

Sipeed MaixDock Datasheet

v1.0



Features:

- CPU: RISC-V 64-bit dual-core processor, 400MHz standard clock (overclockable)
- Image recognition: QVGA@60FPS / VGA@30FPS
- MEMS microphone: MSM261S4030H0
- Sensitivity: -26 (dB, dBFS @1kHz 1Pa)
- Audio: DAC + PA (supports 2x3W speakers)
- Micro SD card slot (TF card)
- Download circuit: firmware download requires only a USB Type-C cable
- 24-pin DVP and 24-pin MCU LCD connectors
- Wireless (optional): supports 2.4G 802.11 b/g/n

Document Revision History

V1.0	Edited July 9, 2019; original document

Feature Overview

Main Module	Sipeed M1 or M1W AIoT module (for more details, please refer to the following datasheets: Sipeed M1 Datasheet V1.1.pdf and Sipeed M1W Datasheet V1.0)
GPIO Interface	All GPIOs are connected to through-hole pads on a 2.54mm pitch
Micro SD Card (TF Card) Slot	Small-form-factor TF card slot
Onboard MEMS Microphone	The MSM261S4030H0 is an omnidirectional, bottom-port, I2S digital-output MEMS microphone. It offers high performance and reliability.
DVP Camera Interface	24-pin 0.5mm FPC connector
LCD Interface	24-pin 0.5mm FPC connector (8-bit MCU LCD)
Audio	TM8211 DAC + PAM8403 PA (supports 2x3W speakers)
Buttons	Boot button and Reset button

Software Overview

FreeRTOS & Standard SDK	Supports FreeRTOS and the Standard development kit.
MicroPython Support	Supports MicroPython on M1
Machine Vision	Machine vision based on convolutional neural networks
Machine Hearing	High-performance microphone array processor

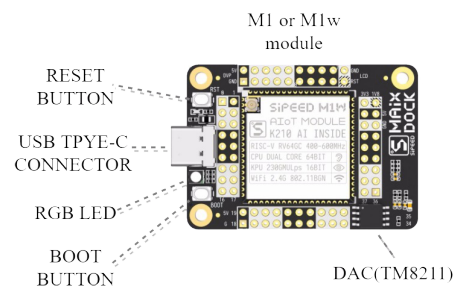
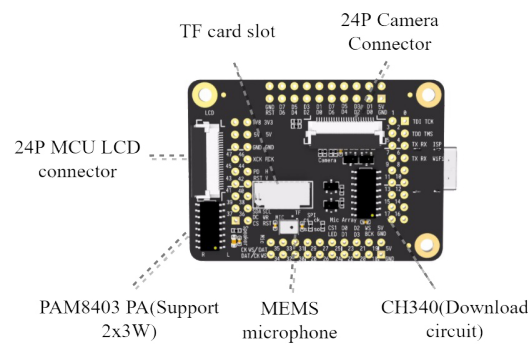
Hardware Overview

External Supply Voltage Requirement	4.8V ~ 5.2V
External Supply Current Requirement	>600mA
Temperature Rise	<30K
Operating Temperature Range	-30°C ~ 85°C

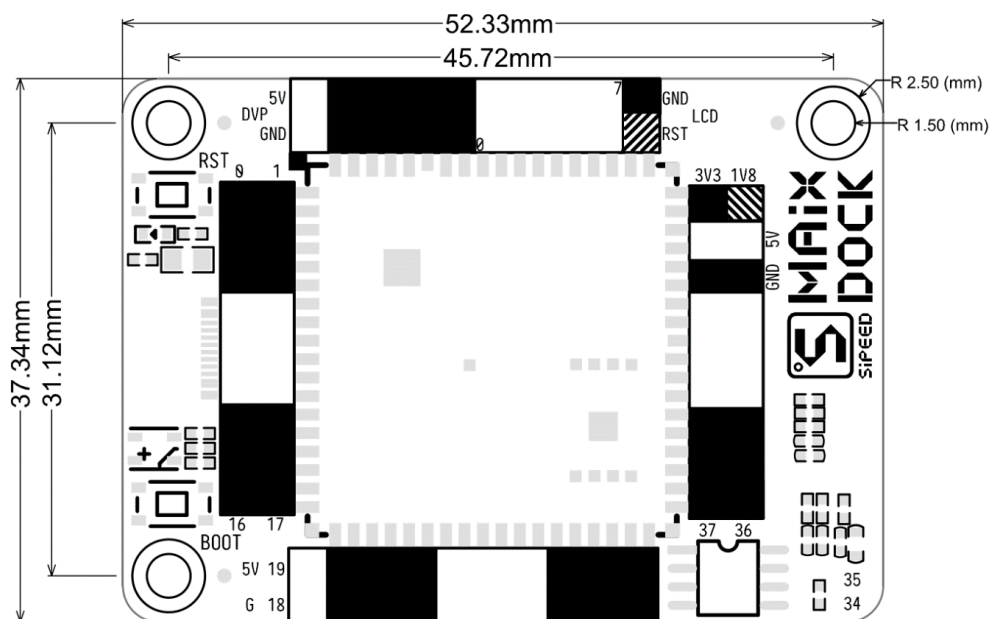
RF Characteristics (M1w-Dock only)

MCU: ESP8285	Tensilica L106 32-bit MCU
Wireless Standard	802.11 b/g/n
Frequency Range	2400MHz - 2483.5MHz
Transmit Power (Conducted 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

General Description



Dimensions	
Length	52.33mm
Width	37.34mm



Resources	
Official Website	www.sipeed.com
Github	https://github.com/Lichee-Pi
BBS	http://bbs.sipeed.com
Wiki	maixpy.sipeed.com
Sipeed Model Hub	https://maixhub.com/
SDK Information	dl.sipeed.com/MAIX/SDK
HDK Information	dl.sipeed.com/MAIX/HDK
E-mail (Technical Support & Business Cooperation)	support@sipeed.com
Telegram Link	https://t.me/sipeed
AI QQ Group	878189804

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