

# miriac™ MPX2020

## System on Module

### Product Description



#### Introduction

The miriac™ MPX2020 CPU Module is the first of a series of QorIQ™ based SoMs by MicroSys. The P2020 CPU combines dual Power Architecture™ e500v2 processor cores with system logic required in a variety of networking, telecom, military and industrial markets applications.

The QorIQ P2 series consists of dual- and single-core products that are pin-compatible with the QorIQ P1 platform products, offering a five interchangeable cost-effective solutions. Scaling from a single core at 533 MHz (P1011) to a dual core at 1.2 GHz (P2020), the two QorIQ platforms together deliver an impressive 4.5 x aggregate frequency range within the same pinout.

Freescale's QorIQ® technology is a perfect fit for any application requiring very high performance but low power on a small form factor SoM.

The physical dimensions of the MPX modules are 66 x 77 mm<sup>2</sup>. The MicroSys standard includes the definition of the 2 x 208 pads to connect the SoMs to peripherals and system extensions. The innovative elastomeric connector technology offers an easy means to stack extension modules on the front and back side of the SoM. Rapid prototype designs can be done easily and turned into production systems rapidly by that.

The MPX SoM-family features a rugged design with the aim to withstand extreme and harsh environments in embedded applications. Versions for extended temperature ( -40°C to +85°C) are available.

## Feature Summary

- Freescale QorIQ P2020, 2x e500v2 core @1.0 or 1.2 GHz
- up to 2 GB soldered DDR2 memory
- up to 512 MB NAND Flash
- three 10/100/1000 Mbps Ethernet controllers (eTSECs) with IEEE® 1588 support
- USB 2.0, SPI, GPIO, I<sup>2</sup>C
- 2 x UART
- SD-Card Interface
- High speed interfaces supporting various multiplexing options
  - four SerDes to 3.125 GHz multiplexed across controllers
  - three PCI Express interfaces
  - two Serial Rapid I/O interfaces
  - two SGMII interfaces
- LBC local bus
- SPI Boot Flash
- High precision RTC
- two 208 Pin Zero Force Connectors, that make all I/O and bus signals available to the carrier board

**Fig. 1 MPX2020 SoM on carrier board**



**Software-Support:** Linux, VxWorks, Microware OS-9, MicroC/OS-II, QNX; others are available on request.

Order Number	Description	Status
837612	miriac MPX2020 System on Module P2020@ 1,2 GHz, 2 GB DDR2 ECC & 256 MB Flash memory	StI
837605	miriac MPX2020 MIRIAC MODULE P2020, 1,2GHz, 2GB DDR ECC & 256MB Flash memory ext. Temp.	BoO
839601	miriacSBC2020 Development Kit for MPX2020 SoM, incl. order # 837612, Linux BSP, accessories	BoO
831501	MPE03 MPX Header Pin Adapter Board 208 Lines	StI

StI: 'Stock Item' – normally available ex stock

BoO: Build on Order – will be built after order received

**You are interested in a different variant?**

**You are very welcome to contact us!**

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