ENCLUSTRA FPGA SOLUTIONS

Product Brief

Mars AX3
Artix-7 FPGA Module

Overview

The Mars AX3 FPGA module is equipped with a highly capable Xilinx Artix-7 low-cost and low-power FPGA, Gigabit Ethernet and fast DDR3 SDRAM and is thus perfectly suited for high speed communication and DSP applications.

The SO-DIMM form factor allows space-saving hardware designs as well as quick and simple integration of the module into the target application.

The Mars AX3 FPGA module reduces development effort, redesign risk and improves time-to-market.

Highlights

- Low-cost, low-power FPGA of the latest generation
- Up to 100K logic cells, 120K flip-flops and 240 DSP slices with the XC7A100T FPGA
- Comes in the handy SO-DIMM form factor
- Available in the industrial temperature range
- Supports Gigabit Ethernet

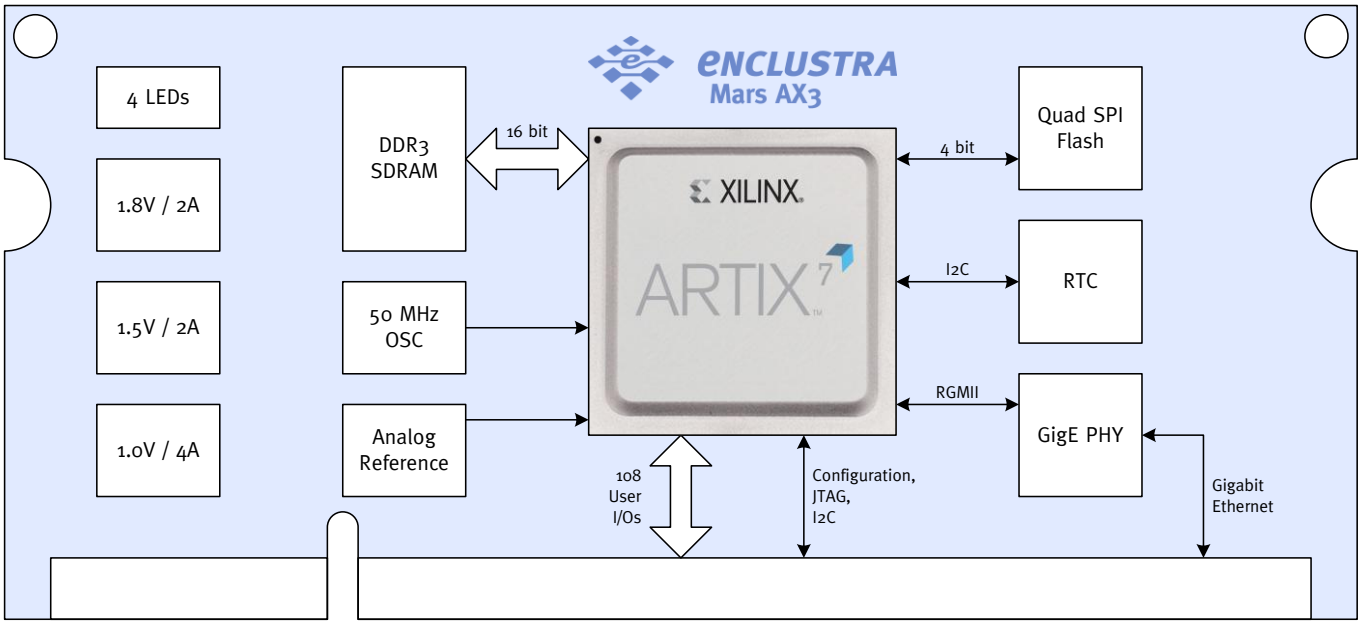
Benefits

- Simple, low cost and yet rugged assembly thanks to the industry-standard SO-DIMM form factor
- Fast boot times and support for execution-in-place (XiP) thanks to the 4 bit parallel SPI Flash
- High-bandwidth program and data memory thanks to the the DDR3 SDRAM
- Lowest power consumption thanks to the high-efficiency DC/DC converters, the Xilinx Artix-7 FPGA and support for FPGA SUSPEND.
- Many IP cores are available from Xilinx, Enclustra and 3rd parties.

Features

- Xilinx Artix-7 FPGA in the CSG324 package (XC7A30T and XC7A100T as standard options)
- SO-DIMM form factor (68 x 30 mm, 200 pins)
- 108 user I/Os, single-ended or differential
- Up to 16 MB quad SPI Flash
- Up to 512 MB DDR3 SDRAM
- Gigabit Ethernet PHY
- Single 3.3V supply voltage

Module Architecture



Product Selection Matrix

Product Number	FPGA	Quad SPI FLASH	DDR3 SDRAM	Ethernet PHY	Real Time Clock	Temp. Range
MA-AX3-100-1C	XC7A100T-1CSG324C	16 MB	128 MB	1 Gbps	✓	0..+70°C
MA-AX3-100-2I-D256	XC7A100T-2CSG324I	16 MB	256 MB	1 Gbps	✓	-40..+85°C
Custom Configurations	XC7A 8 15 30T 50T 100T 1 2 2L 3 CSG324 C E I	✘ 4 MB 8 MB 16 MB	✘ 64 MB 128 MB 256 MB	✘ 1 Gbps	✘ ✓	0..+70°C -40..+85°C

Minimum order quantities may apply for custom module configurations. Please contact us.

Target Applications

- Data Acquisition
- High-Speed Communications
- Digital Signal Processing
- Image Processing
- Embedded Computing

Related Products

- Enclustra Mars Starter Base Board
- Enclustra Universal Drive Controller IP Core
- Enclustra TFT Display Controller IP Core

Enclustra GmbH
FPGA Solutions
Technoparkstrasse 1
CH-8005 Zürich
Switzerland
Phone +41 43 343 39 43
Fax +41 43 343 39 44
www.enclustra.com