

miriac™ MPX1011

System on Module

Product Description



Introduction

The miriac™ MPX1011 CPU Module is the second of a series of QorIQ™ based SoMs by MicroSys and pin compatible to the MPX2020 products. The devices in these two platforms are software compatible, sharing the e500 Power Architecture core and peripherals, as well as being fully software compatible with the existing PowerQUICC processors. This enables you to create a product with multiple performance points from a single board design.

The QorIQ P1xxx CPUs offer the value of extensive integration and extreme power savings for a wide variety of applications in the networking, telecom, defense and industrial markets. Based on 45 nm technology for low power implementation, the P1011 processor provides single core solutions for the 533 MHz to 800 MHz performance range, along with advanced security and a rich set of interfaces. Providing a migration path from Freescale's popular PowerQUICC II Pro processor family, the P1xxx series offers

a performance upgrade in the same power envelope, which enables low power consumption, fan-less system designs on small form factor solutions.

The physical dimensions of the MPX modules are 66 x 77 mm². 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 on request.

Feature summary

- Freescale QorIQ P1011 CPU, single 500v2 core @ 533 - 800 MHz
- 256 KB L2 Cache with ECC, also configurable as SRAM and stashing memory
- up to 1 GB soldered DDR2 memory
- up to 512 MB NAND Flash
- three 10/100/1000 Mbps Ethernet controllers (eTSECs) with IEEE® 1588 support
- 2x high speed USB 2.0, SPI, GPIO, 2x I²C, DUART, timers, SD/MMC, ULPI
- High speed interfaces supporting various multiplexing options
 - Four SerDes to 3.125 GHz multiplexed across controllers
 - Two PCI Express interfaces
 - Two SGMII interfaces
- two 208 Pin Zero Force Connectors, that make all I/O and bus signals available to carrier board

Fig.1 MPX1011 SoM on carrier board



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

Order number	Description	Status
837606	miriac MPX1011 System on Module P1011@ 800MHz, 512MB DDR2 ECC & 256MB Flash memory	StI
837607	miriac MPX1011 System on Module P1011@ 533MHz, 256MB DDR2 ECC & 256MB Flash memory	StI
837608	miriac MPX1011 System on Module, ext. Temp P1011@ 533MHz, 256MB DDR2 ECC & 256MB Flash memory	BoO
831501	MPE03 MPX Header Pin Adapter Board, 208 Lines	StI
839603	miriac SBC1011 Development Kit for MPX1011 SoM based designs, includes order number 837606, Linux BSP, accessories	BoO

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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