

create successive layers of battery components, each about the thickness of a human hair, until enough bulk has been achieved for a particular application. Printable batteries for smart cards would weight less than 1 gram

and be less than 1 mm thick. The organic materials generate 1.5 V per cell, like conventional batteries, and they are free of hazardous substances such as heavy metals used in conventional rechargeable and alkaline batteries.

Fraunhofer researchers said their battery is already working in the lab, and their industrial partners estimate that the first commercial models will be ready for beta testing later this year.

www.fraunhofer.de/en/press/research-news/2009/july/printable-batteries.jsp

(090569-X)

KEF creates unique flagship speakers

In loudspeaker engineering as in everything else, true innovation sometimes requires rethinking a problem from first principles. So when KEF set out to create the Concept Blade, a unique not-for-sale speaker system designed to showcase their speaker technology, the acoustic research department had complete freedom to explore radical new options, with no preconceptions or aesthetic restrictions, and no reliance on existing components. After three years of exhaustive test-

ing and analysis of traditional as well as experimental approaches to loudspeaker design, they perfected a combination of technologies that generates an extraordinarily pure sound. Concept Blade is forged from these technologies. Its exceptional acoustic integrity derives from the fact that every element of the system has been conceived to perform as a single coherent unit with all parts working in flawless harmony. The highest quality components and advanced materials have been

used in perfecting the design. While the technologies incorporated into the design are often very complex, the focus has always been on simplicity. The drivers are specifically designed to behave with zero break-up or resonance over their frequency range, and the distinctive cabinet is carefully engineered not to interfere with the purity of their output.

www2.kef.com/us/conceptblade

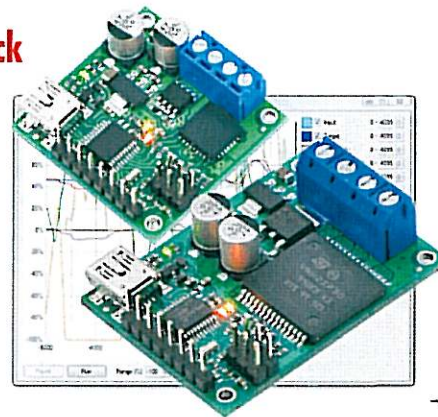
(090569-IV)



Pololu Jrk Usb Motor Controller with Feedback

Pololu announces the release of the jrk line of USB motor controllers: highly configurable, versatile devices that make it easy to add open- or closed-loop control of brushed DC motors to your computer- or microcontroller-based project. The jrk supports four interface modes — USB for PC-based control, logic-level (TTL) serial for use with embedded systems, analog voltage for simple potentiometers and joysticks, and RC pulse for radio control systems — and can perform open-loop speed control, closed-loop position control with analog voltage feedback to make

your own servos, and closed-loop speed control with frequency feedback from a tachometer. The jrk 21v3, the smaller of the two units currently available, has an operating range of 5-28 V and can deliver 3 A continuous output (5 A peak). The jrk 12v12, the more powerful of the two, has an operating range of 6-16 V and can deliver a continuous output of 12 A (30 A peak). Both devices can handle transients of up to 40 V. A free configuration program (Windows XP and Vista compatible) is available for calibrating your system. Real-time plots of vari-



tings such as PID constants, acceleration, and current limit for your application. The unit price is \$49.95 for the jrk 21v3 (item #1392) and \$99.95 for the jrk 12v12 (item #1393).

ables such as control input, feedback, motor output, and current draw make it easy to fine-tune set-

www.pololu.com

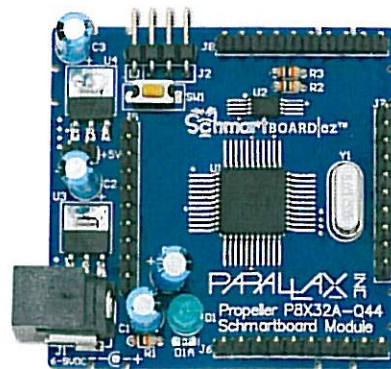
(090711-VIII)

Surface soldering the Propeller chip

Parallax Inc. has partnered with SchmartBoard to create an easy Propeller prototyping system in the form of a kit.

If you are new to surface soldering and don't know where to start, the P8X32A-Q44 SchmartBoard kit is a perfect starting point. The SchmartBoard technology makes surface mount soldering easy. Once completed, the

board will host Parallax's most powerful microcontroller on this convenient development platform, allowing access to all 32 I/O pins of the multicore Propeller chip. The kit retails at \$39.99 and includes surface-mount and through-hole package types for some components, offering a soldering choice and challenge.



www.Parallax.com
(search 'SchmartBoard' or '27150')

(090711-II)