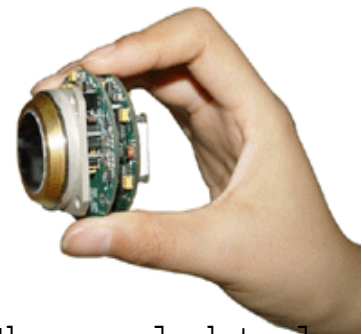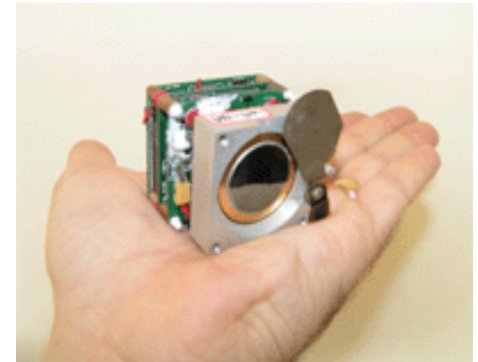# Technologies of the Month

Dave Jaffe

March 25, 2006

Thermal Imaging Sensor Modules

- 160 x 120 – 320 x 240 – 384 x 288 pixel units
- Uncooled
- 2x and 4x electronic zoom
- Digital control interface
- Analog and digital video outputs

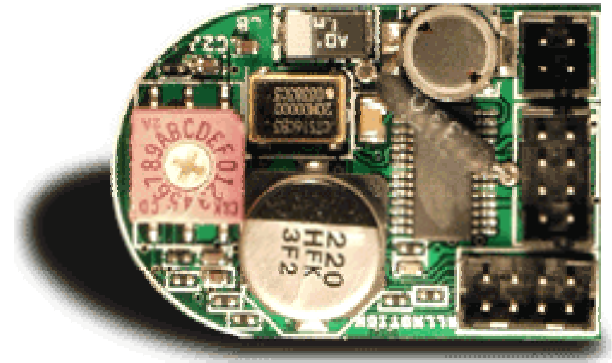http://www.armstrongoptical.co.uk/Thermal/Thermal.html

Computer on a Stick

- Computer-On-a-Stick (COS) is a USB Flash Drive featuring its own ultra fast Operating System, Microsoft Word, Excel, and Powerpoint compatible applications, Email, Firefox, and more...

- Capacities of 256 Mb to 2 Gb

- 512K PRO - $139

- Linux 2.6.x Series Kernel

- Gnome GUI Desktop

- Includes: Mozilla Firefox Web Browser, Evolution email, and Yahoo & MSN compatible Instant Messenger

http://www.fingergear.com/computer_on_a_stick.php

Servo Drive

- 12 – 40 volt, 1.5 amp DC brush servo driver

- 0.95" x 1.4" x 0.6”

- High level serial commands

- Position, velocity, and torque modes

- Quadrature encoder based feedback

- Up to 16 stepper / servo motors

- $199

http://www.allmotion.com/EZSV10pressrelease.htm

32-bit Processor Module

- Coldfire processor
- Ethernet
- 2 UARTs
- 22 I/O lines
- 4 timers
- QSPI port
- USB port
- 2 Mb Flash, 8 Mb RAM
- 2" x 2.6"
- Board only - $139
- Development kit - $499

http://www.netburner.com/products/core_modules/mod5272.html

Dual Channel USB Module

- FTDI FT2232C dual USB 1.1 chip
- PIC 16F877 MPU
- Reprogram MPU through USB
- Compiler available
- $35

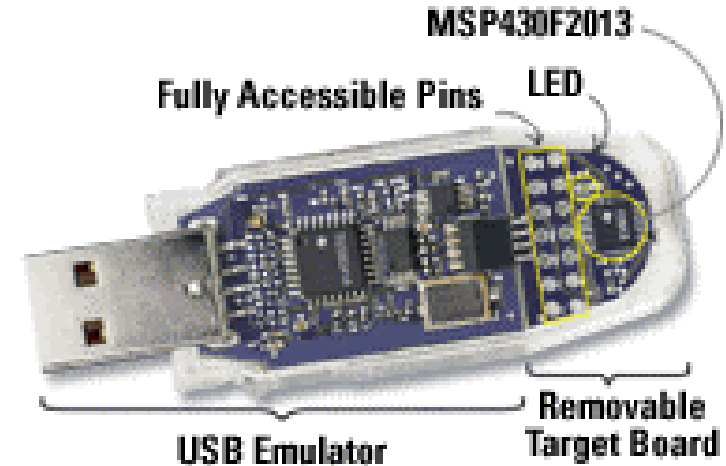http://www.dlpdesign.com/usb/2232m.shtml

Rugged Memory Device

- 128 Mb – 1 Gb capacities

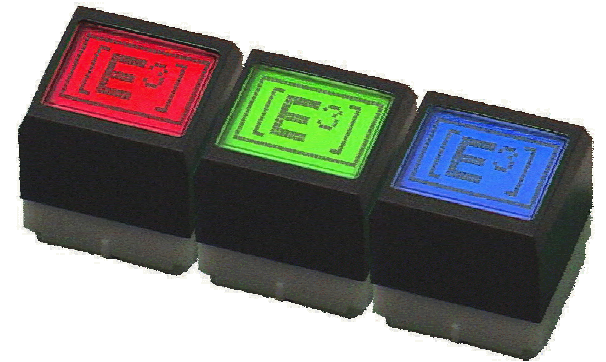- USB and SPI interfaces

- Embedded applications

TI Low Power MCU

- 16 MIPS performance
- < 1 uA standby current
- Choice of converters: comparator, 10-bit A/D, 16-bit sigma-delta
- Physical size as small as 4 by 4 mm
- World's smallest complete development tool for only $20
- Free if you attend seminar in San Jose on May 25th
- USB interface
- Development kit includes: assembler, linker, simulator, source-level debugger, and limited C-compiler

http://www.ti.com/corp/docs/landing/ez430tool/index.htm?DCMP=430Day&HQS=Other+OT+ez430

LCD Switch

- 64 RGB colors

- Backlit

- 32 by 16, 36 by 24, and 64 by 32 pixel resolutions

- 4-wire SPI interface

http://www.lcd-keys.com/main/main.htm

Disk Drives

- Western Digital - WD1200VE
- High capacity – 120 Gb - 2.5"
- 5400 RPM - $235

- Seagate Technology - ST9160821A
- Higher capacity – 160 Gb – 2.5"
- 5400 RPM – 8 Mb cache - $325

- Toshiba – MK4001MTD
- Small size - .85" – 4 Gb
- 3600 RPM - $?

http://www.wdc.com/en/products/Products.asp?DriveID=164&Language=en
http://www.seagate.com/products/notebook/momentus.html
http://www.toshiba.com/

8051 Development Kit

- Ramtron - $99
- 3.3 and 5v regulators
- RS-232 transceiver w/ DB-9
- LEDs
- 2-wire Flash RAM
- Buzzer and prototyping space
- In-circuit programmer
- Integrated development environment
- C compiler and assembler

http://www.ramtron.com/doc/News/Release_detail.asp?ID=114

Sterile Mice

- Washable optical mice
  - Sealed structure lets you wash and sterilize.
- Easy to disinfect
  - Can withstand being immersed in antibacterial solutions and rinsed under a tap to reduce spread of germs.
- "The cleanliness you want, the performance you expect"
- $80

http://www.unotron.com/US/Products.html#M10WashableMouse

Blue Light Special

- Blue illuminated piezo and mechanical switches

- Optical feedback indicates the switch position (on/off)

- Yellow, red, and green also available

http://www.schurterinc.com/products/usa/switch_new.asp