JC-ESP32P4-M3-C6 module

List

Product description

It is an ESP32-P4 core board with integrated ESP32-C6, supporting Wi-Fi 6 and Bluetooth 5 wireless connectivity. It provides rich HCI interfaces including MIPI-CSI (Integrated Image Signal Processor ISP), MIPI-DSI, SPI, I2S, I2C, LED PWM, MCPWM, RMT, ADC, UART, TWAI and so on. In addition, USB OTG 2.0 HS is supported.The ESP32-P4 adopts a 400MHz dual-core RISC-V processor, supports up to 32MB PSRAM, and is equipped with peripherals such as USB 2.0, MIPI-CSI/DSI, H.264 encoding, etc., which meets the needs of low-cost, high-performance and low-power multimedia development. In addition, ESP32-P4 integrates digital signature peripheral and dedicated key management unit to ensure data and operation security..

Features

●High-performance MCUs with RISC-V 32-bit dual-core and single-core processors

●Main frequency up to 360M

●Maximum support 800*1280

●There are MIPI-CSI, MIPI-DSI, USB 2.0 OTG, SDIO 3.0 SD interfaces

available

●32MB PSRAM stacked in chip package, 16MB Nor Flash integrated in module

●128KB HP ROM, 16KB LP ROM, 768KB HP L2MEM, 32KB LP SRAM, 8KB TCM

●Provide arduino library functions and sample programs to facilitate rapid secondary development

Product parameters

Name	Describe	Remark
SKU	JC-ESP32P4-M3-A6	
Resolution	Maximum support 800*1280	
Series	M series	
Master Frequency	360M	
Operating Voltage	3.3V	
Wireless network	ESP32-C6　WiFi 6	
Storage Space	16M	
Operating Temperature	-20℃~+70℃	
Interfaces	CSI/DSI/USB2.0	
Size	27*27*3.4mm	

Interface Description

Product Size

27mm

27mm

Thicknesses 3.4mm

**Size Comparison**

27mm

27mm

25mm
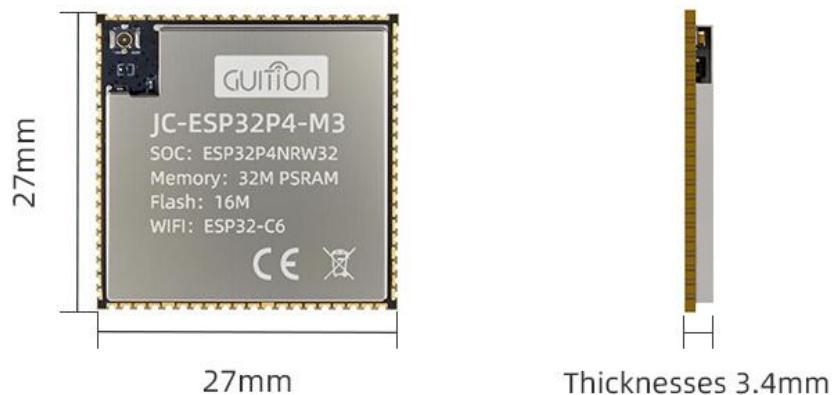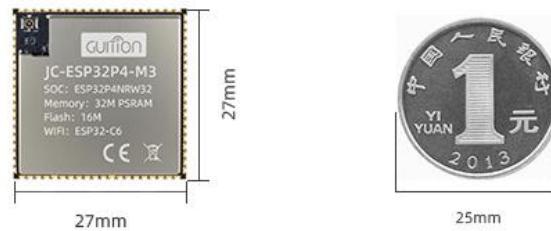
Warning:

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

NOTE:

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.

FCC Statement:

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 or more 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.

The equipment complies with FCC Radiation exposure limit set forth for uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Information to user

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.

Labelling Requirements for the Host device

The host device shall be properly labelled to identify the modules within the host device. The certification label of the module shall be clearly visible at all times when installed in the host device, otherwise the host device must be labelled to display the FCC ID of the module, preceded by the words "Contains transmitter module", or the word "Contains", or similar wording expressing the same meaning, as follows:

Cricket

MODEL:JC-ESP32P4-M3-C6

FCC ID:2BRXA-ESP32P4-M3-C6

The host OEM user manual must also contain clear instructions on how end users canfind and/or access the module and the FCC ID .Cricket

MODEL:JC-ESP32P4-M3-C6

FCC ID:2BRXA-ESP32P4-M3-C6

OEM Statement

2.1 General

Integration instructions are provided to ensure proper installation of this module into host products. The module must be integrated only by OEM manufacturers or professional installers. End users are not permitted to install or remove the module. The host manufacturer shall follow all integration guidance in this document, including antenna type, RF exposure separation requirements, labeling, and host compliance obligations.

2.2 List of applicable FCC rules

This module has been evaluated for compliance with the following FCC rules:

CFR 47 FCC Part 15 Subpart C (Section 15.247 for 2.4 GHz operation)

CFR 47 FCC Part 15 Subpart B (unintentional radiators – host product responsibility)

2.3 Summarize the specific operational use conditions

This module is approved as a stand-alone modular transmitter for mobile or fixed applications. A minimum separation distance of 20 cm between the antenna and the user must be maintained. If the host product requires simultaneous transmission with other radios or has operational conditions not covered by this modular approval, the host manufacturer must consult with the module manufacturer and may be required to perform additional testing to demonstrate compliance

2.4 Limited module procedures

Not applicable. This device has been granted full modular approval and does not require limited module procedures.

2.5 Trace antenna designs

Not applicable. This module does not employ a trace antenna design. Only the approved antenna(s) listed in Section 2.7 may be used.

2.6 RF exposure considerations

This equipment complies with FCC RF radiation exposure limits for an uncontrolled environment. It must be installed and operated with a minimum distance of 20 cm between the radiator (antenna) and the user's body. Portable applications requiring SAR evaluation are not supported.

2.7 Antennas

This radio transmitter, FCC ID: 2BRXA-ESP32P4-M3-C6, has been approved for use with the following antenna type: PCB antenna, maximum gain 0 dBi

Use of any other antenna type or antennas with gain higher than listed above is strictly prohibited.

2.8 Label and compliance information

The final end product must be labeled in a visible area with the following text:Contains FCC ID: 2BRXA-ESP32P4-M3-C6 ,The label must be permanently affixed, visible, and legible.

2.9 Information on test modes and additional testing requirements

The module supports test modes that can be activated via the manufacturer's provided software tools or commands. These modes allow the host manufacturer or test lab to perform compliance testing (e.g., continuous transmission). The host manufacturer is strongly recommended to verify FCC compliance of the final system when the module is installed.

2.10 Additional testing, Part 15 Subpart B disclaimer

The host manufacturer is responsible for ensuring that the final host product complies with FCC Part 15 Subpart B requirements (unintentional radiators), with the module installed. Additional testing may be required to demonstrate compliance.

2.11 OEM installation limitation

This module is limited to OEM installation only. It must be integrated by the OEM manufacturer or a professional installer and is not intended for end-user installation.

2.12 End-user instructions restriction

The OEM integrator is responsible for ensuring that end-users are not provided with any instructions to install or remove the module. All integration must be performed at the OEM manufacturing stage.

2.13 Installation limitation

This module is limited to installation in mobile or fixed applications. It must not be installed in portable applications as defined by FCC Part 2.