

TQMa243xL

Arm® Family



HIGHLIGHTS

- ▶ 4x Real-time GBit Ethernet for Fieldbus
- ▶ Up to 2x CAN FD
- ▶ Integrated Cortex®-M4
- ▶ High-speed communication via 2x Gbit Ethernet, 1x USB 2.0 interface
- ▶ Low power consumption (typ. 1-2 W)
- ▶ Integrated security functions

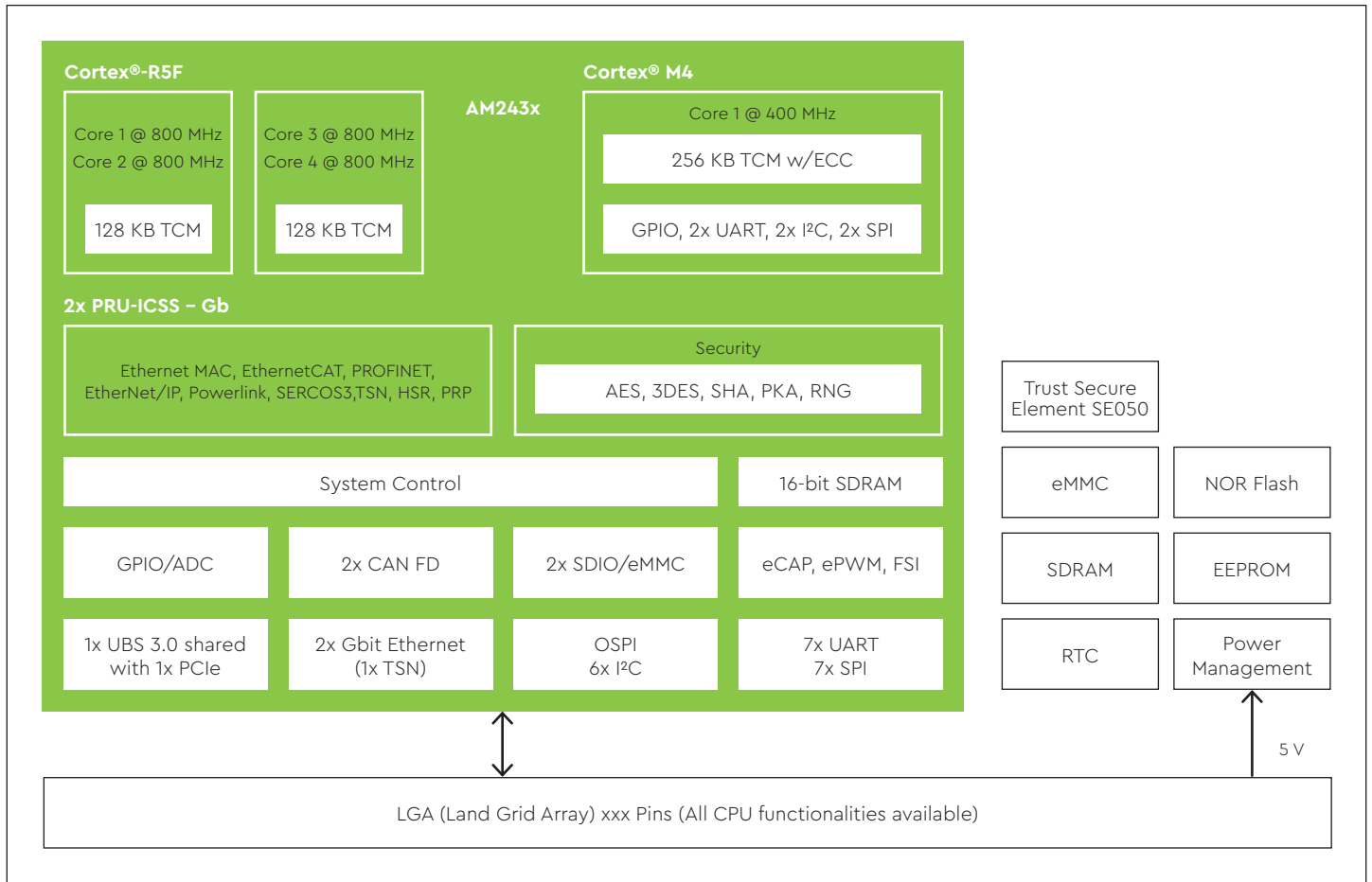
Embedded Cortex®-R5F module based on TI AM243x for headless Applications with Real-time demand.

TECHNICAL SPECIFICATION

CPU	AM2434, AM2432, AM2431
Interfaces	Up to 2x Gbit-Ethernet Up to 4x Real-time Gbit Ethernet (PRU) Up to 1x USB 2.0 interface Up to 2x CAN FD Up to 1x SerDes (PCIe/USB 3.0) Up to 9x UART
Periphery interfaces	Up to 2x SDIO Up to 6x I2C Up to 7x MCSPI Up to 1x OSPI or QSPI Up to 1x ADC Up to 9x PWM
Memory	SDRAM: Up to 2 GB NOR: Up to 256 MB (TBD) eMMC: Up to 64 GB (TBD) EEPROM: 0/64-kbit

Other	Real Time Clock (RTC) Secure Element SE050 Temperature sensor CPU JTAG interface
Power supply	5 V
Ambient conditions	Standard temperature range: -25°C...+85°C Extended temperature range: -40°C...+85°C
Dimensions	38 mm x 38 mm
Plug-in system	LGA (Land Grid Array) 366 pins
Operating systems	Real-time Operating System (TBD)

BLOCK DIAGRAM TQMA243XL



ORDERING INFORMATION

TQMa2434L-AA	TQMa2434L-AA, 2x Dual Cortex®-R5F/800 MHz, Cortex®-M4/400 MHz, 64 MB NOR Flash, 1 GB SDRAM, 64 kB EEPROM, RTC, -40°C...+85°C
TQMa2432L-AA	TQMa2432L-AA, Dual Cortex®-R5F/800 MHz, Cortex®-M4/400 MHz, 64 MB NOR Flash, 1 GB SDRAM, 64 kB EEPROM, RTC, -40°C...+85°C
TQMa2431L-AA	TQMa2431L-AA, Single Cortex®-R5F/800 MHz, Cortex®-M4/400 MHz, 64 MB NOR Flash, 1 GB SDRAM, 64 kB EEPROM, RTC, -40°C...+85°C

Other configurations on request

**STKa243xL-AA
(Prototypes Q1/2022)**

STKa243xL (Eval Kit) with TQMa243xL-AA, 2x Dual Cortex®-R5F/800 MHz, Cortex®-M4/400 MHz, 64 MB NOR Flash, 1 GB SDRAM, 64 kB EEPROM, RTC, 1x USB 2.0 OTG, 2x ETH 10/100/1000 (PRU), 1x ETH 10/100/1000, 2x CAN FD, 1x Temperature sensor, GPIOs (4x 24V_IN, 4x 24V_OUT, 4x AI_IN), Reset-Button, SD Card interface, Power Supply, 4 GB SD card, Cables

**Starterkit
STKa243xL set**

The core of the STKa243xL set is the TQMa243xL module with a R5F CPU. The components contained in the starter kit constitute a modular system enabling you to develop your own product ideas. To develop your own hardware you can use the certified and qualified circuit components of the starter kit in your own designs.

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