Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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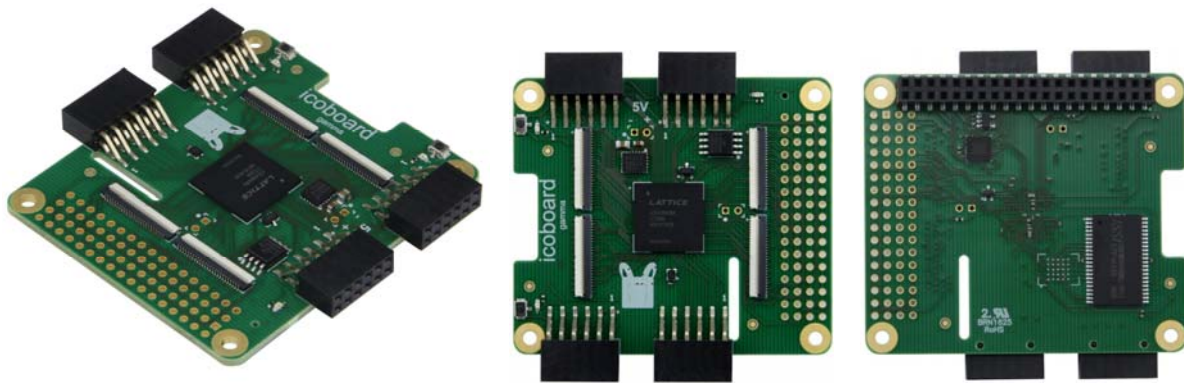Email & Skype: info@chipsmall.com Web: www.chipsmall.com
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icoBoard Version 1.1 with 8 MBit SRAM

Order number: TE0887-02M

Product information "icoBoard Version 1.1 with 8 MBit SRAM"

The icoBoard contains a Lattice FPGA with 8k LUT, 100 MHz max. clock, 8 MBit of SRAM and is programmable in Verilog by a complete open source FPGA toolchain.

The icoBoard is pin-compatible with the RaspberryPi 2B and all newer versions and any board using the same pinout. Bitstreams for programming the FPGA can directly be generated on the RaspberryPi.

The ICE40 FPGA is a cheap FPGA without special hardware blocks like multipliers or SerDes or SDRAM interfaces. With its 8k LUT he is one of the smaller FPGAs, but large enough to hold significant projects like a complete Risc-V 32 bit SoC.

The icoBoard is a perfect learning tool to get the feet wet with logic circuit design in Verilog without having to do the heavy lifting of the professional huge programming tools from Xilinx or Altera.

When Professors want to introduce their students to Verilog, it is much easier for them to hand out the open source toolchain directly than to ask students to register with a manufacturer to get a student license and to install from the manufacturer several GByte.

The PMod connectors make it very easy to work with a wide variety of sensors and interfaces. A selection of PMod sensors can be found at trenz-electronic.de/pmodlist.

To load the bitstream into the flash memory of the icoBoard, a RaspberryPi is needed.

Key Features

- Lattice ICE40HX8k
- Supported by the open source toolchain icoTC consisting of Yosys, ArachnePnR, icestorm
- Mainly for learners and tinkerers
- 4 PMod connectors with unbuffered 3.3 V interfaces
- 4 by 16 100mil I/O connectors
- 4 flatflex connectors with 36 3.3 I/O lines each
- 16-Bit-wide 8 MBit SRAM
- 16 MByte SPI Flash memory for storing 4 bitstreams or data
- 3 programmable status LED, green
- 2 push buttons

If IicoBoard is connected to RaspberryPi, power is supplied by RaspberryPi. If icoBoard is operated standalone, 5V power need to be provided to the power supply pins.

A working microSD card image for the RaspberryPi with all tools is available for download.

Getting started

Here is how you use the icoBoard with a RaspberryPi: http://icoboard.org/get-started-with-your-icoboard-and-a-raspi.html

Optional Accessories

Peripherie Module von Digilent
Pmod is Digilent's name for the line of over 60 peripheral modules that we offer to add extra functionality to both microcontrollers and FPGAs (field-programmable gate array). This functionality includes audio amplifiers, GPS receivers, USB to UART interface, seven-segment displays, accelerometers, H-bridges with input feedback, analog-to-digital converters, and much more.

Package Content

1 x icoBoard Version 1.1 with 8 MBit SRAM