

# TQMa6x

## The Multimedia module

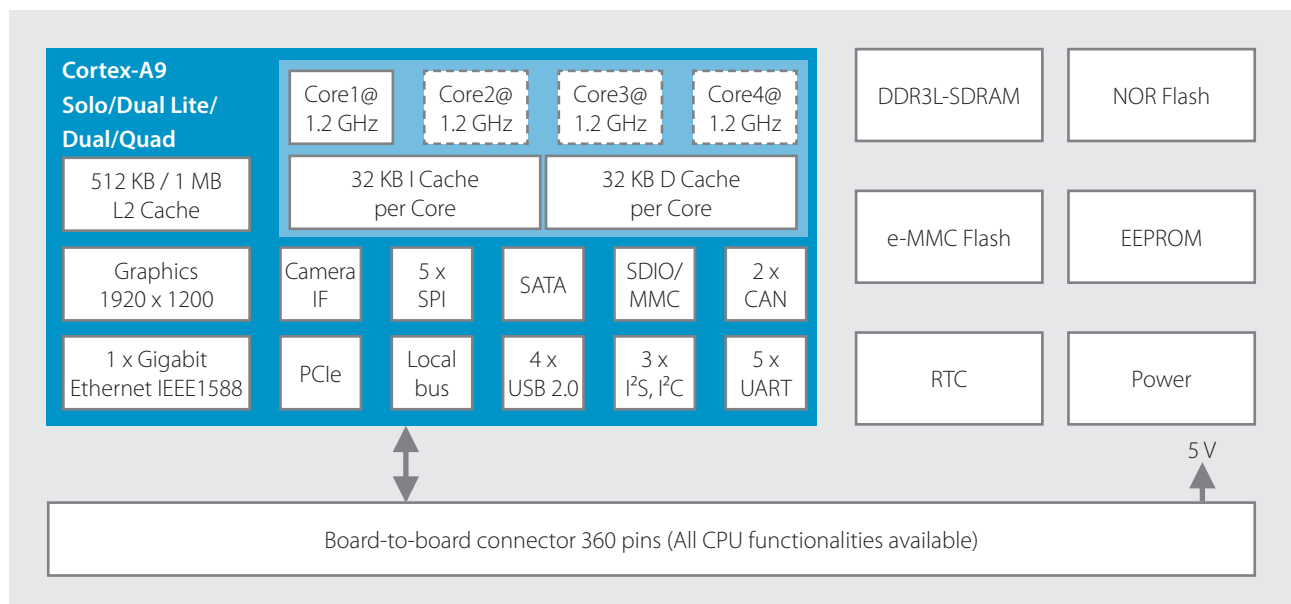
The Minimodule TQMa6x, based on the processor i.MX6 from Freescale, combines Industry and Multimedia. The integrated graphic controller supports displays with a resolution up to Full HD. Therefore the module is best suited for HMI and animated display screen- and accordingly multitouch applications.

With an ARM Cortex™ A9 core and a clock rate up to 4 x 1,2 GHz the TQMa6x provides a balanced ratio between performance and power dissipation.

### The highlights:

- Graphic
- Extended temperature range
- e-MMC Flash
- NOR Flash
- Low power consumption (typ. 4 W)
- Long-term availability
- IEEE 1588 support
- Security functions

## Block Diagram TQMa6x



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## Technical specification

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### Microprocessor

MCIMX6 Solo/Dual Lite/Dual/Quad Cortex-A9

### System interfaces

1x Ethernet 10/100/1000 Mbit (IEEE 1588)  
2x FlexCAN  
1x USB 2.0 high speed OTG interface  
1x USB 2.0 high speed HOST interface  
Up to 5x UART

### Periphery interfaces

Up to 2x USB 2.0 High-Speed Inter-Chip (HSIC)  
WEIM Bus  
Up to 3x SDIO/MMC  
Up to 2x I<sup>2</sup>C  
Up to 5x SPI  
Up to 3x SSI/I<sup>2</sup>S  
ESAI  
2x 16 bit Camera I/F  
SATA  
PCIe  
SPDIF

### Graphic

DVI (HDMI)  
Parallel 2x 24 bit (RGB)  
Dual LVDS

### Memory

DDR3L-SDRAM: Up to 2 GB (MCIMX6 Solo with 1 GB)  
e-MMC: Up to 16 GB  
NOR: Up to 128 MB  
EEPROM: 0 / 64 kbit

### Other

Real Time Clock (RTC)  
Temperature sensor  
CPU JTAG Interface

### Power supply

5 V

### Ambient conditions

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

### Dimensions

70 mm x 46 mm

### Plug-in system

Board-to-board plug-in system 360 pins

### Operating systems

Linux, VxWorks, QNX

### Operating systems on request

Windows Embedded 7, Android

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## Ordering information

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### TQMa6S-AA

TQMa6S, Solo Cortex-A9 / 800 MHz, 4 GB e-MMC flash, 512 MB DDRL3, 64 kbit EEPROM, -25°C ... +85°C

### TQMa6D-AA

TQMa6D, Dual Cortex-A9 / 800 MHz, 4 GB e-MMC flash, 1 GB DDRL3, 64 kbit EEPROM, -25°C ... +85°C

### TQMa6Q-AA

TQMa6Q, Quad Cortex-A9 / 800 MHz, 4GB e-MMC flash, 1 GB DDRL3, 64 kbit EEPROM, -25°C...+85°C

### STKa6D-AA

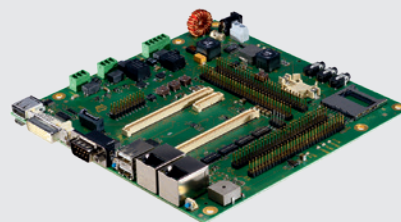
STKa6x (Eval Kit) with TQMa6D-AA, Dual Cortex-A9 / 800 MHz, 1 GB DDR3, 4 GB e-MMC Flash, 64 kbit EEPROM, 1x RS232, 1x RS485, 2 x CAN 2.0B separated, 3x USB 2.0 HOST, 1x USB 2.0 OTG, 1x ETH 10/100/1000, 1 x ETH 10/100, 1x Mini PCIe, DVI (HDMI), 1x PCIe, 2x LVDS, Sound, RTC, Temperature sensor, Reset button, SD interface, Power Supply, 4 GB SD card, Cables

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## Starter kit STKa6D set

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The core of the STKa6D Set is the TQMa6D module with a Dual Cortex-A9 CPU from Freescale. 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.



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