

# COMPUTING

## Data Sheet

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

- NXP dual-core QorIQ P1022 processor
- Two cores running at 1.067 GHz
- Supports up to 2GB DDR3 SO-DIMM
- 95 mm x 95 mm compact footprint
- DVI and LVDS Video output
- I²C Audio
- Ultra low power processing module (< 7 W)



**COM Express®**

## COMX-P1022

### Module based on the COM Express Form Factor

The COMX-P1022 small form factor module brings the NXP® QorIQ P1022 dual-core processor onto a module that incorporates the mechanical features and dimension of the COM Express specification.

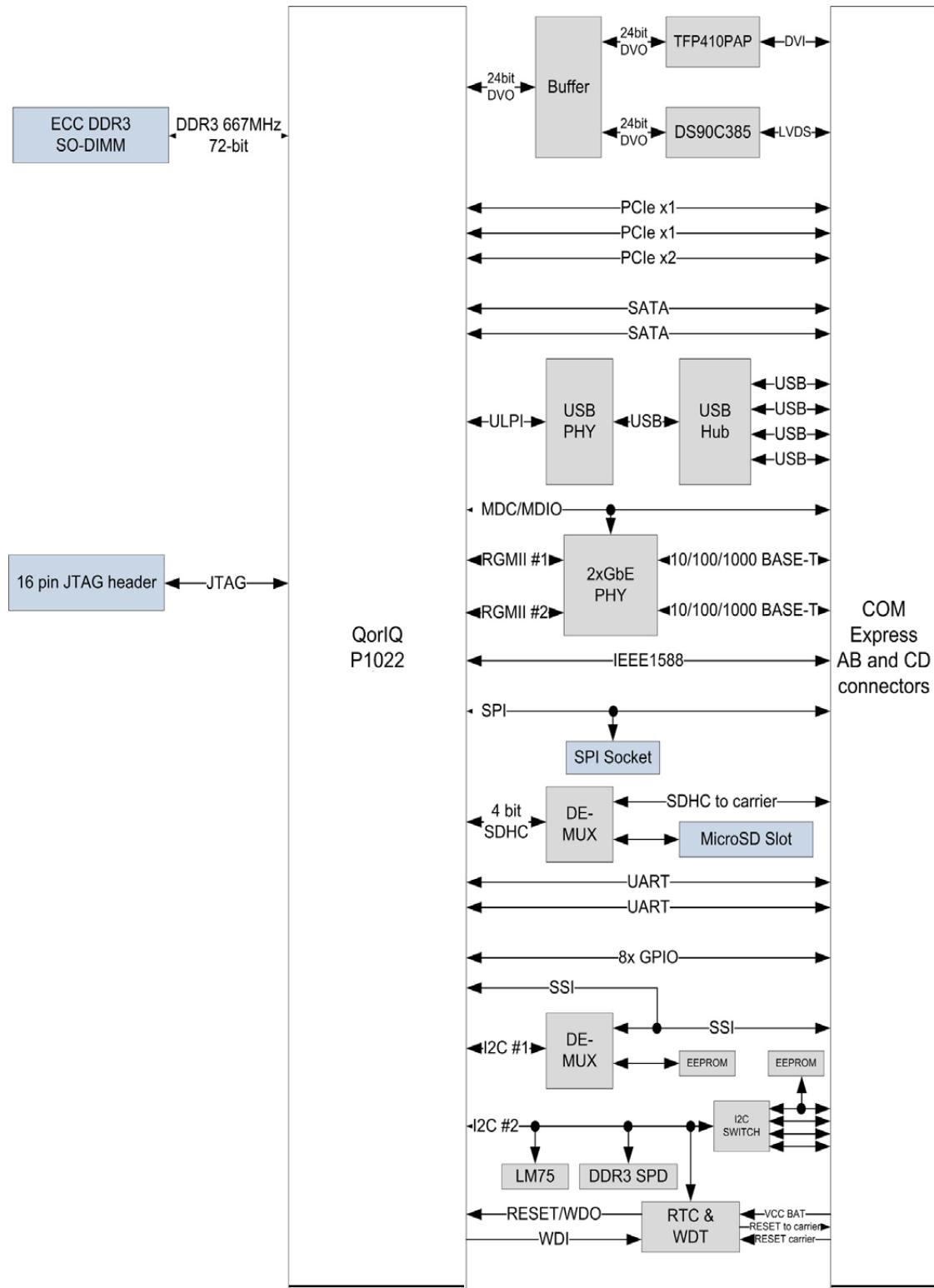
The QorIQ P1022 processor is effectively a System-on-Chip device with a range of features including USB, PCI Express, Gigabit Ethernet, memory controller, general purpose I/O and SD/MMC flash controller. The overall dimensions of the COMX-1022 are 95 mm x 95 mm following the definition of a Compact COM Express module and this enables it to be fitted within a very wide range of enclosures when mounted on a customer carrier. COMX-P1022 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, Artesyn 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-P1022 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-P1022 is supported by a range of real-time operating systems and development tools.



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## COMX-P1022 Block Diagram



## Hardware Specifications

### PROCESSOR

- NXP QorIQ P1022, dual-core e500 Power Architecture device running at 1.067 GHz

### FORM FACTOR

- 95 mm x 95 mm COM Express type module

### BOOTLOADER

- U-boot

### VIDEO

- DVI and LVDS available to the carrier

### MEMORY

- Support for up to 2GB DDR3-667 in one SO-UDIMM

### ON-BOARD STORAGE

- MicroSD card slot
- 2kbit I2C EEPROM

### ON-BOARD I/O

- JTAG

### I/O TO THE CONNECTORS

- Two (2) Gigabit Ethernet interfaces
- Two (2) SATA ports
- Four (4) USB 2.0
- Two (2) PCI Express x1 interfaces
- One (1) PCI Express x2 interface
- Eight (8) general purpose I/O (GPIO) ports
- Two (2) UART interfaces

### POWER

- 12 V and 5 V standby (optional)

### ACCESSORIES

- Heatsink, heat spreading plate, development carrier

### POWER CONSUMPTION

- < 7 W

### COMPLIANCE & CERTIFICATIONS

- 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
  - Wind River VxWorks 6.8
  - Green Hills INTEGRITY

**Ordering Information**

<i>Product</i>	<i>Description</i>
<b>COMX-P1022</b>	P1022 processor module
<b>COMX-P1022-HSP</b>	P1022 heat spreading plate
<b>COMX-P1022-HTSNK</b>	P1022 active heatsink
<b>COMX-P1022-2G-KIT</b>	P1022 with 2GB DRAM and heatsink
<b>COMX-CAR-P1</b>	QorIQ module carrier card
<b>P1022COME-DS-PB</b>	NXP Development System including the P1022 module, carrier, memory and driver. This kit is available from NXP and NXP distributors. For more information go to <a href="http://www.NXP.com">www.NXP.com</a>

**SOLUTION SERVICES**

Artesyn Embedded Technologies 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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<b>United States</b>	+1 888 412 7832	<b>China</b>	+86 400 8888 183
<b>Germany</b>	+49 89 9608 2552	<b>Japan</b>	+81 3 5403 2730
<b>Hong Kong</b>	+852 2176 3540	<b>Korea</b>	+82 2 6004 3268

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