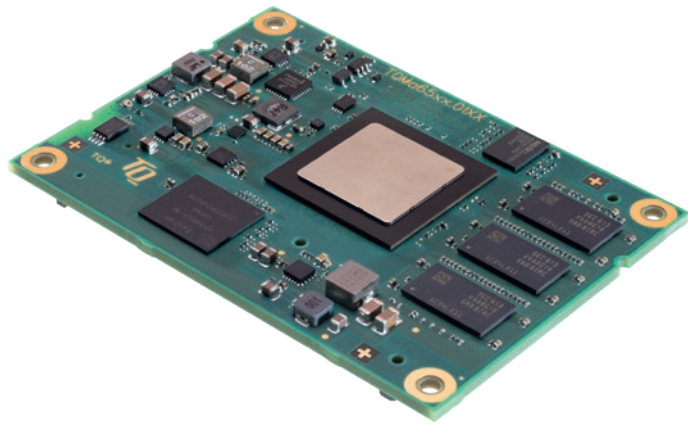


# TQMa65xx

Arm® Family



## HIGHLIGHTS

- ▶ Graphic with 3D Support
- ▶ DDR4 with ECC Support
- ▶ 6x Real Time Gbit Ethernet TSN (PRU)
- ▶ 1x Gbit Ethernet, 2x PCIe and 1x USB 3.1 interface
- ▶ Low power consumption (typ. 6 W)
- ▶ 2x CAN FD
- ▶ Integrated Cortex® R5F MPU

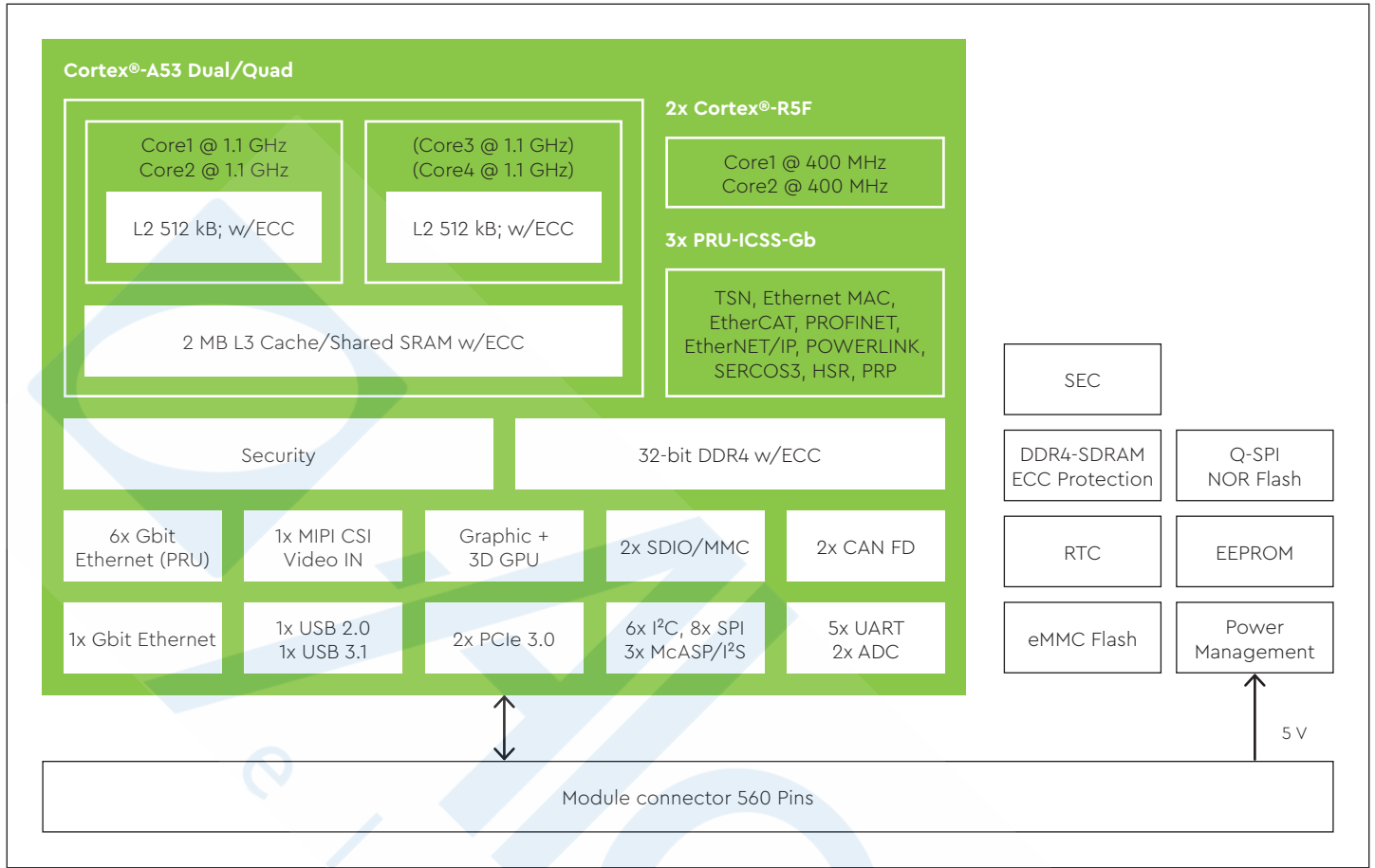
**Embedded Cortex®-A53 module based on AM65xx for applications with enhanced real-time requirements.**

## TECHNICAL SPECIFICATION

<b>CPU</b>	AM6526, AM6528, AM6546, AM6548
<b>Interfaces</b>	Up to 1x Ethernet 10/100/1000 Mbit Up to 6x Ethernet 1000 Mbit (PRU) Up to 1x USB 3.1 interface Up to 1x USB 2.0 interface Up to 5x UART Up to 2x CAN FD
<b>Periphery interfaces</b>	Up to 2x SDIO/MMC Up to 2x PCIe 3.0 Up to 6x I2C Up to 8x SPI Up to 2x QSPI Up to 3x McASP/I <sup>2</sup> S Up to 2x ADC Up to 32 GPIO
<b>Graphic</b>	LCD Interface: 1x 24bit RGB LCD, 1x LVDS Camera: 1x MIPI CSI2, 1x 16-bit Video IN

<b>Memory</b>	DDR4-SDRAM: Up to 4 GB + ECC Quad SPI NOR: Up to 512 MB eMMC Flash: Up to 64 GB EEPROM: 0/64-kbit
<b>Other</b>	Real Time Clock (RTC) Temperature sensor CPU JTAG interface
<b>Power supply</b>	5 V
<b>Ambient conditions</b>	Standard temperature range: -25°C...+85°C Extended temperature range: -40°C...+85°C
<b>Dimensions</b>	77 mm x 55 mm
<b>Plug-in system</b>	Board-to-board plug-in system 560 pins 0.5 mm Pitch
<b>Operating systems</b>	Linux
<b>Operating systems on request</b>	QNX, Android

## BLOCK DIAGRAM TQMA65XX



## ORDERING INFORMATION

**TQMa6528-AA**  
(Prototypes Q2/21)

TQMa6528-AA, Dual Cortex®-A53/1.1 GHz, 8 GB eMMC Flash, 2 GB DDR4, 64 kB EEPROM, RTC, -25°C...+85°C

**TQMa6548-AA**  
(Prototypes Q3/20)

TQMa6548-AA, Quad Cortex®-A53/1.1 GHz, 8 GB eMMC Flash, 2 GB DDR4, 64 kB EEPROM, RTC, -25°C...+85°C

Other configurations on request

**STKa65xx-AA**  
(Prototypes Q3/20)

STKa65xx (Eval Kit) with TQMa65xx-AA, Quad Cortex®-A53, 2 GB DDR4, 8 GB eMMC Flash, 64 kB EEPROM, RTC, 2x CAN separated, 4x USB 2.0, 1x USB 2.0 OTG, 1x ETH 10/100/1000, 6x ETH 10/100/1000 (PRU), 1x 24-bit RGB, 1x LVDS, 1x MIPI CSI, 1x Mini PCIe + SIM Card, Audio, Temperature sensor, Reset-Button, SD Card interface, Power Supply, 4 GB Micro SD card, Cables

**Starterkit**  
**STKa65xx set**

The core of the STKa65xxx set is the TQMa65xx module with a Dual or a Quad Cortex®-A53 CPU. The components contained in the starter kit constitute a modular system enabling you to develop your own product ideas. Development of graphic interfaces can be started immediately using the prepared combination of closed display unit and starter kit that are matched to each other. To develop your own hardware you can use the certified and qualified circuit components of the starter kit in your own designs.