring ( hardware TSF )
- 4 x invented , Wi-Fi joggle
- Also supports Infrastructure Network (Infrastructure BSS) Station mode / SoftAP mode / confounding mode Note that the SoftAP channel changes simultaneously when the ESP32 scans in Station mode.
- Antenna diversity

## Other Interfaces

- Reset button: 2 pcs
- LED indication: power indicator

## Dimensions and Weight

- Dimensions: 73.4(L)\*71.3mm(W)\*27mm(H) ( without Antenna )
- Weight : Gateway host 87.2g (including antenna, without power adapter)

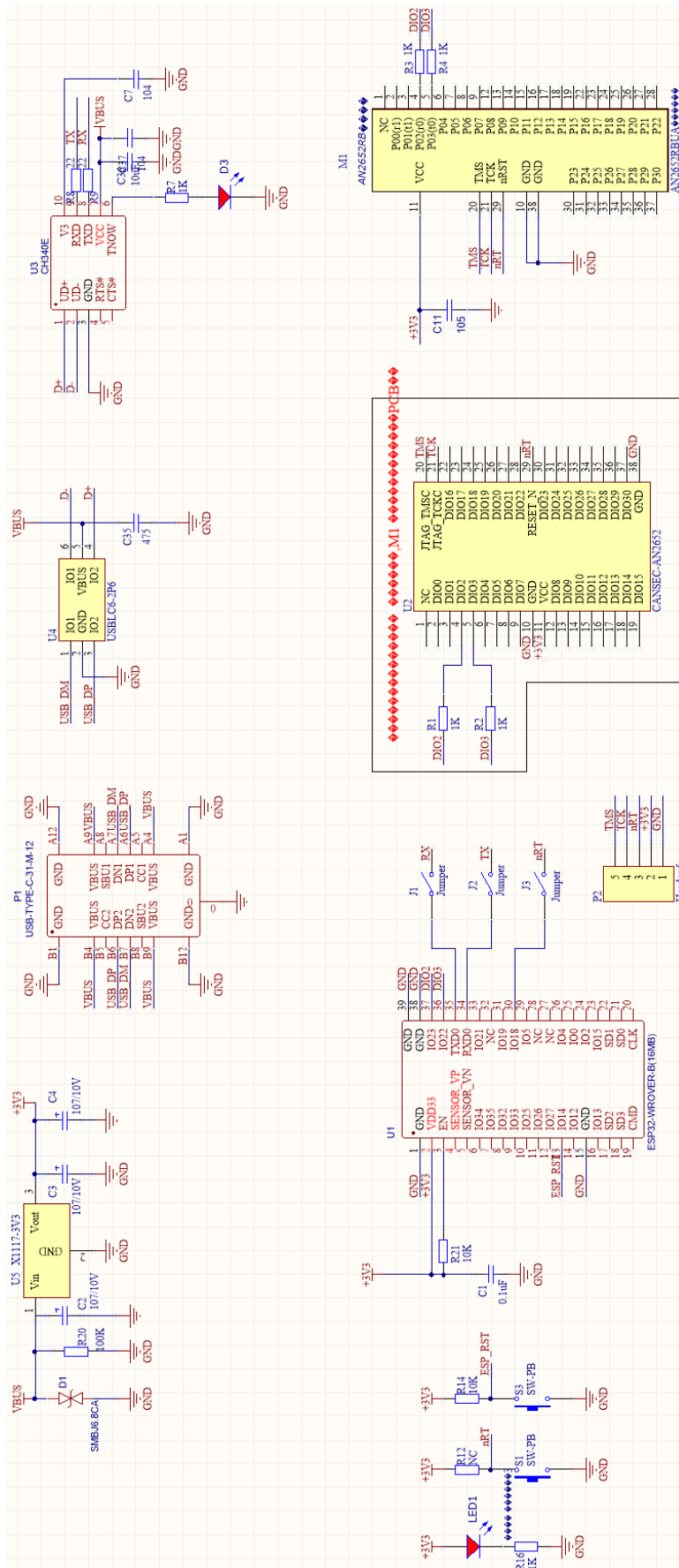




Interfaces	Definition
SMA1	2.4GHz Wi-Fi antenna
SMA2	2.4GHz BLE antenna
SW1	Main reset key
SW2	Slave reset key
LED	Power LED
Power supply	5V/1A Type-C port



# Schematic



## Specifications

Parameter	Min	Typ	Max	Unit
Operating Voltage	-	5	-	V
Operating Temperature	-20	-	+70	°C
Storage Temperature	-40	-	+125	°C

## Contact Details



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