



- ✓ Powered by NXP I.MX8M mini processor
- ✓ Built-in Murata WiFi/Bluetooth
- ✓ Popular SODIMM200 Footprint
- ✓ Industrial Temperature Range

Quad Cortex-A53 based Industrial SOM

VisionSOM-8Mmini

MAIN FEATURES

NXP I.MX 8M Mini

- 1x/2x/4x ARM Cortex-A53
Clock up to 1.8 GHz
- 1x Cortex-M4 (up to 400 MHz)

MURATA LBEE5KL1D

- WiFi IEEE 802.11b/g/n
- Bluetooth Version 4.1 + EDR

MEMORY

- LPDDR4 up to 8GB
- Various flash configuration (eMMC, uSD Card)

GPU

- 3D Vivante GC320
- OpenGL ES 2.0

LCD DISPLAY SUPPORT

- MIPI-DSI (4-lane)

VPU

- Built-in VPU
- Encoder/Decoder

OS SUPPORT

- Linux (Yocto)
- Android
- FreeRTOS

INTERFACES

- 10/1000 Mbps Ethernet x1
- USB OTG x2
- UART (up to 4)
- I2C (up to 4)
- SPI (up to 3)
- SAI (up to 5)
- PCI 2.0 x1

CAMERA INPUT

- MIPI-CSI2 (4 lane)

SOM FOOTPRINT

- SODIMM 200

OTHERS

- Industrial temperature range
- On board U.FL antenna connector
- Optimized power consumption

5V Input
PMIC

POWER SUPPLY

IMX 8M Mini
1x/2x ARM Cortex-A7
1 x ARM Cortex-M4F

CPU DOMAIN

RAM LPDDR4
1,2,4,8 GB

eMMC
4 – 32Gb

uSD Card

MEMORY

muRata

WiFi
Bluetooth

CONNECTIVITY

SODIMM 200

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VisionSOM-8Mmini is comprised of a small processor module with CPU bus accessibility and standard I/O functionality and is an ideal solution for real time projects.

VisionSOM-8Mmini module can often trim 8-12 months from design cycle and can be easy adapted to existing projects or can be used together with a dedicated carrier board. Customers who are looking for a

complete solution can use a set comprised of System on Module (SoM) and Carrier Board (CB).

VisionSOM-8Mmini module requires a matching customer's board or a carrier board to establish a complete system. Carrier Board together with System on Module (SoM) is ready to use computer on board and is giving enormous flexibility in building projects.

SOM

System on Module

VisionSOM-8Mmini

MPU architecture	ARM Cortex-A53
Maximum clock	1.8 GHz
Number of Cores	1/2/4x A53 & 1x M4
RAM	1,2,4,8 GB
eMMC	4GB – 32GB
uSD Card Slot	YES optionally
WiFi & Bluetooth	YES
Antena connector	U,FL
Temperature	-40 to +85°C (WiFi -30 to +70°C)
Supported OS	Linux (Yocto), Android, FreeRTOS
Carrier Board	VisionCB-8Mmini-STD & VisionCB-8Mmini-ADV

Altium Designer's library file is available for all SOM variants (SCH and PCB)

CB

Carrier Board

VisionCB-8Mmini-STD

VisionCB-8Mmini-ADV

Power Supply	9-12VDC	9-12VDC
Ethernet 10/100/1000Mbps	x1	x1
USB OTG	x2	x2
Display Interface	MIPI DSI	MIPI DSI, HDMI, LVDS
Camera Interface	-	+
RS485	-	+
CAN	-	+
PCI	-	+
Audio Codec	-	+
RTC Battery backup	-	+
SoM Interface	SODIMM200	SODIMM200
Board Size	160mmx100mmx17mm	160mmx100mmx18mm

DT

Development Tools

VisionSTK-8Mmini

Starter Kit

VisionDK-8Mmini

Development Kit

Included SOM	VisionSOM-8Mmini SLS23X8MMQC_1800C_02GR_08GE_0SF_C	VisionSOM-8Mmini SLS23X8MMQC_1800C_02GR_08GE_1WB_C
Carrier Board	VisionCB-8Mmini-STD	VisionCB-8Mmini-ADV
7inch LCD display	-	+
USB Debug Cable	-	+
Ethernet Cable	-	+
12V Power Supply	-	+
WiFi-Bluetooth Antenna	-	+