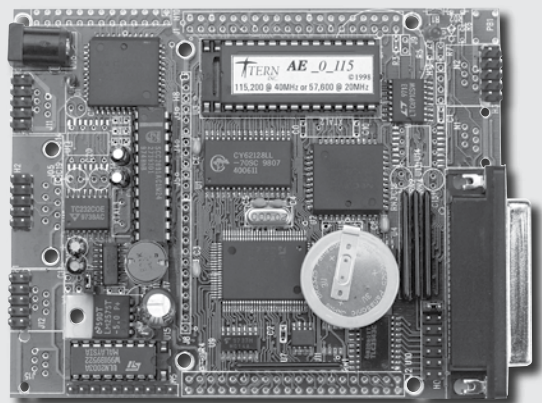# BirdBox-A™ (BB-A)

40MHz!

Single-board User Interface Controller with 4 UARTs, LCD, Keypad, and Enclosure

Features:

- 4.5x3.6x0.9"
- 40MHz 188, C/C++ programmable
- Power consumption: <190mA; Power-down mode: 20µA
- Power input: +8.5 to +12V with linear regulator, or
  +8.5 to +35V with switching regulator *****
- Up to 512KB SRAM, 512KB ROM/Flash *****
- 32 Multiplexed I/O lines, 2 PWM outputs, interrupts, timers
- Up to 4 serial ports*****   • Real-time clock *****
- 7 solenoid sinking drivers   • 512-byte EE
- 48 additional bi-directional I/O lines from 2 PPIs
- 11 ch. 12-bit ADC *****   • 2 ch. 12-bit DAC *****
- 16x2 LCD, 4x3 keypad, enclosure (BB-Pack) *****
  * optional

The **BirdBox-A™ (BB-A)** can be used to convert protocols into different formats, allowing communication between different systems. It offers a complete C/C++ programmable system with a high performance CPU (188), up to 512KB ROM/Flash, 512KB battery-backed SRAM, a 512-byte serial EEPROM, ADC, and DAC. The **BB-A** supports a real-time clock (RTC72423), battery, three timer/counters, a watchdog, up to four serial ports, a 16x2 character LCD, and a 3x4 keypad, all of which can be packaged in a 4.8" x 3.7" x 1.5" aluminum sheet enclosure.

The **BB-A** offers a total of four serial ports: two from the CPU, two from optional SCC2691 UARTs. All four serial ports are RS-232 by default. The two optional UARTs can be configured for RS-485. A 16-bit counter can be used to count external events at up to 10MHz, and to generate PWM outputs. 32 I/O pins from the Am188ES are multifunctional and user-programmable. There are 11 channels of 12-bit serial ADC (TLC2543) which have a 0-5V (or 0 to REF) input range, at up to 10KHz sample rate. The 2 channels of 12-bit serial DAC, output 0-4.095V. Two PPI chips (82C55) provide 24x2 bi-directional I/O lines that can support a DB25 printer port, 3x4 keypad, and a 16x2 LCD. Seven solenoid drivers can sink up to 350mA at 50V per channel.

The optional BB-Pack consists of a DB9, a DB25, RJ11 phone jacks, a 16x2 LCD, a 3x4 keypad, a beeper, and an enclosure. An optional switching regulator can be installed to reduce power consumption. A **MemCard™ (MM-B)** can be installed without using the BB-Pack. Up to 250 **BB-A**s can be networked via RS-485.

BirdBox-A™ with optional BB-Pack.

Ordering Information

BB-A (40MHz)   **$174/$139/$99/$69**   **Qty 1/100/500/1K+**

Includes 188, 128KB SRAM, I/Os, 2 UARTs (RS-232), 3 timers, 24x2 I/Os from 82C55, watchdog, 512-byte EE, 7 solenoid drivers, linear regulator.

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

Add-on Options:

1) SRAM: 512KB...$20

2) Debug ROM (*AE_0_115*) $20

3) Real-time clock (RTC) and battery $20

4) UART (SCC2691) + drivers *up to 2*

    a) RS-232   b) RS-485 ....$20 + 10 each

5) 11 ch. 12-bit ADC (TLC2543) $20

6) 2 ch. 12-bit DAC (LT1446) $20

7) Switching regulator $20

8) BB-Pack: 16x2 LCD, keypad, beeper, box $150

Typical Order Example:

BirdBox-A™ 40MHz, 512 KB SRAM, RTC & Battery, BB-Pack
BB-A + 1 + 3 + 8 = $174 + $20 + $20 + $150 = $364