

# Introduction to Arduino Microcontrollers

# Terminology

- I/O Board - main microcontroller
- Shield - add-on boards
- Sketch - the program
- Sensor - components (thermistors, etc.)
- Modules - serial data (GPS module, etc.)

# What do these do?

Digital IO (LEDs, switches)

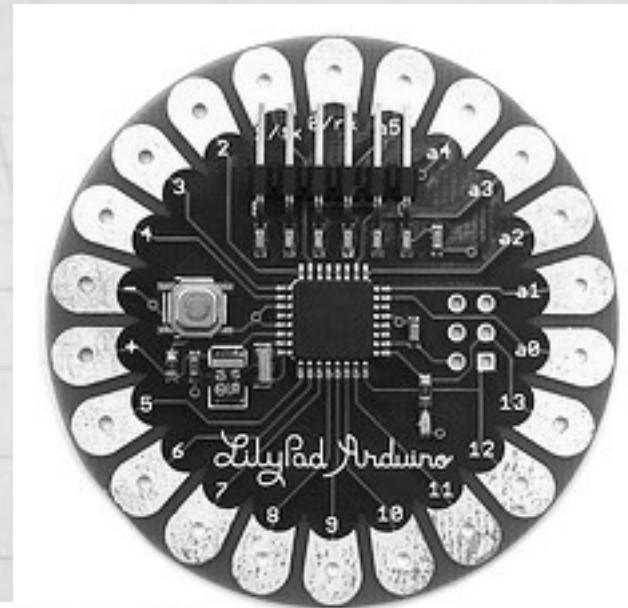
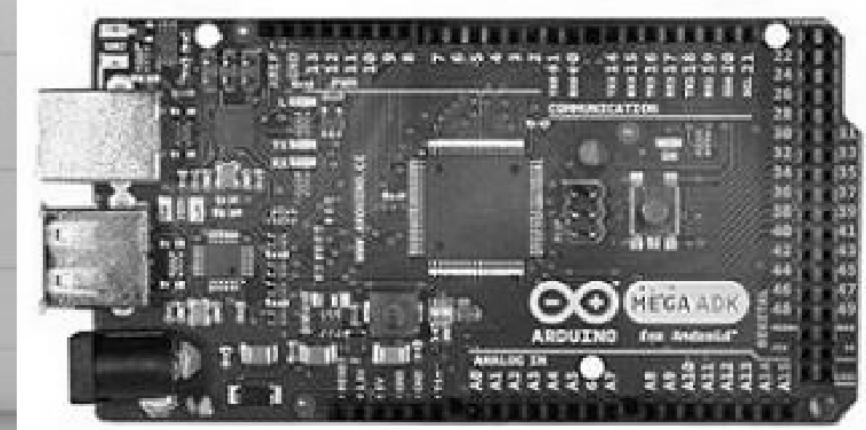
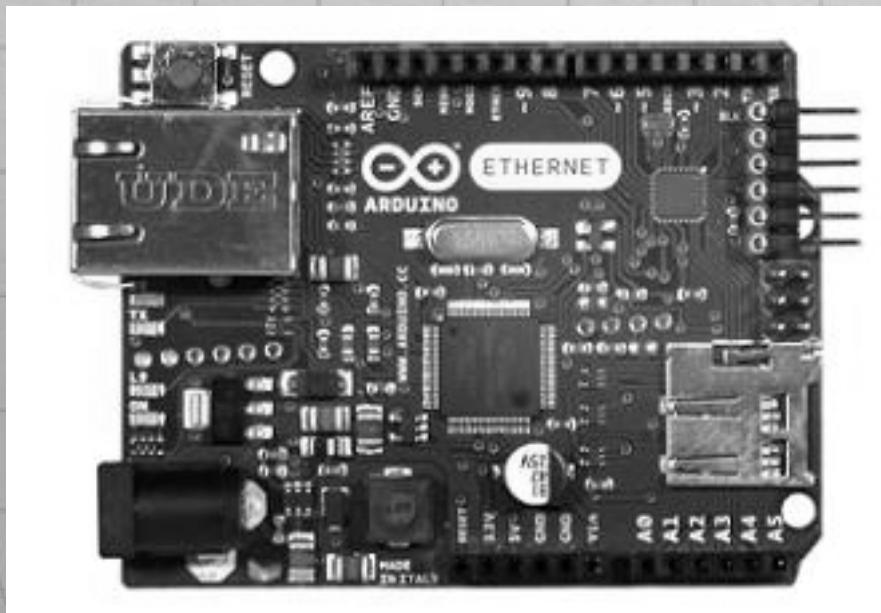
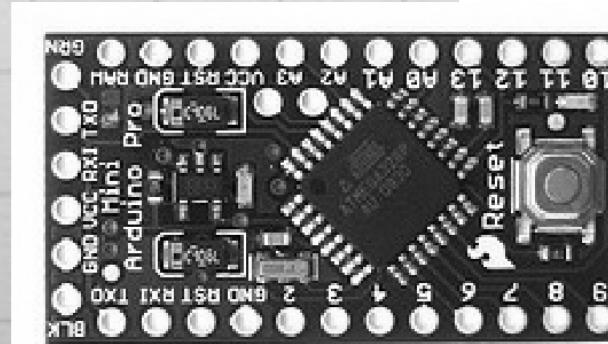
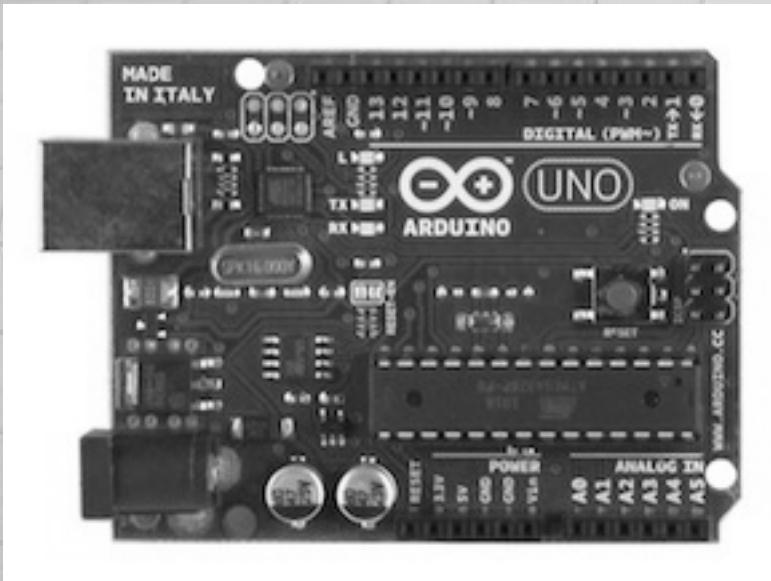
Analog IO (resistive sensor data)

Serial Connection (Sensors, GPS, etc)

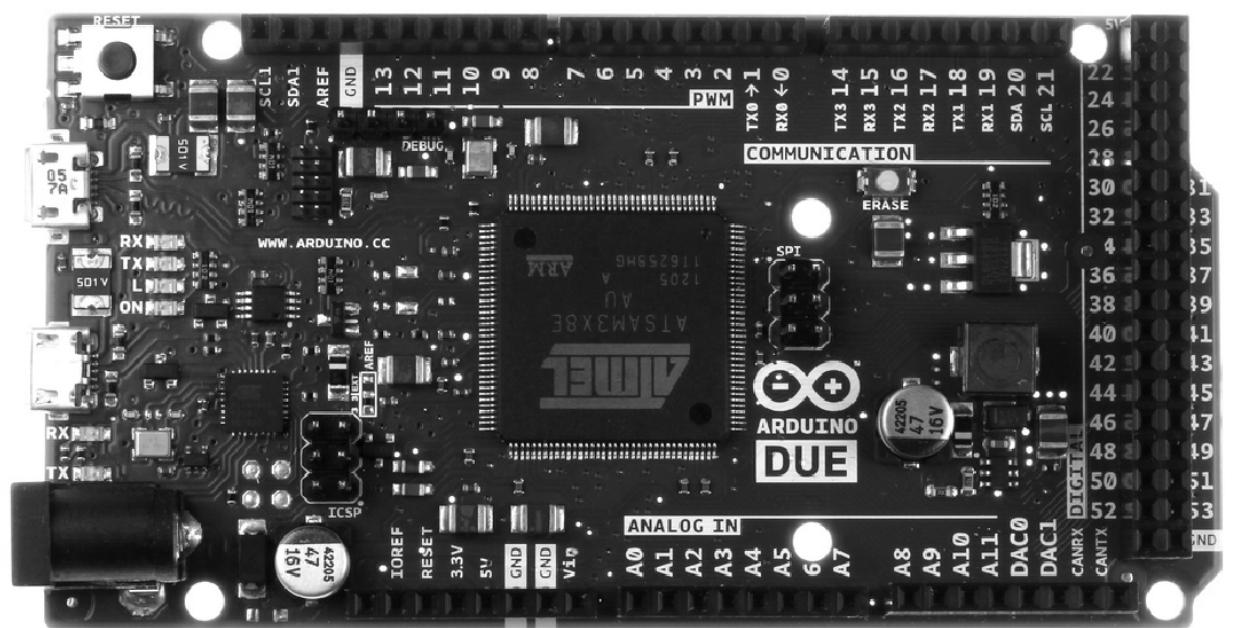
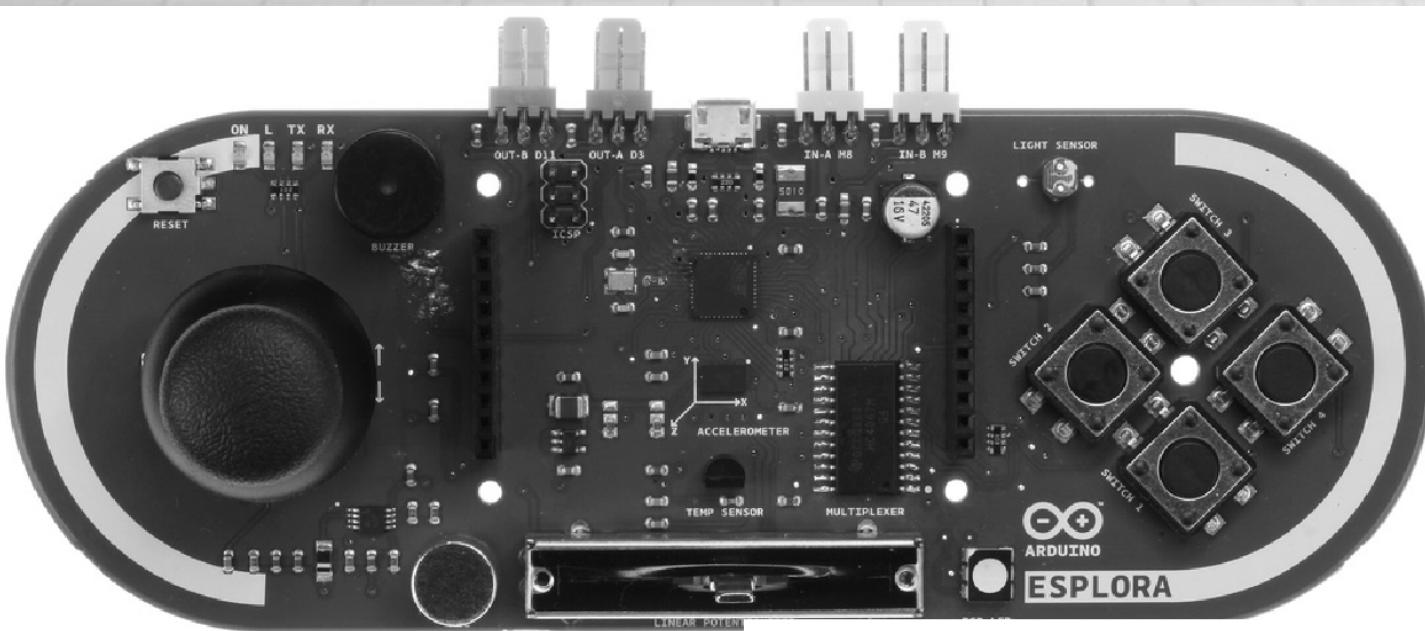
Program from your computer

Your limit is only your creativity!

# Arduino I/O Boards

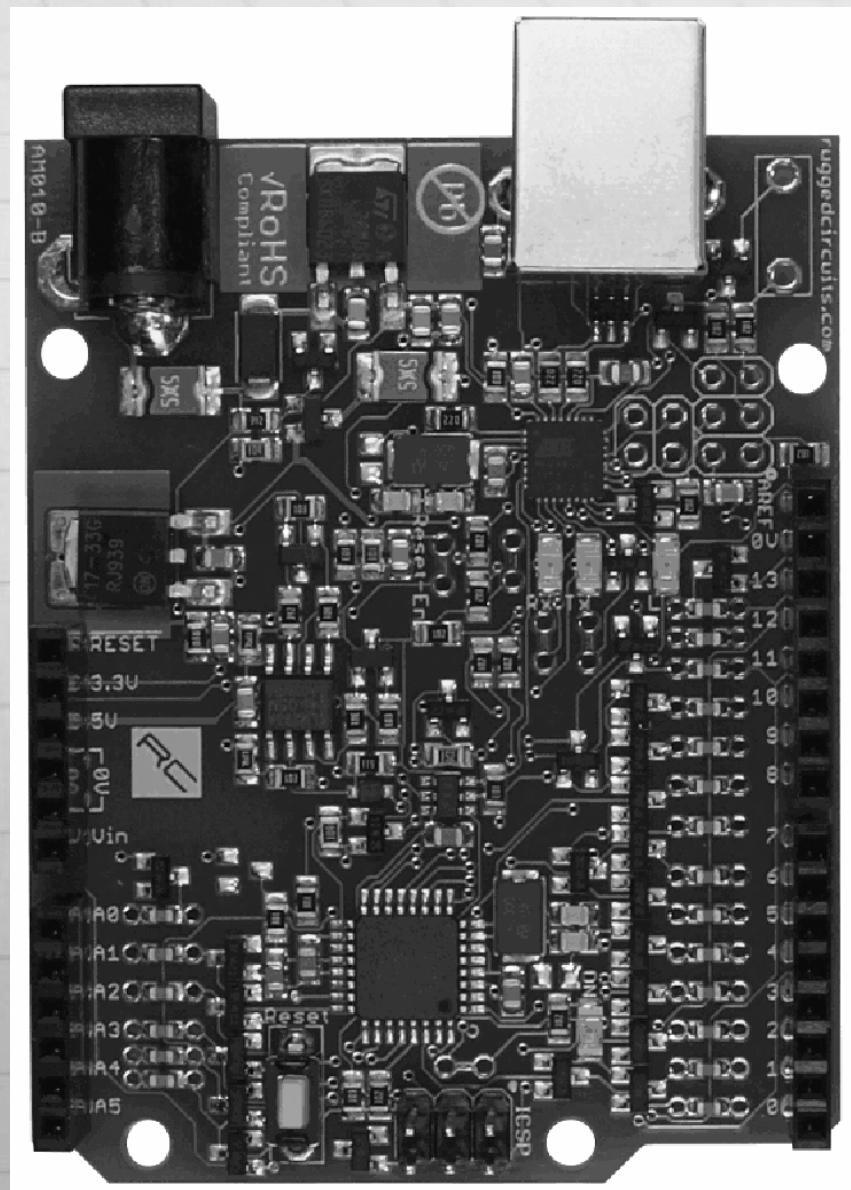
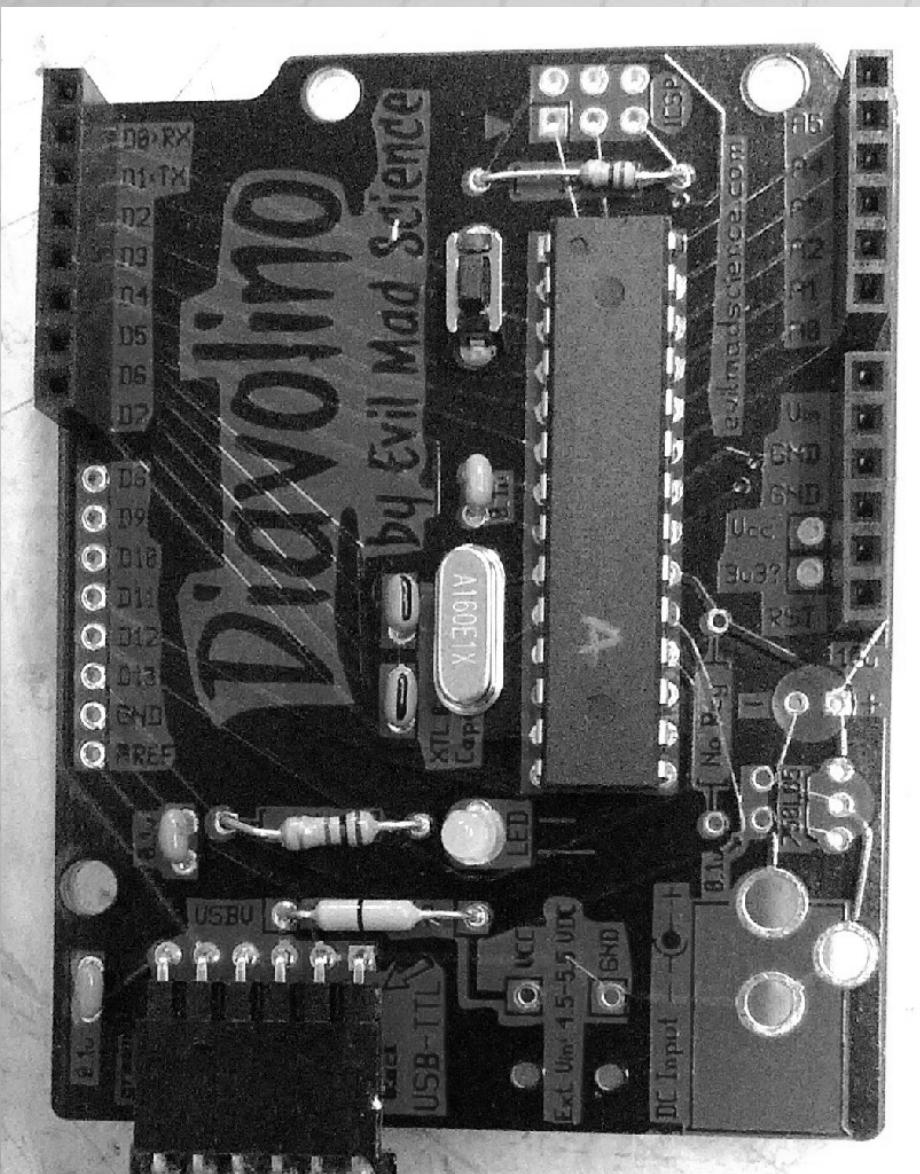


# More Boards



# 15 current boards

# Compatible Boards

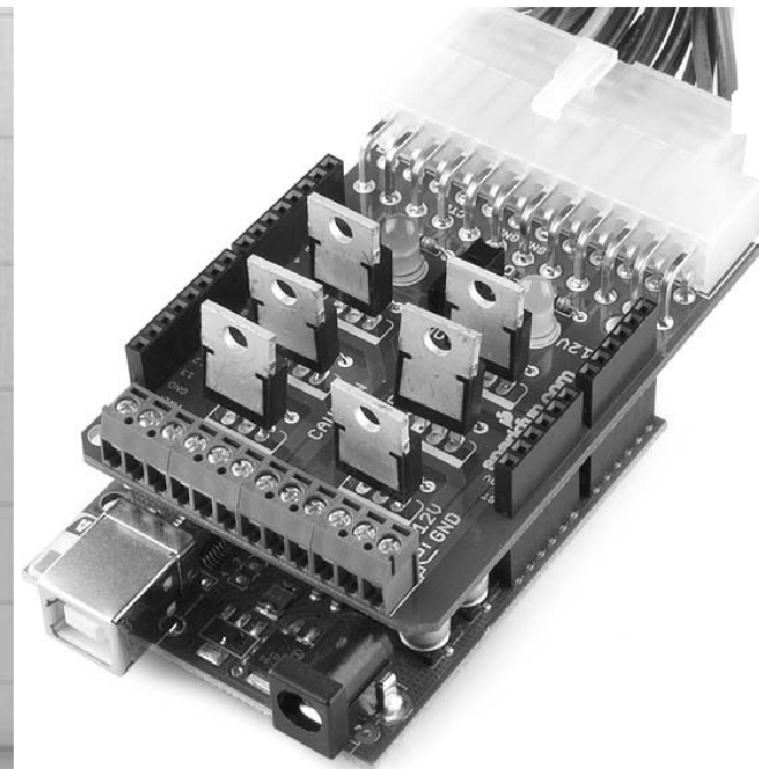
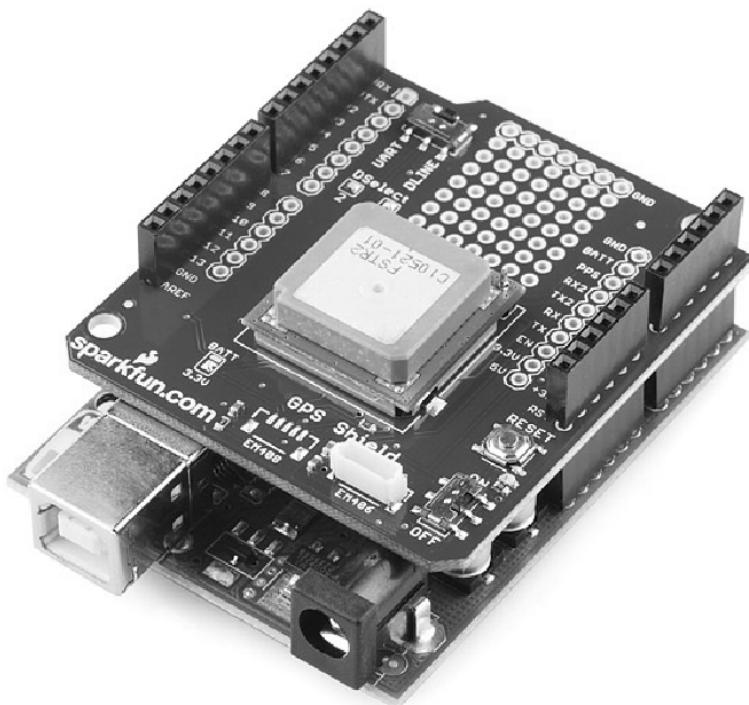
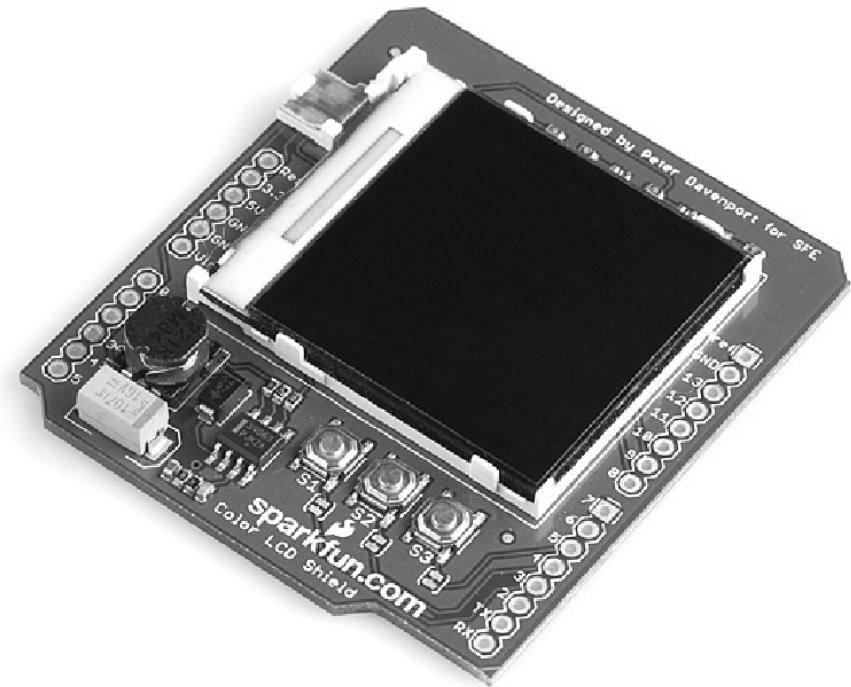
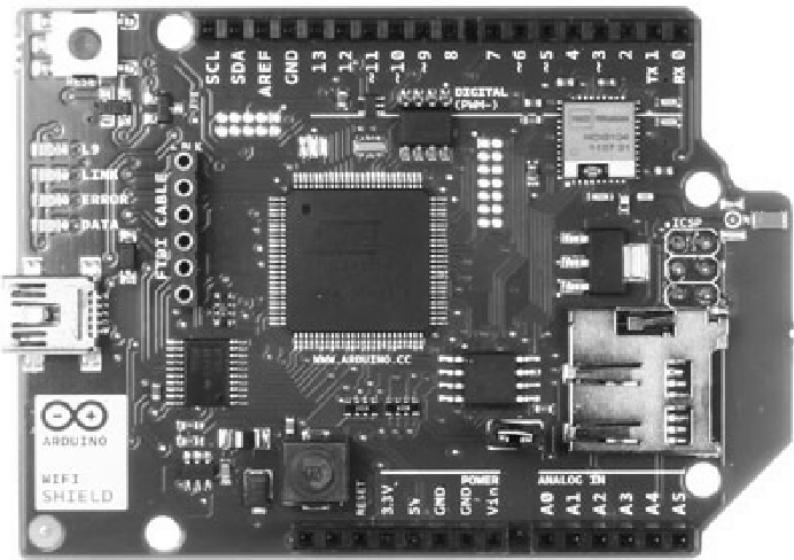


These are two of MANY!

# Compatible Boards



# Shields

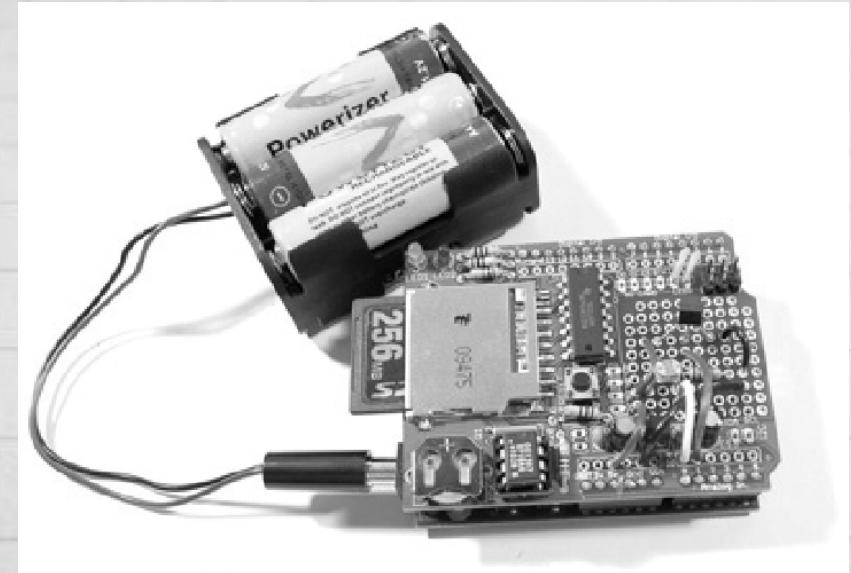


# Shields

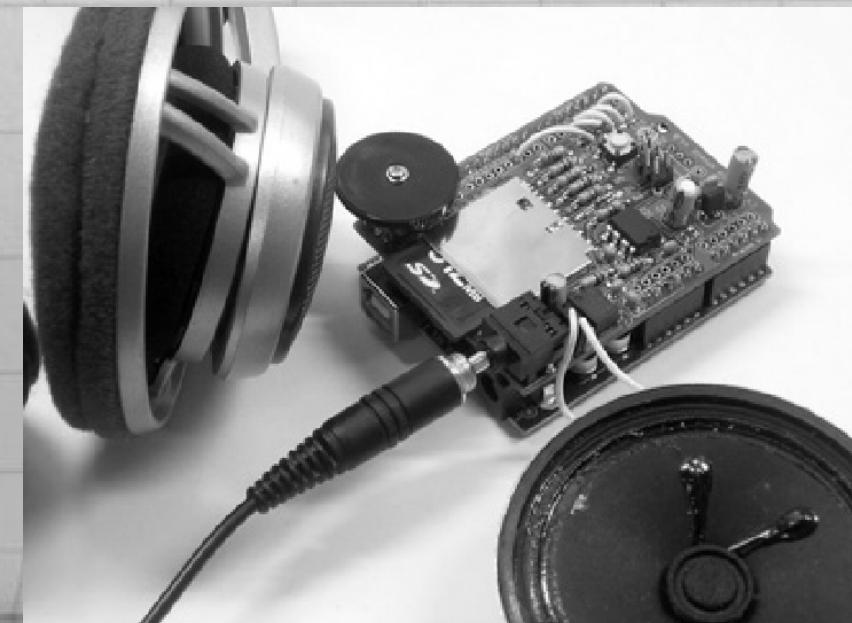


Touchscreen Shield

## Datalogging Shield



Wave Shield



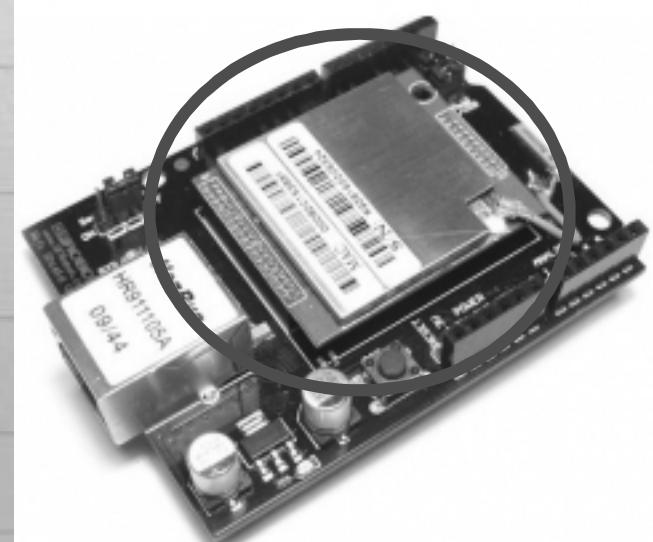
# More Shields...



Ethernet Shield

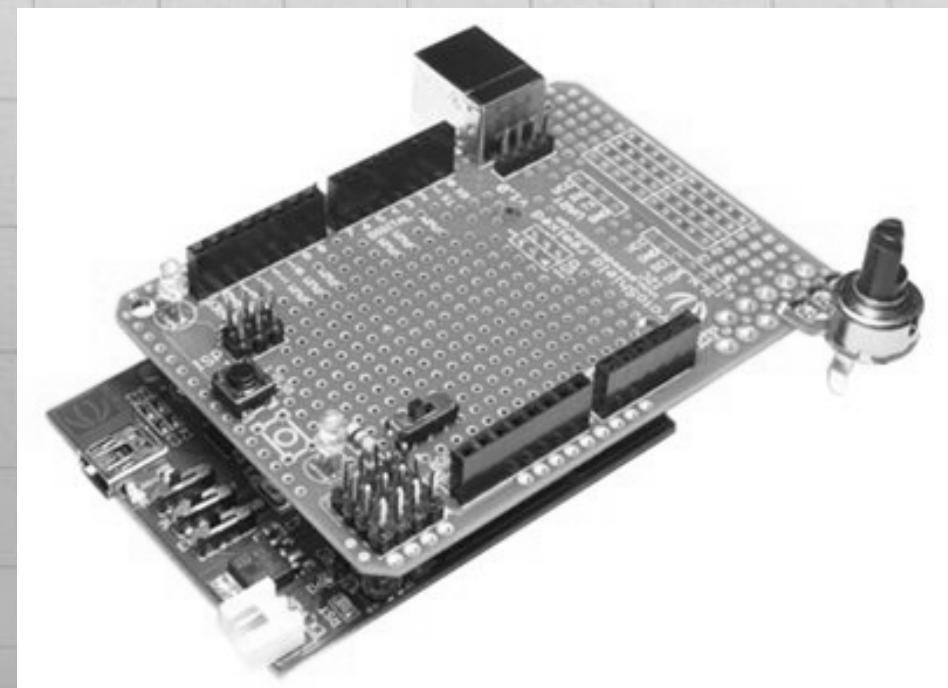
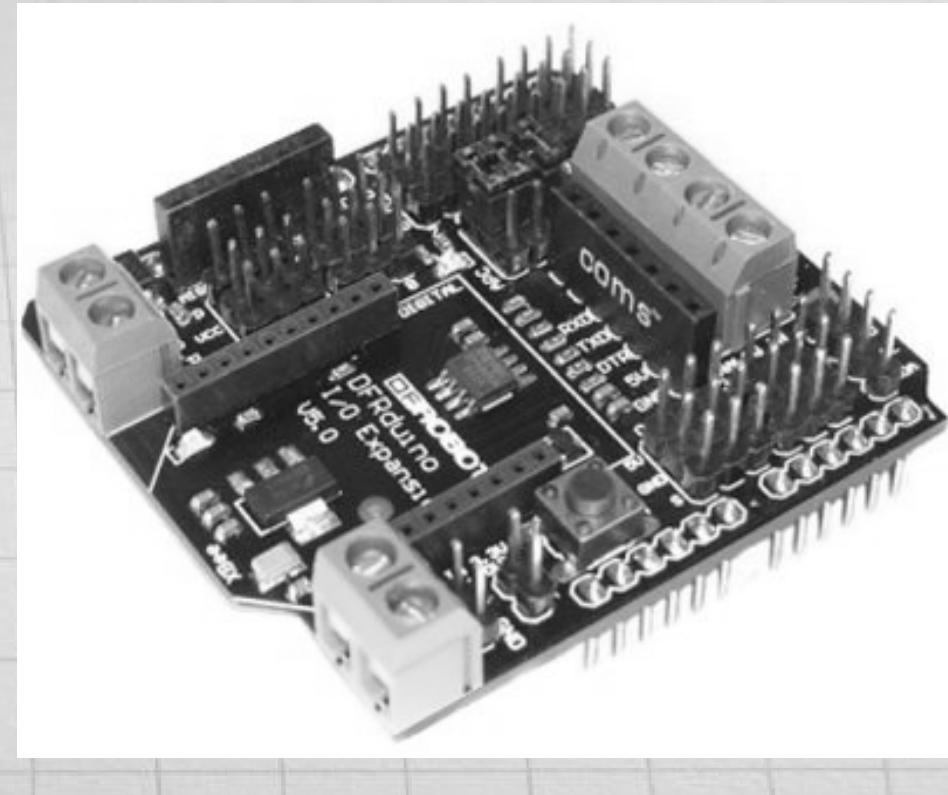
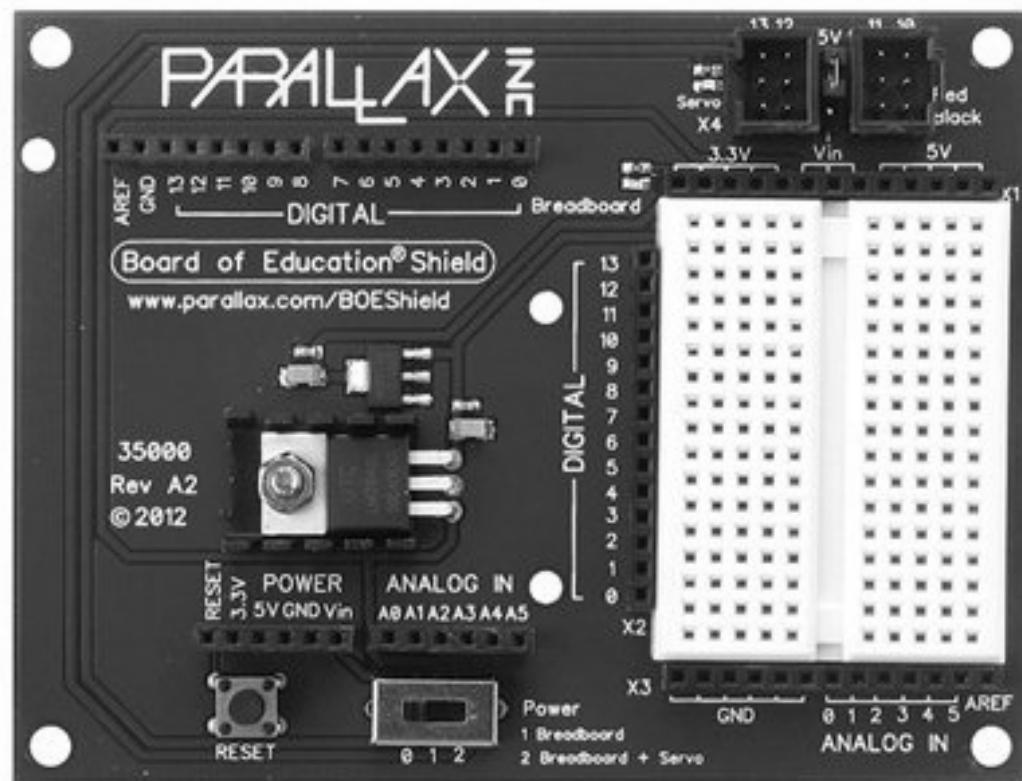


XBee Shield

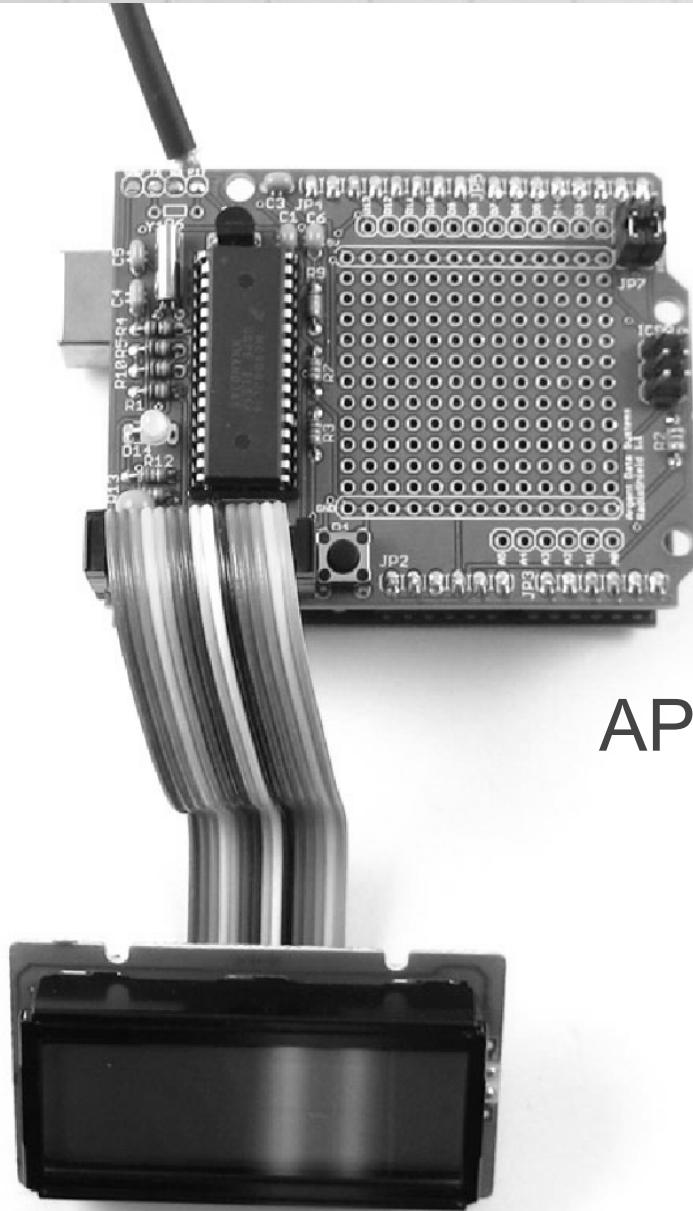


Wifi Shield

# And more shields...



# Even more shields!

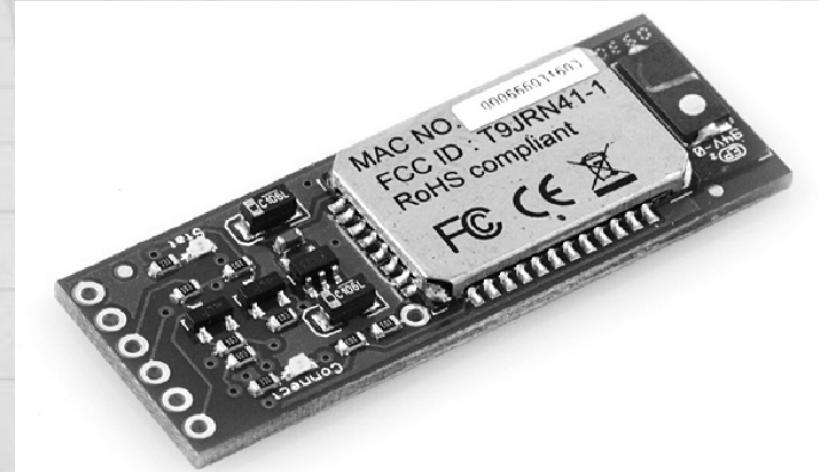


APRS Shield

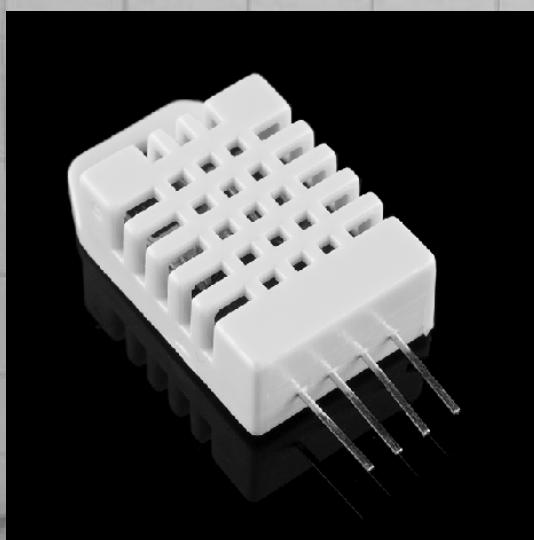
# Modules



GPS Module



Bluetooth Module

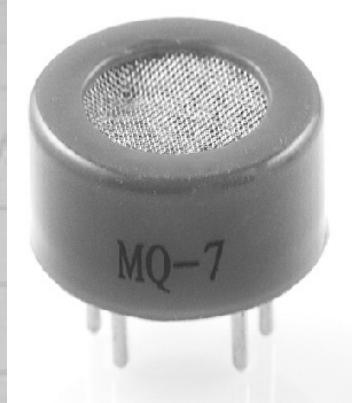


Temperature &  
Humidity Sensor

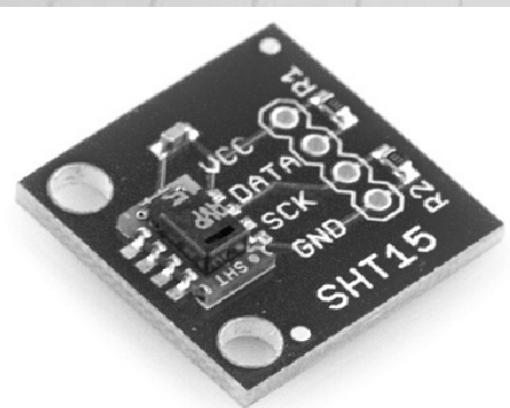


RFID Module

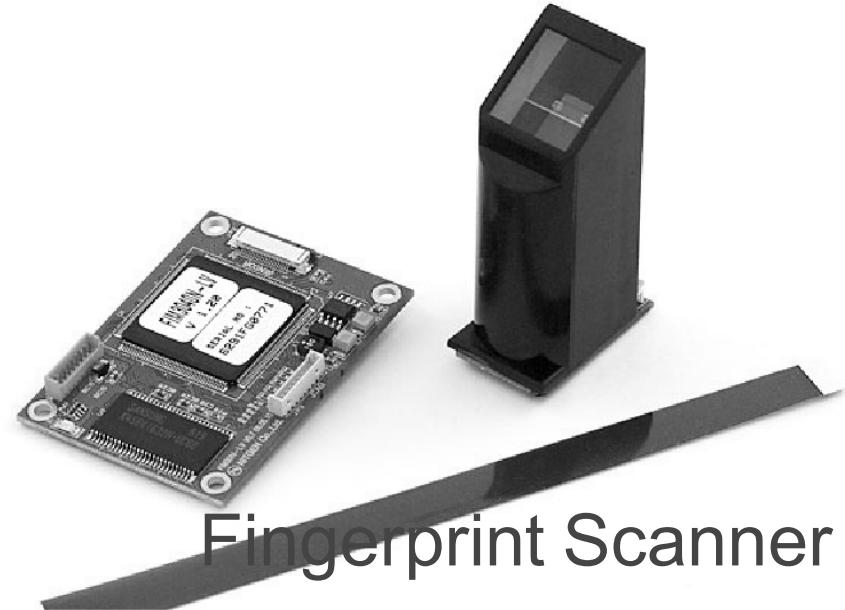
# Sensors and Modules



Gas Sensor

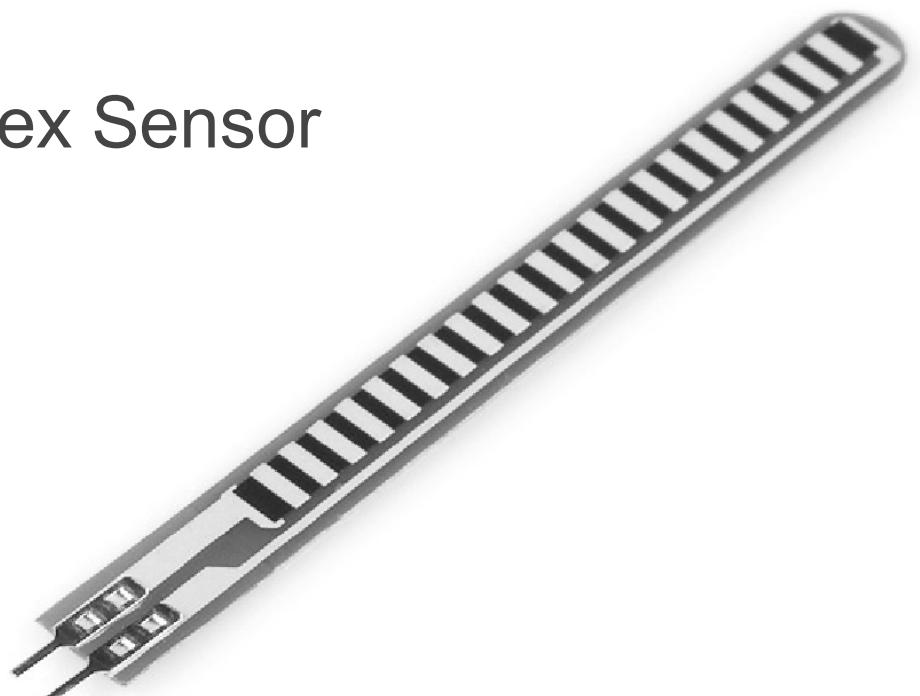


Temp & Humidity



Fingerprint Scanner

Flex Sensor



Geiger Counter

# Sensors

Photoresistor, infrared, force sensitive resistor, Hall effect,  
Piezo, tilt sensor..

