

Q29 series

System on Module based on **i.MX6** processor in
Package on Package (**PoP**)



Actual size

FEATURES

- Scalable SoM with **NXP i.MX6** Quad/Dual ARM® Cortex® - A9 CPU
- High pin multiplexing flexibility
- Very small dimensions only **29 x 29 x 3.8mm**
- Low cost solutions

CPU

- **NXP i.MX6** Quad/Dual ARM® Cortex® - A9 CPU
- CPU core 2\4
- CPU Frequency 800 MHz

MEMORY

- Up to 2GB LPDDR2 up to 800MHZ

STORAGE / BOOT¹

- Up to 64 GB eMMC
- SPI FLASH 8 MB (up to 64MB on request)

MULTIMEDIA AND HUMAN INTERFACE¹

- Hardware accelerators:
 - Video Processing Unit
 - Image Processing Unit version 3H (2 IPUs)
 - 3D Graphics Processing Unit (OpenGL ES 2.0) ver. 4
 - 2D Graphics Processing Unit (BitBlt)
 - OpenVG 1.1 Graphics Processing
- Camera Interface Types:
 - 1x 8-bit parallel, 1x 20-bit parallel, MIPI-CSI2
- Display:
 - up to three interfaces may be active at the same time
 - 1x LVDS
 - 1x HDMI 1.4
 - 1x MIPI-DSI

I/O PERIPHERALS¹

- 1x USB 2.0 Host
- 1x USB 2.0 OTG
- 1x Ethernet 1Gbps RGMII
- 2x FLEXCAN BUS Interfaces
- 5x UART TTL Level
- 2x SDIO SD 3.0/MMC 4.41
- 2x I2C Interfaces
- 1x PCIe 2.0
- 1X S-ATA II
- 1x SPI Interfaces (ecSPI)
- 1x AUDMUX port for connecting an external audio codec
- 1X SPDIF Input and Output channels
- GPIOs available

SYSTEM

- 2x B2B 100 pin connector
- Single +3.3 VDC ±10% power supply
- On board regulators for all integrated functions
- Power consumption depends on MPU clock frequency / state
- RTC integrated in i.MX6 Application processor

TEMPERATURE²

- -20 to 70°C for Commercial extended Grade
- -40 to +70°C for Industrial Grade

OPERATING SYSTEMS

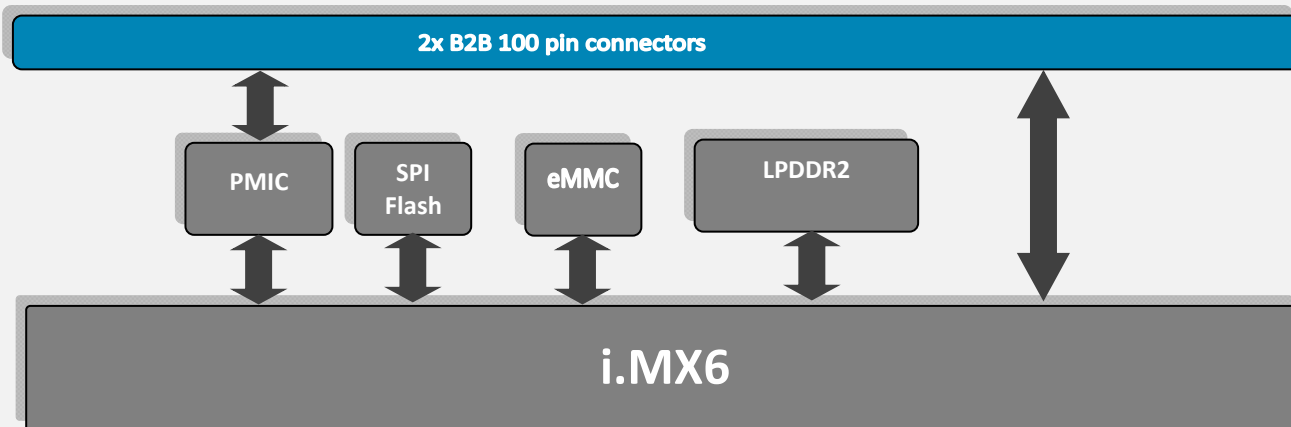
- Linux



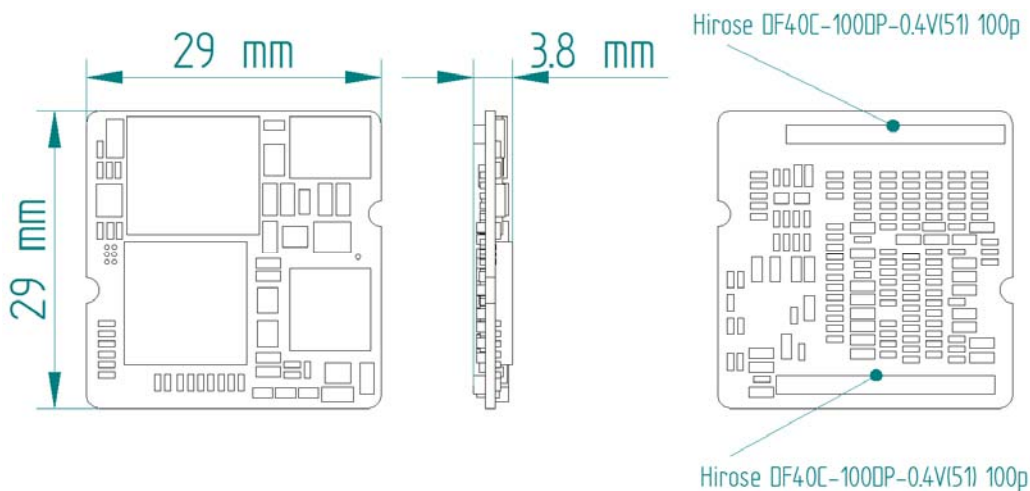
¹Please note that all function may not be available simultaneously, due to pin muxing limitation of SOM connector restrictions. Function availability depends also on the installed processor. For more details refer to processor datasheet.

² These temperatures are the ambient operating temperature ranges for the components used into Q29 series, with exception of iMX6 processors, which are specified on junction operating temperature range, -40 to +105°C for Industrial Grade and -20 to +105°C for Commercial Extended Grade. Q29 series ambient operating temperature depends on the application and on the cooling measures applied.

BOARD DIAGRAM



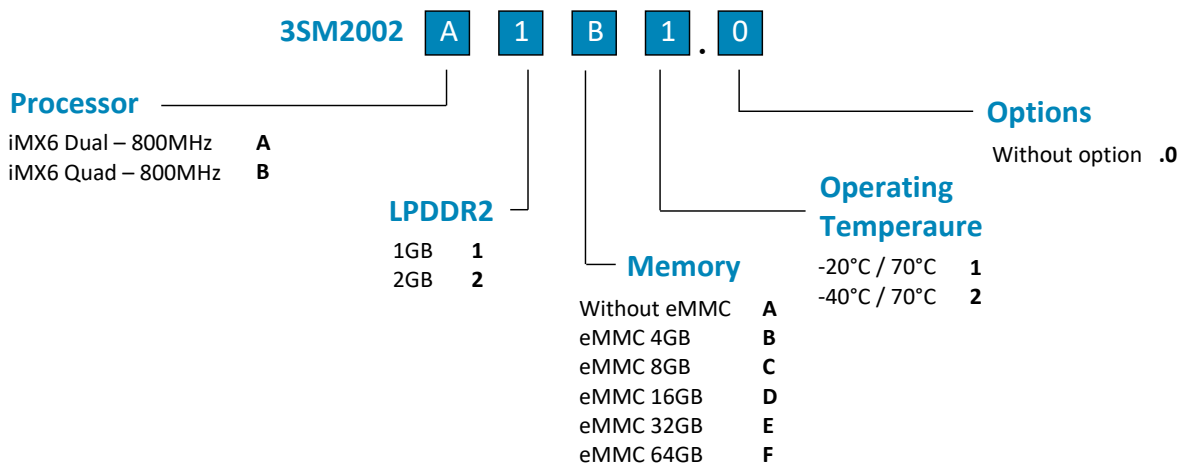
DIMENSIONS (mm)



ORDERING INFORMATION

Standard ordering code

Ordering Code	Descriptions
3SM2002A1B1.0	iMX6 Dual 800MHz, LPDDR2 1GB, Memory eMMC 4GB, Temp. -20°C to 70°C, Options: No Options
3SM2002B1C1.0	iMX6 Quad 800MHz, LPDDR2 1GB, Memory eMMC 8GB, Temp. -20°C to 70°C, Options: No Options



Not all code combinations are allowed, for more information on ordering codes please contact Elettronica GF sales department.