



TQMa53

The Multimedia module

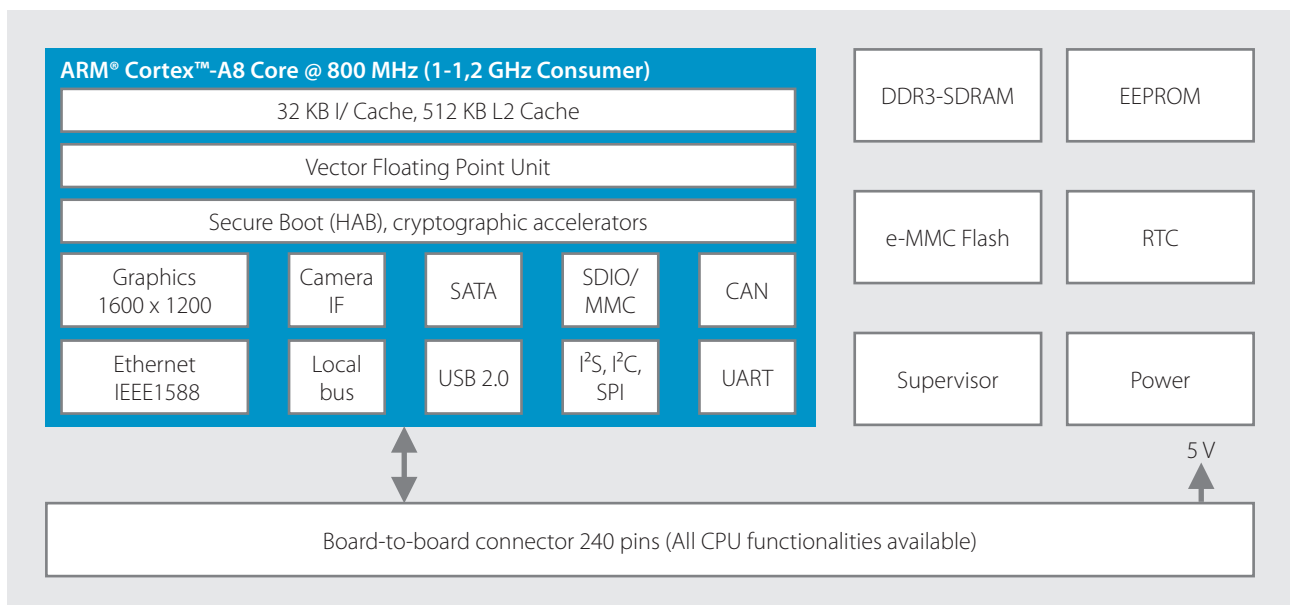
The Minimodule TQMa53, based on the processor i.MX537 from NXP, combines Industry and Multimedia. The integrated graphic controller supports displays with a resolution up to UXGA. Therefore the module is best suited for HMI and animated display screen- and accordingly multitouch applications.

With an ARM Cortex™ A8 core and a clock rate up to 1,2 GHz the TQMa53 provides a balanced ratio between performance and power dissipation.

The highlights:

- Graphic
- Extended temperature range
- e-MMC flash
- Low power consumption (typ. 3 W)
- Long-term availability
- IEEE 1588 support
- Security functions

Block diagram TQMa53



Technical specification

Microprocessor

MCIMX537 / MCIMX535

System interfaces

1x Ethernet 10/100 Mbit (IEEE 1588)
2x FlexCAN
Up to 5x UART
2x USB 2.0 high speed HOST interface
1x USB 2.0 high speed OTG interface

Periphery interfaces

WEIM Bus*
Up to 3x SDIO/MMC
Up to 2x I²C
Up to 3x CSPI
Up to 3x SSI/I²S
ESAI
1x 16 bit Camera I/F
SATA
SPDIF

Graphic

Analog VGA
Parallel 1x 24 bit (RGB) UXGA*
Dual LVDS UXGA

Memory

DDR3-SDRAM: up to 1 GB
e-MMC: up to 16 GB
EEPROM: 0 / 64 kbit

Other

Real Time Clock (RTC)
Temperature sensor
CPU JTAG Interface
Supervisor 5 V

Power supply

5 V

Ambient conditions

Standard temperature range: -25°C...+85°C
Extended temperature range: -40°C...+85°C

Dimensions

55 mm x 44 mm

Plug-in system

Board-to-board plug-in system 240 Pins

Operating systems

Linux, QNX

Operating systems on request

WEC 7, Android

* Optional WEIM bus or parallel 24 bit graphic interface usable

Ordering information

TQMa53-AA

TQMa53, i.MX537 / 800 MHz, 4 GB e-MMC flash, 512 MB DDR3, 64 kbit EEPROM, -25°C ... +85°C

For further product variants please visit our website:
www.tq-group.com/en/TQMa53

STKa53-AA

STKa53 (Eval Kit) with TQMa53-AA, i.MX537 / 800 MHz, 512 MB DDR3, 4 GB e-MMC flash, 64 kbit EEPROM, 1x RS232, 1x RS485, 2 x CAN 2.0B separated, 3x USB 2.0 HOST, 1x USB 2.0 OTG, 2x ETH 10/100, CRT, 2x LVDS, Line Out, Mono Mic In, Line In, RTC, Temperature sensor, Reset button, SD interface, Power Supply, 2 GB SD card, Z-Modem cable, USB cable, DVI-VGA adapter, DVI-HDMI adapter

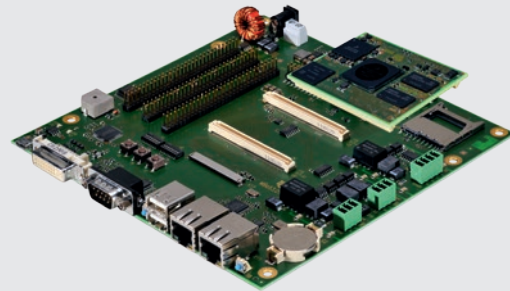
Starter kit STKa53 set

The core of the STKa53 set is the TQMa53 with the i.MX53 CPU from Freescale.

With the preconfigured starter kit you can start immediately with the development of your application in order to achieve a fast time-to-market.

To develop your own hardware you can use the certified and qualified circuit components of the starter kit in your own designs.

A large accessory kit enables the connection of commercial monitors. Different display solutions for a direct connection to LVDS / TTL are available upon request.



TQ-Systems GmbH

Mühlstr. 2 | Gut Delling | 82229 Seefeld | Germany

Phone: +49 8153 9308-0 | Fax: +49 8153 4223

info@tq-group.com | www.tq-group.com

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