

# AM437x Product on Module (PoM)

## Overview

The AM437x PoM from Mistral is a low cost, small form factor, high performance; easy-to-use Product on Module (PoM) built around the powerful 800MHz/1GHz Sitara™ AM437x SoC from Texas Instruments. With extensive integration such as quad core PRU-ICSS, PowerVR SGX 3D acceleration core, dual camera, QSPI-NOR, up to 512KB on-chip memory, Dual ADC and an easily extendable architecture, the AM437x PoM is the perfect solution for quick product deployment while leveraging the benefits of the powerful SoC.

AM437X PoM supports high performance interfaces such as 2x Gigabit ethernet, 2 x 8/10-Bit Parallel Camera, 24-Bit RGB display and 32-Bit DDR3L. The low power module uses +5V DC or can also be \*USB powered.

### Specifications

#### CPU

- 800MHz/1GHz ARM Cortex-A9 processor with quad core PRU-ICSS

#### Memory

- 1GB x 32 DDR3L
- 4GB eMMC
- Micro SD card Connector
- 256KB I2C EEPROM

#### LAN

- On-Board PHY supporting Gigabit Ethernet

#### Audio

- TI Low Power Audio Codec TLV320AIC31xx

#### Wireless

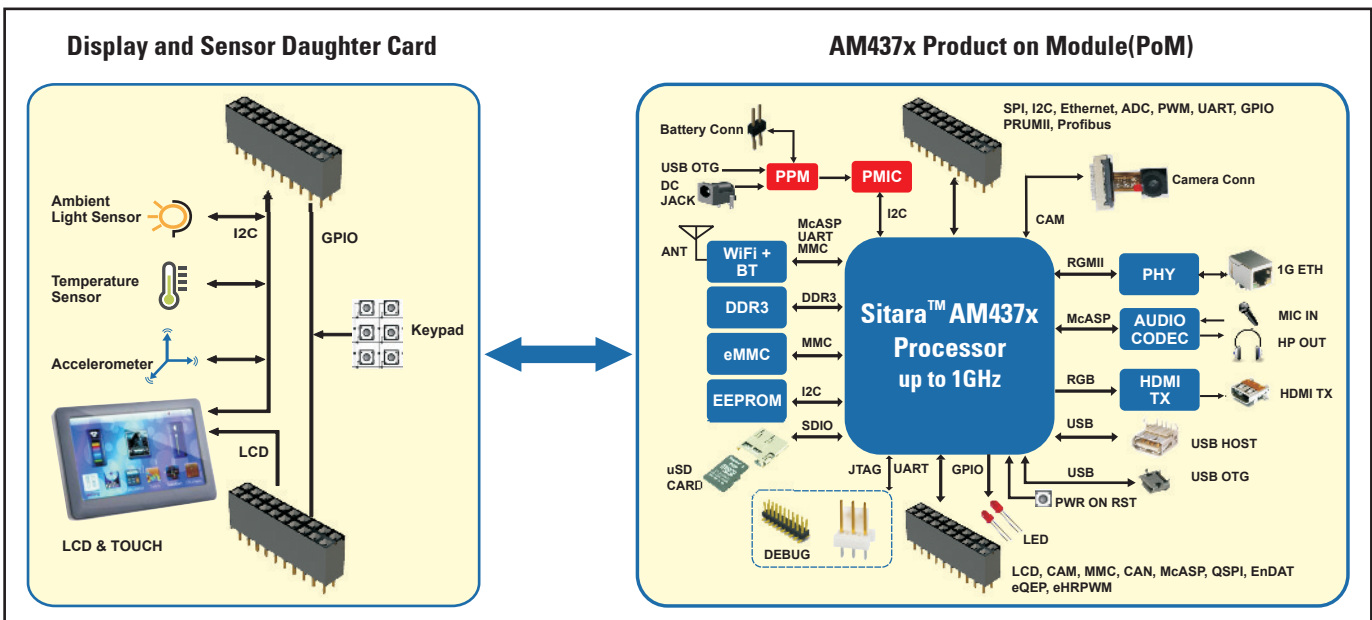
- On-Board SiP Module supporting
  - WiFi 802.11 b/g/n
  - Bluetooth v4.0 (BT+BLE)

#### USB 2.0

- USB OTG port
- USB HOST port

#### I/O Interfaces

- 10/100/1000Mbps Ethernet port
- Audio MIC In
- Audio HP Out
- HDMI Out
- USB 2.0 OTG
- USB 2.0 Host
- 8/10-Bit Parallel Camera



## Expansion Connector

- ▶ 24-Bit LCD
- ▶ 8/10-Bit Camera
- ▶ MMC, CAN
- ▶ McASP
- ▶ Ethernet - RGMII
- ▶ I2C, SPI, ADC, PWM, UART
- ▶ PRUMII, Profibus
- ▶ EnDAT, eQEP, eHRPWM

## Debug

- ▶ JTAG
- ▶ UART

## Board Dimension

- ▶ 90mm x 70mm

## Environmental

- ▶ Commercial Grade

## Power Input

- ▶ Companion power management chip TPS65218x
- ▶ +5VDC or \*USB powered
- ▶ Battery Connector
- ▶ Option to power the PoM from daughter card

## Operating System

- ▶ Linux 3.12
- ▶ Android Support

## User Interface

- ▶ LEDs for Power and Status indication
- ▶ Power on Reset switch to reset the board

## Display & Sensor Daughter Card (Optional Kit)

A 7" LCD and Touch Panel with accelerometer, ambient light and temperature sensors which can be connected to the expansion connector on the main card.

**Note:** \* Powered from USB adapter with higher power rating (>1A)

## User Interface

- ▶ 7" LCD with Capacitive touch
- ▶ KEY buttons

## Sensors

- ▶ Ambient Light Sensor, Temperature Sensor
- ▶ 3-axis Accelerometer

## Applications

- ▶ Point of Sale
- ▶ Home Automation
- ▶ Industrial HMI and PLC
- ▶ Barcode Scanners
- ▶ Portable Data Terminals
- ▶ Medical Electronics
- ▶ Test and Measurement

## Deliverables

- ▶ AM437x PoM Board with Accessories
- ▶ Board Support Packages
- ▶ QSG and User Manuals
- ▶ Display and Sensor Daughter Card (Optional)

## Custom Development

Mistral also offers customized hardware and software design services to help your final product design

- ▶ Custom PoM/Daughter Card Development
- ▶ BSP Development /OS Porting
- ▶ Custom application/GUI Development
- ▶ Design review and Support

## Ordering

For ordering information please email us at [sales@mistralsolutions.com](mailto:sales@mistralsolutions.com) or call +1-408-705-2240 for USA and +91-80-3091-2600 for rest of the world.

## About Mistral

Mistral is a technology design and systems engineering company providing end-to-end solutions for product design and application deployment. Mistral focuses in two business domains: Product Engineering Services and Defense & Homeland Security. Mistral provides total solutions for a given requirement, which may include hardware board design, embedded software development, FPGA design, systems integration and customized turnkey solutions.

Mistral's strategic partnerships with leading technology companies help provide customers with a comprehensive package of end-to-end solutions.

Mistral Solutions is a Platinum Member of Texas Instrument Design Network offering development platforms, reference designs and services in the area of software & hardware design, development and consulting on various TI DSPs platform.



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