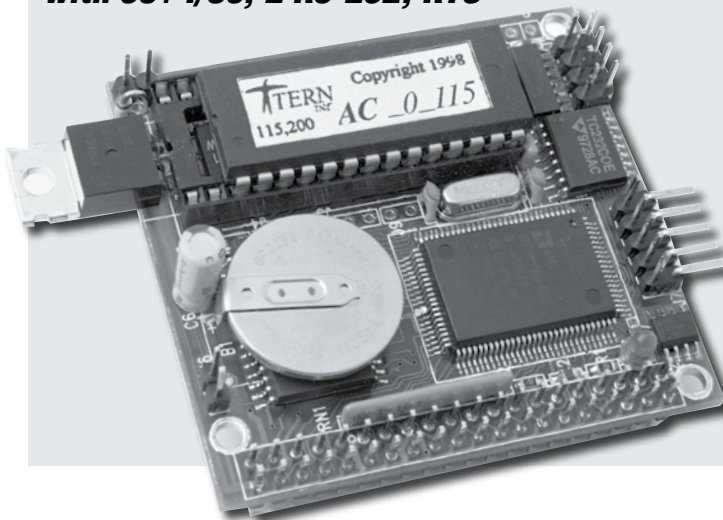# A-Core™ (AC)

C/C++ programmable 16-bit controller with 30+ I/Os, 2 RS-232, RTC

Features:

- 2.3x2.2x0.3"
- 40MHz, 16-bit CPU (188), program in C/C++
- 160mA for 40MHz, 30 mA power-save mode
- 2 serial ports, 32 multifunctional I/Os plus 8 TTL outputs
- 3 16-bit timers/counters, PWM output, 512-byte EE
- Up to 512KB SRAM, 512KB ROM/Flash *****
- Real-time clock (RTC72421), battery *****
- On-board 2 RS-232 drivers and 5V regulator *****
  * optional

The **A-Core™ (AC)** is a low cost microcontroller ideal for integration into an OEM product as the programmable core component. Using the **AC** reduces time from design to market introduction, cuts development costs, minimizes technical risks, and delivers a more reliable product.

The **AC** is a complete C/C++ programmable module based on a 16-bit CPU (188). It supports up to 512KB ROM/Flash, 512KB battery-backed SRAM and 512 bytes serial EEPROM. Two high speed DMA driven serial ports from the 188 support reliable serial communications, up to 115,200 baud. There are 32 multifunctional I/Os from the CPU, 8 TTL outputs from a 74HC259, 3 16-bit timers/counters and a watchdog timer. The timer can count external events, up to 10MHz, or generate PWM outputs. An optional real-time clock (RTC72421, EPSON) provides calendar information and a VOFF control signal.

Two RS-232 drivers and a 5V regulator can be installed, or a VE232 expansion card can be used during development.
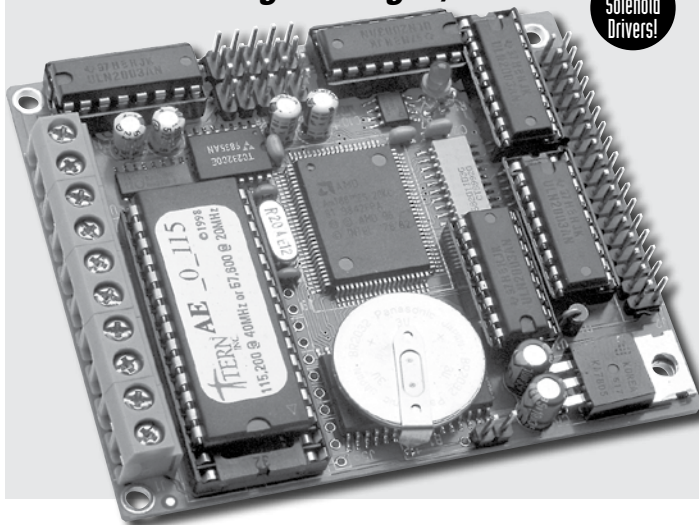
Typical Order Example:

A-Core™ 40MHz, 512KB SRAM, RTC & Battery, RS232 + 5V reg.
AC + 1 + 3 + 4 = $79 + $20 + $20 + $10 = $129

MD88™ 40MHz, 512KB SRAM
MD88 + 1 = $99 + $20 = $119

MiniDrive88™ (MD88) 40 MHz!

35 Protected high-voltage I/Os

35 Solenoid Drivers!

Features:

- 3.1x2.6x0.3"
- Same features as the **A-Core™**
- 35 solenoid drivers support 0-30V input/output signals
- Screw terminals for solenoid drivers

The **MiniDrive88™ (MD88)** adds 35 solenoid drivers to the same basic features offered by the **A-Core™**. The **MD88** is designed for industrial control applications that require solenoid drivers and protected high-voltage inputs. The 35 high-voltage I/O lines are routed to screw terminals and headers. They include 7 inputs, 14 outputs, and 14 hardware-configurable inputs or outputs.

These inputs can take up to 30V DC. The outputs are capable of sinking 350mA at 50V per line, and they can be used to directly drive solenoids, relays, and lights.

Ordering Information

AC (40MHz)	$79/$64/$49/$29	Qty 1/100/500/5K+
MD88 (40MHz)	$99/$74/$55/$34	Qty 1/100/500/5K+

Includes: 188 with 2 UARTs, 3 timers/2 PWMs, I/Os, watchdog timer, power-fail reset, 512-byte EE, 128KB SRAM.

The **MD88** adds 35 solenoid drivers, a RS232 driver and a 5V regulator.
NOT including add-on options. OEM option discounts available.

Add-on Options:

1) SRAM: 512KB $20
2) Debug ROM (*AC_0_115, AE_0_115 for MD88*)....................$20
3) Real-time clock (RTC) and battery.......................................$20
4) RS-232 and 5V regulator (**AC**)..$10
5) **VE232™** (**AC**) $49
6) Sockets for expansion: 20x2 and 20x1 (**AC** only) $6

13