✓ Powered by STM STM32MP1 processor

✓ Built-in Murata WiFi/Bluetooth

✓ Popular SODIMM200 Footprint

✓ Industrial Temperature Range

ARM Cortex-A7 based Industrial SOM

VisionSOM-STM32MP1

MAIN FEATURES

POWER SUPPLY
5V Input
2x DC/DC

CPU DOMAIN
STM32MP1
1x/2x ARM Cortex-A7
1 x Cortex-M4

MEMORY
RAM DDR3L
64 – 512MB

eMMC
4 – 32Gb

uSD Card

CONNECTIVITY
WiFi
Bluetooth

SODIMM 200

STM STM32MP1
- 1x/2x ARM Cortex-A7 Clock up to 800 MHz
- 1x Cortex-M4

MURATA LBEE5KL1D
- WiFi IEEE 802.11b/g/n
- Bluetooth Version 4.1 + EDR

MEMORY
- DDR3L 64-512MB
- Various flash configuration (eMMC, uSD Card)

GPU
- 3D PGU Vivante
- OpenGL ES 2.0

LCD DISPLAY SUPPORT
- MIPI-DSI 2-lane display interface
- 24-bit parallel RGB

CAMERA INPUT
- up to 24-bit parallel CSI

OS SUPPORT
- Linux BSP (Debian)
- FreeRTOS

INTERFACES
- 10/100Mbps Ethernet x1
- USB OTG x3
- Can FD (up to 2)
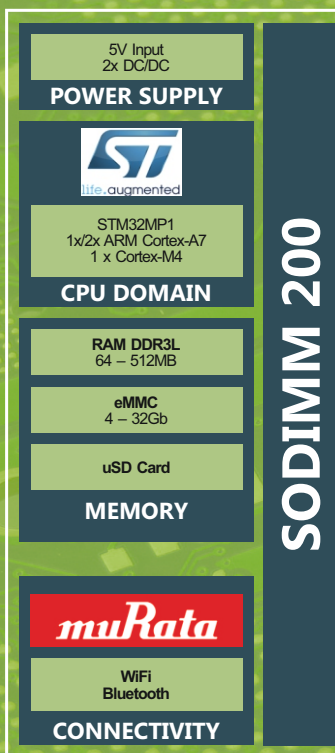- UART (up to 8)
- I2C (up to 6)
- SPI (up to 6)
- SAI (up to 4)

ANALOG
- 2x16 A/DC Converters
- 2x 12 bit D/A Converters

SOM FOOTPRINT
- SODIMM 200

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

VisionSOM-STM32MP1 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-STM32MP1 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-STM32MP1 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-STM32MP1

MPU architecture	ARM Cortex-A7
Maximum clock	800 MHz
Number of Cores	x2 A7 & 1x M4
RAM	64MB – 512MB
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 (OpenSTLinux)
Carrier Board	VisionCB-STM32MP1-STD

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

CB
Carrier Board

VisionCB-STM32MP1-STD

Power Supply	9-12VDC
Ethernet 10/100Mbps	x1
USB OTG	x2
Display Interface	RGB (FPC50), MIPI-DSI (FPC30)
Arduino Socket	-
Reset button	+
Raspberry Pi connector	+
USB Linux console	+
RTC Battery backup	+
SoM Interface	SODIMM200
Board Size	160mmx100mmx17mm

DT
Development Tools

	VisionSTK-STM32MP1 Starter Kit	VisionDK-STM32MP1 Development Kit
Included SOM	VisionSOM-STM32MP1 SLS18MP157A_650C_512R_uSD_0SF_C	VisionSOM-STM32MP1 SLS18MP157A_650C_512R_uSD_1WB_C
Carrier Board	VisionCB-STM32MP1-STD	VisionCB-STM32MP1-STD
7inch LCD display	-	+
USB Debug Cable	-	+
Ethernet Cable	-	+
12V Power Supply	-	+
WiFi-Bluetooth Antenna	-	+