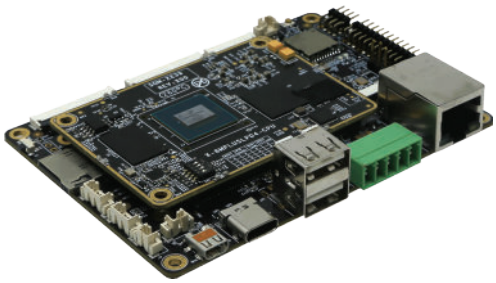
X86 & ARM BOARD | EMB-2239



FEATURES

- NXP i.MX8M Plus with Up to Four 1.8GHz Cortex-A53 Processors
- One 800MHz Cortex-M7 for Real Time Requirements
- Gigabit Ethernet with PoE Ready (with Optioanl PoE Add-on Board)
- Smart Codec with Dual-core DSP for Digital MICs and Voice Control
- MIPI DSI, LVDS, I²C Connectors for LCD and Touch Panel Support
- Integrated AI/ML Neural Processing Unit Accelerating ML Inferencing
- Rich I/O with Dual MIPI CSI, RS232/RS485/CAN, I²C, GPIOs, USB 3.0 Ports

The EMB-2239 embedded board is based on the NXP i.MX8M Plus ARM application processor. The board features a Power over Ethernet (PoE) ready Gigabit Ethernet port, on-board dual-core DSP that runs algorithms for voice control, a full set of I/Os including RS232/RS485/CAN, dual MIPI CSI camera interfaces and expansion header slot for PCIe, GPIO and second ethernet port, integrated AI/ML Neural Processing Unit.

SPECIFICATIONS

SYSTEM

Processor	NXP i.MX 8M Plus, 4 x ARM Cortex-A53 @ 1.8GHz, 1 x ARM Cortex-M7 @ 800MHz
Platform	ARM Cortex-A53
Graphic Controller	GC7000UL Supports OpenGL ES 1.1, 2.0, 3.0, OpenCL 1.2, Vulkan
Memory	On-board LPDDR4, Up to 4GB
Storage	On-board iNAND Flash (16GB Default), 1 x Micro SD Slot
OS	Yocto Embedded Linux, Amazon AVS Device SDK, Sensory TrulyHandsfree Wake Word Engine, Android 10, Debian Linux

DISPLAY

LCD Interface	1 x MIPI 4-lane DSI, 1 x Dual Channel LVDS for 5", 7", 8", 10.1" and other Size LCD Panels
Display Resolution	LVDS - Up to 1920 x 1200p60, MIPI DSI - Up to 1920 x 1200p60 or 2 x 1080p60 + 1 x 4kp30 on HDMI

COMMUNICATIONS

Ethernet	1 x GbE with PoE Option, Second RGMII Via Pin Header
Wireless	1 x WiFi / Bluetooth (AP6255/56) Module, 802.11 b/g/n/ac + Bluetooth v5.0

POWER

Power Input	5V DC Via Pin Header or PoE Via RJ45 (PoE Add-on Board not Included)

I/O INTERFACE

AI/ML	Dedicated Neural Processing Unit (NPU): 2.3 TOPS PCIe or USB Expansion Via Pin Headers
Audio	1 x Mono Class D Speaker Out, @2W (4Ω), 2 (R/L) x HP Out Header, Amplifed Speaker Out (R/L) @3W(4Ω)
Voice Control	Dual Digital MEMS Microphone Header Via CS47L24 with Dual DSP, Support Multi-mic Noise Suppression, Acoustic Echo Cancellation (AEC), Omni-directional Spatial
Watchdog Timer	Programmable Timer System Reset
I/O Ports	1 x RS232/RS485/CAN 2 x GPIO Via Terminal Block 2 x USB 2.0 or 1 x USB 3.0 Type A 2 x USB 2.0 Header 1 x USB 3.0 Type C OTG 4+ GPIO, 2 x I²C (for TP and MIPI CSI) 2 x MIPI-CSI, 2 x ISP
Expansion	40 pin Header with PoE Power, 2x USB 2.0, PCIe x 1, Up to 8 Channel Digital Audio Inputs or GPIOs

MECHANICAL

Form Factor	Embedded Pico-ITX Standard
Dimensions	100 x 72mm (3.94" x 2.83")

ENVIRONMENTAL

Temperature:	
- Operation	0°C to 60°C (32°F to 140°F)
- Storage	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% @ 40°C Non-condensing

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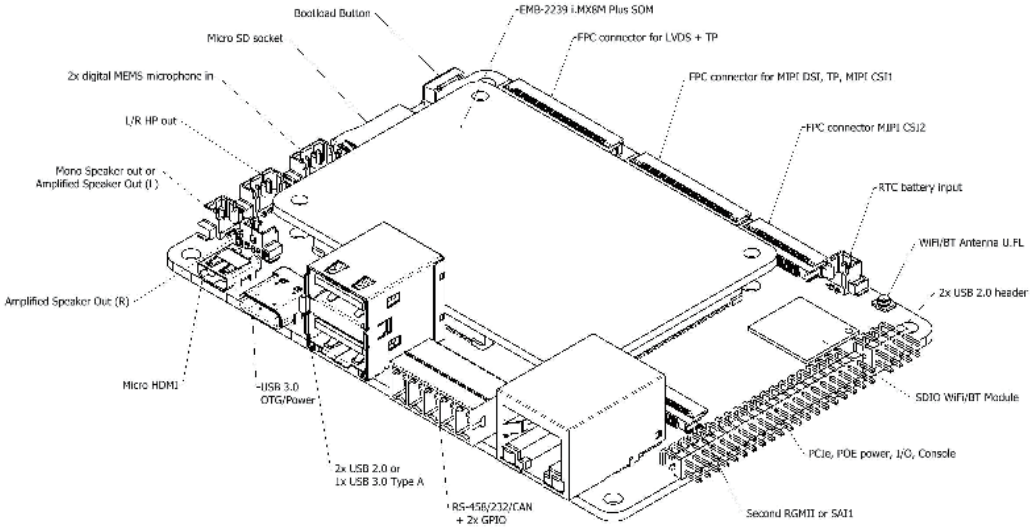
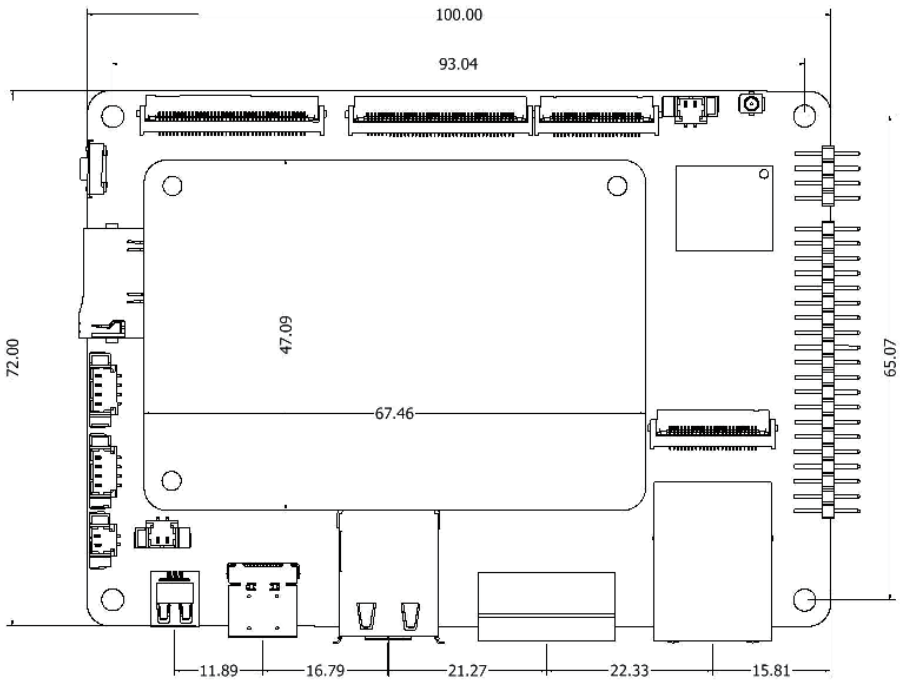
SYSTEM LAYOUT



PRODUCT DIMENSIONS

Unit: mm



ORDER INFORMATION

Part No.	Description
SOM-2239	NXP i.MX8M Plus SOM with Smart Coded and Ethernet
IOB-2239	IOB-2239 Carrier Board for SOM-2239
EMB-2239	SOM-2239 i.MX8M Plus SOM + IOB-2239 Carrier Board
PoE-4210	PoE Add-on Module

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