COMX-P2020

Module based on the COM Express Form Factor

Embedded Computing for Business-Critical Continuity™

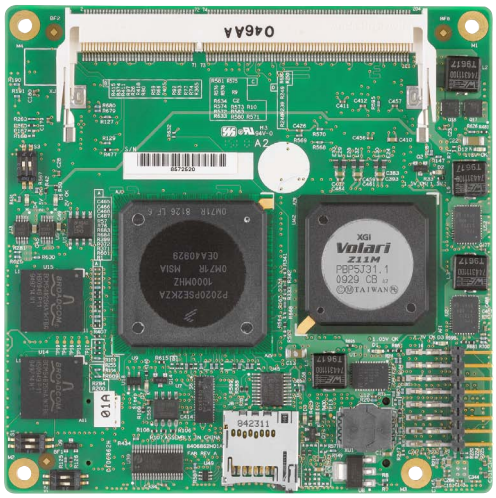
QorIQ processing power on a module for rapid deployment across diverse I/O requirements

- Freescale QorIQ P2020 processor
- Two e500 Power Architecture cores running at 1.2 GHz
- On-board XGI Z11M Graphics Processor Unit (GPU)
- Supports up to 2GB DDR3 ECC SO-UDIMM
- 95 mm x 95 mm compact footprint
- MicroSD card slot for on-board storage

The COMX-P2020 module from Emerson Network Power provides the performance and features of the Freescale QorIQ™ P2020 dual-core processor on a convenient plug-in mezzanine module. By incorporating and leveraging the mechanical features and dimension of the COM Express® specification, the COMX-P2020 exhibits all the best open standard attributes: allowing easy technology upgrades with future devices; competitive pricing with choice of modules; and speedy time to market.

The QorIQ P2020 processor is effectively a System-on-Chip device with a range of features including USB, PCI Express, Gigabit Ethernet, memory controller, general purpose I/O and SD/MMC flash controller. In addition, Emerson has added a graphics controller on the COMX-P2020 module to enable LCD connection through either a local LVDS or a VGA port for those applications that need graphics output. The overall dimensions of the COMX-P2020 are 95 mm x 95 mm following the definition of a Compact COM Express module and this enables it to be fitted within a very wide range of enclosures when mounted on a customer carrier. COMX-P2020 is an off-the-shelf processor solution that is backed by one of the world's leading embedded computing companies for peace of mind and fast time to market by isolating you from the complexities of the high speed processor, memory and graphics devices. To ease the development cycle further, Emerson supplies a development carrier card as well as a carrier designer's guide and other resources.

By combining the tried and tested Power Architecture processor core along with a considerable range of on module I/O, the COMX-P2020 is suitable for a range of applications including programmable automation controllers, security gateways, civil aeronautics, renewable energy controllers, test and measurement and other embedded devices. The COMX-P2020 is supported by a range of real time operating systems and development tools.



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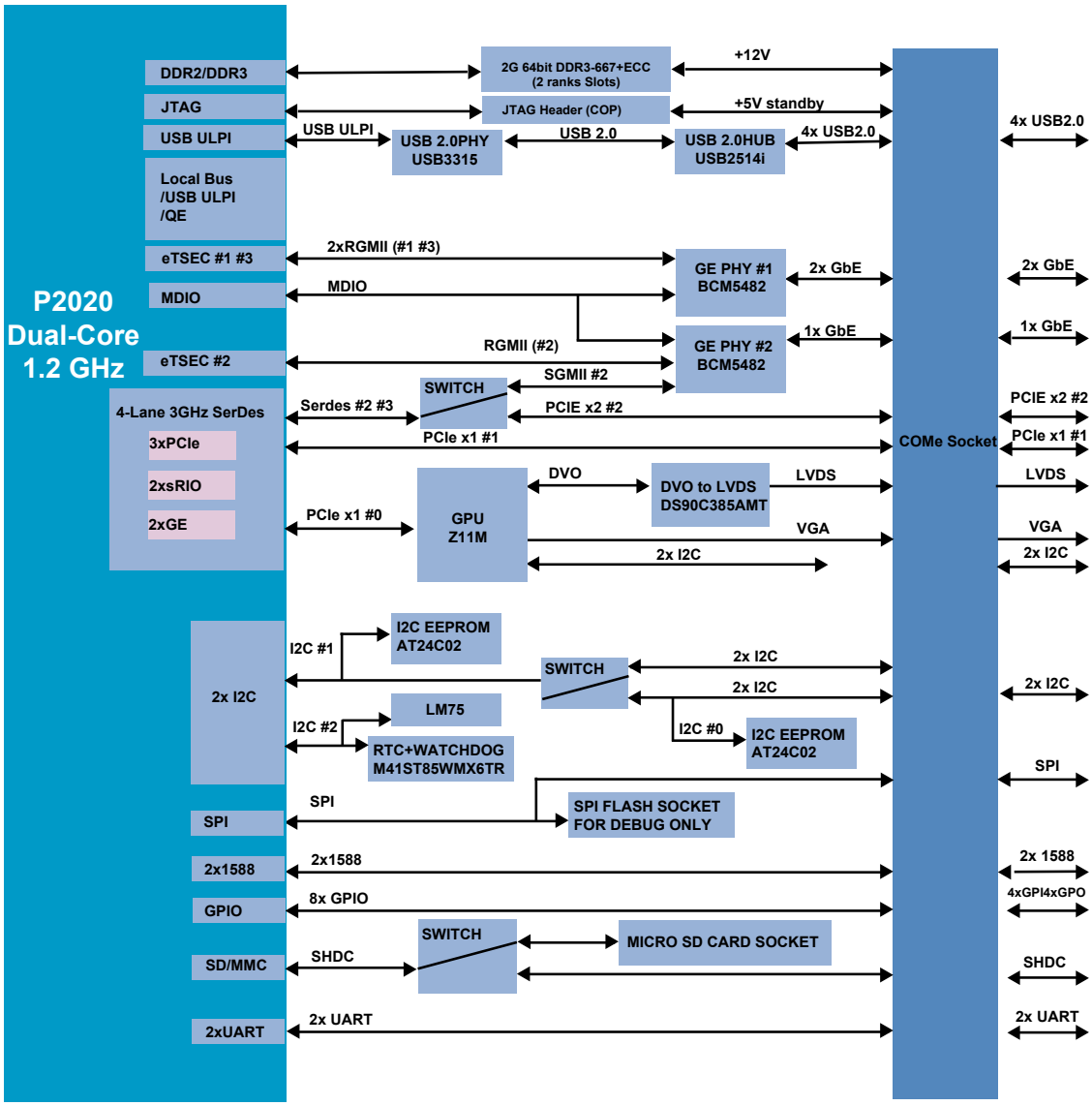
COM Express®

EMERSON™ Network Power

Block Diagram



Hardware Specifications

PROCESSOR

- Freescale QorIQ P2020, two cores running at 1.2 GHz

FORM FACTOR

- 95 mm x 95 mm COM Express type module

BOOTLOADER

- U-boot

GRAPHICS PROCESSOR UNIT

- XGI Z11M (1280 x 1024)

MEMORY

- Support for 2GB DDR3-667 ECC SO-UDIMM

ON-BOARD STORAGE

- MicroSD card slot
- 2kbit I^2C EEPROM
- 4MB SPI Flash

ON-BOARD I/O

- JTAG

I/O TO THE CONNECTOR

- Two (2) UART ports
- Three (3) Gigabit Ethernet interfaces (10/100/1000BaseT)
- Eight (8) general purpose I/O (GPIO) ports
- Four (4) USB 2.0
- PCI Express x2 and x1 interfaces
- SPI bus
- SD/MMC (optional)
- VGA
- LVDS
- Two (2) IEEE 1588 control

POWER

- 12 V and 5 V standby (optional)

ACCESSORIES

- Heatsink, heat spreading plate, development carrier

POWER CONSUMPTION

- Typical 12 W; Max 15 W

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
  - Wind River VxWorks 6.8

Ordering Information

Product	Description
COMX-P2020	P2020 processor module
COMX-P2020-HP	P2020 heat spreading plate
COMX-P2020-HTSNK	P2020 active heatsink
COMX-P2020-2G-KIT	P2020 with 2GB DRAM and heatsink
COMX-CAR-P1	QorIQ module carrier card
P2020COME-DS-PB	Freescale Development System including the P2020 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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