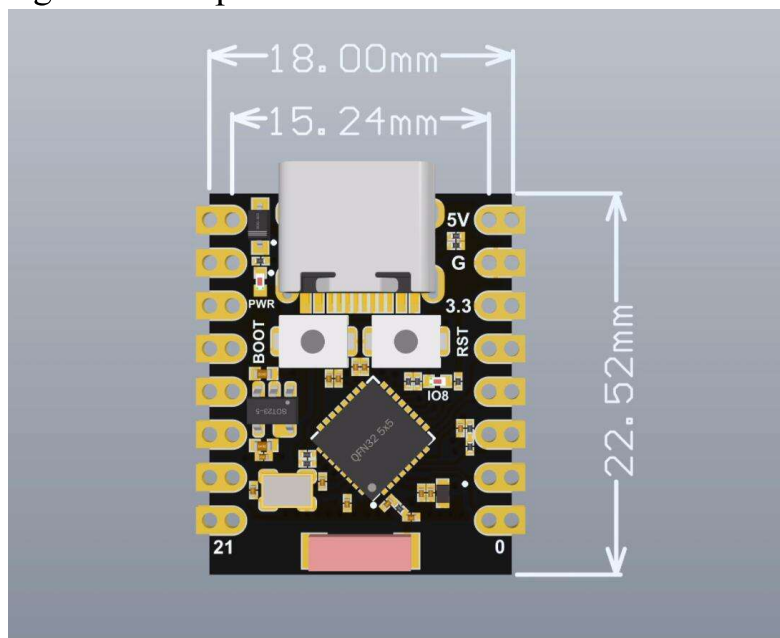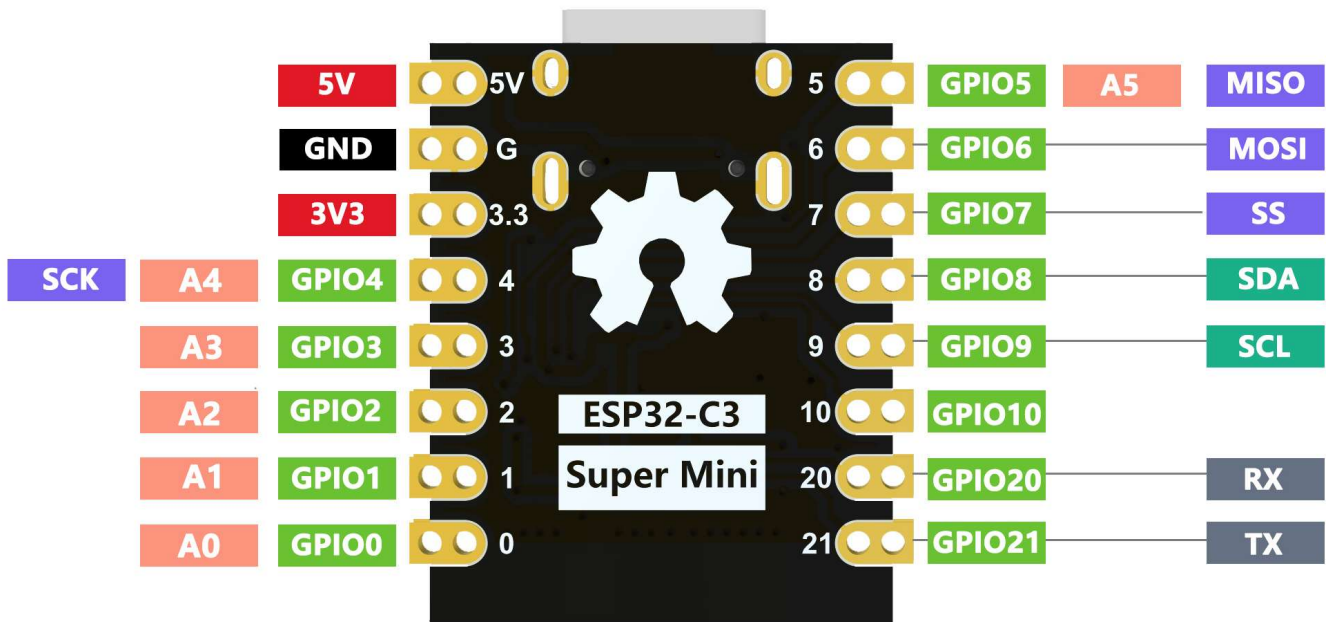## Product Introduction:

The ESP32 C3 SuperMini is an loT mini development board based on the Espressif ESP32-C3 WiFi/ Bluetoot hdual-mode chip. The ESP32-C3 is a 32-bit RISC-V CPU that contains the FPU (floating point unit) for32-bit single-precision operations with powerful computing power. It has excellent F performance and supportsIEEE 802.11b /g/n WiFi and Bluetooth 5 (LE) protocols. The board comes with an external antenna to enhance signal strength for wireless applications. It also has a small and delicate form factor combined with a single-sided surface mount design. It is equipped with a wealth of interfaces, with 11 digital I/ OS that can be used as PWM pins and 4 analog I/OS that can be usedas ADC pins. It supports four serial interfaces: UART, I2C and SPI. The oard also has a small reset button and a boot loader mode button.

Combined with the above features, the ESP32C3SuperMini is positioned as a high-performance,low-power,cost-effective iot mini development board for low-power iot applications and wireless wearable applications.

Product parameter:

1. Powerful CPU: ESP32-C3, 32-bit RISC-V single-core processor, running up to 160 MHz
.WiFi: 802.11b/g/n protocol, 2.4GhHz, support Station mode, SoftAP mode, SoftAP+Station mode, hybrid mode
3. Bluetooth: Bluetooth 5.0
4.Ultra-low power consumption: deep sleep power consumption of about 43uA
5.Rich board resources: 400KB SRAM, 384KB ROM built-in 4Mflash.
6.Chip model: ESP32C3FN4
7.Ultra-small size: As small as the thumb (22.52x18mm) classic shape, suitable for wearables and small projects
8.Reliable security features: Encryption hardware accelerators that support AES-128/256, hashing, RSA, HMAC,digital signatures, and secure startup
9.Rich interface: 1x12C, 1xSPI, 2xUART, 11xGPIO(PWM), 4xADC
0.Single-sided components, surface mount design
11 Onboard LED blue light: GPIO8 pin

ESP32-C3 Super Mini

		Left pins	Pin No.		Right pins		
		5V	5V	5	GPIO5	A5	MISO
		GND	G	6	GPIO6		MOSI
		3V3	3.3	7	GPIO7		SS
SCK	A4	GPIO4	4	8	GPIO8		SDA
	A3	GPIO3	3	9	GPIO9		SCL
	A2	GPIO2	2	10	GPIO10		
	A1	GPIO1	1	20	GPIO20		RX
	A0	GPIO0	0	21	GPIO21		TX

ESP32-C3 Super Mini

Legend: ■ Pin No. ■ Power ■ ADC ■ SPI ■ GND ■ UART ■ Digital

VBUS PD1 USB1 VSYS
SMD SOD323 BAT60J (ST意法半导体)

B4/A9
A4/B9
VBUS_1
VBUS_2

GND UR1 CC1
SMD 0201 5.1K 5%
D+A6 Dp1
D- A7 Dn1
A8 RFU1

CC1 RFU2
Dp1 Dn2
Dn1 Dp2
RFU1 CC2

B8
B7D UR2 USBD_N
B6D UR3
B5C UR4 USBD_P
SMD 0201 5.1K 5%

SMD 0201 22R 5%

A1/B12 GND_1
B1/A12 GND_2
SMD TYPE-C 16P
GND

SMD 0402 10uF 10V 10%
VSYS
PC1
GND

PU1
IN OUT
EN
BP
GND
SMD SOT23-5 ME6211-3.3V3

3.3V
PC2
SMD 0402 10uF 10V 20%
GND

H1
GPIO5 1
GPIO6 2
GPIO7 3
GPIO8 4
GPIO9 5
GPIO10 6
GPIO20 7
GPIO21 8
Header 8

H2
VBUS 8
GND 7
3.3V 6
GPIO4 5
GPIO3 4
GPIO2 3
GPIO1 2
GPIO0 1
Header 8

SMD 0201 100nF 10V 10%
SMD 0201 1uF 10V 10%

3.3V
UC1 UC2
GND

SMD 0402 10UF 10V 10%
SMD 0201 1uF 10V 10%
SMD 0201 100nF 10V 10%
3.3V
UC4 UC5 UC6
GND GND GND

XTAL_P
XTAL_N
U0TXD
USBD_P
USBD_N

U0TXD GPIO21
U0RXD GPIO20

33 32 31 30 29 28 27 26 25
EP VDDA YDDA XTAL_N XTAL_P U0TXD U0RXD GPIO19 GPIO18

A1
0
1
UR9
UC8 UC9
WIFI天线
UR15
SMD 0201 10K 5%
GND GND
3.3V

1 LNA_IN
2 VDD3P3
3 VDD3P3
4 XTAL_32K_P
5 XTAL_32K_N
6 GPIO2
7 CHIP_EN
8 GPIO3

GPIO0
GPIO1
GPIO2
CHIP_EN
GPIO3

24 SPIQ
23 SPID
22 SPICLK
21 SPICS0
20 SPIWP/GPIO13
19 SPIHD/GPIO12
18 VDD_SPI
17 VDD3P3_CPU

SPIQ
SPID
SPICLK
SPICS0
SPIWP/GPIO13
SPIHD/GPIO12
VDD SPI/GPIO11
3.3V

MTMS
MTDI
VDD3P3_RTC
MTCK
MTDO
GPIO8
GPIO9
GPIO10
9 10 11 12 13 14 15 16

GPIO4
GPIO5
3.3V
UC13
GPIO6
GPIO7
GPIO9
GPIO8
UR10
SMD 0201 10K 5%
3.3V
SMD 0201 100nF 10V 10%
GND

SMD 0201 1uF 10V 10%
UC12
SMD 0201 1uF 10V 10%
UC11
SMD 0201 10nF 10V 10%
UC10

3.3V
UR5 UR6
SMD 0201 10K 5%
CHIP_EN
GPIO9 BOOT
SMD 0201 100nF 10V 10%
UC7
K2 K1
LED R 0603
SMD KEY 3*4*2 2P按键

VSYS 3.3V
UR7 UR8
SMD 0201 5.1K 5%
CD1 CD2
LED B 0603
GPIO8
GND

CY1
SMD 3325 40M
XTAL_P Y+ Y- XTAL_N
G G
SMD 0201 15pF 16V 10%
CC1 CC2
SMD 0201 15pF 16V 10%
GND GND