

CPCI-8220

6U CompactPCI Freescale QorIQ P2040 Ruggedized Processor Board

NEW



Features

- Freescale QorIQ™ P2040 at 1.2 GHz or optional P2041 at 1.5 GHz
- Supports extended operating temperature range
- 66 MHz 64-bit PCI interface to J1 and J2
- Up to 4GB DDR3 with ECC support
- Redundant Flash Storage: 2 x 128 MB NOR Flash and 2 x 4GB NAND Flash
- Supports on-board 32 GB eMMC
- Two PMC / XMC interfaces
- Five 100/1000Base-T interfaces
- Five USB 2.0 interfaces
- PICMG 2.1/2.3/2.9/2.16 compliant

CompactPCI® CE FCC 50

Introduction

The CPCI-8220 is a ruggedized 6U CompactPCI board based on the Freescale P2040 QorIQ™ communications processor with dual PMC/XMC slots designed to support high performance mezzanine cards. The P2040 combines four Power Architecture® processor cores with high-performance datapath acceleration logic and network and peripheral bus interfaces ideally suited for applications in industrial and military/aerospace as well as in networking and communications. The board supports higher frequency P2041 processors when higher performance is required.

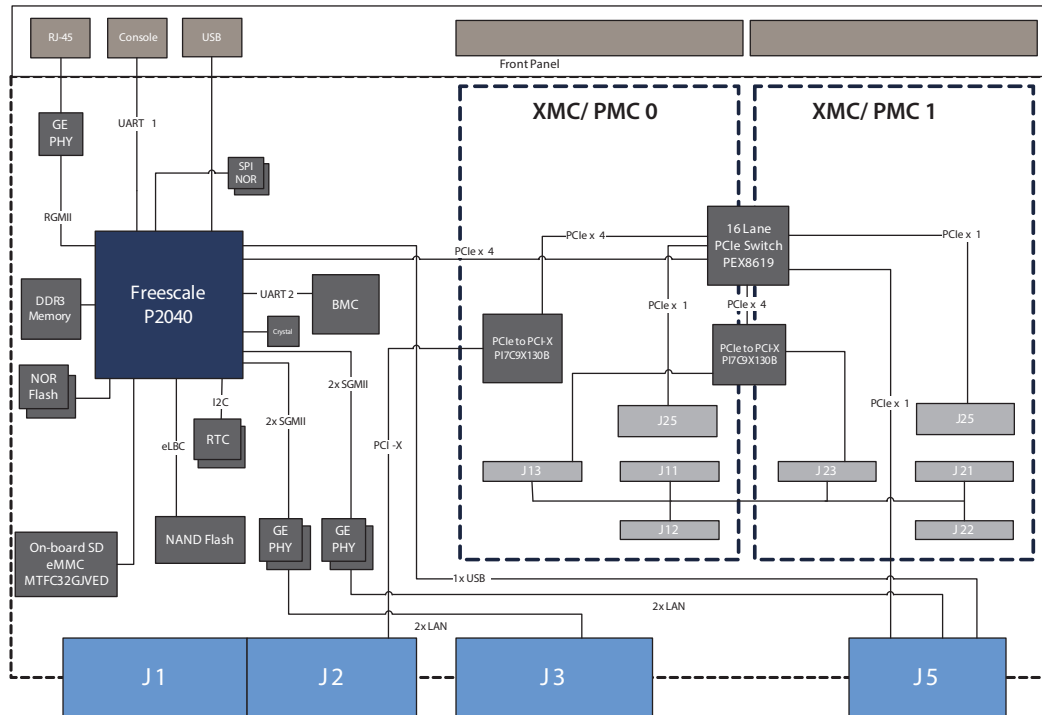
The CPCI-8220 is designed for deployment in rugged environments where extended temperature ranges and low thermal design power are required. Soldered ECC memory makes it deployable in mission critical applications where memory reliability is mandatory, supporting 1GB soldered DDR3 ECC memory, with 2GB or 4GB build options. 2 x 4MB Redundant SPI Flash and 2 x 128MB of NOR flash enable backup and update capabilities. A further 4GB NAND Flash serves as a boot device while an onboard 32GB SD eMMC offers application and storage capacity for a broad range of embedded applications.

The board supports both PMCs and XMCs to provide system integrators with the widest choice of COTS modules to choose from. These allow expansion for applications requiring acceleration and offload, communications or field bus I/O, FPGA processing, graphics as well as A-D and D-A interfaces depending on interoperability testing. The CPCI-8220 also supports five gigabit Ethernet ports, USB ports, PCI Express I/O, PMC I/O, XMC I/O, and RS-232/RS 422/RS-485 serial ports on the front panel or J5 connector. The CPCI-8220 is a powerful, flexible solution for the next generation of embedded CompactPCI applications. Operating system support for Wind River VxWorks™ and Wind River Linux Board Support Packages (BSPs) is available.

Specifications

Processor system	CPU	Freescale QorIQ P2040 4 Cores e500mc PowerPC, up to 1.2 GHz	
	Boot-loader	U-boot	
Boot Device	SPI Flash	4 MB x 2 (Redundant)	
	NOR Flash	128 MB x 2 (Redundant)	
	NAND Flash	4 GB	
Memory	Technology	DDR III with ECC, up to 1333 MHz	
	Max. Capacity	4 GB (Default is 1 GB)	
Ethernet	Controller	I-Temp Ethernet PHY controller	
	Interface	1GE port x1 on Front Panel 1GE port x4 on RIO	
Hardware Monitor	Controller	IPMI v1.5 compatible BMC (NXP)	
Storage	eMMC	32 GB eMMC on-board chip (Micron)	
Operation System	Compatibility	WR Linux 4.3 & WR VxWorks 6.9	
Form Factor	CompactPCI	6U 4HP CompactPCI w/ PMC/XMC design PICMG 2.1/2.3/2.9/2.16 compliant	
Power Consumption	Max	38 W	
	Typical	33 W	
I/O Interface	Serial Port	1x mini-USB console port	
Physical	Dimension	233.35 x 160 mm	
Environment		Operating	Non-Operating
	Temperature	-40 ~ 70° C (certified component)	-40 ~ 85° C
	Humidity	10 ~ 95% @ 40° C, non-condensing	10 ~ 95% @ 60° C, non-condensing
	Vibration	2 Grms (random)	2G (sine)
	Shock	IEC60068-2-27 (10 G, 11 ms)	
	Altitude	300 m below sea level to 4,000 m above sea level	10,000 above sea level
Peripheral	PMC/XMC	PMC/XMC Slot x 2	
Regulatory	Conformance	FCC Class B, CE, RoHS & WEEE (Plan)	
Compliance	Standards	PICMG 2.1/2.3/2.9/2.16, IPMI v1.5, HPM.1	

Block Diagram



Ordering Information

Model number	Configuration
CPCI822000AE-ES	CPCI-8220 with Freescale QorIQ P2040 -1.2 GHz and 1 GB DDR3-1333 MHz memory & 32 GB eMMC

Contact our sales for more pricing & ordering information.

