

3SM1005 series

System on Module based on **i.MX6** processor

FEATURES

- Scalable SoM with NXP i.MX6
Quad/Dual/DualLite/Solo ARM® Cortex®-A9 CPU
- 200pin edge connector
- Low cost solutions
Small dimensions only 40 mm x 67.6 mm

elettronica GF
custom embedded devices



Actual size

CPU

- NXP i.MX6 Quad/Dual/DualLite/Solo ARM® Cortex®-A9 CPU
- CPU core 1/2/4
- CPU Frequency 800/1000/1200 MHz

MEMORY

- Up to 4 GB DDR3 up to 1066MHz (32/64 bit)

STORAGE / BOOT¹

- SPI Nor Flash 4 MB
- Up to 64 GB eMMC (optional)

MULTIMEDIA AND HUMAN INTERFACE¹

- GPU 3D Vivante™GC880 \ GC2000
- GPU 2D (Vector Graphics) emulated on GPU 3D or Vivante™GC355 depending on CPU model
- GPU 2D (Composition) Vivante™GC320
- Video Encode 1080p30 H.264 BP/ Dual 720p
- Video Decode 1080p30 + D1\1080p 60 h.264
- Single parallel RGB 24 bit display output
- 1x Keypad controller Matrix 8x8
- 1x Resistive Touch Panel interface 4/5 Wire (Optional)

I/O PERIPHERALS¹

- 1x USB 2.0 OTG + PHY
- 1x USB 2.0 Host + PHY
- 3x USB 2.0 Host + PHY (optional with integrated Hub)
- 1x Ethernet 10/100 with on board PHY (optional)
- Up to 2x FLEXCAN BUS Interfaces
- Up to 4 UART (TX,RX,RTS,CTS) TTL Level
- 1x AUDMUX port for connecting an external audio codec
- SPDIF Input and Output channels
- Up to 2x SPI Interfaces (ecSPI)
- Up to 2x I2C BUS Interfaces
- Up to 2x SD 3.0/MMC 4.41
- GPIOs available

SYSTEM

- 200 pin SO-DIMM + JTAG
- Single +5 VDC ±10% power supply
- Integrated regulators for all internal functions
- Power consumption depends on MPU clock frequency / state
- RTC on board
- Temperature sensor on board

TEMPERATURE²

- -20°C to +70°C for Commercial Extended Grade
- -40°C to +85°C for Industrial Grade
- 0°C to +60°C for Commercial Grade

OPERATING SYSTEMS

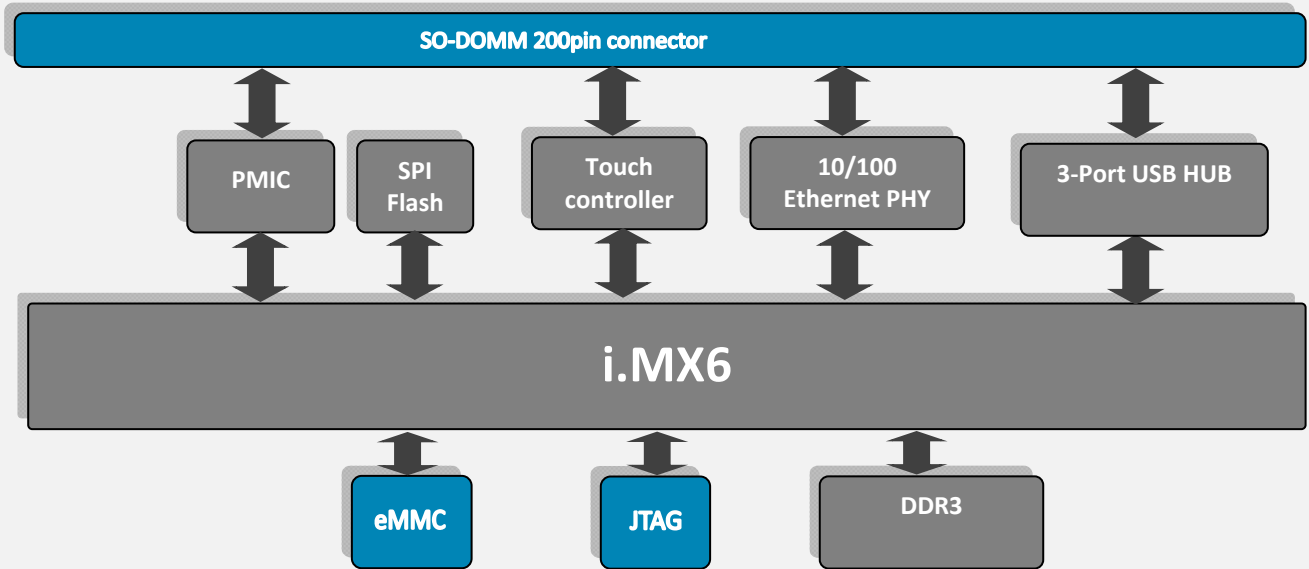
- Linux



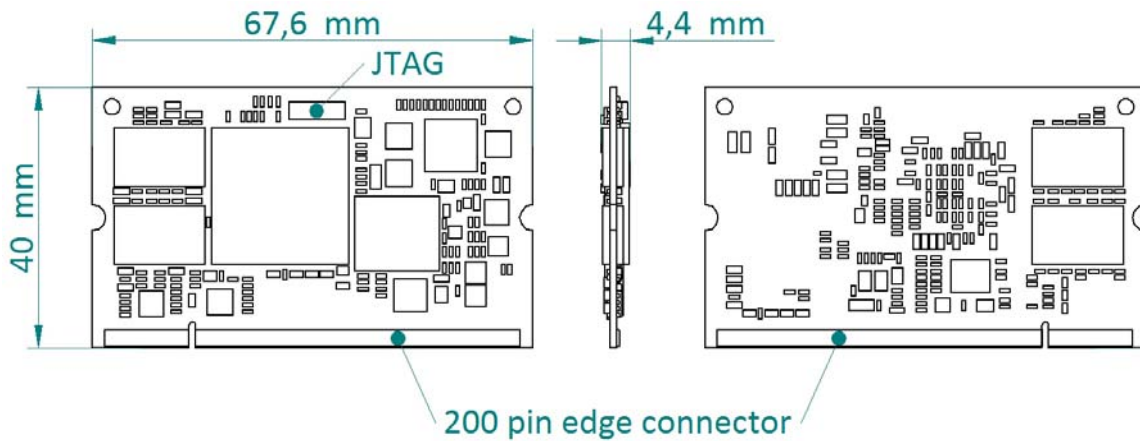
¹Please note that all function may not be available simultaneously, due to pin muxing limitation of SOM connector restrictions. Function availability depends also on the installed processor. For more details refer to processor datasheet.

² These temperatures are the ambient operating temperature ranges for the components used into 3SM1005 series, with exception of iMX6 processors, which are specified on junction operating temperature range, 0 to +95°C for Commercial Grade, -40 to +105°C for Industrial Grade and -20 to +105°C for Commercial Extended Grade. 3SM1005 series ambient operating temperature depends on the application and on the cooling measures applied.

BOARD DIAGRAM



DIMENSIONS



ORDERING INFORMATION

Processor Part Number	Selector	DDR3	Selector	eMMC	Selector	Temp. Range	Selector	Option	Selector
iMX6S - 800MHz	3SM1005A	512MB	1	eMMC 4GB	A	Commercial	1	Without options	.0
iMX6DL - 800MHz	3SM1005B	1GB	2	eMMC 8GB	B	Extended	2	Jtag connector	.1
iMX6S -1000MHz	3SM1005C	2GB	3			Industrial	3	PHY Ethernet	.2
iMX6DL -1000MHz	3SM1005D							HUB USB	.3
iMX6D -1000MHz	3SM1005E							Touch controller	.4
iMX6Q -1000MHz	3SM1005F								
iMX6D -1200MHz	3SM1005H								
iMX6D -800MHz	3SM1005I								
iMX6Q -800MHz	3SM1005L								
iMX6Q -1200MHz	3SM1005M								

Red color is default configuration (code: 3SM1005C1A1.0)

In the table below there are two examples of code generation. Not all code configuration are available, please for more information contact: sales@elettronicagf.it

Ordering Code Examples	3SM1005D1A2.23								
iMX6DL -1000MHz	3SM1005D	512MB	1	eMMC 4GB	A	Extended	2	PHY Ethernet	.2
								HUB USB	.3

Ordering Code Examples	3SM1005C2B1.0								
iMX6S -1000MHz	3SM1005C	1GB	2	eMMC 8GB	B	Commercial	1	Without options	.0

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