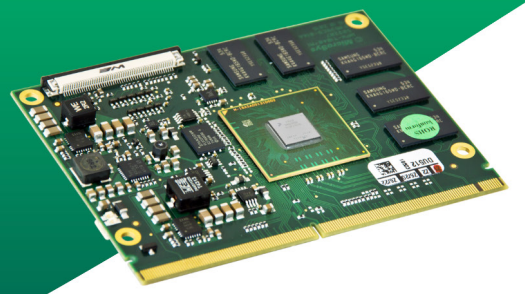
MicroSys
Creating Embedded Systems

miriac® MPX-T1042

System on Module based on NXP® QorIQ® T1042 CPU

- 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



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).

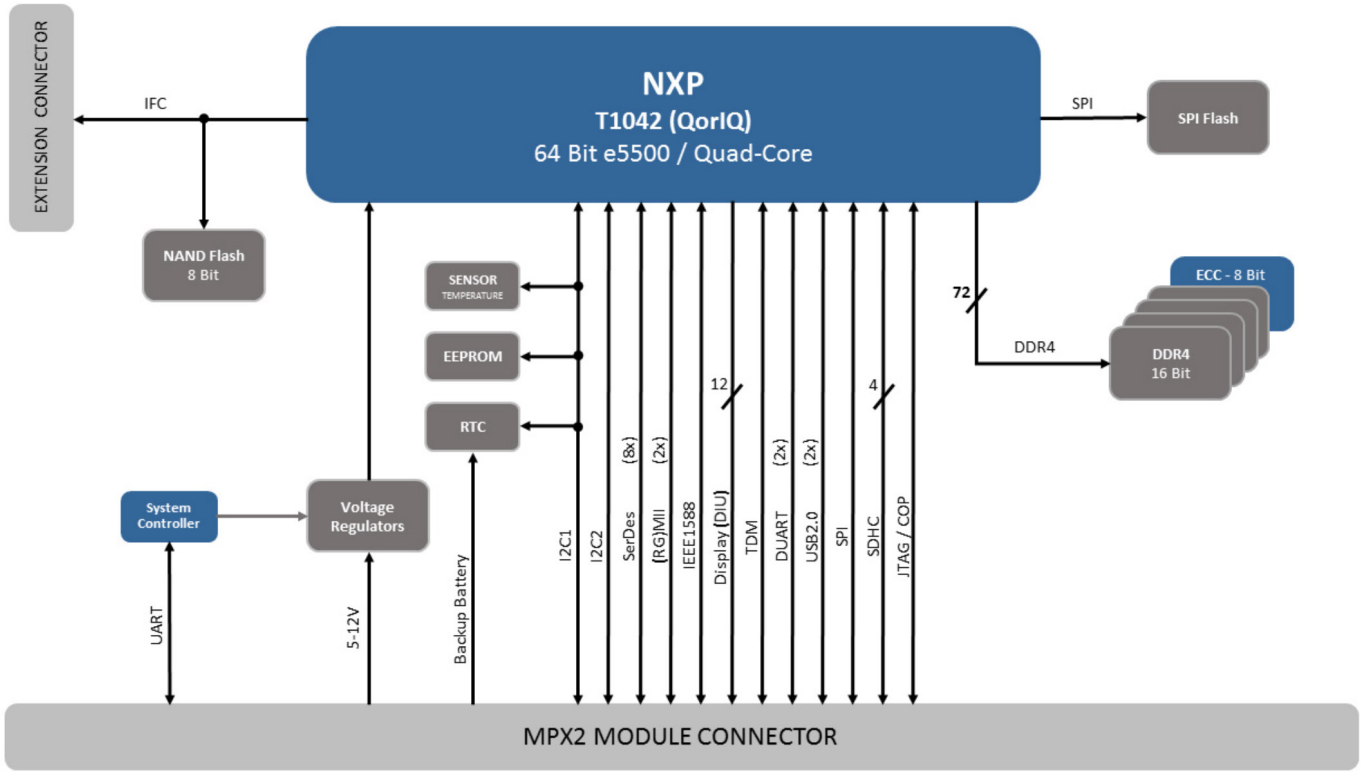
Memory up to 8GB DDR4 ECC RAM, parallel Ethernet interface, 4x PCIe 2.0 and commercial & industrial temperature range are some of the key features of this SoM.

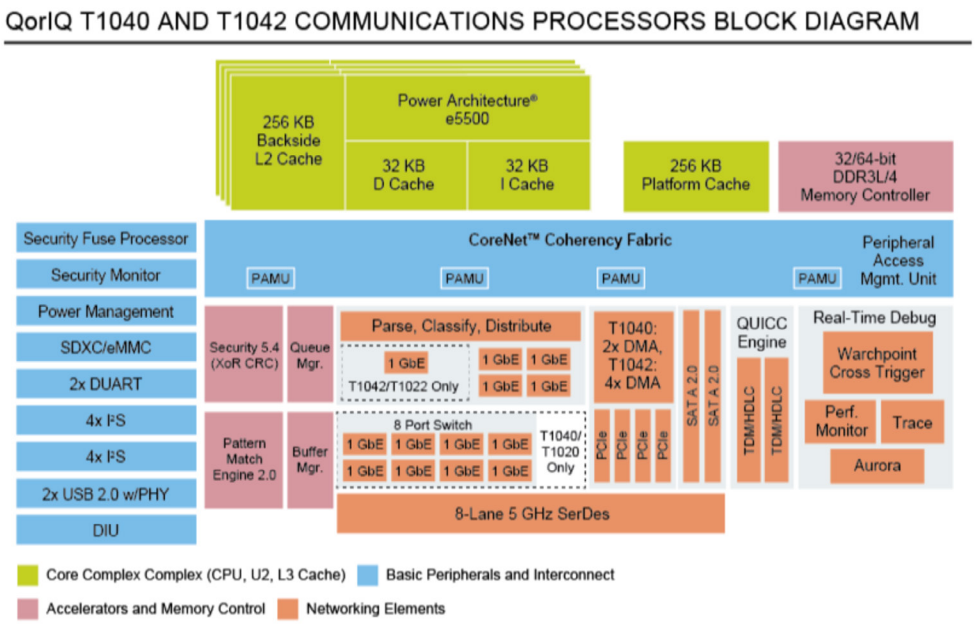
Due to the available performance, miriac® MPX-T1042 SoM provides the basis for networking, telecommunication and industrial applications. Furthermore this SoM is scalable with the dual-core performance of miriac® MPX-T1024 SoM.

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 QorIIQ 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 availabilty, MicroSys offers huge experience with long-term delivery program. For further information regarding our migration program from NXP QorIIQ please follow this link.

Block Diagrams





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

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.

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	• miriac® MPX-T1042 • CRX05 • incl. BSP and accessories	active

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