Hardware Hacking

An introduction
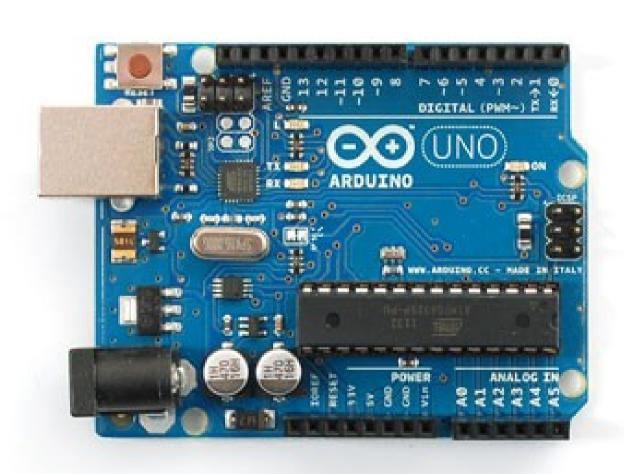To some of the
New embedded
Platforms.

Introduction

- Who am I?
  - Been in IT for 20 years.
    - PC repair
    - Networking
    - Security/Hacking
    - Software Testing
  - Just a guy who loves to tinker with things.

Are you a Developer?

- The Questions.
  - Have you ever developed a utility and realized that your PC is way overkill?
  - Have you ever wished you could create your own hardware to use your application?

- The Solution.
  - NOW YOU CAN DO IT!

Arduino

Arduino Benefits

- Great Beginner board!

- Easy IDE (Based on C)

- Lots of Books, Links, Videos, and Tutorials!!!

- Lots of Extra Stuff to buy for it!

  - LEDs

  - Sensors

  - Shields

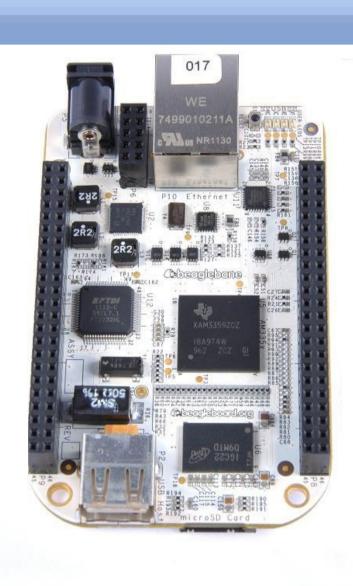 - http://www.adafruit.com/category/17

Arduino Links

- http://arduino.cc/en/

- http://www.adafruit.com/category/17

- http://www.makershed.com/Arduinos_Accessories_s/43.htm

- http://www.sparkfun.com/categories/23

- http://www.goldmine-elec.com/

- And Lot's lot's more!

Arduino

The Demo.

BeagleBone

Beaglebone Benefits

- Full Linux Distro on the Board!

- Uses Capes not Shields

- Cortex CPU/256 MB RAM/Micro SD Card slot

- 10/100 Ethernet Port on the Card.

- Cloud 9 to Develop on the card!

- Choice of Linux,Android or even Windows!

- FITS IN AN ALTOIDS TIN!!!!!!
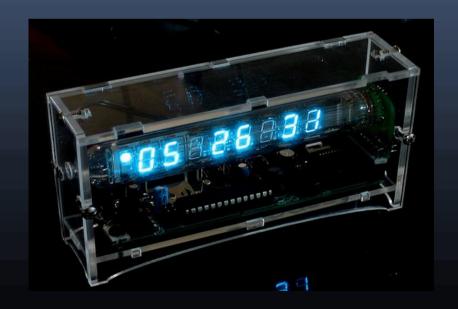
Access your Beaglebone

- Ethernet over USB. (special Drivers)

- Port 22. SSH

- Port 80. Beaglebone 101 presentation

- Port 443. Gateway console

- Port 3000. Cloud9 IDE.

- USB KVM

Beaglebone Cons

- Brand Spanking New

- No tutorials yet.

- EVERYONE is still learning the hardware layout.

- No Video on the board (Capes in development)

- Not many Capes yet.

Other Platforms

- Parallax Propeller

- Chumby

- Or Build your own from Kits or even scratch!

Helpful Extras

- You will probably need to learn how to solder.
  - Schmartboards are great for surface mounts.
- ARDX is a great learning package!
- Go to your local Hackerspace and meet with others who are into these platforms.
- Mailing lists, Forums, websites, etc.
- Www.hackaday.com Is excellent for ideas!!!

THANK YOU!!

Questions and Answers