ARTEKIT AK-MACHXO2-7000 Development Kit

Introduction

The AK-MACHXO2-7000 Development Kit is an easy-to-use, low cost platform for evaluating and designing with Lattice MachXO2 FPGAs. The kit offers free design tools and reference designs.

Lattice Diamond 2.1 Design Software

Lattice's free Diamond design software offers a comprehensive design environment for the Lattice MachXO2 architecture. It includes tools for design entry, synthesis, map, place & route, I/O planning, simulation, and device programming. Download Lattice Diamond design software: www.latticesemi.com/product/designsoftware/diamond/
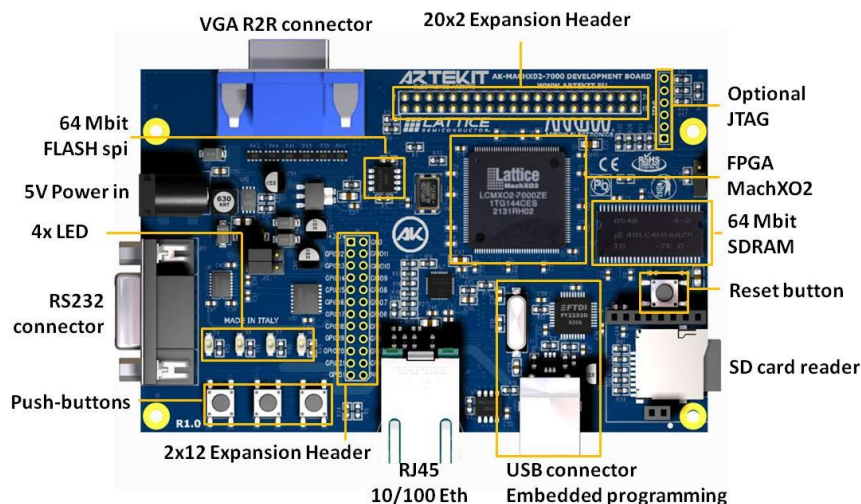
Reference Designs

Lattice offers an extensive portfolio of IP cores and reference designs. The reference designs, source codes, and documentation can be downloaded free from the Lattice website.

In addition, Arrow extended reference design portfolio with AK-MACHXO2-7000 based reference design.

Time-to-market

AK-MACHXO2-7000 comes with a preprogrammed system-on-chip. The SoC integrates multiple reference design including the LatticeMICO32 microcontroller, wishbone interconnect and peripheral controllers for SPI and SDRAM.

Key Feature

- MachXO2 LCMXO2-7000, HC version
- 64 Mbit SPI Flash Memory
- 64 Mbit SDRAM Memory
- On-Board USB controller (FTDI) for programming (JTAG) control (UART) and power
- 2x20 and 2x12 Expansion Headers
- Push-buttons and LED for general purpose IO and reset
- RJ45 Ethernet 10/100 capable
- RS232 UART connector
- VGA R2R connector
- SD card reader

Design example

- SoC Mico32/Mico8 Based
- TFT/VGA up to 800x600 image reader
- TFT/VGA up to 800x600 controller
- Ethernet 10/100 TCP/IP web-server demo (*/)
- Ethernet 10/100 UDP data/register transfer (*)
- TFT/VGA UDP Ethernet controller (*)

(*) MAC 10/1000/1000 MAC Eth with optional stack UDP by **SanitasEG**

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