

- Powered by NXP i.MX RT Processor
- Ideal for Real Time Applications
- Popular SODIMM200 Footprint
- Industrial Temperature Range

ARM Cortex-M7 based Industrial SOM

VisionSOM-RT

MAIN FEATURES

NXP i.MX RT

- ARM Cortex-M7
- Clock up to 525 MHz
- 1MB on chip RAM memory

MEMORY

- Ext SDRAM up to 32MB
- Flash configuration (QSPI, eMMC)

SOM FOOTPRINT

- SODIMM 200

LCD DISPLAY SUPPORT

- 24 bits parallel RGB LCD display up to WXGA (1366x768)
- Resistive touch screen controller (4wire/5wire)

OS SUPPORT

- FreeRTOS

INTERFACES

- 10/100Mbps Ethernet x2 with IEEE1588
- USB OTG x2
- FlexCan (up to 2)
- UART (up to 8)
- I2C (up to 4)
- SPI (up to 4)
- ESI x1

ANALOG

- 12 bits/10 channels ADC x2

CAMERA INPUT

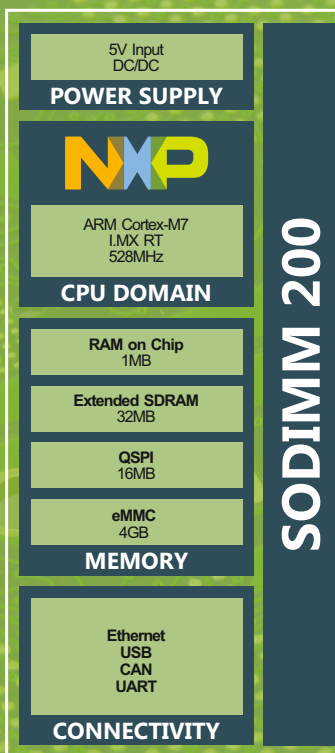
- up to 24-bit parallel CSI

IMAGE PROCESSING

- PXB v2.0
- CSC, Resize, Combine, Rotate

OTHERS

- Industrial temperature range
- Optimized power consumption



VisionSOM-RT is comprised of a small processor module based on Cortex-M7 Core and standard I/O functionality and is an ideal solution for real time projects.

VisionSOM-RT 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-RT 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-RT

MPU architecture	ARM Cortex-M7
Maximum clock	528 MHz
Number of Cores	x1
RAM on Chip	51KB
Extended SDRAM	32MB
eMMC (Optional)	4GB
QSPI Flash	16MB
WiFi & Bluetooth	-
Antena connector	-
Temperature	-40 to +85°C
Supported OS	FreeRTOS
Carrier Board	VisionCB-RT-STD

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

CB

Carrier Board

VisionCB-RT-STD

Power Supply	9-12VDC or 5VDC
Ethernet 10/100Mbps	x1
USB OTG	x2
Display Interface	RGB (50 pin FPC)
Arduino Socket	+
Reset button	+
Raspberry Pi connector	+
JTAG	+
RTC Battery backup	-
SoM Interface	SODIMM200
Board Size	130mmx90mmx17mm

DT

Development Tools

VisionSTK-RT

Starter Kit

VisionDK-RT

Development Kit

Included SOM	VisionSOM-RT SLS12RT62 528C 32R 16QSPI 0SF I	VisionSOM-RT SLS12RT62 528C 32R 16QSPI 0SF I
Carrier Board	VisionCB-RT-STD	VisionCB-RT-STD
7inch LCD display	-	+
USB Debug Cable	-	+
Ethernet Cable	-	+
12V Power Supply	-	+