TQMa62xx

Arm® Family

HIGHLIGHTS

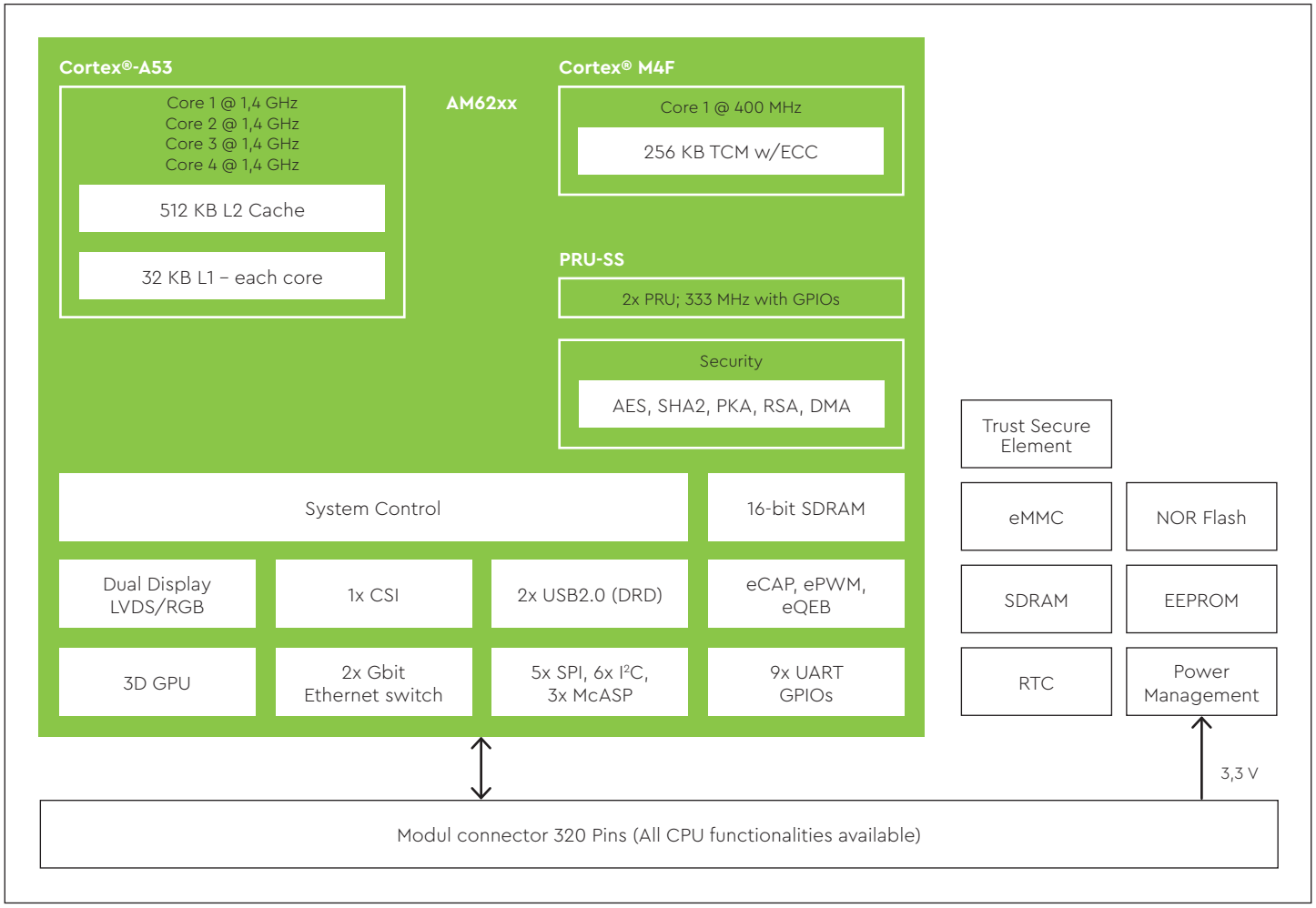
- 4/2/1 Cortex A53 – scalable computing performance
- Dual Display LVDS / RGB + 3D GPU
- LPDDR4 support with ECC
- High-speed communication via 2x Gbit Ethernet switch (TSN), 3 x CAN FD, 2x USB 2.0 interface
- Low power consumption (typ. 2 W)
- Integrated security functions

Embedded Cortex®-A53 module based on TI AM62xx for applications with enhanced computing & scalable graphics performance

TECHNICAL SPECIFICATION

CPU	AM6254, AM6252, AM6251, AM6234, AM6232, AM6231
Interfaces	Up to 2x Gbit-Ethernet switch (TSN) Up to 2x USB 2.0 interface Up to 3x CAN FD Up to 9x UART
Periphery interfaces	Up to 3x SDIO Up to 6x I²C Up to 5x SPI Up to 1x GPMC Up to 1x OSPI Up to 3x PWM 3x McASP (Audio)
Graphic	1x LVDS (8 lanes) 1x RGB (24bit) 3D GPU (8G FLOPFS) Camera: 1x CSI-Rx (4 lanes)
Memory	LPDDR4: Up to 2GB NOR: Up to 256 MB eMMC: up to 64 GB EEPROM: 0/64-kbit
Other	Real Time Clock (RTC) Secure Element SE050 Temperature sensor CPU JTAG interface
Power supply	3,3V
Ambient conditions	Standard temperature range: -25°C...+85°C Extended temperature range: -40°C...+85°C
Dimensions	58 mm x 32 mm
Plug-in system	Board to board plug in system 320 pins (TBD)
Operating systems	Linux
Operating systems on request	(TBD)

BLOCK DIAGRAM TQMa62xx



ORDERING INFORMATION

TQMa6254-AA	TQMa6254-AA, Quad Cortex®-A53 / 1,4 GHz, Cortex®-M4 / 400 MHz, 8 GB eMMC, 1 GB SDRAM, 64 kB EEPROM, RTC, 3D GPU, -40°C...+85°C
TQMa6231-AA	TQMa6231-AA, Single Cortex®-A53 / 1,0 GHz, Cortex®-M4 / 400 MHz, 8 GB eMMC, 1 GB SDRAM, 64 kB EEPROM, RTC, -40°C...+85°C
	Other configurations on request
STKa62xx-AA	STKa62xx (Eval Kit) with TQMa62xx-AA, Quad Cortex®- A53/1,4 GHz, Cortex®- M4 / 400 MHz, 64 MB NOR Flash, 1 GB SDRAM, 64 kB EEPROM, RTC, 2x ETH 10/100/1000 (TSN), 2x CAN FD, 1x USB 2.0 OTG, 1x USB Debug, 2x USB2.0., Audio, 1x LVDS, IOT & WLAN Module, 1x CSI Kamera, GPIOs (4x 24V_IN, 4x 24V_OUT, 2x AI_IN), Pinheader (PRU Signals, GPIOs, SPI, I2C), Reset-Button, mikro SD Card interface, Power Supply, 4 GB SD card, Cables
Starterkit STKa62xx set	The core of the STKa62xx set is the TQMa62xx module with a Quad Cortex®-A53 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

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