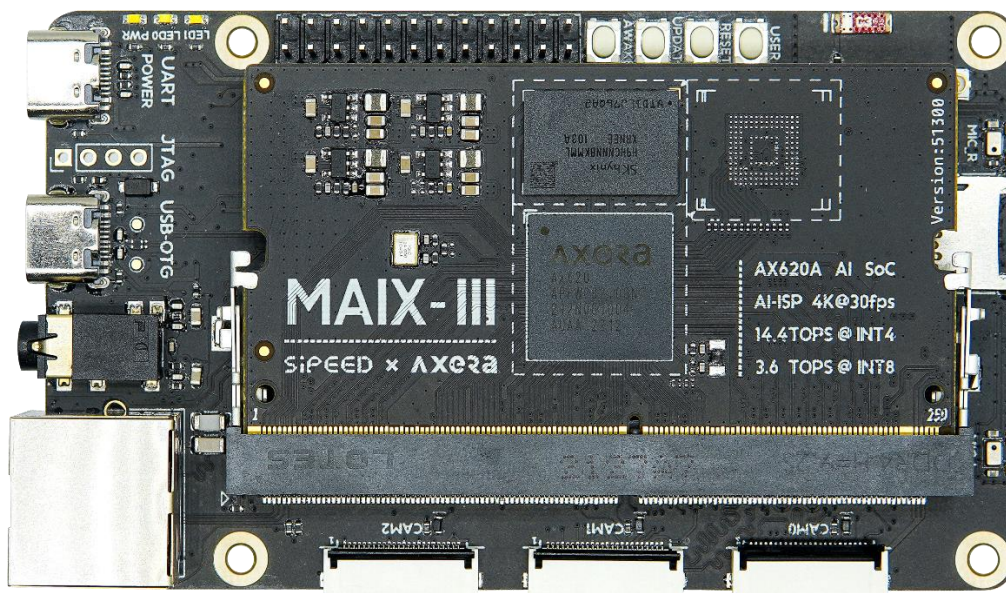


AXera-Pi

Datasheet v1.0



Characteristic :

- Support MAIX-III Core Module Board
- MIPI CSI FPC Connector x3 (4-Lane x1 & 2-Lane x2)
- 4-Lane MIPI DSI FPC Connector
- Gigabit Ethernet with RJ45 Connector
- Wi-Fi Module with SMT Antenna (IPEX for Optional)
- USB-C OTG Port & USB-C UART Port
- Advanced 3.5mm Headphone Jack with Mic (CTIA)
- 2-ch MEMS Mics for Stereo Recording
- Support microSD card (default boot media)

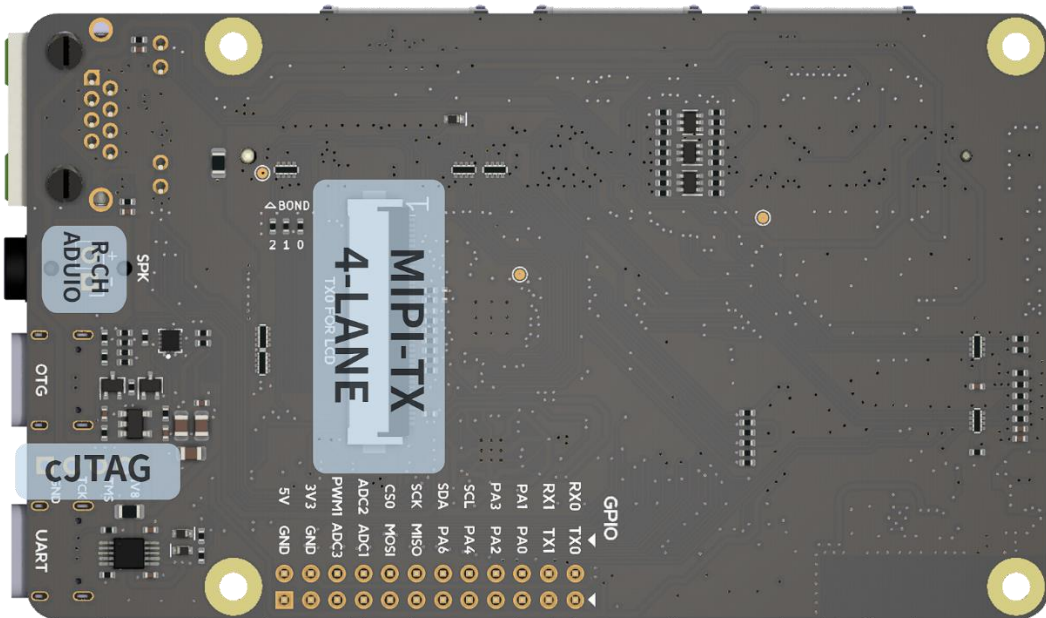
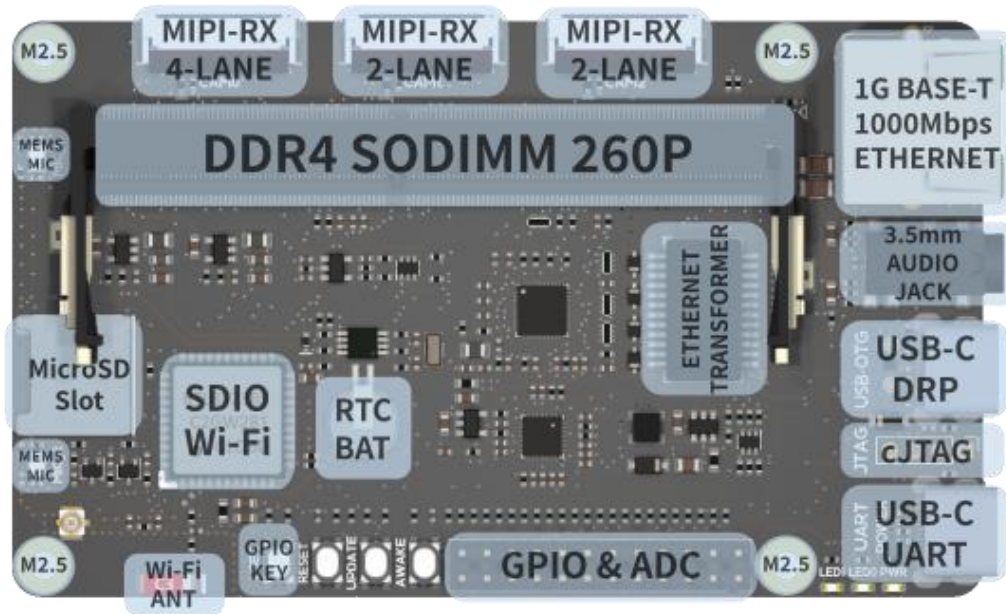
Update record of this document	
V1.0	Edited on December 13, 2022; Original document

Hardware overview	
Supported core board	MAIX-III Core Module
Display Output	4-Lane MIPI DSI FPC Connector, default for 5-inch MIPI DSI LCD. Support video output streaming by RSTP via ethernet
Camera Input	3 MIPI CSI FPC Connectors for sensor module, 4-Lane x1 & 2-Lane x2. Default support Single camera on connector CAM0
Sensor Module	GC4563 & OS04A10 module produced by Sipeed.
Network connections	Gigabit Ethernet & 2.4GHz Wi-Fi (802.11b/g/n)
USB	One USB-C port for UART & One USB-C port for OTG (USB high-speed)
Audio	3.5mm Headphone Jack with Mic (CTIA) 2-ch MEMS Mics, symmetrical distribution, support stereo recording
Storage	One microSD card slot, SDXC & UHS-I supported, default boot for SD card
cJTAG connector	4P 2.54mm pitch Compact JTAG connector for testing (default does not enable)
GPIO expansion	GPIO is fanned out through 2x12p 2.54mm pitch pin-headers
LED	One power indicator LED, two User-Defined LEDs
Button	Onboard 4 buttons, include an RST & a user button The UPDATE button is design for eMMC firmware update (The eMMC is located on core module board & default not included) The AWAKE button is design reserve for some low power usage

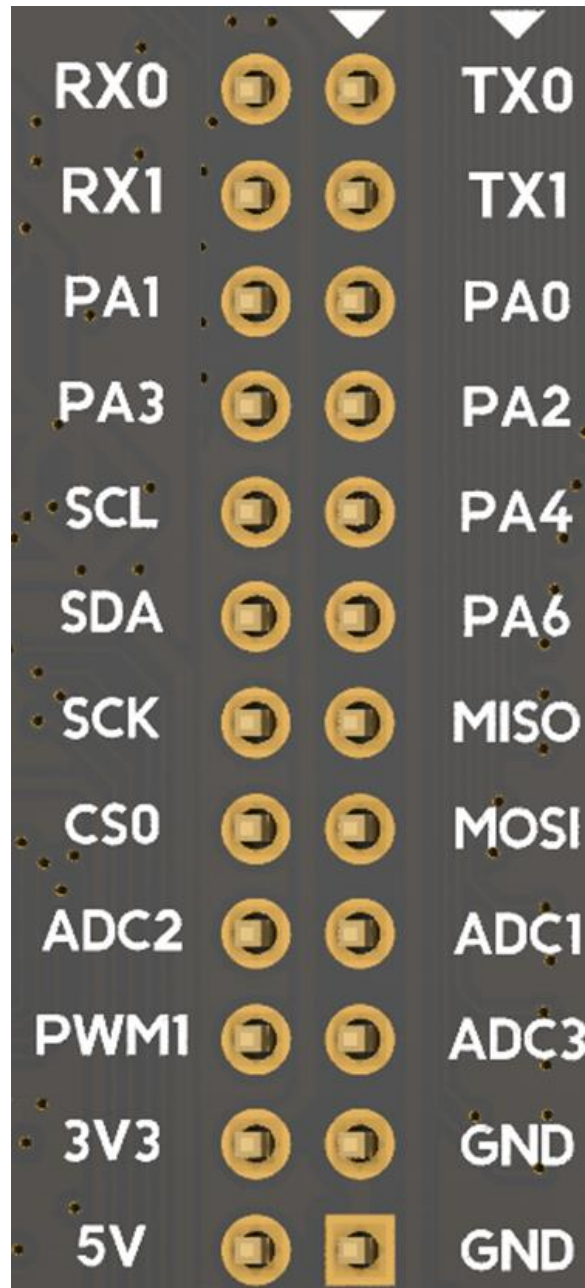
Software overview	
System	Debian (community support)
	Buildroot Linux with busybox (provide by AXera)
SDK	libmaix , ax-pipeline-api , axpi_bsp_sdk , provided by Sipeed ax-samples , ax-pipeline , provided by AXera
AI	1. maixhub.com 2. pulsar-docs
Supported development language	C/C++, Python, Golang, etc... Ready for Jupyter Notebook
resources	wiki.sipeed.com/en/m3axpi

Working conditions	
Power supply	Any USB-C or 5V pin on the 2x12 pin-headers: 5V±10%, 1A max
Temperature rise	<30K
Temperature range	0°C ~ 65°C

Functional annotation

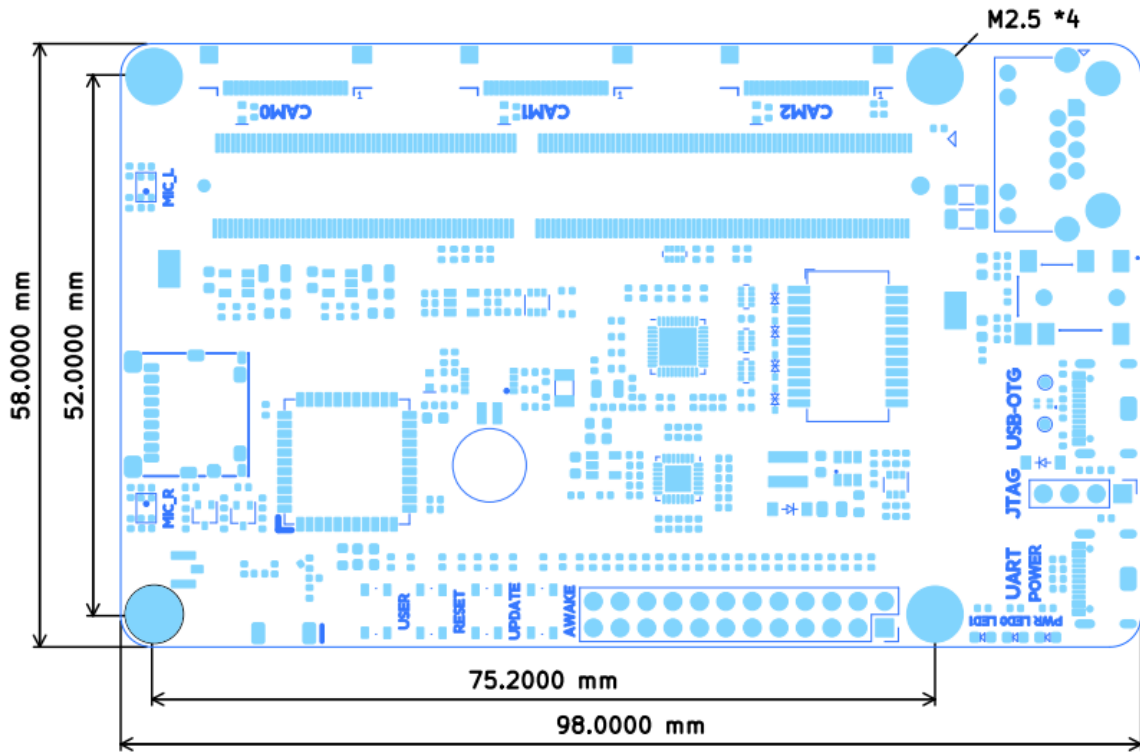


Pin annotation (Bottom view)



Note: For detail GPIO pins definitions please refer our [WIKI](#) for more information

Dimension information	
Length	98.00mm
Thickness	58.00mm
Thickness	Please check the 3D drawing



Notice	
ESD protection	Please pay attention to avoid ESD hitting the PCBA. Please discharge the human static electricity before touching PCBA
GPIO voltage	Please do not let the actual working voltage of GPIO exceed the rated value, otherwise it will cause permanent damage to PCBA
FPC connector	When connecting the FPC cable, make sure that the cable is completely inserted into the connector
Plug/unplug	Please disconnect the power completely before removing the core module board
Avoid short circuit	Please avoid any liquid or metal touching the pads of components on PCBA during power on, otherwise it will cause short circuit and damage the PCBA
Special GPIO	The UART0 (RX0 & TX0) is the system UART & also is connected to the USB-C UART

Resources	
Official website	www.sipeed.com
BBS	bbs.sipeed.com
WIKI	wiki.sipeed.com/en/m3axpi
Twitter	@SipeedIO
Online A.I. Service	maixhub.com
Github	github.com/sipeed
E-mail (For business cooperation)	support@sipeed.com



Disclaimer and Copyright Notice

Information in this document including URL is subject to change without notice. This document is provided by Sipeed without warranty of any kind, with respect to any proposal, specification or sample mentioned elsewhere. This document shall not constitute liability, including infringement of any patent rights, by use of the information in this document.

Copyrights © 2022 Sipeed Limited. All rights reserved.