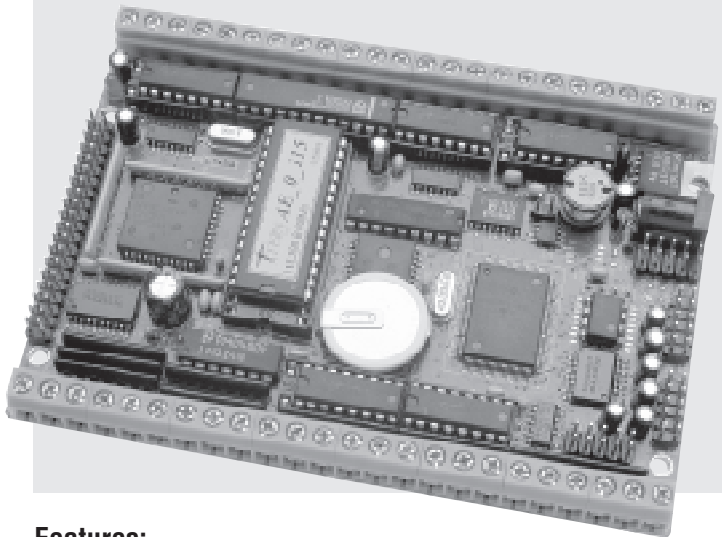


## 35 solenoid drivers, 24 TTL I/Os, ADC, DAC, 3 serial ports



### Features:

- 4.8x3.4x0.5" • -40°C to +80°C
- 16-bit CPU (188), 20/40MHz, program in C/C++
- 190mA for 40MHz, 30mA power-save-mode
- Up to 512KB SRAM, 512KB ROM/Flash \*
- 2 PWM outputs and Pulse Width Demodulation
- 512-byte EE, 6 external interrupts, 3 timer/counters
- Up to 3 serial ports, 11 ch. 12-bit ADC, 2 ch. 12-bit DAC \*
- 24 TTL I/O pins and 35 high voltage I/Os
- Real-time clock, battery, switching regulator \*

\* optional

The **40MHz TinyDrive™ (TD40™)** is designed for industrial control applications that require solenoid drivers and protected high-voltage inputs.

The **TD40™** is a complete C/C++ programmable industrial controller system with a 16-bit, 40/20MHz CPU (188). It supports 35 high-voltage I/O lines, 24 TTL bi-directional I/O pins, an 11 ch. 12-bit ADC, a 2 ch. 12-bit DAC, three RS-232/RS-485, a real-time clock, battery, watchdog timer, PWM, three timer/counters, 512-byte EEPROM, up to 512KB SRAM, and 512KB ROM/Flash.

The 35 high-voltage I/O lines, routed to screw terminals, include 7 inputs, 14 outputs, and 14 hardware-configurable inputs or outputs. The inputs can take up to 35V DC. The outputs are capable of sinking 350mA at 50V per line, and they can drive solenoids or relays. A real-time clock (RTC72421) provides calendar information. Two DMA-driven serial ports support RS-232 communication, at up to 115,200 baud. The optional third UART SCC2691 can be configured as either RS-232 or RS-485, supporting 8-bit or 9-bit RS-485 networking.

A 16-bit counter can count external events, up to 10MHz, or generate PWM outputs. A 82C55 chip provides 24 bi-directional I/Os, which can be used to interface with an LCD. A supervisor chip (691) with a watchdog is on-board.

An optional 11 ch. 12-bit serial ADC (TLC2543) has sample-and-hold and a sample rate up to 10KHz. Four operational amplifiers provide analog signal conditioning. The remaining seven channels are single-ended, 0-5V (or 0 to REF). Two optional 2 ch. 12-bit serial DACs provide 0-4.095V analog voltage outputs, capable of sinking or sourcing 5mA.

An optional switching regulator can be installed to reduce power consumption and heat. It also supports power-off mode, allowing µA-level power consumption. An optional TD-Pack including a 16x2 LCD, 8x2 keys, and an enclosure are also available.

### Ordering Information

**TD40 (40MHz) \$174/\$144/\$109/\$74 Qty 1/100/500/1K+**

Includes: 188, with 2 RS232 drivers, 24 TTL I/Os, 35 solenoid drivers, watchdog, a 512-Byte EE, PPI, and 128KB SRAM.

**NOT including add-on options. OEM option discounts available.**

### Add-on Options:

- |  |       |
|--|-------|
| 1) SRAM: 512KB .....                         | \$40  |
| 2) Debug ROM (AE_0_115) .....                | \$30  |
| 3) Real-time clock (RTC) and battery .....   | \$20  |
| 4) UART (SCC2691) w/ drivers                 |       |
| (a) RS-232 (default) or (b) RS-485 .....     | \$30  |
| 5) 11 ch. 12-bit ADC (TLC2543) .....         | \$30  |
| 6) 2 ch. 12-bit DAC (LT1446) .....           | \$40  |
| 7) Reference, 20 ppm/°C, 2.5V (LT1009) ..... | \$15  |
| 8) TD-Pack (Box, 16x2 LCD, 8x2 keypad) ..... | \$100 |
| 9) Switching regulator .....                 | \$30  |

### Typical Order Example:

**TD-40™**, 512KB SRAM, RTC & Battery, ADC  
 TD40 + 1 + 3 + 5 = \$174 + \$40 + \$20 + \$30 = \$264



**TD-Pack**



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