

INDUSTRIAL PRODUCT DATASHEET

Sipeed Maixduino Kit for RISC-V AI + IoT

Sipeed Maixduino Kit for RISC-V AI + IoT: an Arduino Uno form factor RISC-V 64 AI development board with 400MHz neural network processor, ESP32 Wi-Fi/Bluetooth, camera/display/microphone support, and compatibility with...

SKU

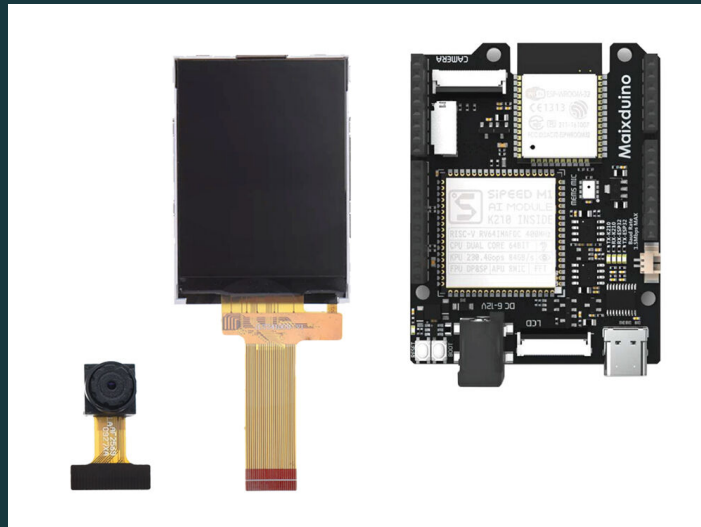
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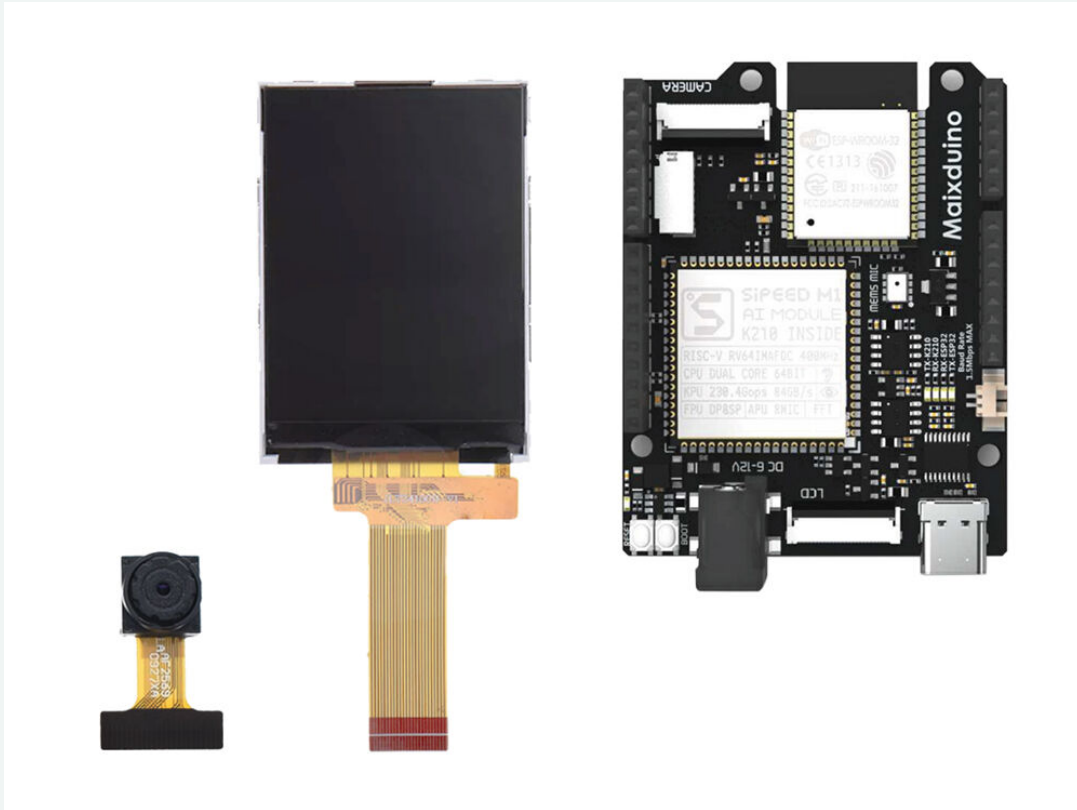
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PRICE

\$34.90(Excl. VAT)



Overview



The Sipeed Maixduino Kit for RISC-V AI + IoT is a MAIX Module-based development board in Arduino Uno form factor, featuring a RISC-V dual-core 64-bit CPU with FPU, a 400MHz neural network processor, onboard ESP32 2.4G 802.11 b/g/n and Bluetooth 4.2, I2S MEMS microphone, camera and LCD FPC connectors, microSD card holder, 3W DAC+PA audio output, and USB Type-C download. It supports QVGA@60FPS/VGA@30FPS image identification, machine vision based on convolutional neural networks, and machine hearing, with software support for MaixPy IDE, Arduino IDE, OpenMV IDE, PlatformIO IDE, Tiny-Yolo, Mobilenet, and TensorFlow Lite, targeting applications such as smart home, medical industry, smart industry, education, and agriculture.

Key Features

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

| 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, make AIoT 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.

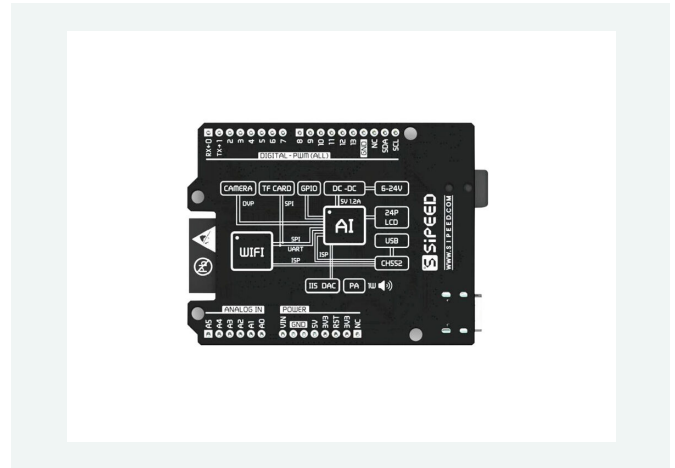
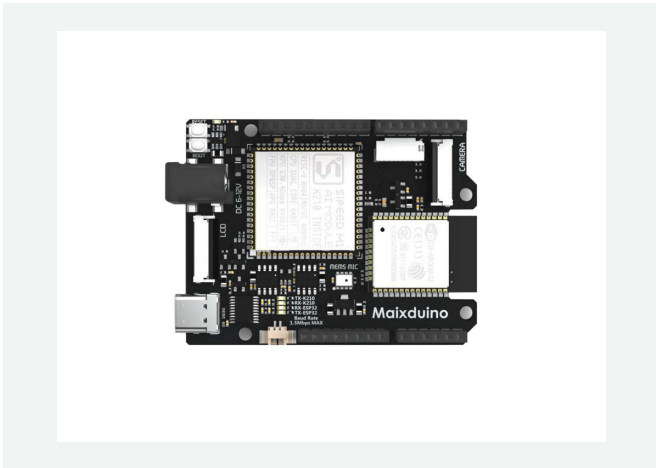
Agriculture applications like agricultural monitoring, pest and disease monitoring, automated control, etc.

Specification

Part List

- 1 x Maixduino dev. board
- 1 x GC0328 camera module
- 1 x 2.4 inch TFT Display

Product Gallery



Specification

Master module	Sipeed 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

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- **Smart Home:** applications like robot cleaners, smart speakers, electronic door locks, household monitoring etc.
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Compliance & Logistics



HSCODE	8517180050
USHSCODE	8517180050
UPC	
EUHSCODE	8543709099
COO	CHINA

Resource Links

- <https://www.seeedstudio.com/Sipeed-Maixduino-Kit-for-RISC-V-AI-IoT-p-4047.html>
- [Maixduino USB Serial Port Driver Issue](#)
- [Maixduino HDK\(Hardware Design Kit\)](#)
- [Maixduino SDK\(Software Design Kit\)](#)
- [Maixduino Main Page](#)
- [GC0328 Camera Datasheet](#)

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