M1 Dock AI Development Kit

SKU:KIT0144

INTRODUCTION

Artificial intelligence tide is sweeping across our world. All open sources developers and AI geekers, good news, come to see this excellent M1 Dock AI development kit. With the integrated Micropython in the module, you can start you AI development with ease!

The development kit adopts professional AI chip K210, a dual-core RISC-V with an FPU. It serves as the core unit and dual-core processing with independent FPU, 64-bit CPU and 8M in-built SRAM. With a 400Mhz adjustable nominal frequency, it supports multiplication, division and square root operation. In the AI processing, AI chip K210 can perform operations such as convolution, batch normalization, activation and pooling. At the same time, the pre-processing of voice direction scanning and voice data output can also be performed. This module can realize face detection, voice, color and object recognition, MNIST handwritten digit recognition, feature map visualization, tiny yolov2 and so on.

M1 Dock Embedded AI development platform is composed of M1 Dan Dock, OV2640 camera, 2.4 inches LCD with 320*240 resolution, and it also has built-in microphone, TF card slot and on-board USB to serial chip for downloading and debugging codes. With so many powerful functions, I am sure this product would be the best choice for all AI enthusiasts!

FEATURES

- Digital Video Port (DVP) interface support
- Universal Asynchronous Receiver/Transmitter(UART)
- Direct Memory Access Controller (DMAC)
- Joint Test Action Group(JTAG)
- I2C, I2S, SPI interfaces
- Field Programmable IO Array (FPIOA/IOMUX)
- AES and SHA256 algorithm hardware accelerators
- Fast Fourier Transform (FFT) hardware accelerator
- Neural Network Processor (KPU)
- Audio processor (APU)

SPECIFICATION

- Machine Vision
- Machine Hearing
- Low power, better vision processing speed and accuracy
- KPU high performance Convolutional Neural Network (CNN) hardware accelerator
- Firmware encryption support
- Unique programmable IO array maximises design flexibility
- FPC24P socket for DVP camera and 8-bit MCU LCD
- 3.3V/1.8V dual voltage IO support eliminates need for level shifters
- Access to all 72-pin full pin lead-out, freely mappable
- USB Type-C interface
- Power amplifier IC for use with speakers

- Built-in microphone
- TF card slot
- On-board Wifi, adopt ESP8285 chip
- Onboard high-speed DAC
- Microphone Array expansion board for sound localization, beam forming, speech recognition etc.

DOCUMENTS

- Product wiki

SHIPPING LIST

- M1 Dock AI Development Kit x1