

TQMT1040

Power Architecture®



Quad-core Power Architecture® module with extended I/O connectivity via integrated 8-Port Switch and strong computing performance.

HIGHLIGHTS

- ▶ Quad core up to 1400 MHz in 28 nm SOI for the best Performance/Watt ratio
- ▶ High speed communication with a combination of up to 4x Gbit Ethernet and integrated 8-Port Switch, 4x PCIe and two USB 2.0 interfaces
- ▶ Dual SATA interfaces for data storage
- ▶ Easy function extensions via PCIe, eSPI, I²C and IFC (Local Bus)
- ▶ IEEE 1588 time synchronization in hardware
- ▶ Extremely compact module dimensions
- ▶ Display Interface Unit

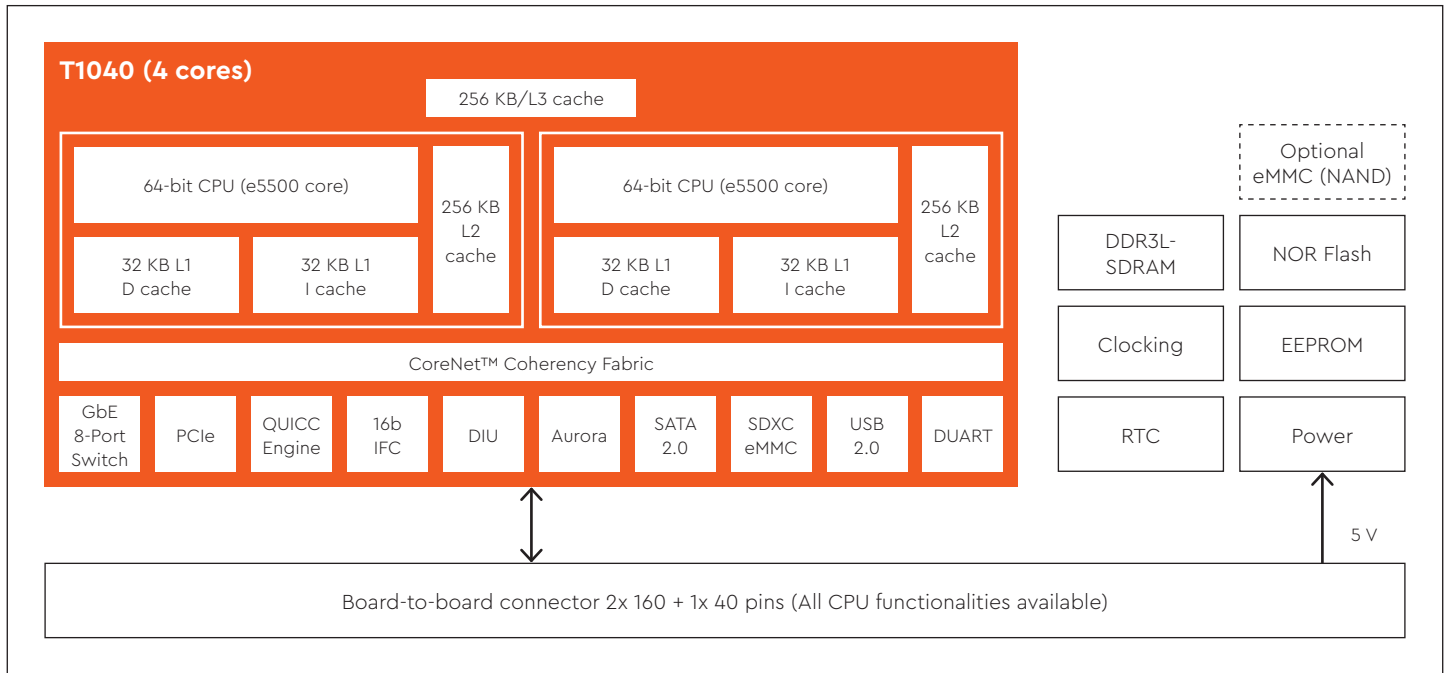
TECHNICAL SPECIFICATION

CPU	Quad T1040 Power Architecture® e5500 cores (64-bit)
Interfaces	4x Gbit Ethernet (with IEEE® 1588v2) 8-Port Gbit Ethernet Switch 2x USB 2.0 High Speed Host/Device/OTG 2x SATA 2.0 4x PCIe, 2.0 Controller up to 5.0 Gbit/s according to PCI Express specification 2.0 as Root-Complex or Endpoint 4x I ² C, max. 400 kHz 1x Integrated Flash Controller (IFC), 16-bit 1x eSPI Controller 2x DUART, max. 115 kBaud (RS232) Up to 32x GPIOs 2x TDM (via QUICC Engine)
Graphics	Display controller for TFT LCD displays (up to 24-bit RGB)
Memory	DDR3L-SDRAM: up to 8 GB with ECC*) NOR flash: up to 256 MB EEPROM: 32 KB Simple expansion for example via MMC, SDHC, USB
Other	Real Time Clock (RTC) Watchdog JTAG Interface Real-Time Debug Interface (Aurora)

Power supply	5 V
Power consumption	Typ. 7 W up to 9 W
Ambient conditions	Standard temperature range: 0°C...+70°C Extended temperature range: -40°C...+85°C
Dimensions	74 mm x 54 mm
Plug-in system	Board-to-board plug-in system 360 Pins
Operating systems	Linux
Operating systems on request	PikeOST™

*) Up to 4GB with ECC for extended temperature range

BLOCK DIAGRAM TQMT1040



ORDERING INFORMATION

TQMT1040-BA

TQ Minimodule with T1040 Quad Core CPU with up to 4x 1200 MHz, Crypto, 2 GB DDR3 SDRAM, 128 MB NOR flash, 32 KB EEPROM, -40°C...+85°C Further product variants on request

STKT1040-SET-BA

Starter kit with TQ Minimodule TQMT1040-BA and baseboard STKT104X, Power Supply, Z-Modem cable, module extractor, heat spreader and documentation.

BASEBOARD

STKT104X

The baseboard STKT104X supports all modules of the type series TQMT104x and TQMT102x and represents an universal platform for evaluation and development of customer specific platforms for those modules.

Design support Production

At TQ you not only get first-class embedded systems – we also provide a series of benefits around the embedded module:

- ▶ Support in writing a technical specification for gathering the requirements of your application
- ▶ Support in selection of components up to Obsolescence management
- ▶ Circuit diagram review
- ▶ Software, especially Board Support Packages and Hardware-close driver
- ▶ Starting-up of your baseboard

As system service provider TQ is able to take over the development, production and test of your baseboard. Therefore you get the whole tested unit from one hand.

TQ-Systems GmbH

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