eBLOCKS®

FPGA starter pack

General information

This starter pack is a flexible training solution for learning FPGA and CPLD programming and for project work.

1. Benefits
   - A complete learning solution including hardware,
   - software and curriculum
   - Provides a great platform for FPGA projects
   - Now USB programmable

2. Features
   - Part of the E-blocks range of products
   - Compatible with Quartus II Web edition from
   - Altera
   - Includes FPGA programmer
   - Several additional E-blocks boards included for projects
   - Shipped in rugged plastic trays for storage
   - Includes full CD ROM tutorials

Pack description

This system has been put together from E-blocks™ to allow rapid development of electronic solutions based on FPGA technology,
and to provide a superb platform for learning FPGA programming in either VHDL or Verilog.
The solution consists of a FPGA development board, LED boards, switch boards, a dual 7-segment display board, a prototype board, serial D/A board, and a power output board. A complete contents list of the pack is given below.

All of these boards can be mounted on a metal backplane which can be locked down for security. Acrylic covers, which extend board life and provide added component security are available, and storage trays are provided.

The solution is supplied with all necessary cables and power supplies.

A CD ROM - Programmable Logic Techniques - is included and this contains a complete course on programming in both VHDL and Verilog as well as Altera's Quartus II web edition development software. A separate datasheet on the CD ROM is available.

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- The Quartus II Web Edition software is an entry-level version of the Quartus II design software that supports devices from Altera's mainstream FPGA and CPLD device families as shown in Table 1.
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- The Quartus II Web Edition software includes a complete environment for FPGA and CPLD design, including schematic- and text-based design entry, HDL synthesis, SOPC Builder system generation software, place-and-route, verification, and programming. The Quartus II Web Edition software removes all barriers for designing high density architectures, giving designers the performance advantages and compile time benefits of Altera's award winning design software at no cost.

Further information

1. Learning time

When used with Programmable Logic Techniques CD ROM Students can undertake a 20 hour course in VHDL or Verilog - not including project time.

2. Prerequisites

A good understanding of digital electronics - both combinational and sequential logic
Windows skills

3. Manual

No manual is supplied - the pack is designed to be used with Programmable. Logic Techniques CD ROM. Datasheets on all E-blocks boards are supplied.

4. Also included

Programmable Logic techniques CD ROM containing tutorials in VHDL and Verilog programming.

5. System requirements

PC with CD ROM drive and Windows Vista or greater.
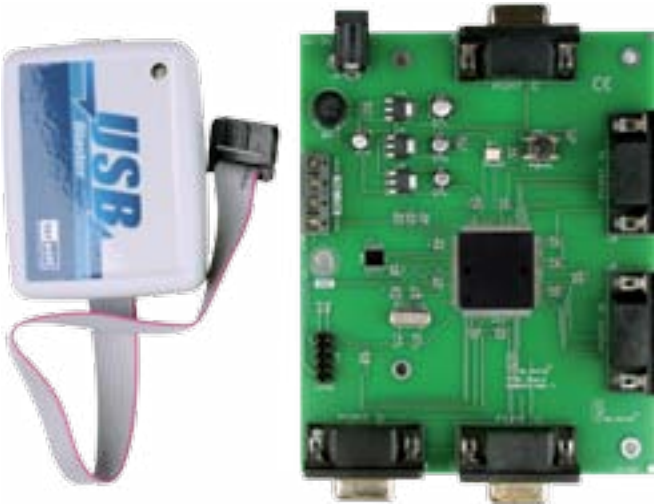
6. Further information

A separate datasheet is available foreach of the E-blocks boards included inthe pack. Please see our web site for details.

7. Order code

The order code for this product is EB940.

Solution Contents

The table gives a list of the major items of the pack contents.

Datasheets on any individual item are available

from the resource section of the Matrix TSL website www.matrixtsl.com

Tray	Qty	Code Description
1	1	ELPLDSI Logic Techniques CD ROM
1	2	HP2642 Holed foam for E-blocks trays
1	2	HP6219 E-blocks plastic mounting pillar
1	1	BP232 E-blocks backplane
1	1	EB216 Pack of 100 M3 anti-slip nuts
1	1	EB217 100 M3 12mm pozi head screws
1	1	EB251 Male to Male IDC connector
1	1	EB355 E Blocks User Guide
1	1	EB355 E Blocks User Guide
1	1	EB634 E-blocks IDC cable
1	1	EBPUB E-blocks publicity sheet
1	1	ELSAM ELSAM mini CD ROM
1	1	HP2045 Shallow plastic tray
1	1	HP4039 Lid for plastic trays
1	1	HP5328 power supply with adaptors
1	1	HP9734 Cardboard box for trays
1	1	HPUSB USB cable
2	1	EB00200 E-blocks screw terminal board
2	2	EB00400 E-Blocks LED board
2	2	EB00700 E-Blocks Switch board
2	1	EB00800 E-Blocks Quad 7-segment display
2	1	EB01100 E-blocks power board
2	1	EB01300 E-blocks D/A and memory board
2	1	EB01400 E-blocks Keypad
2	1	HP2045 Shallow plastic tray
2	1	HP4039 Lid for plastic trays
2	1	HP9734 Cardboard box for trays
2	1	EB00600 E-blocks PICmicro Multiprogrammer
1	1	EB635 Male to male IDC cable
2	1	EB089 E-blocks FPGA board

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