Snoopy would approve

BeagleBoard sessions at ESC teach you how to configure the TI OMAP3530-based development platform. And it's yours to keep!

By Murray Slovick
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The concept is simple. Encourage creativity by providing the basic building blocks to let customers make and personalize an attractive product, then let them take home what they've built.

It works for kids: If you spend any time at a shopping mall chances are good you've come across one of the over 400 Build-A-Bear Workshop stores worldwide. It's a fun place that gives kids the opportunity to build their own stuffed animal, which makes the bear they create and take home even more special. Successful? Just over 70 million furry friends are entertaining kids around the globe.

It works for engineers, too. Consider, for example, the BeagleBoard evaluation board/kit classes at ESC. BeagleBoard is a-low cost ($149) 3 inch by 3 inch, USB powered platform based on a TI OMAP3530 SoC application processor featuring a superscalar ARM Cortex-A8 core delivering over 1,200 Dhrystone MIPS of performance and an HD video capable TMS320C64x+ DSP. The board, sold through Digi-Key, also features an Imagination Technologies PowerVR SGX530 GPU to provide accelerated 2D and 3D rendering.

Complete with DVI-D, S-Video, a single SD/MMC card slot, a USB On-the-Go port, an RS-232 serial connection, a JTAG connection to facilitate software development and debugging and two 3.5mm stereo audio I/O jacks, BeagleBoard has all the functionality of a basic computer.

In all, BeagleBoard is a unique, Open Source (it runs on the Angstrom Linux Distribution) embedded development and education project and the focal point of four hands-on interactive training sessions scheduled at ESC on Tuesday, September 22 in room 200. You get access to industry expert-led classes where you learn how to configure your kit onsite---and it's yours to keep!

BeagleBoard was designed initially by TI's Jason Kridner, Principal Architect, Open Platforms, and Gerald Coley, Systems Engineer, both of whom will be in the workshop Tuesday morning for those that would like to bring-up their boards before the classes kick-off. Subsequent development of BeagleBoard has been done by BeagleBoard .org community members.

There are many productive uses of the BeagleBoard as well as a few that should be avoided. It is not intended as a full OMAP3 development platform as many features and interfaces available for the OMAP3530 are not accessible from BeagleBoard. The evaluation board/kit also is intended for engineering development, demonstration or evaluation purposes only and is not considered by BeagleBoard.org to be a finished end product fit for general consumer use.

BeagleBoard's USB OTG port is its primary power source and communication link. A single PC USB port is sufficient to power the BeagleBoard, so you can take your demonstration project on the road. If a need arises for additional power, such as when additional devices are connected to the expansion bus, a 5V power supply (T450-P5P-ND, not provided with the BeagleBoard but available from Digi-Key) can be plugged into the optional power jack. When the wall supply is plugged in, it removes the power path from the USB connector and is the power source for the whole board.

A supplement to the USB 2.0 specification, OTG is different from previous USB iterations in that devices can sometimes also act as hosts. In this way the Beagle Board can be used with peripherals attached such as a keyboard, mouse, printer, etc. In host mode, you must power the BeagleBoard using the 5V power jack.

Built-in storage and memory is provided through a Package on Package (PoP) CPU/Memory chip that includes 256MB of NAND flash memory and 256MB of RAM and is mounted on top of the processor. There are no other memory devices on the BeagleBoard, however it is possible to add multiple gigabytes of storage to BeagleBoard by installing a NAND-based device in the SD/MMC slot.

While the ESC BeagleBoard sessions are free there is a fee for setup and the board if you don't already have one. You can add a BeagleBoard to any ESC registration package for $299. If you already have a BeagleBoard from last year's event, you just pay an additional $99 for the 2009 set up (including cables, monitor station and all BeagleBoard accessories). Attendees are encouraged to bring their laptops and a USB-to-serial adapter to the classes to bring-up the BeagleBoard.