COMX-P4080

Module based on the COM Express Form Factor

QorIQ processing power on a module for rapid deployment across diverse I/O requirements
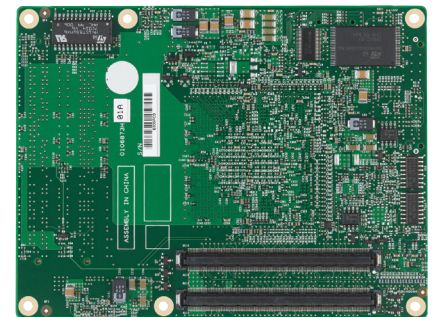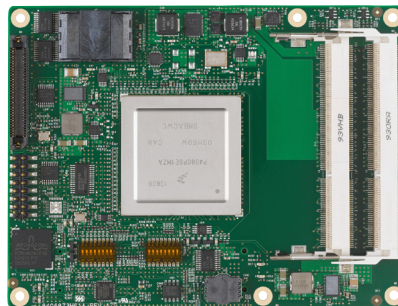
- ■ Freescale QorIQ P4080 processor

- ■ Eight e500mc Power Architecture cores running at 1.5 GHz

- ■ Supports two channels of 2GB DDR3-1333 ECC SO-UDIMM (4GB max.)

- ■ 95 mm x 125 mm compact footprint

- ■ 12 configurable SERDES lanes available for maximum flexibility

The COMX-P4080 module from Emerson Network Power provides the performance and features of the Freescale QorIQ™ P4080 eight-core processor on a ready-to-go pluggable mezzanine module. By incorporating and leveraging the mechanical features and dimensions of the COM Express® specification, the COMX-P4080 exhibits all the best attributes of the COM Express open standard enabling shorter development schedules and faster time-to-market. Emerson has a range of QorIQ based COM Express form factor modules to enable scalable product strategies with multiple performance levels. This open, standardized approach fosters competitive pricing, greater upgrade flexibility and longevity of support.
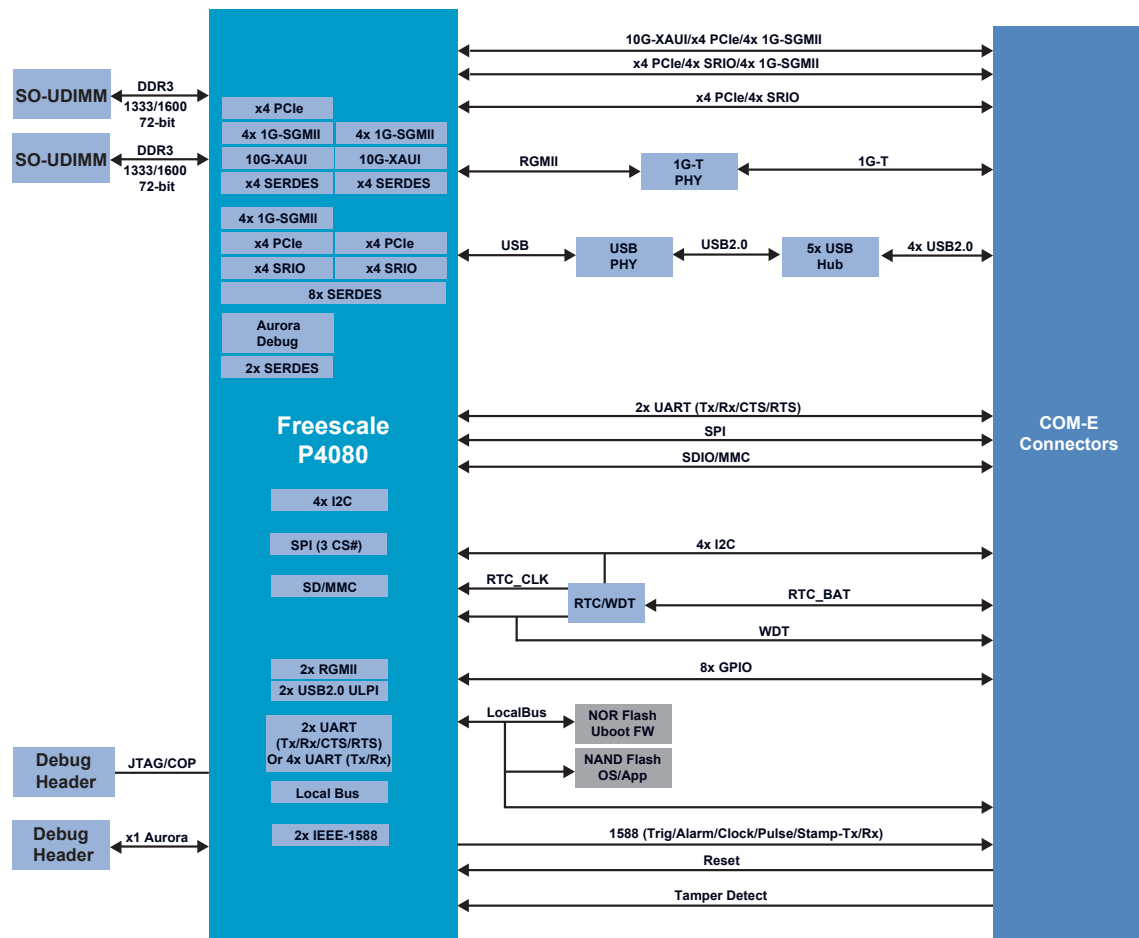
The QorIQ P4080 processor is effectively a System-on-Chip device with a range of features including high-performance datapath acceleration and network processing in a low power envelope making COMX-P4080 suitable for combined control, datapath and application layer processing. Underpinning the high-compute capability of COMX-P4080 are the eight Power Architecture e500mc cores which are complemented by highly flexible I/O including 10G-XAUI, SRIO, GPIO, USB 2.0, PCI Express, Gigabit Ethernet, and real-time debug.

The dimensions of the COMX-P4080 are 95 mm x125 mm which enable it to fit within a very wide range of enclosures when mounted on a customer carrier. COMX-P4080 is an off-the-shelf processor solution that isolates you from the complexities of high speed processor and memory system design, allowing you to concentrate on a carrier tailored to application I/O needs.

By combining the tried and tested Power Architecture processor cores along with a considerable range of on-module I/O, the COMX-P4080 is suitable for a range of applications including enterprise and service provider routers, switches, base-station controllers, radio network controllers (RNCs), long-term evolution (LTE) and general-purpose embedded computing systems in the networking, telecom/datacom, wireless infrastructure, military and aerospace markets.

RoHS 6/6 COMPLIANT

EMERSON™
Network Power

Block Diagram

Hardware Specifications

PROCESSOR

- Freescale QorIQ P4080, eight cores running at 1.5 GHz

FORM FACTOR

- 95 mm x 125 mm COM Express Basic size

BOOTLOADER

- U-boot

MEMORY

- Support for 4GB DDR3-1333 ECC SO-UDIMM (two channels of 2GB)

ON-BOARD STORAGE

- 128KB NOR flash
- 1GB NAND flash
- 2kbit I^2C EEPROM

ON-BOARD I/O

- JTAG
- Aurora debug

I/O TO THE CONNECTOR

12 configurable SERDES lanes available for maximum flexibility in customer platform design.
Available interfaces include:

- Up to one (1) 10 GbE XAUI 3.125Gbps
- Up to four (4) 1 GbE SGMII 1.25 Gbps
- Up to three (3) PCI Express (x4) 2.5 or 5Gbps
- Up to two (2) SRIO (4x) 2.5 or 3.125 Gbps

Other I/O at the connector

- Two (2) UART ports
- One (1) Gigabit Ethernet interface (10/100/1000Base-T)
- Eight (8) general purpose I/O (GPIO) ports
- Four (4) USB 2.0 ports
- SD/MMC
- Two (2) IEEE 1588 control
- SPI bus

POWER

- 12 V and 5 V standby (optional)

ACCESSORIES

- Heatsink, heat spreading plate, development carrier

POWER CONSUMPTION

- TBD

THERMAL RANGE

- 0°C to +55°C

COMPLIANCE AND CERTIFICATION INFORMATION

- RoHS 6/6
- UL/CSA 60950-1, EN55022, FCC Class B

Firmware and Operating System Support

OS SUPPORT

- BSPs to be available from partners including:
  - Mentor Graphics Linux
  - Green Hills Integrity
  - LynuxWorks LynxOS
  - QNX Neutrino
  - Wind River VxWorks

Ordering Information

Product	Description
COMX-P4080	P4080 processor module
COMX-P4080-HP	P4080 heat spreading plate
COMX-P4080-HTSNK	P4080 active heatsink
COMX-P4080-4G-KIT	P4080 with 4GB DRAM and heatsink
COMX-CAR-P1	QorIQ module carrier card
COMX-CAR-P2	QorIQ module carrier card
PP4080COME-DS-PB	Freescale Development System including the PP4080 module, carrier, memory and driver. This kit is available from Freescale and Freescale distributors. For more information go to www.Freescale.com

SOLUTION SERVICES

Emerson Network Power provides a portfolio of solution services optimized to meet your needs throughout the product lifecycle. Design services help speed time-to-market. Deployment services include global 24x7 technical support. Renewal services enable product longevity and technology refresh.

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- ■ **Embedded Computing**
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