

Low-cost, High-resolution IP Camera Runs Linux



US embedded hardware OEM KwikByte is shipping a low-cost, tiny embedded Linux system designed for surveillance and machine vision. KwikByte demonstrated the system running open-source packages providing features such as streaming video server and computer vision.

(Tempe, AZ) June 5, 2009 – US embedded hardware OEM KwikByte demonstrated a complete embedded high-resolution camera running Linux and applications on a power-conscious system. The system is designed for surveillance and machine vision applications.

The board used for the demonstration, KwikByte's CAM60, is built on the company's popular general-purpose KB9260 board. The processor used is Atmel's ARM926-based AT91SAM9260. The camera's small footprint reduces system size while the low power consumption allows the board to be powered by auxiliary DC supply or Power over Ethernet – PoE also known as IEEE 802.3af. By using PoE, a single Ethernet connection to the board can provide power as well as network connectivity. For surveillance applications, this greatly simplifies installation and reduces cost by eliminating the need for dedicated power supply circuits.

The available GPIO make it easy to control external circuits and read digital inputs while the ADC input channels can be used to measure analog signals. The clocks and PWM channels are ideal for measuring process times as well as control lighting and motors.

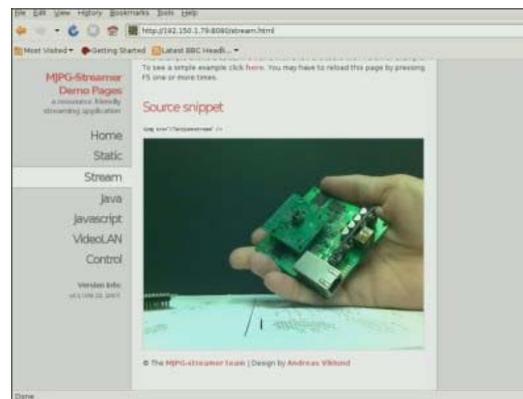
The KB9260 base board supports generic image sensor interface signals. Different image sensors can be used with the same base board. The introductory model includes soldered-on 2 megapixel image board capable of 30 frames per second (fps) at full resolution of 1600 x 1200. The sensor also supports on-chip JPEG compression – freeing the processor from the demanding task of converting the images. This enables the system to function independently as a live, streaming video server as shown at product page (www.kwikbyte.com/CAM60.html).

The board supports minimal configurations like BusyBox/uClibc as well as larger installations like Ångström. The default BusyBox configuration includes image sensor driver module and mjpg-streamer (screen shot). This configuration resides entirely within on-board Flash.

The CAM60 differs from typical web- and IP-based cameras currently available in that it supports greater resolution, is less expensive, and can run completely independent of a host computer.

System Details

- AT91SAM9260, ARM926EJ-S@200MHz
- 64 MB SDRAM
- 8 MB boot Flash
- 256 MB NAND Flash
- 10/100 Ethernet
- 1 x USB 2.0 host port (optional)
- 15 x GPIO, max
- 1 x debug serial channel
- 2 x programmable clocks
- 3 x timer/counter/PWM channels
- 4 x analog input ADC channels
- Image sensor 1600 x 1200 @ 30 fps (max)
- Power options: integrated PoE module, integrated on-board DC converter, or external regulation
- Size: 3.1" x 3.1"



Availability

The CAM60 is shipping now with limited-time introductory pricing of \$199.99 each. KwikByte offers full hardware and software customization.

About KwikByte

KwikByte designs and manufactures embedded hardware systems providing complete turnkey designs and full integration support from prototypes through production. Founded in 2003, KwikByte is located in Tempe, AZ.

###