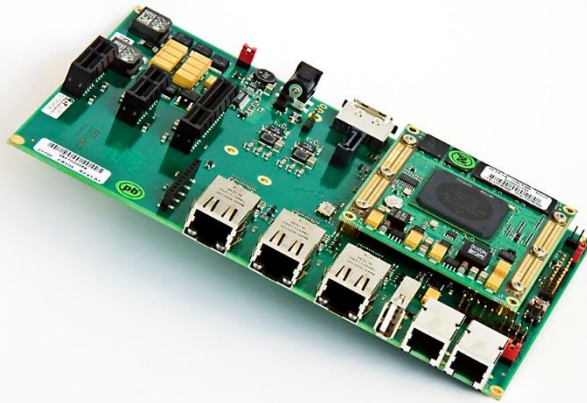# miriac™ SBC1022
Single Board Computer
Product Description

Introduction

The miriac™ SBC1022 Single Board Computer is a member of a family of Freescale QorIQ™ P2/P1 series based complete system solutions by MicroSys. The development kit offers a fast means to implement rugged designs with the aim to withstand extreme and harsh environments. Typical applications for it are found in automotive, industrial automation, medical, railways & transportation, construction and defense market segments. The flexible miriac MPX Module-Carrier-Concept in combination with the provided board support packages of operating systems, is an excellent platform for rapid prototyping and it offers fast time to serial production. Software development environments are an integral part of the product. Middleware to address market specific requirements like field bus solutions (e.g. EtherCAT or PROFINET) embedded graphics (e.g. XiBase9, Qt) or SPS environments like Cloud-PLC or CloudPLC Logix for IEC 61131-3 conform programming can be provided on request.

Key system features

The SBC1022 offers an excellent combination of protocol and interface support based on the low power P1022 e500v2 dual core running between 600 MHz and 1055 MHz. 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 MPX1022 SoM one the board supports the CPUs audio visual and two SATA interfaces as main benefit over the QorIQ P1011 family.

The board offers DDR2 memory, three enhanced triple speed Ethernet ports, an USB 2.0 interface two RS232 connectors, one SD-Card- and three PCI Express slots, to use existing hardware for expansion. The device also supports IEEE Std 1588™ precision time protocol for network synchronization over Ethernet. Additionally one LVDS and two SATA interfaces are available on the board.

Freescale's QorIQ technology is a perfect fit for any application requiring very high performance but low power on a small form factor system. The system is production ready, if it fits the target environment. Conduction cooling can be implemented, if needed.
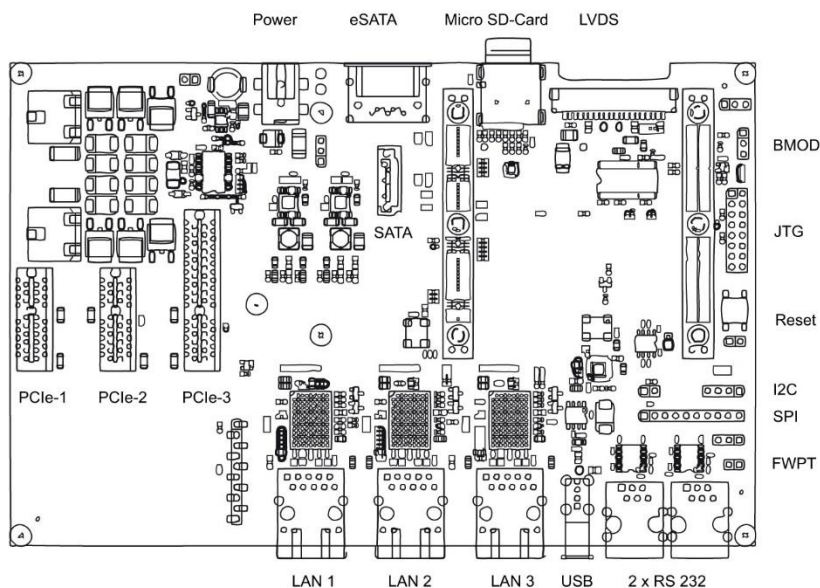
The MPX-System on Modules as core of the SBC1022 are integrated by an innovative connector technology that allows mounting in both directions and stacking of modules with various interface boards. This offers an easy means to check out system variants and guarantees a fast turnaround into series production.

Versions for extended temperature (-40°C..+85°C) are available.

Feature summary

- Freescale QorIQ P1022, dual e500v2 core @ 600 – 1055MHz
- up to 2 GB soldered DDR2 memory
- up to 512 MB NAND Flash
- three 10/100/1000 Mbps Ethernet ports with IEEE® 1588 support
- 1 x LVDS
- 1 x USB 2.0, SPI, I^{2}C
- 2 x RS232
- 1 x PCIe x 2, 2x PCIe x 1 slots
- 2 x SATA
- 1 x SD Card slot
- Single +12 V power input
- JTAG interface for hardware-related debugging
- Dev Kit for immediate start up, e.g. power supply, cables (optional)
- Board Support Packages for various operating systems (optional)

Graphic 1   SBC1022 Single Board Computer (MPX1022 SoM not mounted)

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

Order #	Order Text	Status
839606	miriac SBC1022 Single Board Computer, P1022@ 1,0 GHz, 2 GB DDR2 memory, 256 MB Flash memory	BoO
839613	miriac SBC1022 Starter Kit for MPX1022, includes Order Nr. 839606, power supply, cables, Linux	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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