

AMC-4201

Advanced Mezzanine Card Freescale QorIQ P4080 AMC



Features

- Freescale P4080 8-core e500-mc PowerPC, up to 1.5 GHz
- DDR3 up to 1333 MHz 8 GB with ECC support
- 4 MB SPI Flash and 2 GB NAND Flash
- One 10 GbE SFP+ port for external access
- AMC.0, AMC.1, AMC.2, and AMC.4 compliant and configurable SERDES channel (PCIe/SGMII/XAUI/SRIO) support
- Efficient power consumption, typical 32W
- 8 KHz and 19.44 MHz Telecom Clock Sync support



Introduction

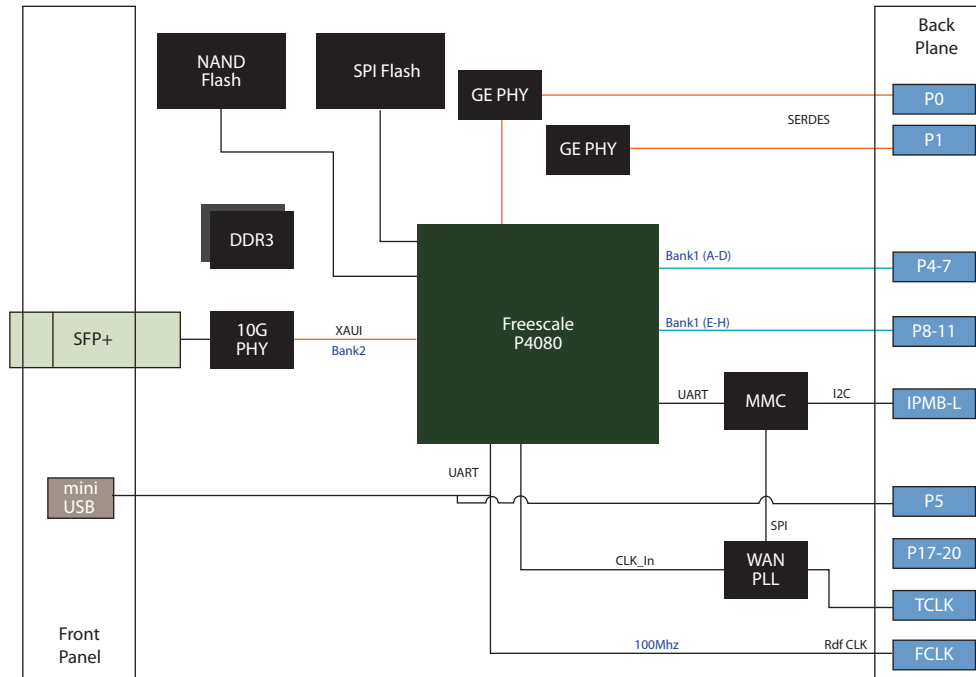
The AMC-4201 is a single-width, mid-size AMC based on the Freescale P4080 processor. It combines eight Power Architecture® e500-mc Cores operating at frequencies up to 1.5 GHz with high-performance, datapath acceleration logic, extensive networking I/O, and peripheral bus interfaces. It combines powerful multi-Core Power Architecture performance with network processing capabilities, and builds on the communications ubiquity of Freescale's QorIQ® product family. AMC-4201 provides 4 and 8 GB build options for onboard DDR3 memory at 1333 MHz with ECC support. One front-panel 10GbE SFP+ connector provides network access in addition to a front panel console and debug port.

The unique SERDES design supports up to four different AMC port configurations for a mix of SRIO, PCIe, XAUI and SGMII channels. This makes the AMC extremely versatile and caters to a wider range of MicroTCA or ATCA Carrier topologies beyond just telecom applications. 4 MB SPI Flash and 2 GB NAND Flash provide onboard options for software and storage. The AMC also provides 8 KHz and 19.44 MHz telecom clock synchronization support.

Main Carrier Board Specifications

Processor system	CPU	Freescale QorIQ P4080 8-core e500-mc PowerPC, up to 1.5 GHz	
	Bootloader	U-boot	
Boot Device	SPI Flash	Spansion S25FL032P0XMF1011, 4 MB	
	NAND Flash	SamSung K9WAG08U1D-SCB0000, 2 GB	
Memory	Technology	DDR III with ECC, up to 1333 MHz	
	Max. Capacity	8 GB	
Ethernet	Controller	Netlogic AEL1010	
	Interface	One 10 GbE SFP+ port for external access	
Hardware Monitor	Controller	IPMI v1.5 compatible MMC	
Firmware	Source code	Pigeon Point System-based	
	Update Standard	HPM.1 compliant	
Operation System	Compatibility	WindRiver Linux 4.3	
		Freescale DPAA SDK1.0 (Optional)	
Form Factor	AMC	Mid-size, single width	
	Interface	AMC.0 compliant and Configurable SERDES channel support: - PCIe: AMC.1 compliant with port 4-7, 8-11 - Ethernet: AMC.2 compliant with port 8-11 - XAUI: AMC.2 compliant with port 8-11 - SRIO: AMC.4 compliant with port 4-7, 8-11	
Power Consumption	Max	40 W	
	Typical	Less than 32 W	
Physical Characteristics	Dimensions (W x D)	180.6 x 73.5 mm	
Environment	Temperature	Operating	Storage
		-5 ~ 55° C	-40 ~ 70° C
	Humidity	IEC60068-2-78 (95%RH @ 40° C)	
	Vibration	IEC60068-2-6 (0.002 G2/Hz, 1Grms)	
	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
Regulatory	Conformance	FCC Class B, CE, RoHS & WEEE (Plan)	
Compliance	Standards	PICMG AMC.0, AMC.1, AMC.2, AMC.4, IPMI v1.5, HPM.1, NEBS Level 3(Design compliant)	

Block Diagram



Ordering Information

Part Number	Description
AMC-4201-11AE	AMC-4201 with P4080-1.5 GHz and 4 GB DDR3-1333 MHz memory (PCIe as port 4-7, 4x SGMII as port 8-11)
AMC-4201-12AE	AMC-4201 with P4080-1.5 GHz and 4 GB DDR3-1333 MHz memory (PCIe as port 4-7, PCIe as port 8-11)
AMC-4201-13AE	AMC-4201 with P4080-1.5 GHz and 4 GB DDR3-1333 MHz memory (SRIO as port 4-7, SRIO as port 8-11)

Contact our sales for more pricing & ordering information.

Note:

1. 1G or 10G front panel is available on request.
2. 8GB DDR3 is available on request.
3. XAUI as port 8-11 is available on request.