

TQMa62xxL

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

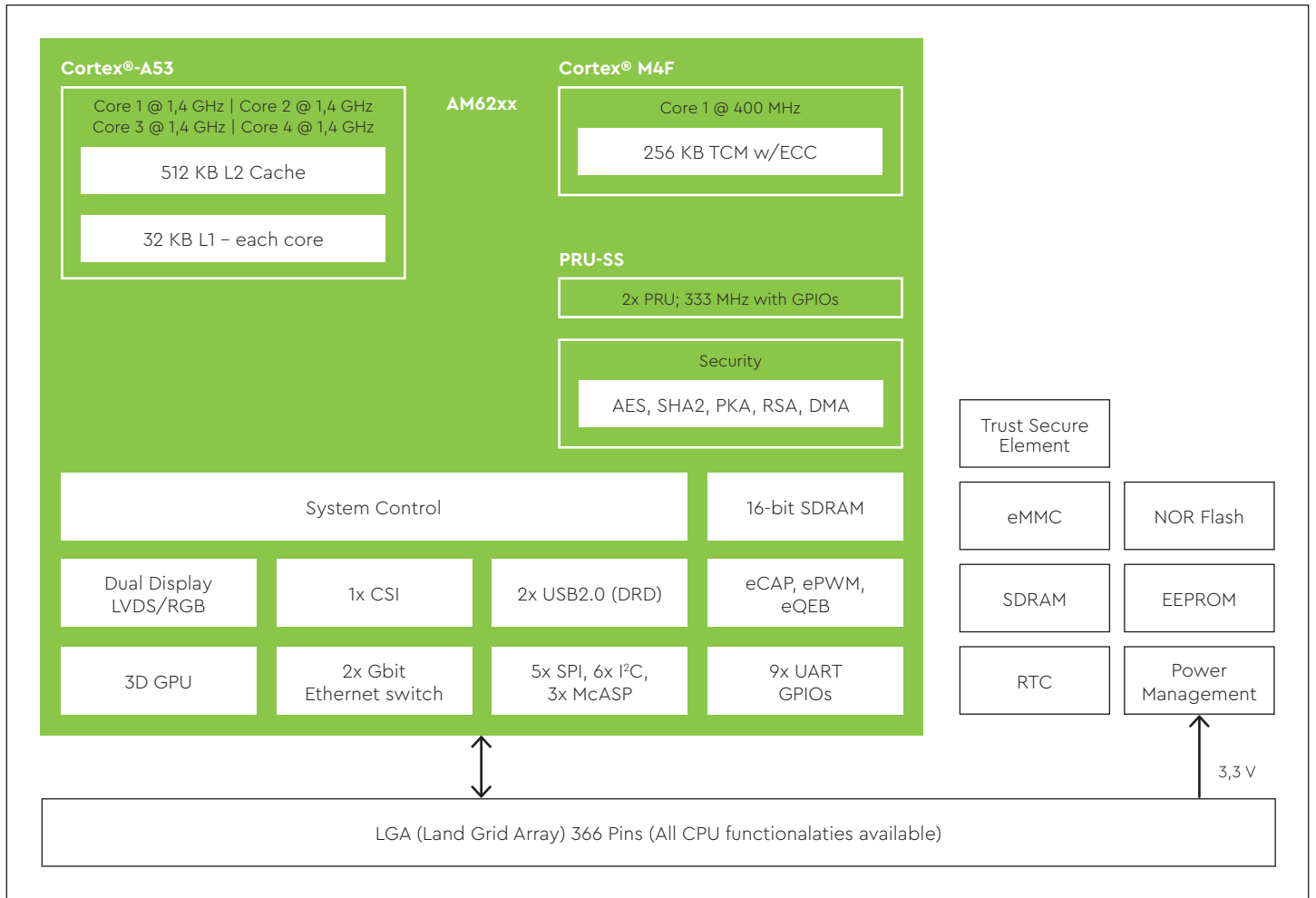
Embedded Cortex®-A53 module based on TI AM62xx for applications with enhanced computing & scalable graphics performance

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 I ² C 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	38 mm x 38 mm
Plug-in system	LGA (Land Grid Array) 366 pins
Operating systems	Linux
Operating systems on request	(TBD)

BLOCK DIAGRAM TQMa62xxL



ORDERING INFORMATION

TQMa6254L-AA	TQMa6254L-AA, Quad Cortex®- A53 / 1,4GHz, Cortex®- M4 / 400MHz, 64 MB NOR Flash, 1GB SDRAM, with 3D GPU, 64 kB EEPROM, RTC, -40°C...+85°C
TQMa6231L-AA	TQMa6254L-AA, Single Cortex®- A53 / 1,4GHz, Cortex®- M4 / 400MHz, 64 MB NOR Flash, 1GB SDRAM, 64 kB EEPROM, RTC, -40°C...+85°C
	Other configurations on request
STKa62xxL-AA (Prototypes Q4/2023)	STKa62xxL (Eval Kit) with TQMa62xxL-AA, Dual Cortex®- A53 / 1GHz, Cortex®- M4 / 400MHz, 64 MB NOR Flash, 1GB 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 STKa62xxL set	The core of the STKa62xxL set is the TQMa62xxL module with a Dual 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