

SoMs Power Architecture

miriac® MPX2041

System on Module based on NXP® QorIQ® P2041
CPU



Highlights



- up to 4 GB DDR3 memory, 64-bit with EEC, soldered
- 10x @ 5 GHz SerDes lanes offer a completely new performance range for demanding I/O functions
- two 208 Pin Zero Force Connectors, that make all I/O and bus signals available to the carrier board
- High precision RTC
- Power: 3.3 V DC single supply, 24 A core voltage regulator





Product Description

The miriac® MPX2041 CPU Module is the first Quad Core QorIQ® based SoM by MicroSys.

The four e500mc CPU cores in combination with the integrated hardware hypervisor and CoerNet fabric allow completely new designs for control applications. The CoerNet fabric eliminates internal data exchange bottlenecks between the CPU cores. This offers higher performance and safer operation on application level.



Features

CPU	
Architecture:	PowerPC
Processor:	NXP® QorIQ® P2041 CPU
	4x e500mc cores up to 1.5 GHz, 32 kB I/D Cache and 128 kB L2 Cache per core
	1 MB CoerNet platform cache with EEC
Memory	
Flash:	up to 512 MB NAND Flash
Flash Card:	1x SD/MMC
High Speed IO	
SerDes lanes:	high speed interfaces supporting various multiplexed options by 10 SerDes lanes @ 5 GHz, e.g.
	- 2x SATA
	- 3x PCI Express®
	- 2x SRIO or
	- 4x SGMII
USB 2.0:	2x USB 2.0
Operating Condition	
Temperature:	optional: ext. temp.
Mechanical	
Formfactor:	MPX-1, 77 mm x 66 mm
Software / Additional	
Software Support:	Linux
	Microware OS-9
	VxWorks
	MicroC/OS-II

QNX

others are available on request

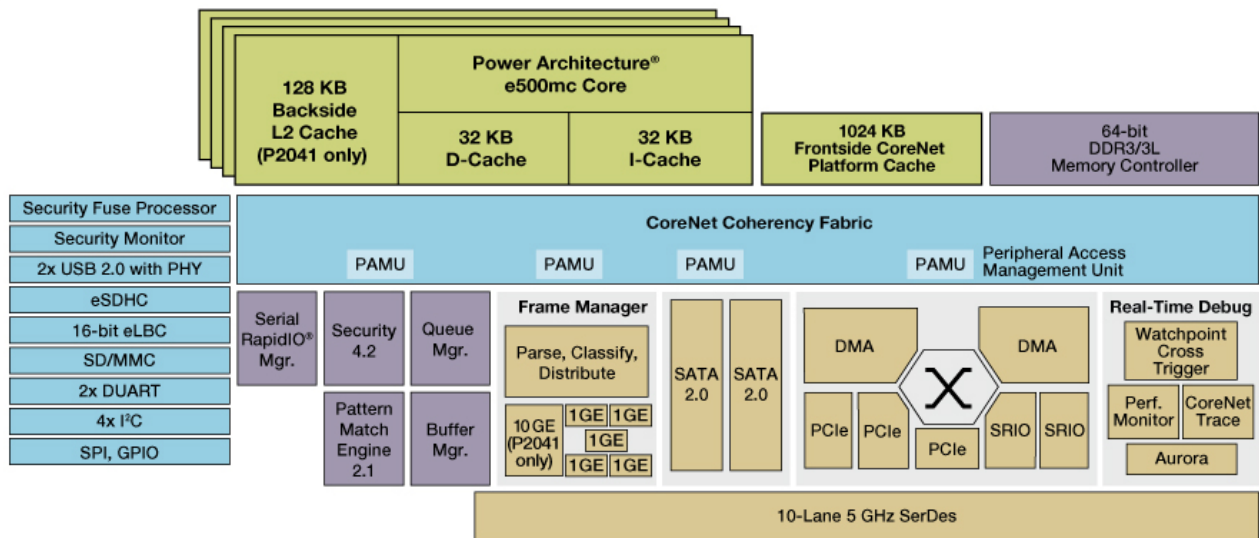
General Note:

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.

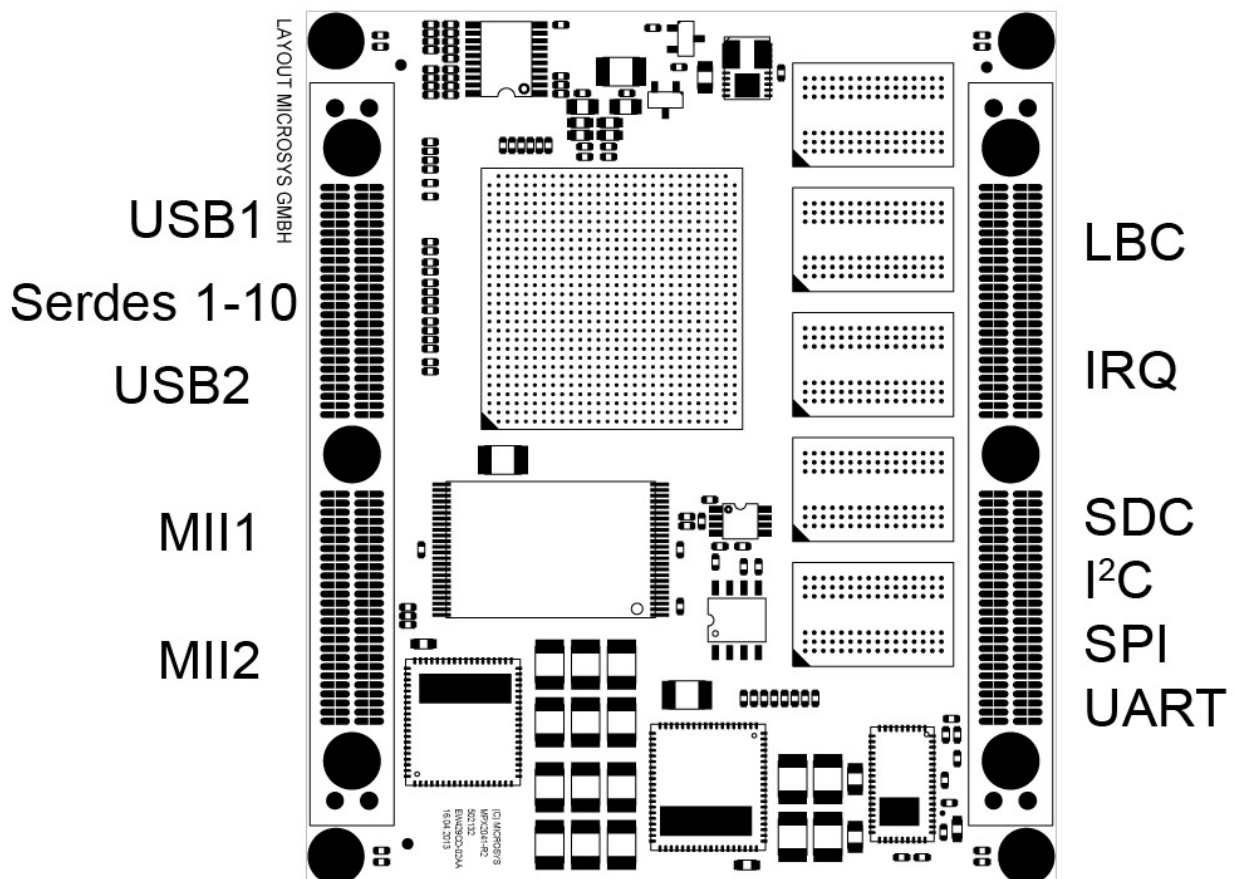


Block Diagrams

QorIQ P2040/P2041 Communication Processors



NXP® QorIQ® P2040, P2041





Order Info

Name	Code	Description	Status
miriac® MPX2041	842902	4 QorIQ® e500mc 1.3 GHz, 2 GB DDR3 w ECC, 4 MB NOR Flash, 256 MB NAND Flash, 0 °C to 70 °C, w/o SEC	EOL
miriac® SBC2041 Development Kit	844310	miriac SBC2041 Development Kit, incl. order#844310, Linux BSP, accessories	on request



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