

TQMa64xxL

Arm® Family



HIGHLIGHTS

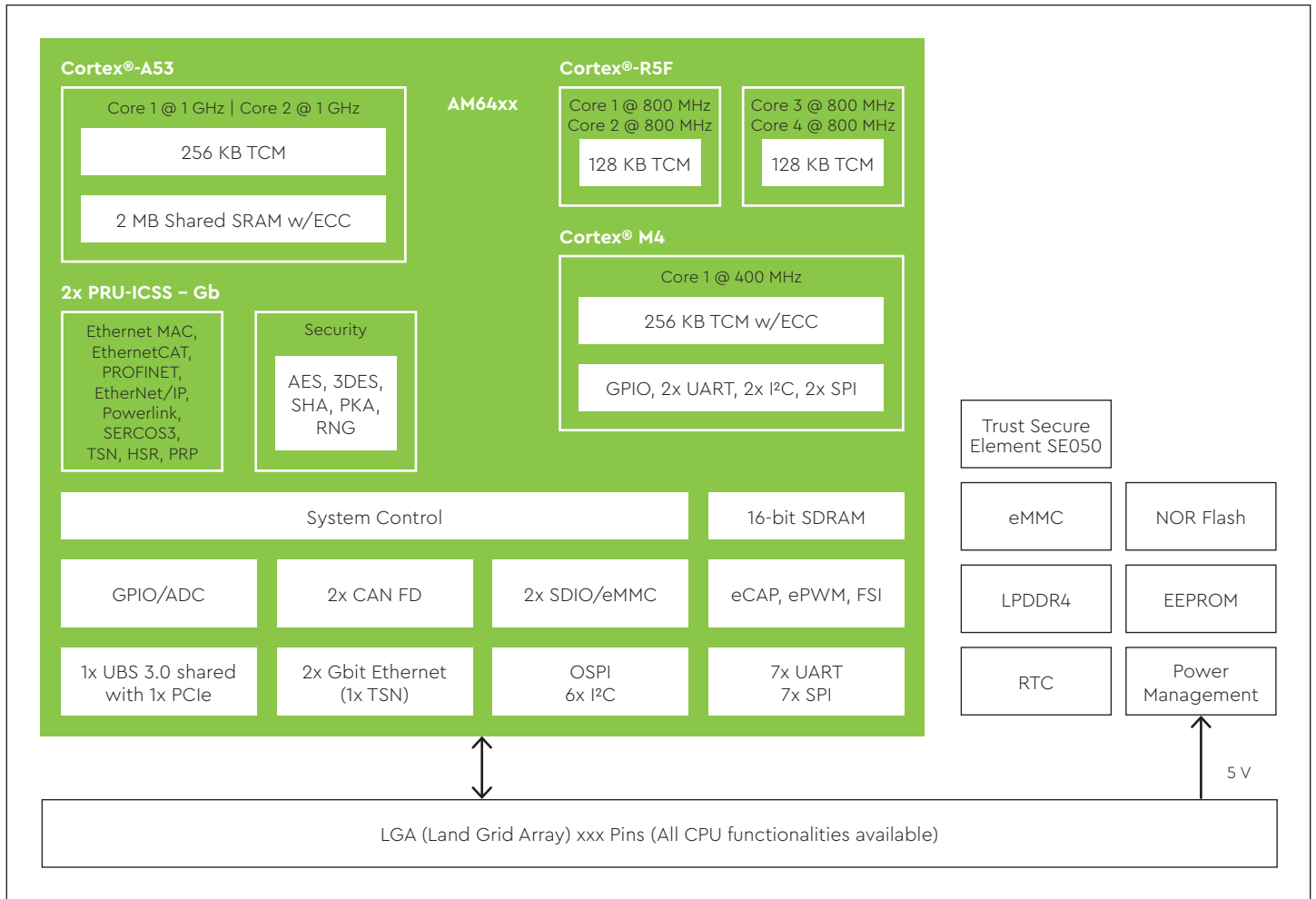
- ▶ 4x Real-time GBit Ethernet for Fieldbus
- ▶ Up to 2x CAN FD
- ▶ Integrated Cortex®-M4
- ▶ High-speed communication via 2x Gbit Ethernet, 1x USB 2.0 interface
- ▶ Low power consumption (typ. 1-2 W)
- ▶ Integrated security functions

Embedded Cortex®-A53/R5F module based on TI AM64xx for headless Applications with Real-time demand.

TECHNICAL SPECIFICATION

CPU	AM6442, AM6441, AM6421, AM6412, AM6411	Other	Real Time Clock (RTC) Secure Element SE050 Temperature sensor CPU JTAG interface
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	Power supply	5 V
Periphery interfaces	Up to 2x SDIO Up to 6x I ² C Up to 7x MCSPi Up to 1x OSPI or QSPI Up to 1x ADC Up to 9x PWM	Ambient conditions	Standard temperature range: -25°C...+85°C Extended temperature range: -40°C...+85°C
Memory	LPDDR4: Up to 2 GB NOR: Up to 256 MB (TBD) eMMC: Up to 64 GB (TBD) EEPROM: 0/64-kbit	Dimensions	38 mm x 38 mm
		Plug-in system	LGA (Land Grid Array) 366 pins
		Operating systems	Real-time Operating System (TBD) Linux (Cortex®-A53)
		Operating systems on request	(TBD)

BLOCK DIAGRAM TQMA64XXL



ORDERING INFORMATION

TQMa6442L-AA TQMa6442L-AA, Dual Cortex®-A53/1 GHz, 2x Dual Cortex®-R5F/800 MHz, Cortex®-M4/400 MHz, 8 GB eMMC Flash, 1 GB LPDDR4, 64 kB EEPROM, RTC, -40°C...+85°C

TQMa6421L-AA TQMa6421L-AA, Single Cortex®-A53/1 GHz, Dual Cortex®-R5F/800 MHz, Cortex®-M4/400 MHz, 8 GB eMMC Flash, 1 GB LPDDR4, 64 kB EEPROM, RTC, -40°C...+85°C

TQMa6411L-AA TQMa6411L-AA, Single Cortex®-A53/800 MHz, Single Cortex®-R5F/800 MHz, Cortex®-M4/400 MHz, 8 GB eMMC Flash, 1 GB LPDDR4, 64 kB EEPROM, RTC, -40°C...+85°C

Other configurations on request

STKa64xxL-AA
(Prototypes Q1/2022)

STKa64xxL (Eval Kit) with TQMa64xxL-AA, Dual Cortex®-A53/1 GHz, 2x Dual Cortex®-R5F/800 MHz, Cortex®-M4/400 MHz, 8 GB eMMC Flash, 1 GB LPDDR4, 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
STKa64xxL set

The core of the STKa64xxL set is the TQMa64xxL module with a Dual Cortex®-A53/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.

TQ-Systems GmbH

Mühlstraße 2 | Gut Delling | 82229 Seefeld | Germany
Tel.: +49 8153 9308-0 | info@tq-group.com | tq-group.com

tq-embedded.com