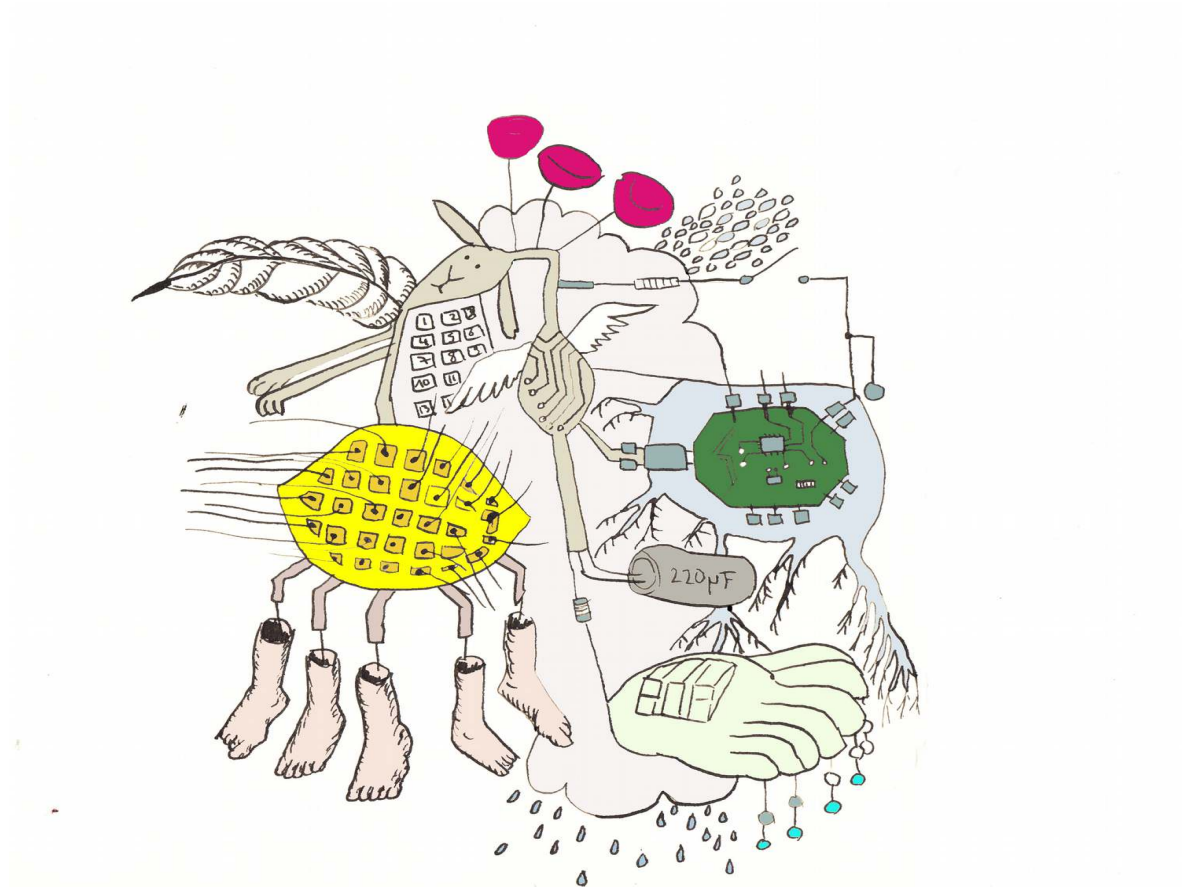


Kollaboratives und disloziertes Arbeiten

Stefanie Wuschitz
17.Oktober 2014

reactive art



INPUT

switches

Sensors (light, temperature, touch)

webcameras

Text

Movement

OUTPUT

Motor movement

Sound

Light

Visuals

Animation

Controlling toy or kitchen device

Analog input

sensoren

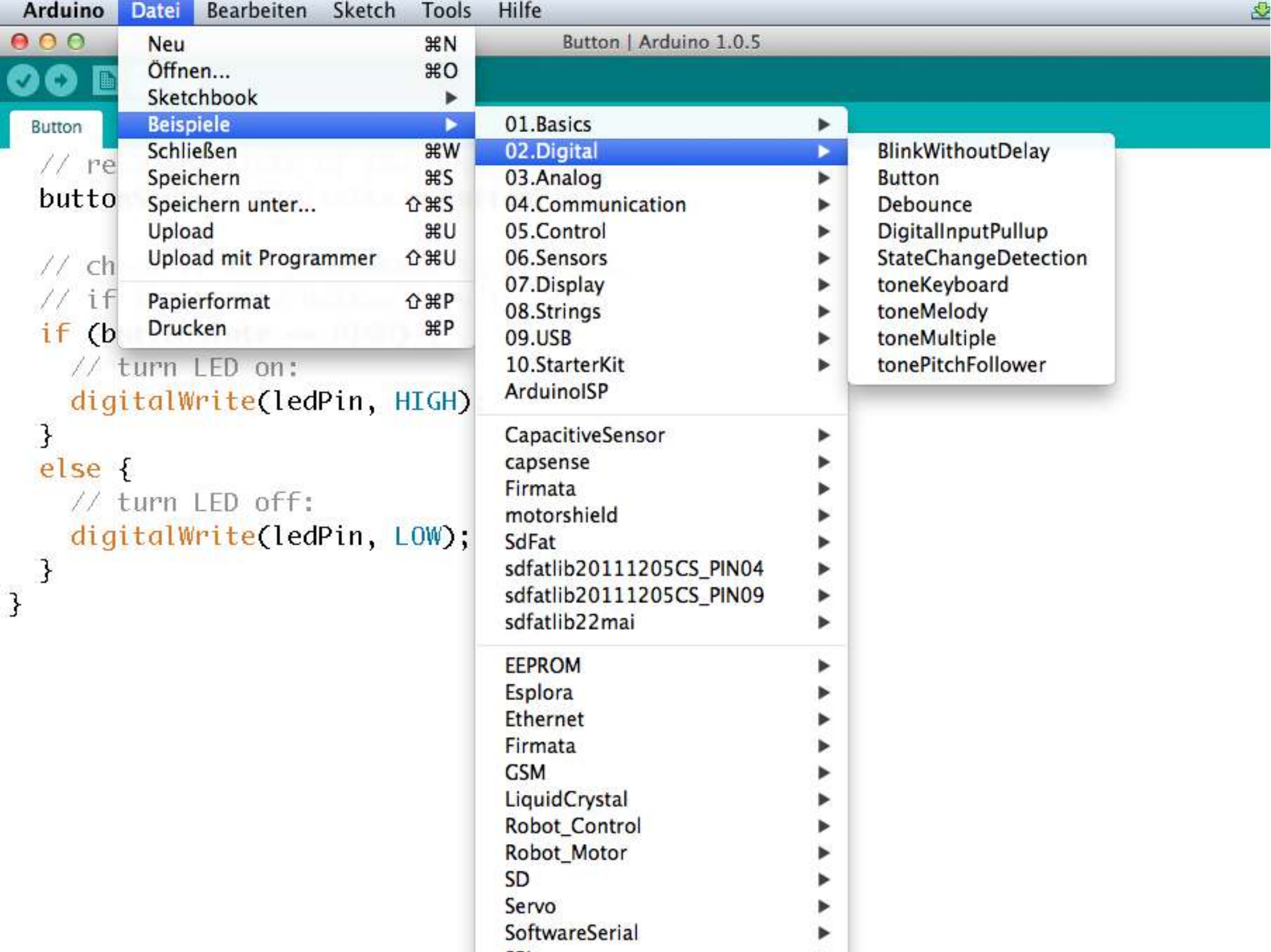
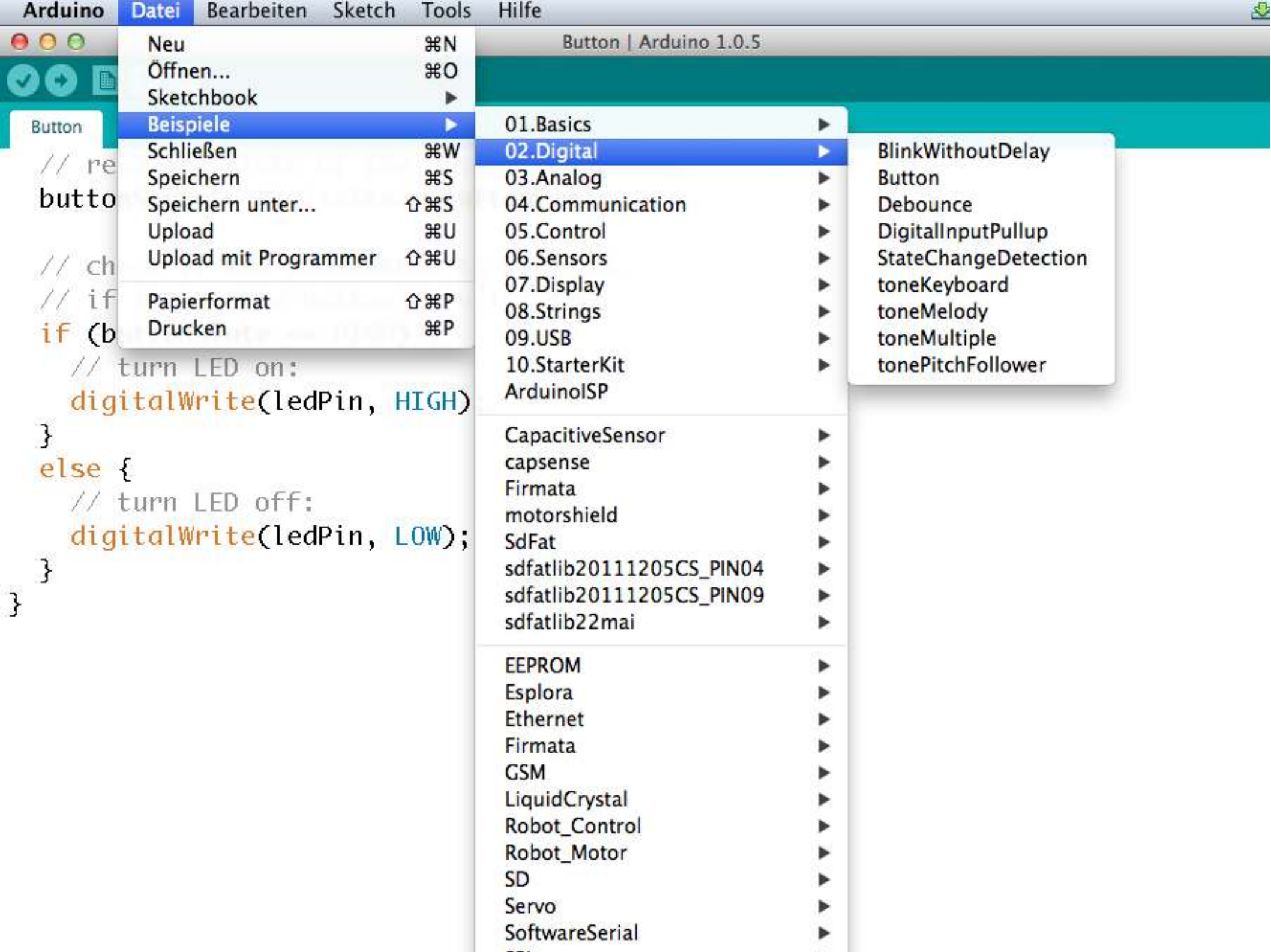
- Bend
- Distance
- Temperature
- movement
- Graphite
- Skin

Digital input

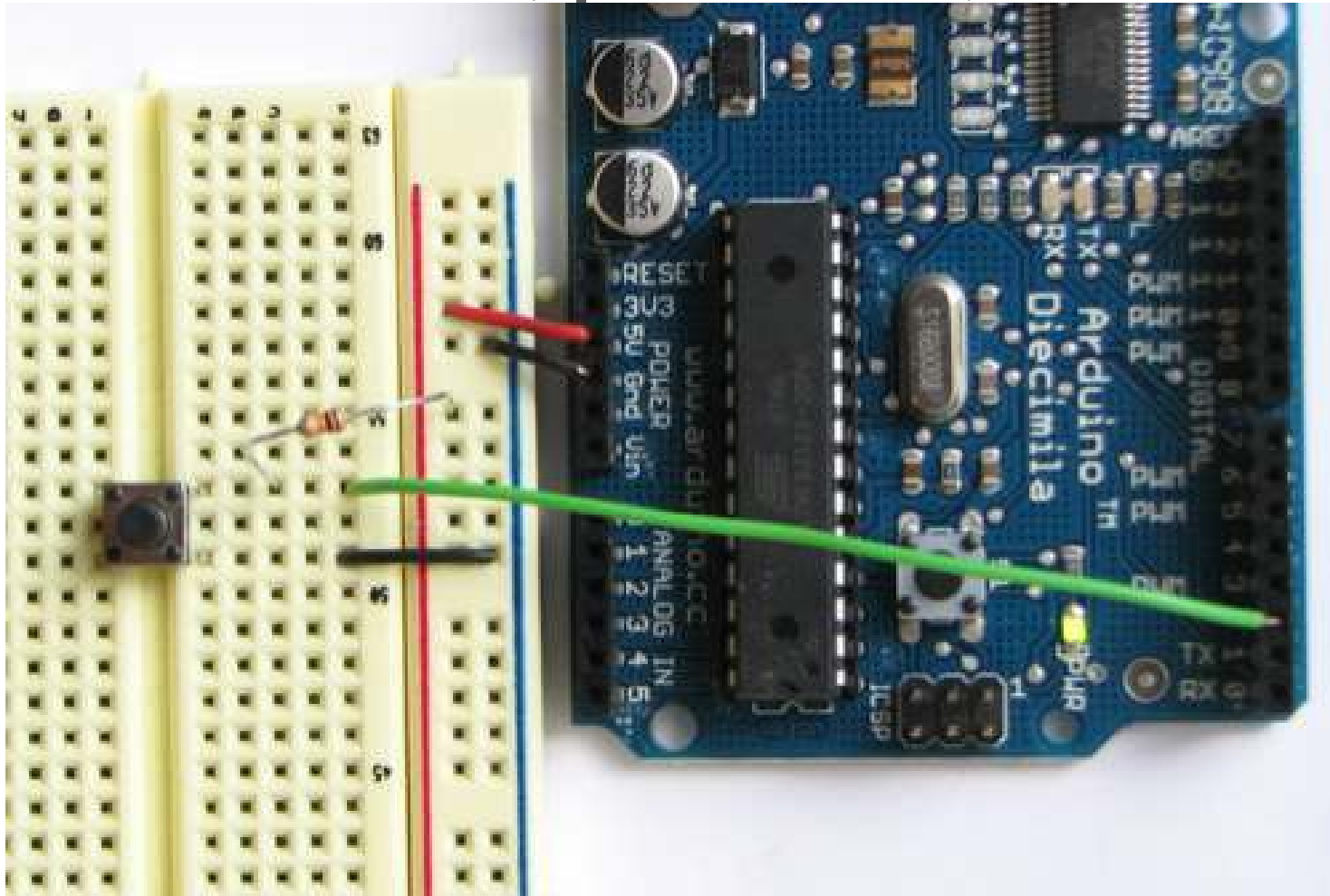
Make your own switch

Second example:

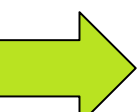
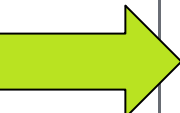
File > Examples > Digital > Button



10 Kohms Resistor, push button, LED



making a switch
WITHOUT additional resistor



```
const int buttonPin = 2;      // the number of the pushbutton pin
const int ledPin = 13;       // the number of the LED pin

// variables will change:
int buttonState = 0;         // variable for reading the pushbutton state

void setup() {
  // initialize the LED pin as an output:
  pinMode(ledPin, OUTPUT);
  // initialize the pushbutton pin as an input:
  pinMode(buttonPin, INPUT);
  digitalWrite(buttonPin, HIGH); //pullup resistors
}

void loop(){
  // read the state of the pushbutton value:
  buttonState = digitalRead(buttonPin);

  // check if the pushbutton is pressed.
  // if it is, the buttonState is HIGH:
  if (buttonState == LOW) {    //pullup to high only to low if button pressed
    digitalWrite(ledPin, HIGH);
  }
  else {
    // turn LED off:
    digitalWrite(ledPin, LOW);
  }
}
```

```

const int buttonPin = 2;      // the number of the pushbutton pin
const int ledPin = 13;       // the number of the LED pin

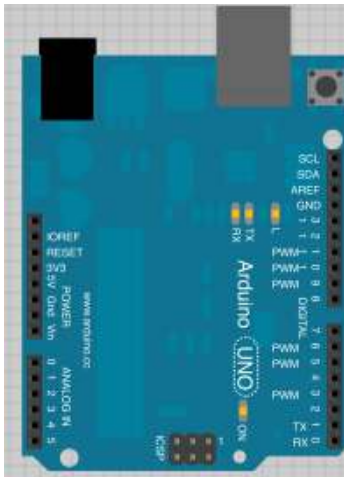
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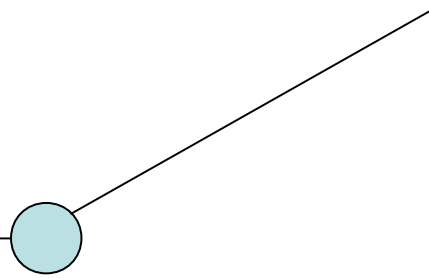
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  // read the state of the pushbutton value:
  buttonState = digitalRead(buttonPin);

  // check if the pushbutton is pressed.
  // if it is, the buttonState is HIGH:
  if (buttonState == LOW) {      //pullup to high only to low if button pressed    // turn
    LED on:
    digitalWrite(ledPin, HIGH);
  }
  else {
    // turn LED off:
    digitalWrite(ledPin, LOW);
  }
}

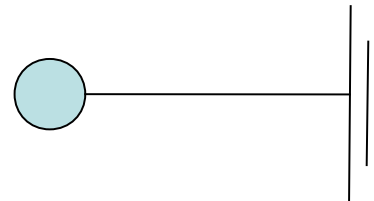
```

pin 2



button



ground

Kurze Pause

HONF

House Of Natural Fiber

- <http://www.natural-fiber.com/>

LifePatch

<http://lifepatch.org/>

Hackteria

<http://hackteria.org/>

Mz Baltazar's Lab

Mzbaltazarlaboratory.org

PROJECTS

TRISTAN PERICH

VOLUME

BATTERY

HEADPHONES

POWER

SKIP

1-BIT MUSIC

ONEBITMUSIC.COM

GANTALOUPE MUSIC

Tristan Perich

Microtonal Wall

1,500 speakers, each playing a single microtonal frequency, collectively spanning 4 octaves. Commissioned in part by Rhizome, with additional support from the Addison Gallery.

- <http://vimeo.com/45225412>

Gabrielle Levine

Alte Geräte neu ausstatten

CONCEPT

A Typewriter (1901 Underwood No.5) that posts to Twitter

A Guitar (1953 Gibson E-125) that posts to Soundcloud

A Still Camera (1939 Graflex) that posts to Instagram

A Video Camera (1953 Bolex B8) that posts to Instagram

FOUR VINTAGE TOOLS
REIMAGINED
AND
REINVENTED

A close-up photograph showing a person's hands working on a small, black, rectangular electronic device. The device is open, revealing a red printed circuit board (PCB) inside. The person's fingers are positioned to adjust or connect a component on the board. The background is a blurred workshop or lab setting with a white pegboard visible. The text "CONNECTING ARTISTS" is overlaid in a serif font, and "ON THE TRAIN" is overlaid in a larger, bold, sans-serif font.

CONNECTING ARTISTS
ON THE TRAIN

Dave Hunt

Time lapse



Bike Headlight

Matt Richardson



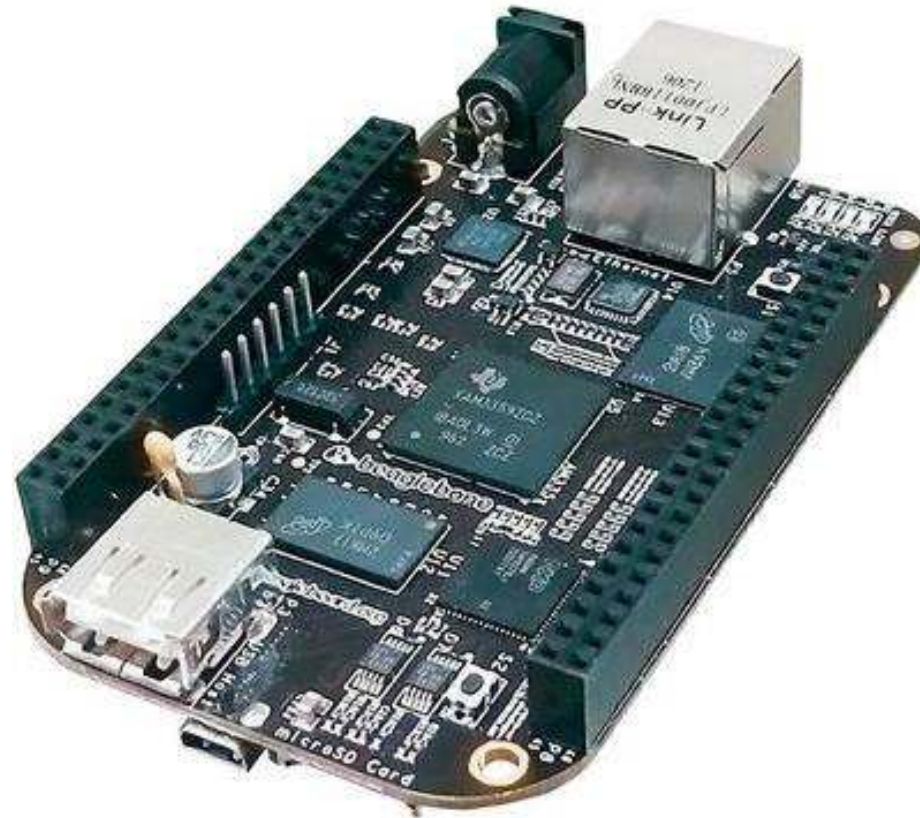
BEET BOX



BeagleBone



beagle



- Neben einem ARM Cortex-A8-Prozessor
- auf OMAP3-System-on-a-Chip
- TMS320C64x+-DSP
- Grafikprozessor von PowerVR Technologies
- Die Grafikausgabe erfolgt über HDMI oder S-Video.

- Es kann vom NAND-Speicher, von der SD-Card, über USB oder der seriellen Schnittstelle booten.

- Anschlüsse sind USB, RS-232, SD-Card, JTAG sowie Stereoein- und ausgabe.
- kann mit 5 V gespeist werden
- keine zusätzliche Kühlung.
- 256 MB NAND-Flash-Speicher und 256 MB Arbeitsspeicher (die ersten Revisionen hatten lediglich 128 MB RAM).

- Einplatinen-Computer
- OS kann kostenlos heruntergeladen werden
- Man kann das Board selbst herstellen
- Seit Mitte 2008 am Markt

PANDA



pandaboard.org



Jelly Bean support for
PandaBoard now in
Android Open Source Project!



Order now 

Status LEDs

SD/MMC Card Slot

Serial /RS-232

Camera Connector

USB 2.0 OTG

Audio in/out

Power Supply 5V

Power/Reset Buttons

OMAP4430 Processor

Highlights:
1GHz Dual-Core ARM Cortex-A9 MPCore
1080p Video
3D Graphics Accelerator
Memory: 1GB Low Power DDR2 RAM

JTAG

WLAN/Bluetooth

Expansion Connector

LCD Expansion

DVI Out

HDMI Out (Type A)

10/100 Ethernet & 2xUSB 2.0 Host ports

Board Dimensions: W:4.0" (101.6 mm) X H: 4.5" (114.3 mm)

Das PandaBoard ist ein Einplatinen-Computer

- von einer freien Entwicklergemeinschaft entworfen
- basiert auf dem OMAP4460-SoC von Texas Instruments mit einer maximalen Taktfrequenz von 1,2 GHz.
-

Cotton Candy

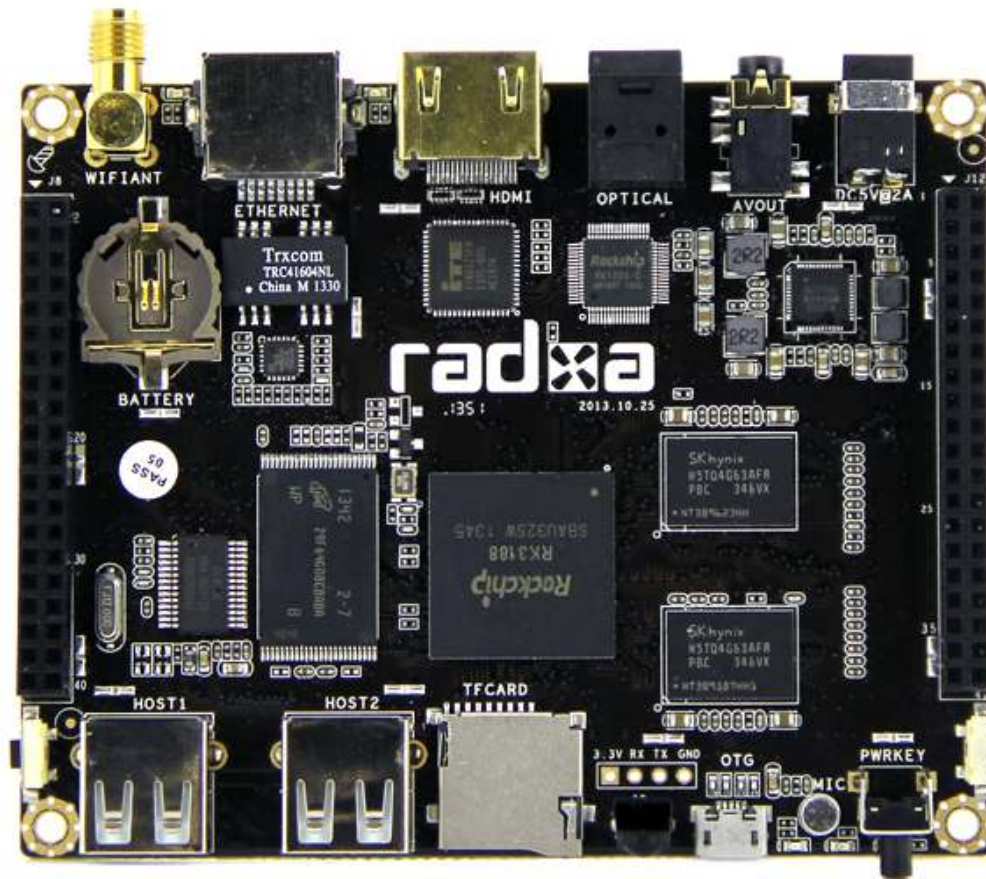


Cotton Candy

The USB stick sized system has dual core 1.2 GHz Cortex A9 CPU, and a Quad Core Mali-400MP GPU. The stick has two main connectors – a HDMI male port so you can stick it directly into a TV, and a USB 2.0 A port to connect mass storage devices and provide power.

The Cotton Candy is \$199.

RADXA ROCK



RADXA ROCK



Radxa Rock

SKU: 800056001

\$99.99

Qty:

1



Add to Cart

Share:



137

Radxa Rock is a single-board computer, based on RK3188, integrated with Bluetooth 4.0, WiFi, LAN, RTC, IR and etc. The CPU is ARM Cortex-A9 with Quad-core at 1.6Ghz, and also including GPU that support OpenGL ES 2.0. It means you play 1080p videos, and output with HDMI.

There are 8GB flash internal storage, also can be expanded via MicroSD card that supports SDXC cards up to 128GB. As a barebones single-board computer, the key feature for developers however will be the dual 40-pin headers that provide a range of extra goodies including 'GPIO, I2C, SPI, Line in, USB 2.0, PWM, ADC, LCD, GPS' and more.

CPU	ARM Cortex-A9 quad core @ 1.6Ghz
Memory	2GB DDR3 @ 800Mhz
Storage	8GB Nand Flash, Micro-SD SDXC up to 128GB
GPU	Mali400-mp4@533Mhz, OpenGL ES 2.0
Digital	Video HDMI 1.4 up to 1080p@60Hz
Analog	Video AV output
LAN	10/100M Ethernet port
WIFI	150Mbps 802.11b/g/n with antenna
Bluetooth	Bluetooth 4.0
Audio	S/PDIF, headphone jack
USB HOST	2 USB 2.0 standard A type
USB OTG	USB OTG micro-USB connector
Serial	Serial Console for debugging

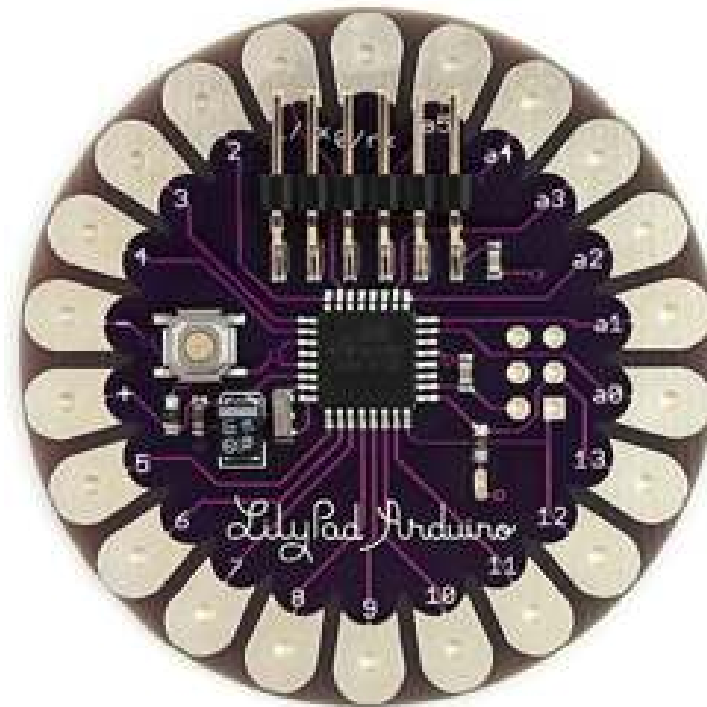
Arduina/Arduino

Input Voltage 2.7 - 5.5 Volt

USB connection

**ATmega168V
oder
ATmega328V**

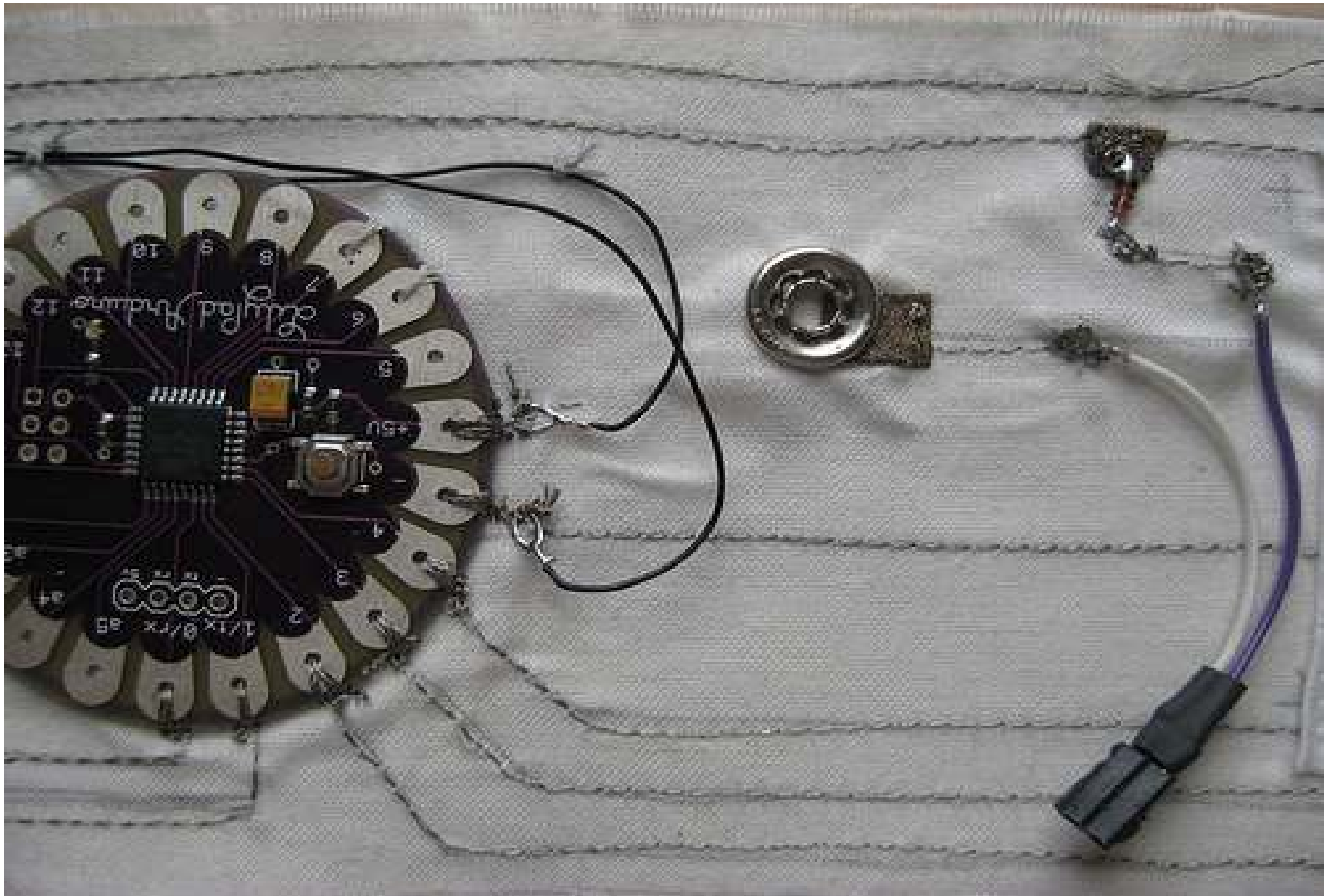
**Analog Input
Pins 6**



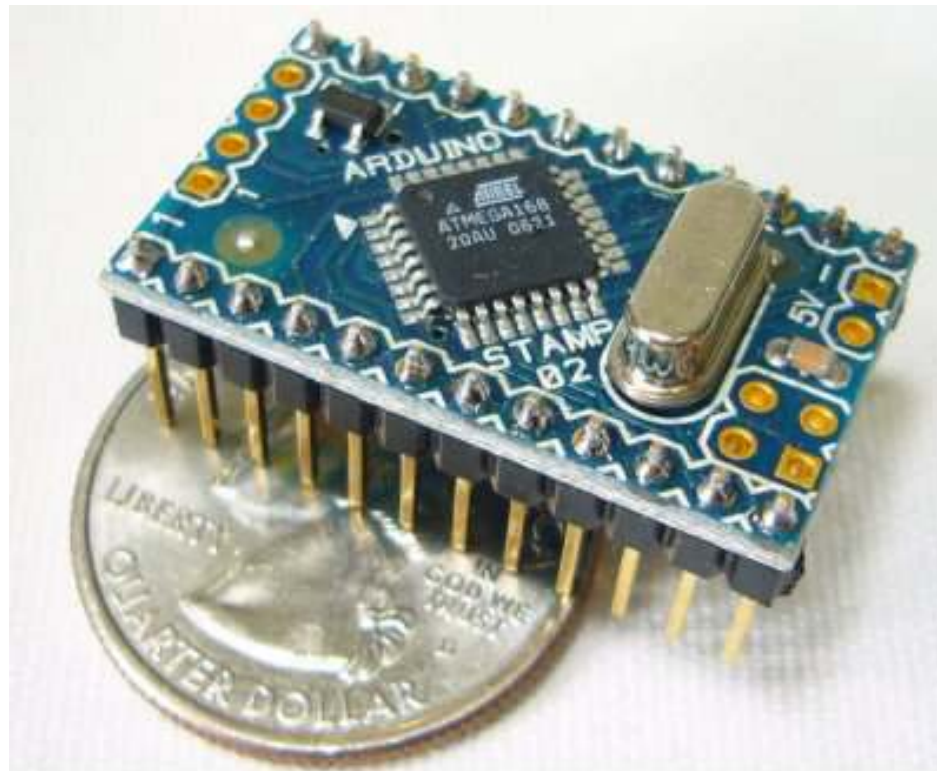
Digital I/O Pins 14

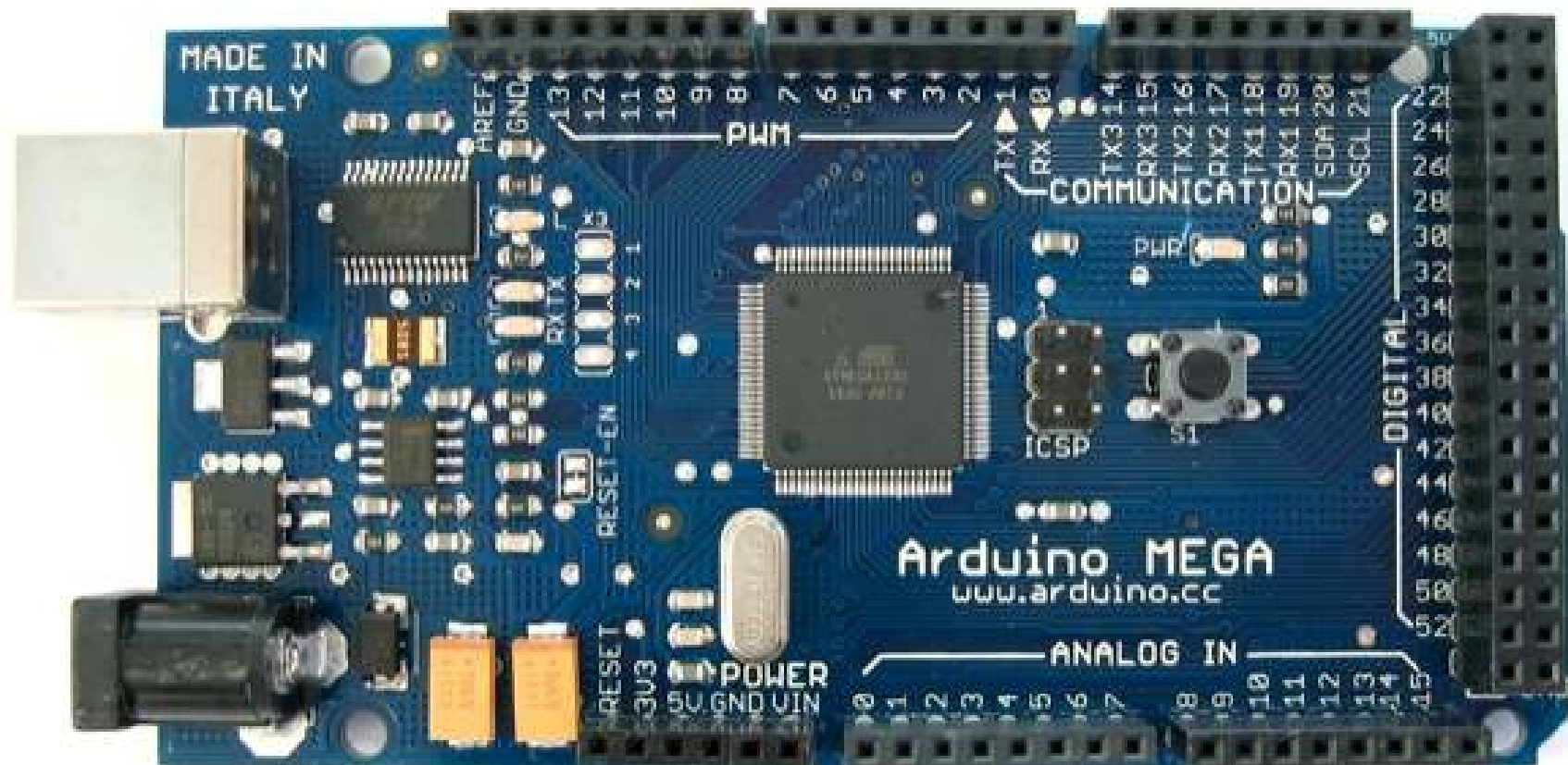
Flash Memory

DC Current per I/O Pin 40 mA



Arduino Mini





Lilypad Arduino

Operating Voltage 2.7-5.5 V

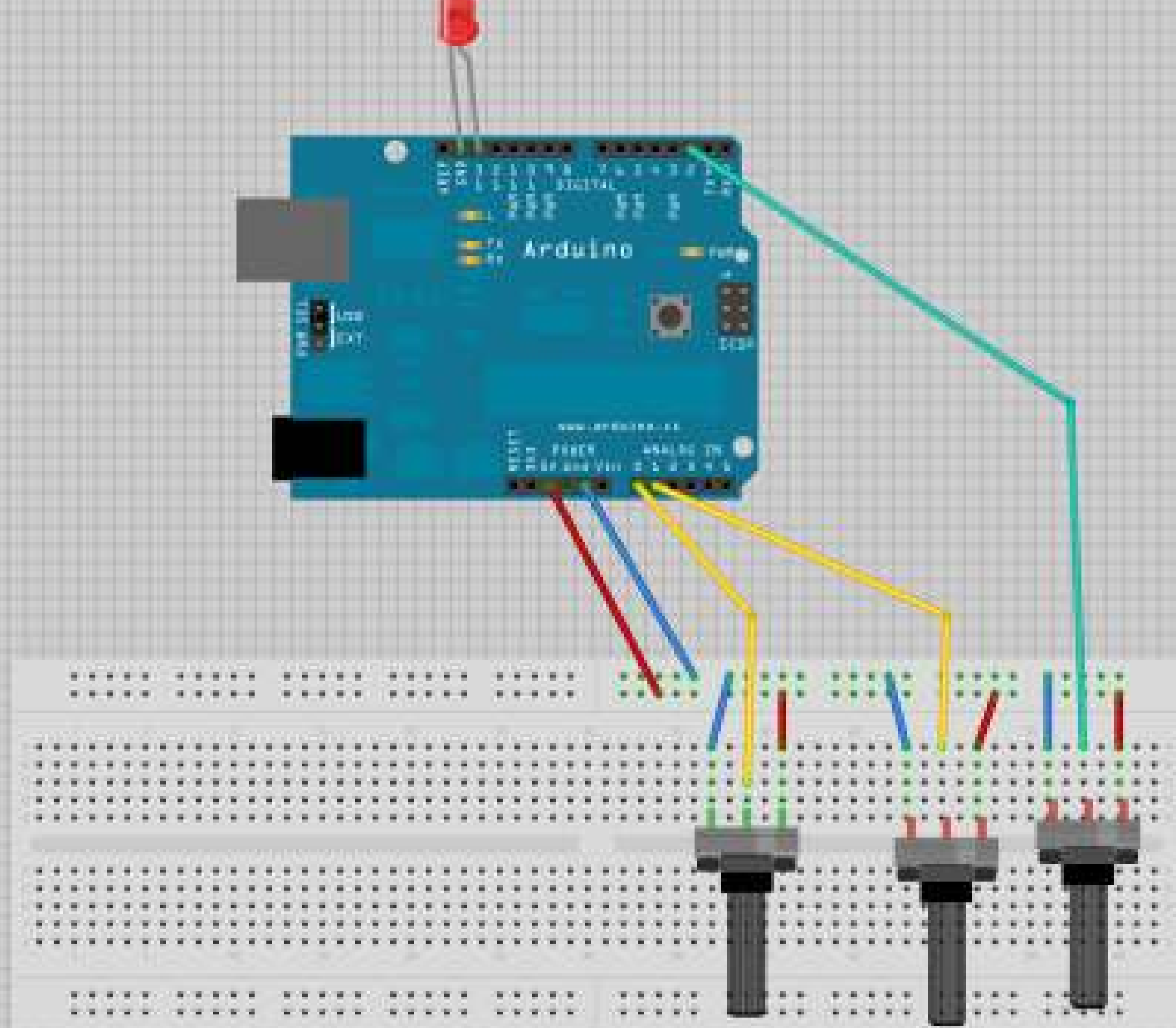
Input Voltage 2.7-5.5 V

Digital I/O Pins 14

Analog Input Pins 6

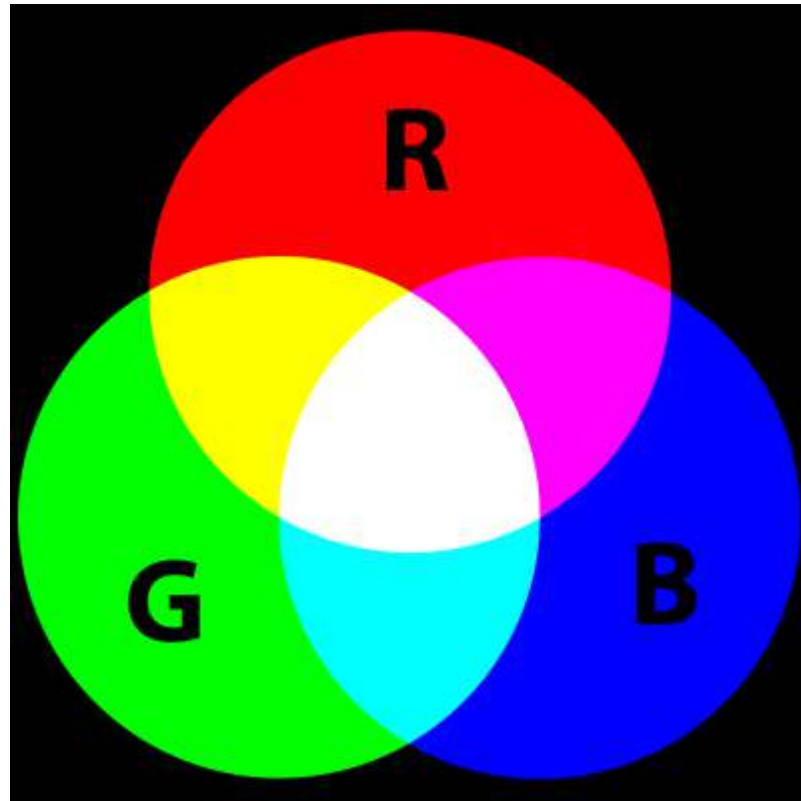
DC Current per I/O Pin 40 mA

Flash Memory 16 KB



changing the meaning of
incoming values

Changing colors



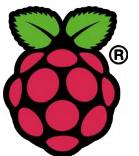
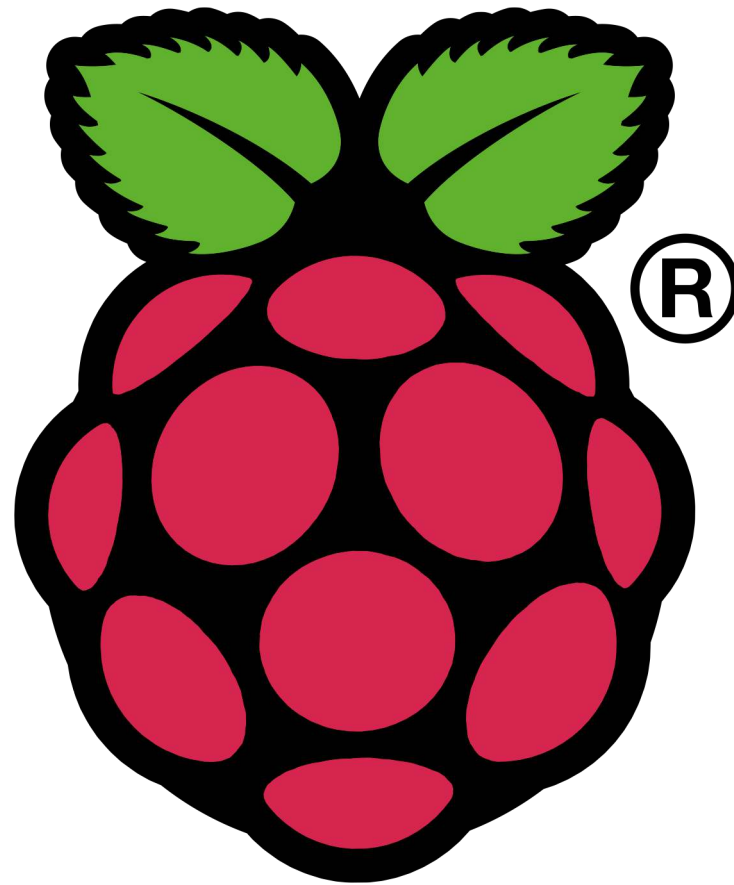
CAPACITOR SENSOR

Please download the library:

- <http://playground.arduino.cc/Main/CapacitiveSensor>

7. November

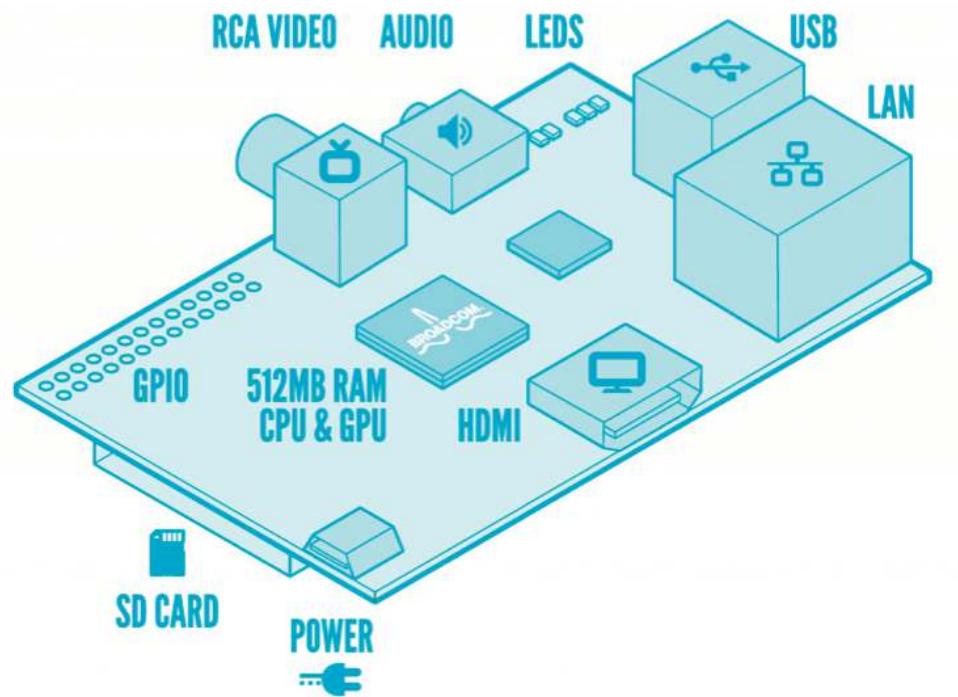
Raspberry Pi Einführung



raspberry pi
based art work



RASPBERRY PI MODEL B



LÖTEN

SOLDERING

When heated, solder becomes a liquid. And like water, it has a surface tension and can behave unexpectedly. It flows well over surfaces that are evenly heated, so the goal is to heat the target surface properly so that the solder covers it smoothly.

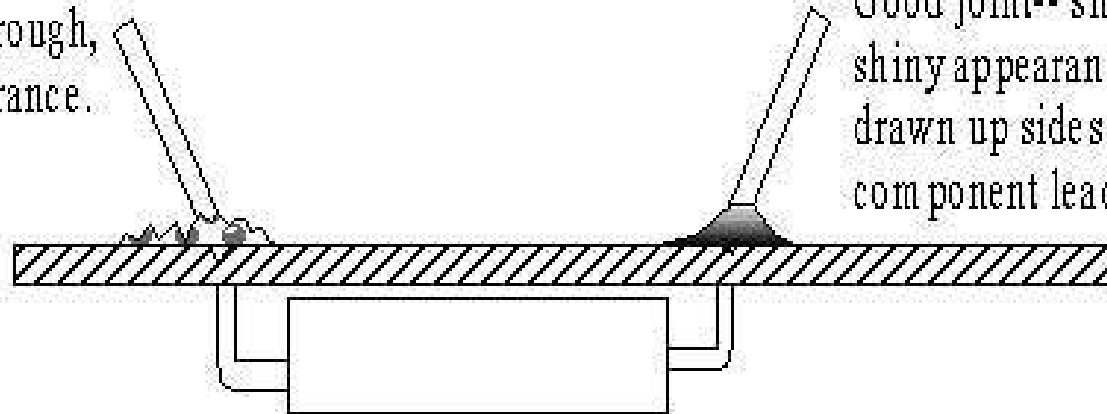
The general idea behind soldering is to have the soldering iron be the first and last thing against the part to be soldered. Try not to let the solder touch the iron itself. Only apply solder to a part that is already hot.

1. hold the soldering iron against the surface to be heated
2. apply some solder
3. remove the solder
4. remove the soldering iron

**Wenn du schwanger bist, atme bitte
den Rauch beim Löten nicht ein.**

A to Z Part 1 - Figure 2

Bad joint-- rough,
scaly appearance.



Good joint-- smooth,
shiny appearance, solder
drawn up sides of the
component lead.