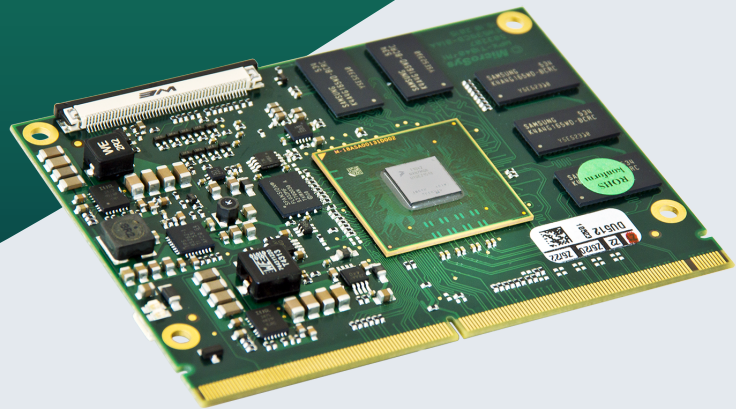


SoMs Power Architecture

miriac® MPX-T1042

System on Module based on NXP® QorIQ® T1042 CPU



Highlights

- up to 8 GB 64-bit DDR4 ECC RAM at 1600 MTps
- up to 8x SerDes lanes at 5 Gbps, configurable in different options
- hybrid 32-bit mode to support legacy software
- temperature sensor
- All on board supply voltages are monitored by a separate μ -controller.





Product Description

The QorIQ® quad-core T1042 is part of NXP QorIQ CPU family. This communication processor is built on Power Architecture® technology combining 64-bit cores with high-performance Data Path Acceleration Architecture (DPAA) and network peripheral bus interfaces. Within the QorIQ® T Series platform, T1042 offers optimized features for the industrial devices including a display interface unit for HMI, the QUICC Engine® for industrial protocol offload and ECC support for high reliability “always on” applications.

Our cost effective MPX-T1042 System-on-Module offers a small form factor and a standard edge connector (MXM3.0 socket).

Memory up to 8GB DDR4 ECC RAM, parallel Ethernet interface, 4x PCIe 2.0 and commercial & industrial temperature range are some of the key features of this SoM.

Due to the available performance, miriac® MPX-T1042 SoM provides the basis for networking, telecommunication and industrial applications. Furthermore this SoM is scalable with the dual-core performance of [miriac® MPX-T1024 SoM](#).

This SoM is part of NXP longevity program with new extended availability and support. This means that the SoM can continue to be evaluated for new projects.

NXP QorIQ CPU family represents additionally CPU as migration processing unit from the discontinued NXP® PowerQUICC® II Pro and NXP® PowerQUICC® III processors. In order to ensure the supply-chain-management process beyond the official processor availability, MicroSys offers huge experience with long-term delivery program. For further information regarding our migration program from NXP QorIQ please follow this [link](#).



Features

CPU	
Architecture:	PowerPC
Processor:	NXP® QorIQ® T1042
Memory	
Flash:	up to 2 GB SLC NAND Flash (soldered)
Flash Card:	1x SDHC
EEPROM:	16 kB
Graphic	
Graphics Controller:	12-bit Display Interface
High Speed IO	
SerDes lanes:	up to 8x SerDes at 5 Gbps
	Options:
	- up to 4x PCIe 2.0
	- up to 5x SGMII interfaces at 1 Gbps
	- up to 2x SGMII interfaces at 2.5 Gbps

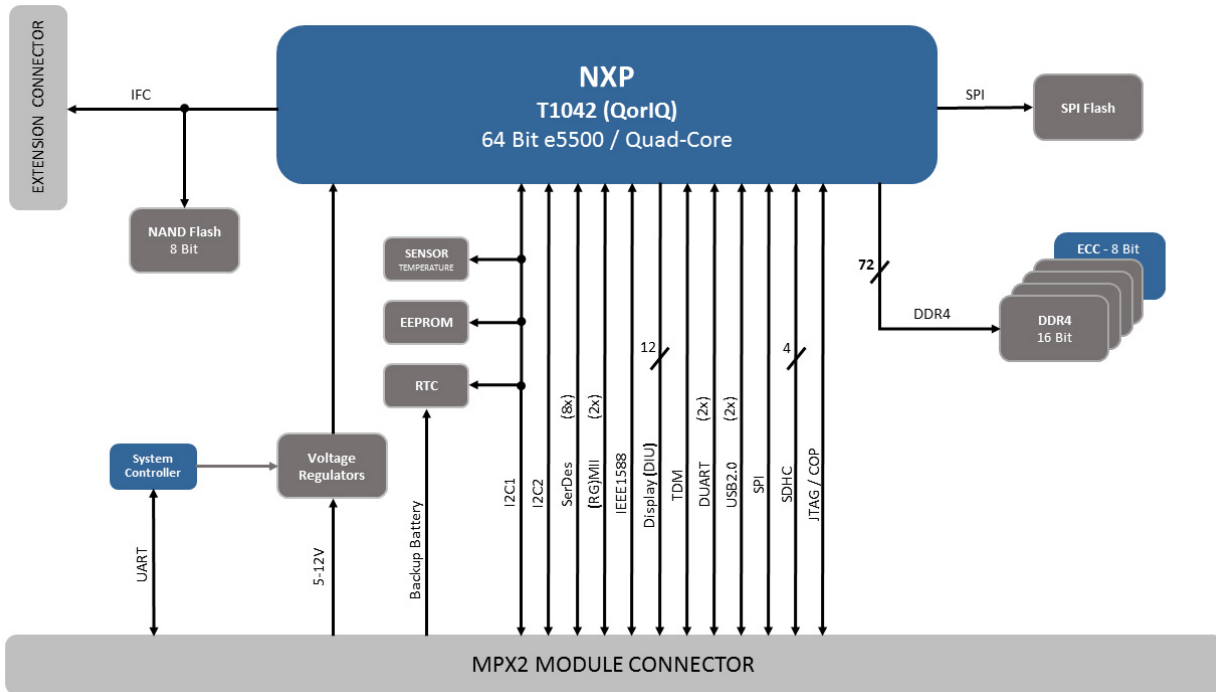
USB 2.0:	2x USB2.0 Host/Client OTG support
Operating Condition	
Temperature:	0 °C to 70 °C
Optional Extended Temperature:	-40 °C to 85 °C
Mechanical	
Formfactor:	MPX-2, 82 mm x 62 mm
Software / Additional	
Software Support:	Linux
	Microware OS-9
	VxWorks
	others on request

General Note:

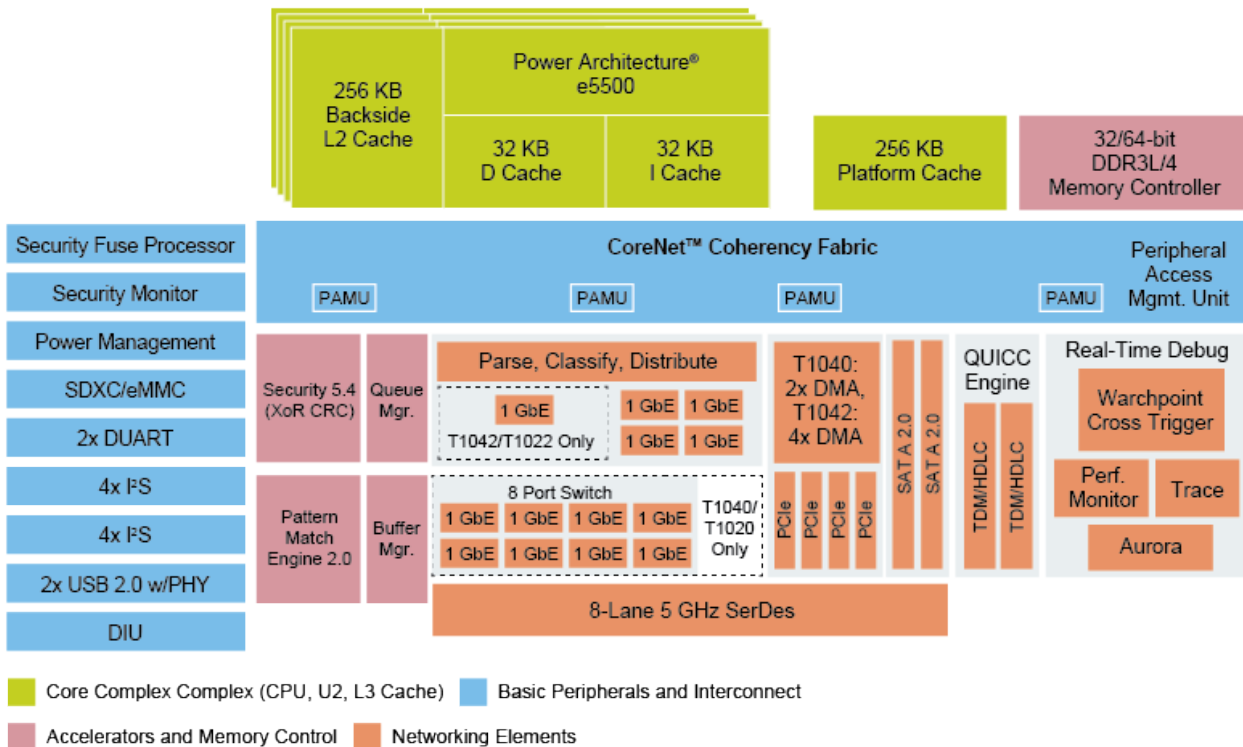
Our standard product versions offer what we consider to be the optimum configuration in terms of performance, price, usage and TDP. The product features lists specify the maximum range of functions per interface. However, not all interfaces or functions are always available in parallel. Flexible SERDES multiplexing is one of the reasons for this. In addition, we provide multiple memory expansion options and are also happy to accommodate specific customer wishes. So do not hesitate to [contact us](#) directly to discuss your desired configuration.



Block Diagrams



QorIQ T1040 AND T1042 COMMUNICATIONS PROCESSORS BLOCK DIAGRAM



NXP® QorIQ® T1042



Order Info

Name	Code	Description	Status
miriac® MPX-T1042	853902	4 QorIQ® e5500, 1.2 GHz, 2 GB DDR4 w ECC, 16 MB NOR Flash, 512 MB NAND Flash, 0 °C to 70 °C, w SEC	active
Development Kit basic for miriac® MPX-T1042	8543	<ul style="list-style-type: none">• miriac® MPX-T1042• CRX05• incl. BSP and accessories	active



Mühlweg 1
82054 Sauerlach
Germany

Sales: +49 8104 801-130
E-Mail: info@microsys.de
www.microsys.de

