LP-2900S
CPLD/FPGA Simple Digital Logic Circuit Design Experiment Board

Introduction
Nowadays, CPLD and FPGA have been the first-choice components for the designers. It is suitable for the designers on application for communication, industrial automation, intelligent instrument, image processing, extensive engine control, etc. In order to allow users have excellent experimental platforms, LEAP series has provided platforms based on Altera or XILINX. Enabling engineers to realize the designs of logical circuit from experimental units.

Test Content
Combined logic design, simulation and test
1. Basic logic
2. Deductor
3. Decoder
4. Combined logic
5. Comparator
6. Multiplexer
7. Adder
8. Compiler
9. Demultiplexer

Sequential logic circuit design, simulation and test
1. Flip-flop device
2. Shift register
3. Shift counter register
4. Synchronized counter
5. Non- Synchronized counter

Analog logic circuit design, simulation and test
1. A/D converter
2. D/A converter

Thematic Application Test
1. 8 × 8 dual color spot array LED control test.
2. Digital clock
3. Counter
4. Electronic alarm clock
5. Traffic light control
6. Electronic dice
7. Keyboard scan
8. LCD display control test
9. A/D, D/A converter test
10. Easy CPU design
11. VHDL/AHDL voice design
12. Matching 8051 thematic test

Standard Accessories
Main unit........................x1
CD.................................x1
( Including Altera Baseline V9.23 driver)
AC power cord................x1
25-pin printer cable or USB cable.....................x1

Specification

<table>
<thead>
<tr>
<th>Communication</th>
<th>USB or Printer Port</th>
<th>Weight</th>
<th>3.5Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>100V AC~240V AC</td>
<td>Operating Altitude</td>
<td>up to 5000m</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>50/60 Hz</td>
<td>Operating Humidity</td>
<td>90% (non-condensing)</td>
</tr>
<tr>
<td>Dimension</td>
<td>32cm x 22.6cm x 3.0/8.5cm</td>
<td>Temperature</td>
<td>+5℃ ~ +45℃</td>
</tr>
</tbody>
</table>

Other Specifications

| Chip Supported       | ALTERA FLEX10K 10A (TQFP-144) |
| Signal Generation Unit | 1. Programmable frequency generator |
|                      | 2. Standard frequency 1K/10K/ 100K/1M/10MHz |
| Logic Input Switch   | 1. 8 × 1 logic input original press point with light |
|                      | 2. 8 × 2 logic input Dip switch |
|                      | 3. 4 impulse press button generator (2 positive pulse; 2 negative pulse) |
|                      | 4. 3 × 3 array keyboard |

| Output Unit | 1. 8 × 8 dual color point array LCD display. |
|            | 2. LCD 16 × 2 monitor |
|            | 3. 6 digits 7 nodes monitor |
|            | 4. 3 × 4 LED output |
|            | 5. Buzzer output x 1 set |

| Linear Unit | 1. 8bit D/A converter x 2 sets |
|            | 2. 8bit A/D converter x 1 set |

| MPU unit | 8051 and CPLD/FPGA match circuit test |

PC System Requirement

| Operating System | Windows 98/2000/XP |

Application Program Range

1. Fundamental logic program
2. Digital circuit design program
3. Digital system design circuit program
4. Micro processor principle program
5. VLSI design program
6. CPLD/FPGA chip design program
7. 8051 single chip program
8. Thematic preparation