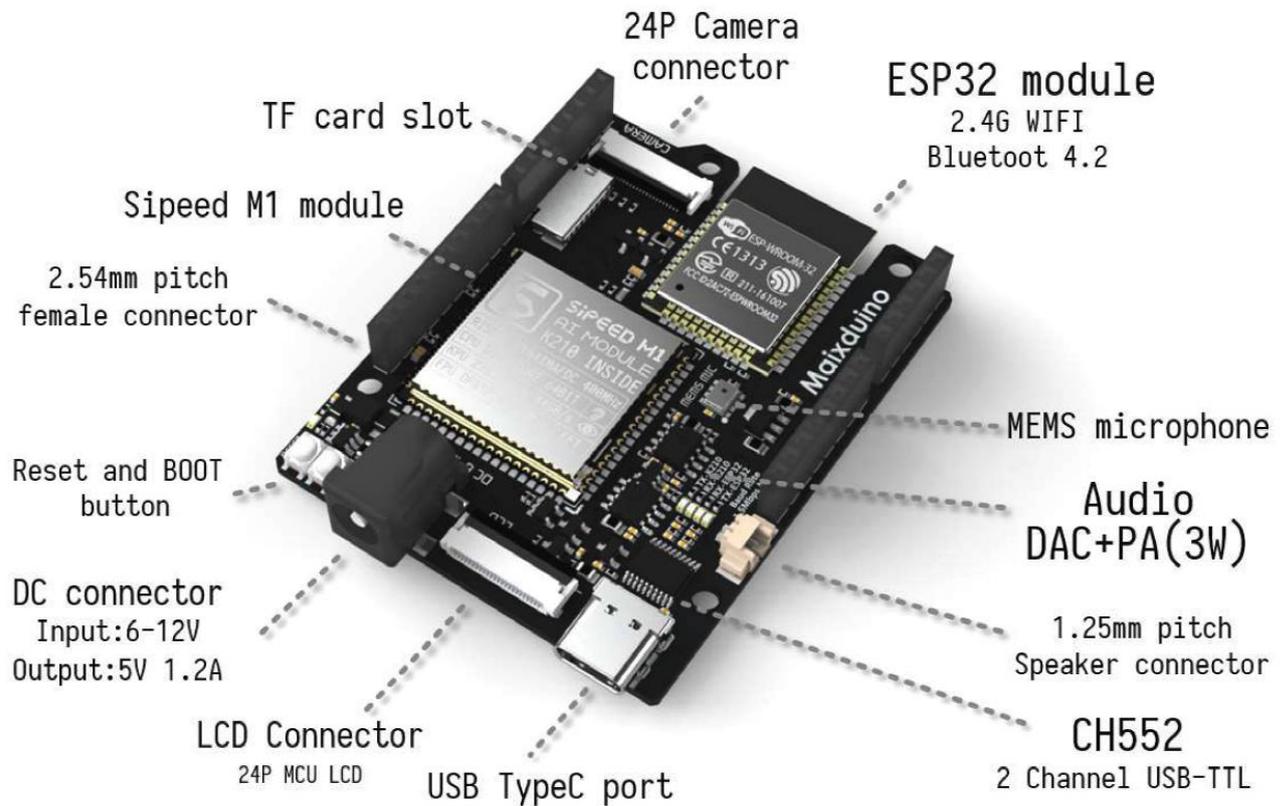


Based on MAIX Module, the Maixduino is a RISC-V 64 development board for AI + IoT applications. Different from other Sipeed MAIX dev. boards, the Maixduino was designed with an Arduino Uno form factor that includes an ESP32 module onboard together with MAIX AI module.



#### Features

- CPU: RISC-V Dual Core 64bit, with FPU; 400MHz neural network processor
- QVGA@60FPS/VGA@30FPS image identification
- Onboard ESP32 module support 2.4G 802.11. b/g/n and Bluetooth 4.2
- Arduino Uno form factor, Arduino compatible interface
- Onboard omnidirectional I2S digital output MEMS Microphone
- 24P 0.5mm FPC connector for DVP Camera
- 8bit MCU LCD 24P 0.5mm FPC connector
- Support self-elastic micro SD card holder
- Reset and boot button; 3W DAC+PA Audio output
- Just connect the USB Type-C cable to complete the download
- Machine vision based on convolutional neural network
- High performance microphone array processor for machine hearing
- Support MaixPy IDE, Arduino IDE, OpenMV IDE, and PlatformIO IDE
- Support Tiny-Yolo, Mobilenet and TensorFlow Lite for deep learning



MAIX is Sipeed's purpose-built product series designed to run AI at the edge. Move AI models from cloud down to devices on the edge of the network where they can run faster, at lower cost, and with greater privacy.

MAIX isn't just a hardware solution; it combines custom hardware, open software and state-of-the-art AI algorithms. Different kinds of dev. boards, kits, peripherals as well as wide compatibility enable rapid and agile prototype development to make IoT projects much easier. And thanks to MAIX' s performance, small footprint, low power and low cost - it enables the broad deployment of high-quality Edge AI.

#### Applications

##### Smart Home

Applications like robot cleaners, smart speakers, electronic door locks, household monitoring etc.

##### Medical Industry

Applications like Auxiliary diagnosis and treatment, medical image recognition, emergency alarm etc.

##### Smart Industry

Applications like industrial machinery, intelligent sorting, monitoring of electrical equipment, etc.

##### Education

Applications like educational robots, intelligent interactive platforms, educational efficiency inspection, etc.

##### Agriculture

Applications like agricultural monitoring, pest and disease monitoring, automated control, etc.

#### Specifications

Master module	Speed MAIX-I AIoT module
Power input	USB Type-C DC-DC step-down circuit:support 6-12V input;Provide 5V 1.2A output
Micro SD card (TF card) slot	Support Self-elastic card holder
Onboard MEMS microphone	MSM261S4030H0 is an omnidirectional, Bottom-ported, I2S digital output MEMS Microphone. It has high performance and Reliability.
DVP Camera interface	24P 0.5mm FPC connector
LCD connector	8bit MCU LCD 24P 0.5mm FPC connector
Audio output	DAC+PA: TM8211:16 bit dynamic range;Low harmonic distortion NS4150:3W output power;Up to 90% efficiency;
ESP32 module	Support 2.4G 802.11.b/g/n 802.11 n (2.4 GHz) speeds up to 150 Mbps Bluetooth v4.2 full standard, including traditional Bluetooth (BR/EDR) and Bluetooth Low Energy (BLE)
Supply voltage of external power supply	4.8V ~ 5.2V
Supply current of external power supply	>600mA

Temperature rise	<30K
Range of working temperature	-30°C ~ 85°C
MCU: ESP8285	Tensilica L106 32-bit MCU
Wireless Standard	802.11 b/g/n
Frequency Range	2400Mhz - 2483.5Mhz
TX Power(Conduction test)	802.11.b : +15dBm 802.11.g : +10dBm(54Mbps) 802.11.n : +10dBm (65Mbps)
Antenna Connector	IPEX 3.0x3.0mm
Wi-Fi mode	Station/SoftAP/SoftAP+Station