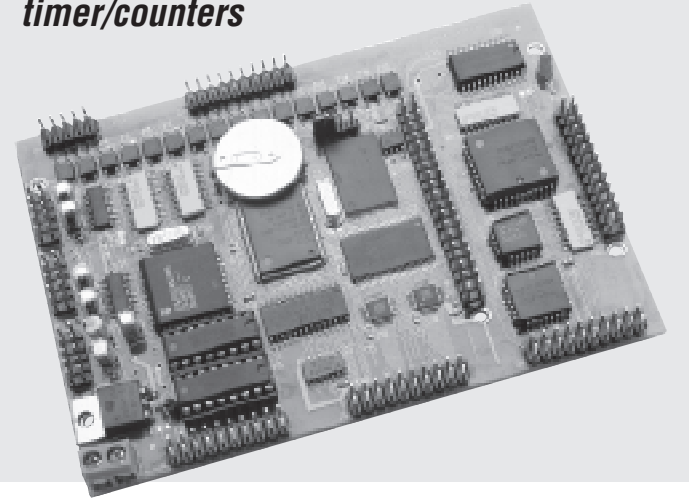


16 opto couplers, 14 solenoid drivers, 24 TTL, 16 ADC, 4 DAC, 4 serial ports, 6 timer/counters



Features:

- 4.8x3.4x0.5", -40°C to +80°C sample tested
 - 16-bit CPU (186), 40 MHz, program in C/C++
 - 190 mA at 40 MHz, 30 mA in power-save mode
 - Up-to 256KW flash and 256 KW SRAM on-board
 - 16 ch. 300 KHz 12-bit ADC (AD7852), 0-5V analog input*
 - 4 ch. 200 KHz 12-bit DAC (DAC7625), 0-2.5V analog output*
 - 16-bit external data bus, 512-byte EE, 4 serial ports
 - PWM outputs and Pulse Width Demodulation
 - 6 16-bit timer/counters, 24 TTL I/Os, and 14 solenoid drivers
 - 16 opto-coupler inputs including 5 external interrupts
 - Real-time clock, battery, switching regulator*
- * optional

The **TD86™** is designed for rugged industrial control applications that require compact size, superior performance, and reliability.

Superior Performance

The **TD86™** is a complete C/C++ programmable industrial controller based on a 16-bit, 40 MHz CPU (186) with 16-bit external data bus, supporting 16 channels of high speed parallel ADCs (AD7852, 12-bit, 300KHz, 0-5V) and 4 channels parallel DACs (DA7625, 12-bit, 5µs, 0-2.5V).

With the wider 16-bit external data bus, code executes directly out of 16-bit SRAM or 16-bit flash. The CPU can access the parallel 12-bit ADC, or parallel DAC with zero wait state in single instruction.

Three 16-bit programmable high-performance counters (71054, NEC), each with its own clock input, gate input, and output, can be clocked up to 10 MHz. Three 16-bit CPU internal timer/counters can support PWM, or pulse-width demodulation.

Industrial Control Input/Outputs

The **TD86** also has 16 opto-isolated digital inputs, 14 solenoid drivers, and 24 TTL I/O pins. The 16 opto-couplers (PS2701/5, NEC) can take up to 50V DC (PS2701, default) or AC (PS2705) inputs. These opto-couplers have 3 µs ON time and 5 µs OFF time. Five opto-inputs are also external interrupts. The 14 solenoid

drivers are capable of sinking 350 mA at 50V per line, and they can drive solenoids or relays.

Versatile Applications

Four serial ports (two CPU internal, two from SCC2692) are configured to RS232 by default. One CPU internal UART(SER1) can be configured to RS485 (half-duplex) or RS422 (full-duplex). The SCC2692 UART can be configure to RS485.

The **TD86** also supports a real-time clock (RTC72423) with battery, a watchdog timer, and a 512-byte EEPROM. A 64KW or 256 KW 16-bit SRAM can be installed. Using the DV-P kit, user applications can be easily field-programmed into the 16-bit ACTF flash over the serial link.

A **MMB**, or **FC-O** can be installed to support up to 1 GB PCMCIA, CompcFlash card. The **MMB** supports 10 BaseT Ethernet, and an additional 39 channels of 12-bit/24-bit ADC inputs.

A 82C55 PPI chip provides 24 I/Os, which can also be used to interface to an LCD. An optional switching regulator can be installed to reduce power consumption and heat.

The **TD86** supports power-off mode, allowing µA-level power consumption. In this mode, the real-time clock or an external signal can turn the TD86 on or off via the VOFF pin of the switching regulator.

An optional TD-Pack including a 16x2 LCD, 8x2 keys, and an enclosure is available.

Ordering Information

TD86 **\$229/\$180/\$138/\$92** **Qty 1/100/1K/5K+**

Includes: 40 MHz 186, 256KW ACTF Flash, 4 RS232, 24 TTL, 14 solenoid drivers, 16 optos, 6 timers, regulator, EE, and 64KW SRAM.

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

Add-on Options:

- | | |
|-----------------------------------------------------|-----------|
| 1) SRAM: 256KW | \$40 |
| 2) Real-time clock (RTC) and battery | \$20 |
| 3) 8 ch. 12-bit ADC, 300KHz (AD7852), 2 chips | \$40 each |
| 4) 4 ch. 12-bit DAC, (DA7625) | \$60 |
| 5) RS485/422 driver for CPU SER1 | \$10/\$20 |
| 6) RS485 driver for SCC2692-A | \$10 |
| 7) TD-Pack (Box, 16x2 LCD, 8x2 keypad) | \$100 |
| 8) Switching regulator | \$30 |

Typical Order Example:

TD86, 256KW SRAM, RTC & Battery, 8 12-bit 300KHz ADCs
 TD86 + 1 + 2 + 3 = \$229 + \$40 + \$20 + \$40 = \$329



1724 Picasso Avenue, Davis, CA 95616 USA
 Tel: 530-758-0180 • Fax: 530-758-0181