- Four PWM timers
- Eight digital I/O
- Synchronous high speed reads of digital and counter inputs

Software options include comprehensive support for Visual Studio® and Visual Studio .NET, DASYLab®, and NI LabVIEW™.

The four-channel USB-CTR04 is priced at US$359, and the eight-channel USB-CTR08 is priced at US$429.

RASPBERRY PI
PROTOTYPING KITS

The surface-mount Raspberry Pi kits now available from Schmartboard each come with a Raspberry Pi through-hole add-on board and a choice of many Schmartboard SMT to DIP adapters which add the ability to use SC70, SOT, SOIC, QFN, QFN, and DFN components.

The Raspberry Pi base board features:

- An extra row of holes for easy access to the Raspberry Pi's general I/O signals.
- Rows of power and ground strips for easy power-up and flexibility.
- Pre-routed traces to minimize the use of wire jumpers.
- A slot for a video cable to keep the circuit clean and unencumbered.
- A marked area where the Raspberry Pi USB and
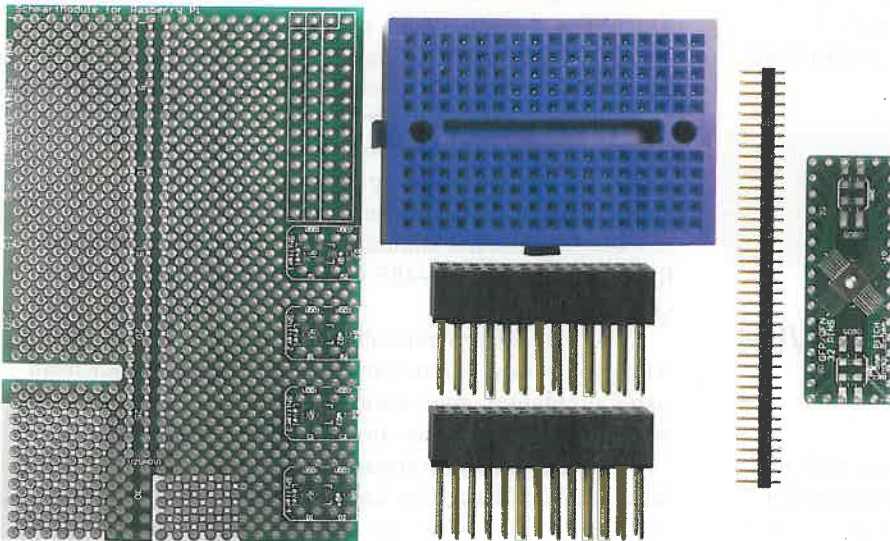
Ethernet connectors are located to avoid conflicts.
- Headers with enough clearance to cleanly and safely stack on the board.
- Circuits for four level shifters.
- Schmartboard's signature offset through-hole grid which expands part placement options.

The kits are currently available in configurations to support SOT 23, SC 70, SOIC .5 mm, .635 mm, .65 mm, .8 mm, and 1.27 mm pitches, and many QFP, QFNs, and DFNs in both .5 mm and .65 mm pitches. More options will be added as which package types are most needed is determined.

The through-hole shields retail for US$13, bundled with the headers. The surface-mount kits retail for US$18, and additional SMT to DIP adapters retail for US$6.

MCUs FEATURE ON-CHIP 12-BIT ADC, OP-AMPS, 16-BIT PWMs, and HIGH SPEED COMPARATORS

Microchip Technology, Inc., has announced an expansion of its eight-bit PIC16F178X enhanced mid-range core microcontroller (MCU) family with increased Flash memory densities, intelligent analog and digital peripherals such as on-chip 12-bit analog-to-digital converters (ADCs), 16-bit PWMs, eight-bit and five-bit digital-to-analog converters (DACs), operational amplifiers, and high speed comparators with 50 ns response time, along with EUSART (including LIN), I²C and SPI interface peripherals.

The PIC16F178Xs are Microchip's first MCUs to implement the new programmable switch mode controller (PSMC) which is an advanced 16-bit pulse-width modulator (PWM) with 64 MHz operation and high performance capabilities. This combination of features enables higher efficiency and performance, along with cost and space reductions.

The new MCUs also feature eXtreme low power (XLP) technology for active and sleep currents of just 32 μA/MHz and 50 nA, respectively, helping to extend battery life and reduce standby current consumption.