

Universal VLSI Protoboard

A universal VLSI platform capable of integrating FPGA's and CPLD's from Xilinx/Altera in different packages like TQ/PQ packages.

Its completely universal, supports multi-vendor devices from **XC9500** CPLDs, **Spartan-2** FPGA from Xilinx and **ACEX 1k** series of FPGAs and **MAX7000s** series of CPLD from Altera.

This protoboard gives a complete learning experience in various PLD architectures and their features. Other optional modules are available for coolrunner CPLDs, Virtex series of FPGAs.

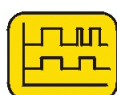
Technical specifications

- ?? Multi-vendor device support for Xilinx and Altera PLDs.
- ?? Modules available in PLCC84, TQ144 and PQ208 packages (and other TQ/PQ packages).
- ?? Upto 140 user I/Os in Xilinx FPGA.
- ?? Interface to 4 X 7-Segment Multiplexed displays.
- ?? 4x4 membrane keypad.
- ?? User selectable configuration modes, using either SPROM / FLASH PROM / JTAG / Slave Serial.
- ?? Interface to RS232 with 9-pin D-type connector.
- ?? Byte-blaster cable interface for configuration of Altera FPGAs.
- ?? On board 8-MHz Clock oscillator (user selectable).
- ?? With on boards regulators supporting 5V, 3.3V and 2.5V devices.
- ?? Interface to 16 digital inputs and outputs with LED indication.
- ?? Power on Reset circuit and configuration reset key.
- ?? Support for different I/O Standards.
- ?? Complaint with Xilinx ISE series software.
- ?? Complaint with Altera Quartus design software.

Block No. 25, Bldg. No. B-5, Bandal Complex, Paul Rd., Kothrud, Pune – 411 088. Maharashtra, India
Tel-Fax:- 91-20-5286948/3004378, Cell:- 9890086718. Email: info@ni2designs.com



High Speed DSP
Design Solutions



FPGA Backend &
Verification/Testing



Innovative Product Development
& Design Consultancy

Daughter Cards (Available with Universal protoboard)

| | |
|---------------------------|---------------------|
| ?? Xilinx FPGA Spartan II | XC2S50 PQ208-5C |
| ?? Altera ACEX FPGA | EP1K50 TQ 144-3C |
| ?? Xilinx CPLD | XC 9572 PLCC84-15C |
| ?? Altera MAX7000s CPLD | EPM7128s PLCC84-15C |

?? **Note: Select any one CPLD adaptor and any one FPGA adaptor.**

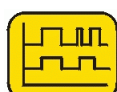
Applications and Practicals

| | |
|---|---|
| ?? Temperature controller. | ?? 8/16/24/32 bit Shift register. |
| ?? Access control system. | ?? 4-bit and 8-bit ALUs. |
| ?? Display and Messaging applications | ?? Timer designs IC8254 and IC8253. |
| ?? PC based applications. | ?? 8255 PPI design. |
| ?? 8051 microcontroller based applications. | ?? Adders and subtractors. |
| ?? Design of 8/16/24/32 bit counters. | ?? All digital logic gates and functions. |

Block No. 25, Bldg. No. B-5, Bandal Complex, Paul Rd., Kothrud, Pune – 411 088. Maharashtra, India
Tel-Fax:- 91-20-5286948/3004378, Cell:- 9890086718. Email: info@ni2designs.com



High Speed DSP
Design Solutions



FPGA Backend &
Verification/Testing



Innovative Product Development
& Design consultancy