

# LatticeMico32/DSP Development Board For LatticeECP2

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## Overview

The LatticeMico32/DSP Development Board for LatticeECP2 is designed to help users rapidly evaluate their microprocessor designs in hardware. The board is packed with features that help the designer get maximum value from the hardware evaluation process, including Flash memory for loading programs, DDR memory for instruction and data storage, optional LCD and keyboard interfaces and a variety of other peripheral interfaces including Ethernet, USB and RS232.

For development with the LatticeECP-33 (first generation LatticeECP FPGA), see [here](#)

## Product Contents

- ▶ LatticeMico32/DSP Development Board for LatticeECP2 featuring:
  - ▶ LatticeECP2-50 FPGA Device
  - ▶ Lattice MachXO-640 Device
  - ▶ DDR SODIMM socket (DDR1, 100-133MHz, 32-bit data bus)
  - ▶ 2x128 Mbit Flash + 2x4 Mbit SRAM
  - ▶ USB 2.0 Connector for programming
  - ▶ Flywire Connector for programming
  - ▶ 9-pin RS232 serial port
  - ▶ 15-pin VGA connector for 64 colors
  - ▶ Ethernet 10/100 M full/half duplex
  - ▶ Multiple USB connectors
  - ▶ Sigma Delta D/A converter
  - ▶ Expansion connector access to FPGA I/O
  - ▶ 12 x 12 FPGA prototype area
  - ▶ AC'97 Stereo Audio Codec with line input and output
  - ▶ Two SATA connectors with four LVDS signal pairs for high-speed data transfer (Note: Full SATA implementation is not supported)
  - ▶ LCD connector for character displays (LCD Panel not included)



- ▶ 25 MHz oscillator
- ▶ 7-segment display and various status LEDs, input switches, and 3x4 keypad
- ▶ USB cable for device programming
- ▶ AC Adapter (International plug/voltage)

## Device Support

You will need the following software to use this board:

- ▶ **ispLEVER** for design, fitting, place & route of Lattice programmable devices
- ▶ **ispVM** to download your program to the LatticeECP2-50 FPGA
- ▶ Optional: **LatticeMico32 Development Tools** for development with the LatticeMico32 microprocessor

## Demonstration Programs

Click the "design files" link at the left of this page for sample programming bitstreams for both the LatticeECP2 and MachXO devices used on this board. For more information, check the sample programs included in the **LatticeMico32 Development Tools**.

## Ordering Information

Part number

LFE2-50E-D-EVN (RoHS Compliant)