miriac™ SBC6Q
Single Board Computer Family
Product Description

Introduction

MicroSys implements customer specific control and HMI devices rapidly, for rugged and harsh environments, if needed. Certification and SW services and long term supply is provided as additional offering.

As basis we rely on our wide spectrum of miriac™ MPX System on Modules and Single Board Computers utilizing Freescale's Power Architecture/QorIQ, ARM® Cortex™ and X86/Intel® Atom™ CPUs.

The miriac™ SBC6x Single Board Computers are members of Freescale's i.MX-ARM based embedded system solutions by MicroSys.

The first product with i.MX6 architecture, the SBC6Q, holds an i.MX6Q (Quad ARM Cortex A9 4 cores CPU). Variants with i.MX6 solo or i.MX6 dual CPUs are available on market and customer demand.

The platform combines a very small system design (close to a module only form factor) with a wide variety of I/O functions. A complex module – carrier design has been waived with this product, to allow low cost device designs.

Available I/Os are video, audio, RS232, USB, LAN, CAN, and SATA interfaces.

The two Ethernet ports are an ideal fit for control applications requiring Ethernet based field bus communication, like EtherCAT, Profinet or Ethernet/IP:

Typical profiles of usage for the SBC6Q are HMI and control applications requiring a cost-efficient solution even suitable for harsh environments.

Example Designs

Control device for harsh environments, supporting a touch display

HMI, Linux and QT graphics

Main System Features

The SBC6Q supports an i.MX6Q ARM Cortex – A9 quad core CPU and operates at a clock speed of 1,2 GHz. The board offers 1 GB DDR III 4 MB SPI Flash and 512 MB NAND Flash memory.

The available media interfaces, like video (IN/LVDS- and HDMI), touch (4 wire resistive), audio (IN/MIC and headphone), SATA and USB are a perfect fit for a wide variety of HMI requirements.

Software Support

A Linux BSP is offered. Middleware to address specific requirements, like field bus solutions (e.g. CAN) embedded graphics (e.g. XiBase9, Qt) or SPS environments like CloudPLC or CloudPLC Logix for IEC 61131-3 conform programming is available.

Feature Summary

- Freescale i.MX6Q ARM Cortex – A9 CPU, quad core @ 1,2 GHz clock speed
- 1 GB DDR III main memory
- 512 MB NAND Flash
- 4 MB SPI Flash
- 2 x 10/100/1000 Mbps Ethernet
- Video: 2 x LVDS, 1 x HDMI, 1 x Video IN, backlight and 4-wire touch support
- Audio: Mic, Line IN/OUT, headphone
- USB: 1 x USB 2.0 Host and 1x USB 2.0 OTG,
- Serial: 1 x RS232
- 1 x CAN
- 1 x SATA
- 1 x µSD card connector
- 1 x JTAG
- via expansion port option: 1 x Video IN, 1 x CAN, 2 x UART, SPI, 10 x GPIO, 1 x I^{2}C
- 12V to 24V DC wide input voltage range
- Evaluation kit for immediate project start (optional)
- Board Support Packages supporting different operating systems (optional)

Grafic 1: miriac SBC6Quad top side and form factor

Software-Support

- Linux, Windows based C/C++ development
  (Eclipse IDE, Cross Compiler, Qt Libs)
- Boots out of SPI-, NAND Flash or from a µSD-Card
- programmable boot option on I^{2}C bus
- other operating systems supported on request

Rugged Design

The system is designed for harsh environments and
versions for extended temperature (-40°C **-** +85°C)
are available on request.
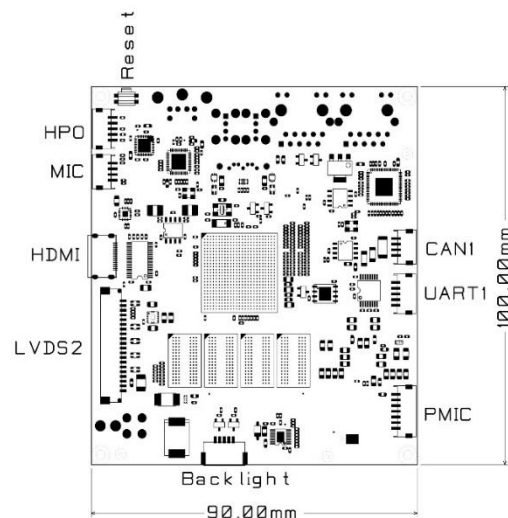
Order Information

Order Nr.	Order Text	Status
842801	miriac SBC6Q Single Board Computer i.MX6Q ARM CPU @ 1,2 GHz, 1 GB DDR III RAM, 512 MB Flash memory	StI
842810	miriac SBC6Q Development Kit, incl. order # 842801, Linux BSP, accessories	BoO

StI: 'Stock Item' – normally available ex stock   **You are interested in a different variant?**

BoO: Build on Order – will be built after order received   **You are very welcome to contact us!**

MicroSys Electronics GmbH
Muehlweg 1
82054 Sauerlach
Germany   www.microsys.de

Phone: +49 (0)8104 801-0
Hotline: +49 (0)8104 801-130
Fax :   +49 (0)8104 801-110
Email: info@microsys.de