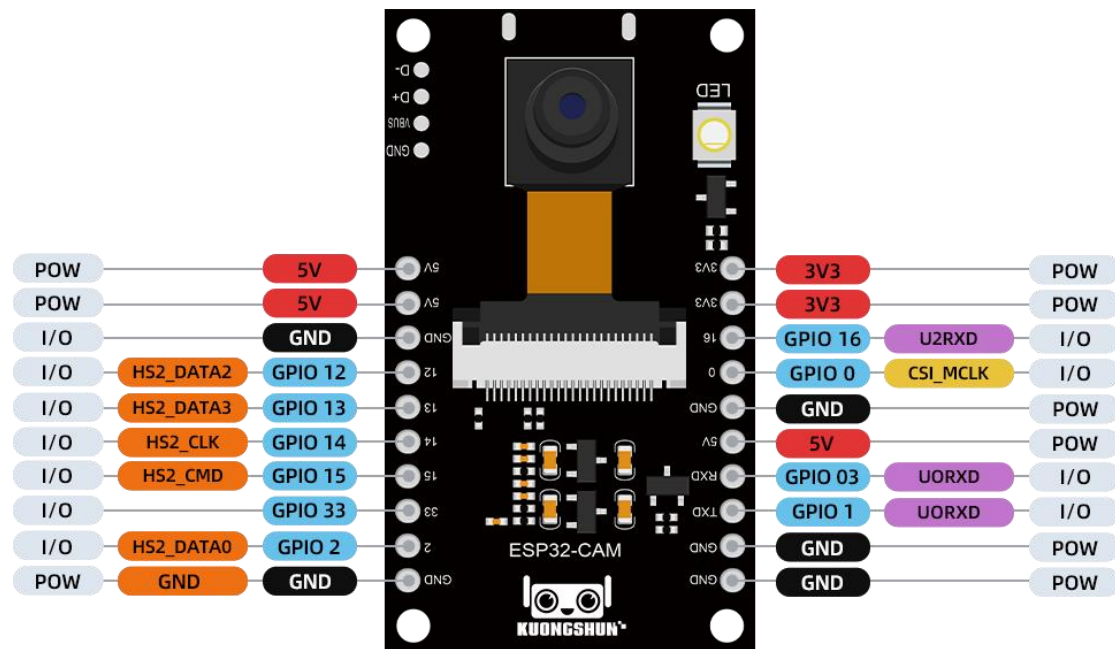


ESP32-CAM Module



Overview

The ESP32-CAM features a highly competitive small-size camera module in the industry. This module can function as a standalone system with compact dimensions of 27.1 × 47.1 mm.

The ESP32-CAM is widely applicable in various IoT scenarios, making it suitable for smart home devices, industrial wireless control, wireless monitoring, QR code wireless recognition, wireless positioning systems, and other IoT applications. It serves as an ideal solution for IoT projects.

With its DIP package, the ESP32-CAM can be directly plugged into a baseboard for easy use, enabling rapid product development. It provides a highly reliable connection method, making it convenient for integration into various IoT hardware applications.

Features

Ultra-small 802.11b/g/n Wi-Fi + BT/BLE SoC module

Low-power dual-core 32-bit CPU, can function as an application processor

Main frequency up to 240MHz, computing power up to 600 DMIPS

Built-in 520KB SRAM, external 4M PSRAM

Supports OV2640 and OV3660 cameras, with built-in flash

Supports image upload via Wi-Fi

Supports STA/AP/STA+AP operating modes

Supports multiple sleep modes

Product technical specifications

Module model	ESP32-CAM
Dimensions	27.1*47.1mm
SPI Flash	Default 32Mbit
RAM	Internal 520KB + External 4M PSRAM
Bluetooth	Bluetooth 4.2 BR/EDR and BLE standards
Wi-Fi	802.11 b/g/n/e/i
Supported interfaces	UART、SPI、I2C、PWM
I/O	9 个
Serial baud rate	Default 115200 bps
Image output format	JPEG (supported only by OV2640), BMP, GRAYSCALE
Spectrum range	2412~2484MHz
Transmit power	802.11b: 17±2 dBm(@11Mbps) 802.11g: 14±2 dBm(@54Mbps) 802.11n: 13±2 dBm(@MCS7)
Receiver sensitivity	CCK,1Mbps:-90dBm CCK,11Mbps:-85dBm 6 Mbps(1/2 BPSK): -88dBm 54 Mbps(3/4 64-QAM): -70dBm

	MCS7(65Mbps, 72.2 Mbps): -67dBm
Power consumption	Flash off: 180mA @ 5V Flash on (maximum brightness): 310mA @ 5V Deep-sleep: Minimum power consumption can reach 6mA @ 5V Modem-sleep: Minimum power consumption can reach 20mA @ 5V Light-sleep: Minimum power consumption can reach 6.7mA @ 5V
Security	WPA/WPA2/WPA2-Enterprise/WPS
Power supply range	5V
Working temperature	-20℃~85 ℃
Storage environmen	40℃~90 ℃, <90%RH