



## Application

This microprocessor trainer is built around the Intel 8086 architecture, providing a practical platform to explore and master 16-bit microprocessor programming, instruction sets, hardware interfacing, and interrupt handling. It's suitable for hands-on lab exercises, curriculum integration, and experimentation with embedded systems.

## System Highlights

### Core Processor & Memory

- **Processor:** Intel 8086 CPU operating at selectable clock speeds of 2.5 MHz or 5 MHz (or higher)
- **RAM:** 16 KB onboard RAM with battery backup; expandable up to 256 KB
- **Monitor EPROM:** 16 KB or higher for system monitoring and firmware operations

### I/O & Peripheral Interfaces

- **General Purpose I/O:**
  - 48 I/O lines via dual 8255 programmable peripheral interface (FRC 26-pin connector)
  - 24 additional I/O lines through single 8255 (25-pin D-sub connector) – suitable for printer or parallel interfacing
- **Timer/Counter:** 16-bit timing control using the 8253 programmable interval timer
- **Serial Communication:** RS-232C interface powered by the 8251 USART
- **Interrupt Management:** Onboard 8259 programmable interrupt controller

### Integrated Support ICs

- Includes essential support components:

*Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.*



Export Sales: +91-9829132777  
India Sales: +91-9588842361



IT-2013, Ramchandrapura Industrial Area,  
Sitapura Extension, Jaipur-302022, India.



info@tesca.in  
www.tescaglobal.com

- 8279 (Keyboard/Display Controller)
- 8284 (Clock Generator)
- 8288 (Bus Controller)
- 8251A, 8253, 8255A, 8259A for peripheral interfacing and control logic

### Display & Input Interface

- **Display:** 20x2 backlit LCD display for status and output
- **Input:** Embedded ASCII keyboard for direct code entry and command execution

### Host Communication

- PC connectivity supported for uploading and downloading programs or data via serial communication

### Signal Accessibility

- All essential address, data, and control buses exposed through a 50-pin FRC header for experimentation and external interfacing

### Available Interface Modules

Supports a wide range of practical interface experiments including:

- Calculator-style keyboard interface
- Alphanumeric display module
- 8-bit dual DAC interface
- 8-bit ADC (16-channel) interface
- 12-bit ADC (8-channel) interface
- Traffic signal control simulation
- Sound/tone generator
- Stepper motor control
- DC motor control
- Real-Time Clock (RTC) interface module

### Included Accessories / Spares

- FRC cables and connectors for interfacing
- Onboard power supply unit
- Replaceable memory modules (EPROM/RAM)
- Peripheral I/O support chips (e.g., 8255, 8253)
- Keyboard and display expansion units

*Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.*



Export Sales: +91-9829132777  
India Sales: +91-9588842361



IT-2013, Ramchandrapura Industrial Area,  
Sitapura Extension, Jaipur-302022, India.



info@tesca.in  
www.tescaglobal.com