

### E89-01 89Cxx Embedded Trainer



**E89-01** is a single board Microcontroller Trainer Kit based on 8 bit 8051 Microcontroller, which is widely used to train engineers to develop on software/hardware for any industrial process & control.

#### Feature

- > CPU: Philips 89C51RD2 or 89S61X2 series
- > On-board Internal Memory
  - 64K Internal Program Memory
  - 1K Internal Data Memory
- > On-board Internal Memory
- > Speed up to 20 MHz with 6-clock cycles per machine cycle (40 MHz equivalent performance); up to 33 MHz with 12 clocks per machine cycle
- > Four interrupt priority levels
- > Seven interrupt sources
- > Four 8-bit I/O ports available in 26 pin FRC.
- > On-Board ISP(in system Programming) facility
- > Windows Based ISP Programming Software
- > Compilers
  - Cross 'C' COMPILER for 8051 Family (Optional)
- > All ports of CPU brought out on two 26 pin FRC.
- > Two 26pin FRC cable & one 40 Pin FRC cable

#### ON-BOARD MODULES

- 64K External DATA Memory using 2 nos. of 62256
- REAL TIME CLOCK using RTC6242
- I<sup>2</sup>C Serial EPROM using 93c46
- Printer Port brought out at 25 pin D-Type connector
- 16x2 Alphanumeric LCD display with backlit
- Six Seven Segment Displays
- Stepper Motor Card with 0.25kgcms Motor (optional)
- 12 Nos. of EWSN Status LED.
- On-board 8 bit ADC using ADC 0804
- Onboard 8 bit DAC using DAC0800
- Data Switches using 8 way DIP switch
- 16 Keys Keyboard Matrix
- 2 channel Relay .
- > In-Built Power Supply of +5V/1.5A, ±12V/250mA.
- > User's Manual with sample programs

### E89-02 89Cxx Project Board



**E89-02** is a single board Embedded Kit based on Philips 8051 Microcontroller for any Embedded applications.

#### Feature

- > CPU: Philips 89C51RD2 or 89S61X2 series
- > On-board Internal Memory
  - 64K Internal Program Memory
  - 1K Internal Data Memory
- > Speed up to 20 MHz with 6-clock cycles per machine cycle (40 MHz equivalent performance); up to 33 MHz with 12 clocks per machine cycle
- > Four interrupt priority levels
- > Seven interrupt sources
- > Four 8-bit I/O ports available in 26 pin FRC polarized connector
- > On-Board ISP(in system Programming) facility
- > Windows Based ISP Programming Software
- > Two 26pin FRC cable & one 40 Pin FRC cable
- > On-Board REAL TIME CLOCK using RTC6242
- > On-Board 64K External DATA Memory using 2 nos. of 62256
- > I<sup>2</sup>C Serial EPROM using 93c46
- > On-Board Parallel Port brought out at 25 pin DType connector.
- > All ICS are mounted on IC Sockets.
- > Bare board Tested Glass Epoxy SMOBC PCB is used.
- > In-Built Power Supply of +5V/1A, ±12V/150mA
- > Attractive Wooden enclosures of Light weight Australian Pine Wood.
- > User's Manual with sample programs
- > 230mm x 140mm x 80mm (L x W x H)
- > Weight 2 Kgs
- > ALL IC-XX SERIES INTERFACING CARDS ARE COMPATIBLE WITH E89-02

## Salicon Nano Technology Pvt. Ltd.

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### E89-03 UNIVERSAL EMBEDDED KIT



**E89-03** is a single board Embedded Kit based on PHILIPS Microcontroller & PIC Microchip Microcontroller for any Embedded applications

#### Feature

- > CPU: Piggy Back Philips 89C51RD2 or 89S61X2 series & piggy Back Microchip PIC16F877A CPU OPERATING @4MHz
- > Onboard Interfaces
  - 6 Digit Seven Segment Displays
  - 16x2 Alphanumeric LCD Display with backlit.
  - 4x4 Keys Keyboard Matrix.
  - On-board ISP Programming facility
  - 12 Nos. of EWSN Status LED.
  - 8 bit ADC using ADC 0804
  - 8 bit DAC using DAC0800
  - Four Data Switches
  - 8 way DIP Switch Array
  - Stepper Motor Controller with 0.25kgcm Stepper Motor (Optional)
  - Reset switch provided for system reset
  - Toggle switch for selection between application mode and ISP mode
- > All ports of PIC IC brought out on two 26 pin FRC Polarized connector
- > Two 26pin FRC Cable for interconnections provided
- > Windows based ISP software
- > Cross 'C' COMPILER for MICROCONTROLLER & PIC MICROCHIP Family (Optional)
- > All ICS are mounted on IC Sockets.
- > Bare board Tested Glass Epoxy SMOBC PCB is used.
- > In-Built Power Supply of +5V/1.5A, ±12V/250mA
- > Attractive Wooden enclosures of Light weight Australian Pine Wood.
- > User's Manual with sample programs for all on board features

### E89-02 89Cxx Project Board



**E89-02** is a single board Embedded Kit based on Philips 8051 Microcontroller for any Embedded applications.

#### Feature

- > CPU: Philips 89C51RD2 or 89S61X2 series
- > On-board Internal Memory
  - 64K Internal Program Memory
  - 1K Internal Data Memory
- > Speed up to 20 MHz with 6-clock cycles per machine cycle (40 MHz equivalent performance); up to 33 MHz with 12 clocks per machine cycle
- > Four interrupt priority levels
- > Seven interrupt sources
- > Four 8-bit I/O ports available in 26 pin FRC polarized connector
- > On-Board ISP(in system Programming) facility
- > Windows Based ISP Programming Software
- > Two 26pin FRC cable & one 40 Pin FRC cable
- > On-Board REAL TIME CLOCK using RTC6242
- > On-Board 64K External DATA Memory using 2 nos. of 62256
- > I<sup>2</sup>C Serial EPROM using 93c46
- > On-Board Parallel Port brought out at 25 pin DType connector.
- > All ICS are mounted on IC Sockets.
- > Bare board Tested Glass Epoxy SMOBC PCB is used.
- > In-Built Power Supply of +5V/1A, ±12V/150mA
- > Attractive Wooden enclosures of Light weight Australian Pine Wood.
- > User's Manual with sample programs
- > 230mm x 140mm x 80mm (L x W x H)
- > Weight 2 Kgs
- > ALL IC-XX SERIES INTERFACING CARDS ARE COMPATIBLE WITH E89-02

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### E89-04 PIC EMBEDDED KIT



**E89-04** is a single board Embedded Kit based on PIC Microchip Microcontroller for any Embedded applications

#### Feature

- > CPU: Microchip PIC16F877A CPU OPERATING @4MHz
- > Onboard Interfaces
  - 6 Digit Seven Segment Displays
  - 16x2 Alphanumeric LCD Display with backlit.
  - 4x4 Keys Keyboard Matrix.
  - On-board ISP Programming facility
  - 12 Nos. of EWSN Status LED.
  - 8 bit ADC using ADC 0804
  - 8 bit DAC using DAC0800
  - Four Data Switches
  - 8 way DIP Switch Array
  - Stepper Motor Controller with 0.25kgcm Stepper Motor (Optional)
  - Reset switch provided for system reset
  - Toggle switch for selection between application mode and ISP mode
  - On-chip I<sup>2</sup>C Serial EPROM
- > All ports of PIC IC brought out on two 26 pin FRC Polarized connector
- > Two 26pin FRC Cable for interconnections provided
- > Windows based ISP software
- > Cross 'C' COMPILER for MICROCONTROLLER & PIC MICROCHIP Family (Optional)
- > All ICS are mounted on IC Sockets.
- > Bare board Tested Glass Epoxy SMOBC PCB is used.
- > In-Built Power Supply of +5V/1.5A, ±12V/250mA
- > Attractive Wooden enclosures of Light weight Australian Pine Wood.
- > User's Manual with sample programs for all on board features
- > 270mm x 185mm x 105mm (L x W x H).
- > Weight 3 Kgs.

### E89-02 89Cxx Project Board



**E89-02** is a single board Embedded Kit based on Philips 8051 Microcontroller for any Embedded applications.

#### Feature

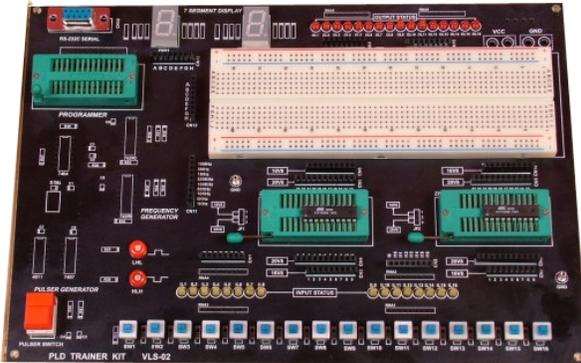
- > CPU: Philips 89C51RD2 or 89S61X2 series
- > On-board Internal Memory
  - 64K Internal Program Memory
  - 1K Internal Data Memory
- > Speed up to 20 MHz with 6-clock cycles per machine cycle (40 MHz equivalent performance); up to 33 MHz with 12 clocks per machine cycle
- > Four interrupt priority levels
- > Seven interrupt sources
- > Four 8-bit I/O ports available in 26 pin FRC polarized connector
- > On-Board ISP (in system Programming) facility
- > Windows Based ISP Programming Software
- > Two 26pin FRC cable & one 40 Pin FRC cable
- > On-Board REAL TIME CLOCK using RTC6242
- > On-Board 64K External DATA Memory using 2 nos. of 62256
- > I<sup>2</sup>C Serial EPROM using 93c46
- > On-Board Parallel Port brought out at 25 pin DType connector.
- > All ICS are mounted on IC Sockets.
- > Bare board Tested Glass Epoxy SMOBC PCB is used.
- > In-Built Power Supply of +5V/1A, ±12V/150mA
- > Attractive Wooden enclosures of Light weight Australian Pine Wood.
- > User's Manual with sample programs
- > 230mm x 140mm x 80mm (L x W x H)
- > Weight 2 Kgs
- > ALL IC-XX SERIES INTERFACING CARDS ARE COMPATIBLE WITH E89-02

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## VLS-02 PAL/PLD TRAINER KIT



### **CPU**

PLD IC using PALCE16V8 OR PALCE22V10

### **Indicators**

1. 16 Toggle Input Switch with LED indication to indicate logic low and logic high
2. 16 LED for output indication.

### **Onboard Interfaces**

1. 2 Digit Seven Segment Displays
2. 2 Nos. of 28 pin ZIF socket for Experiments

### **Mono Pulsar**

Logic Pulsar provides single pole double throw bounce less pulses of Low to High and High to Low transition

### **Bread Board Area**

1. Two Distribution Strip of 100 tie points each totaling 200 tie points
2. One Terminal Strip of 630 tie points

### **Clock Generator**

On-board 5MHz, 1MHz, 500KHz , 100KHz, 50KHz,10KHz .

Programmer to program PLD IC's (Optional)

Interconnections

All inputs & outputs are connected through 8 pin burg Cable

1. All ICS are mounted on IC Sockets.
2. Bare board Tested Glass Epoxy SMOBC PCB is used.
3. In-Built Power Supply of +5V/1.5A,  $\pm 12V/250mA$
4. Attractive Wooden enclosures of Light weight Australian Pine Wood.
5. User's Manual with sample experimental programs