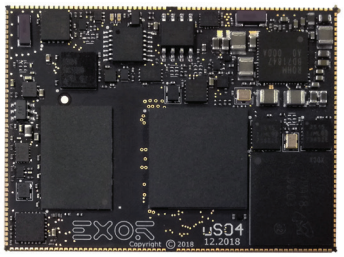
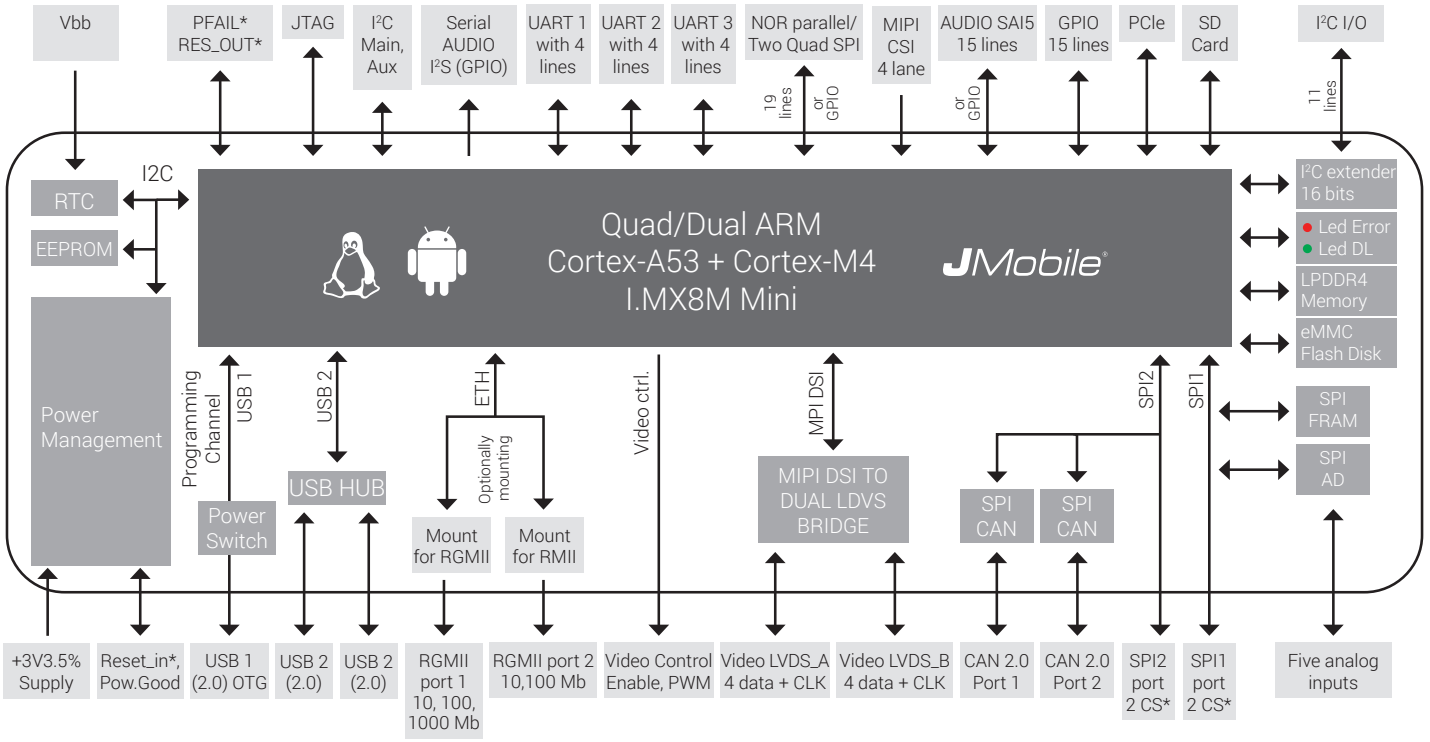
# microSOM uS04 - Technical Data



microSOM uS04 is highly innovative, high performance module, based at i.MX8M mini family, that is one ideal successor of well known i.MX6. This family incorporates quad/ dual Arm® Cortex®-A53, with addition one Cortex-M4 core.

| | |
|---|---|
| Dimensions | 46x35 mm |
| Temperature Range | -40°C to 85°C |
| CPU | i.MX8M Mini Quad/Dual ARM Cortex-A53 at 1.6 Ghz |
| DDR | LPDDR4 x32 @ 3000 MT / 2 GB |
| Flash Disk | eMMC 5.0, up to 32 GB on board |
| EEPROM | I²C, 4 Kbits |
| FRAM | 64 Kbytes |
| External memory (*) | Direct support for NOR parallel flash or 2 QSPI or additional eMMC/ SD interface (in case of using must be mounted at external carrier board) |
| Watchdog/RTC/Voltage monitor/JTAG | Yes |
| USB | 1 (OTG 2.0), 2 (Host 2.0) |
| Ethernet | US04-0001 and US04-0003: 1 (RMII port 10/100 Mb) US04-0002 and US04-0004: 1 (RGMII port 10/100/1000 Mb) |
| SD | Yes, via external connector |
| Serial Port | 3 UARTS (4 lines) |
| SPI | 2 channels with two CS* |
| I²C | 2 |
| CAN | 2 using onboard SPI/CAN bridges |
| Audio | 1 (I2S), 1 (Generic audio channel with 15 signals) |
| Video out | 1 Video Out LVDS Single or dual Channel |
| Video in | 1 (MIPI CSI 4 lanes) |
| GPIO | 15 signals from CPU and 13 signals from on board I2C extenders |
| Analog input | 5 single ended channels, 12bits, 1V8 Max |
| PCIe | Single lane, GEN1, GEN2 |

* Software configurable. In case of not using some special interface all pins can be used as GPIO




# Ordering Information

| Model | Part Number | Description |
|---|---|---|
| uS04-0001 | +US04-0001 | i.MX8M Mini Quad ARM Cortex-A53 1.6 GHz - 2 GB LPDDR4 - 8GB - RMII - Operating Temp. -40 to +85°C |
| uS04-0002 | +US04-0002 | i.MX8M Mini Quad ARM Cortex-A53 1.6 GHz - 2 GB LPDDR4 - 8GB - RGMII - Operating Temp. -40 to +85°C |
| uS04-0003 | +US04-0003 | i.MX8M Mini Dual ARM Cortex-A53 1.6 GHz - 2 GB LPDDR4 - 8GB - RMII - Operating Temp. -40 to +85°C |
| uS04-0004 | +US04-0004 | i.MX8M Mini Dual ARM Cortex-A53 1.6 GHz - 2 GB LPDDR4 - 8GB - RGMII - Operating Temp. -40 to +85°C |
| uS04 Dev. Kit | +EE16EK-0013 | microSOM uS04 Development Kit |