

Raspberry Pi Intro Workshop

March 17, 2016 - UX Team

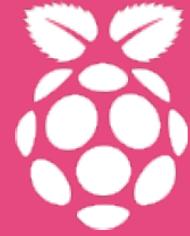


Agenda

- Why should I learn *RPi*?
- What exactly is *RPi*?
- What can *RPi* do? Examples?
- Mini Demonstration
- How can I learn about *RPi*?

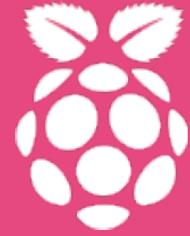
#1

Why should I learn RPi?



Why should I learn RPi?

1. As we started to move into the **connected devices** space, we emphasise a lot on prototyping ideas, and RPi is one of the most powerful tools to make quick physical prototypes for the connected devices space.

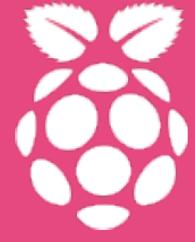


Why should I learn RPi?

2. As a designer, if we know **what RPi is capable of**, we can have more ideas on how to structure our concepts around connected devices, and be able to know the feasibility of the concepts and have better communication with the engineers.

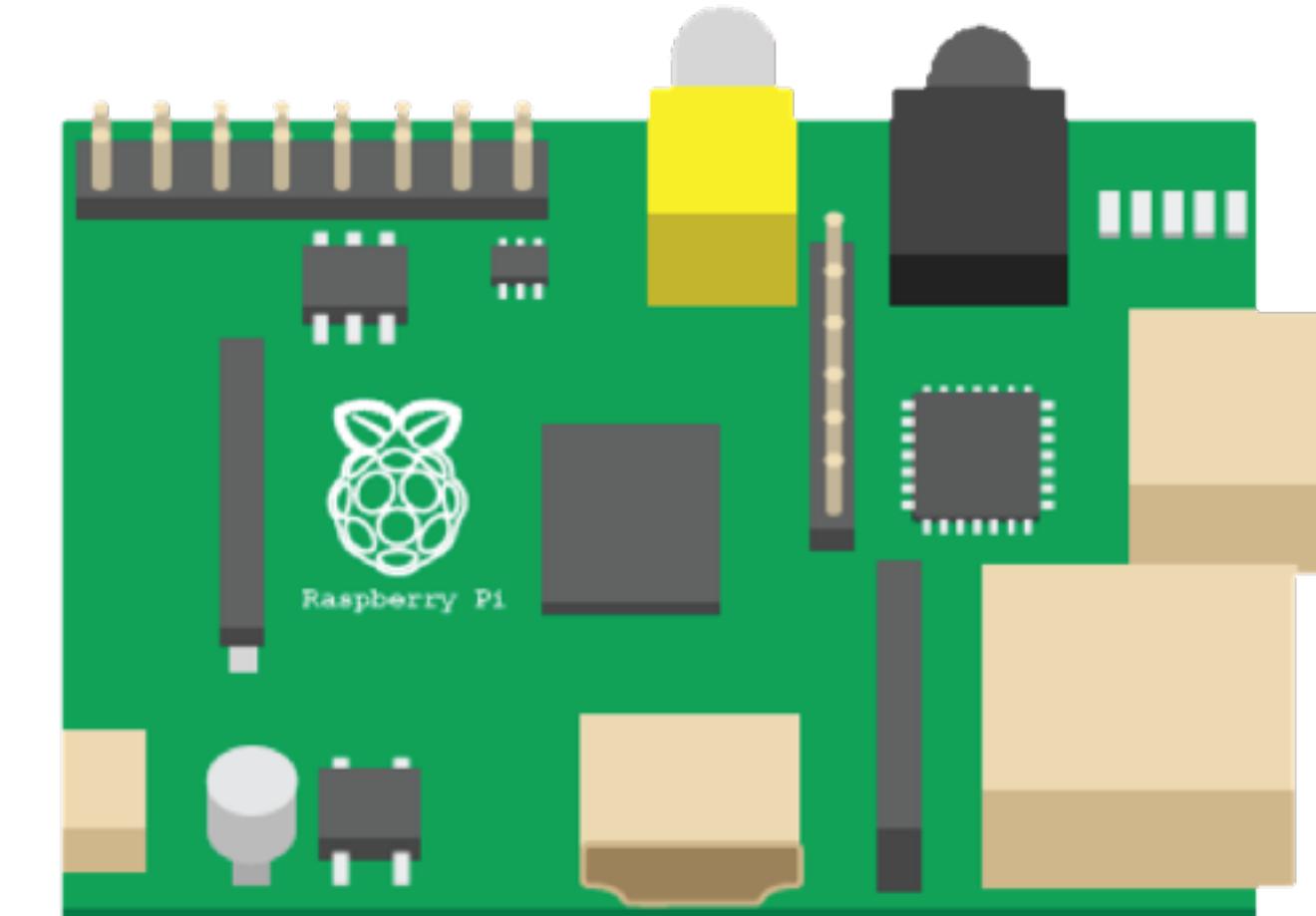
#2

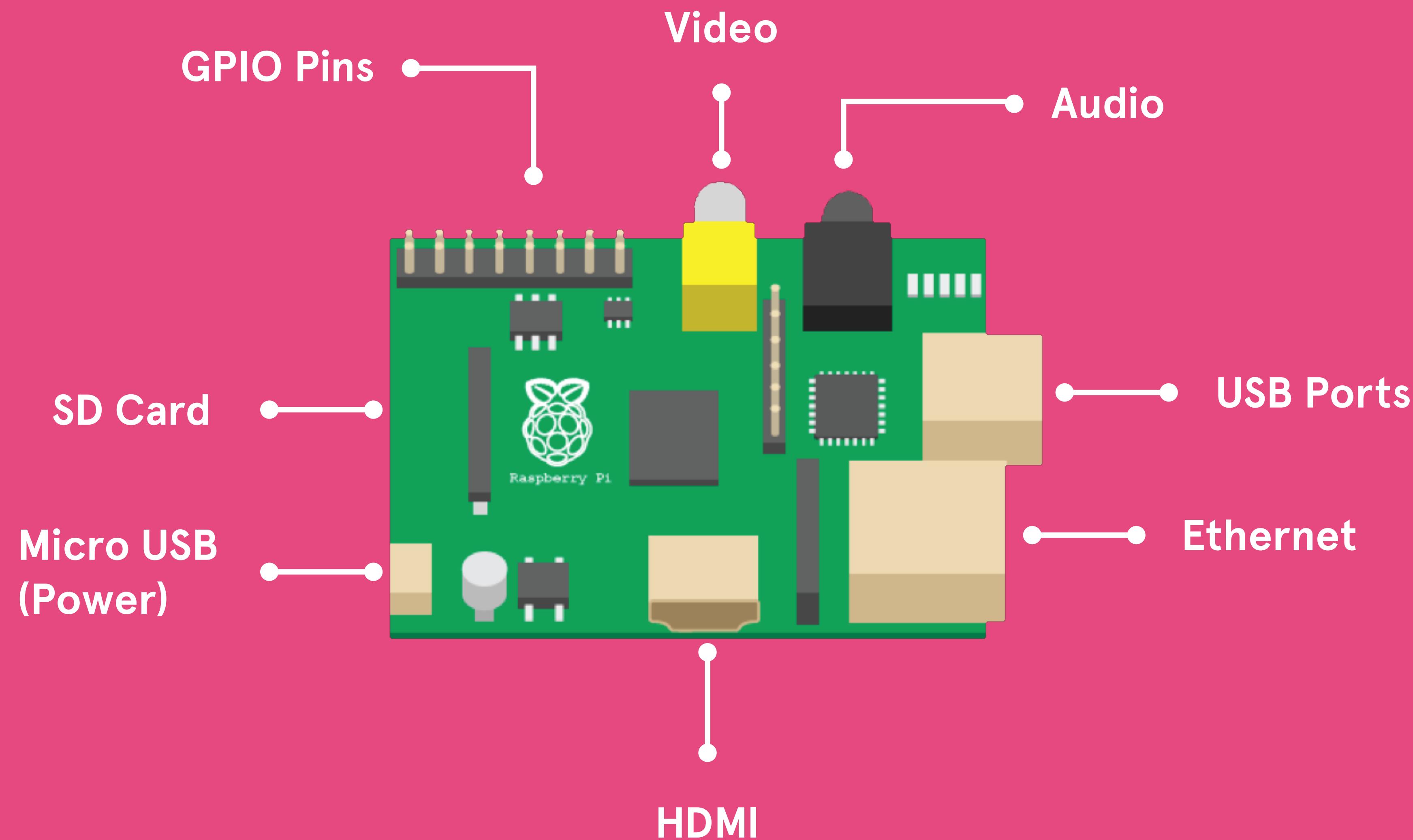
What exactly is RPi?

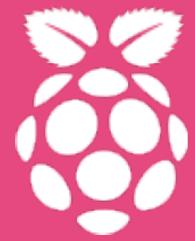


What exactly is RPi?

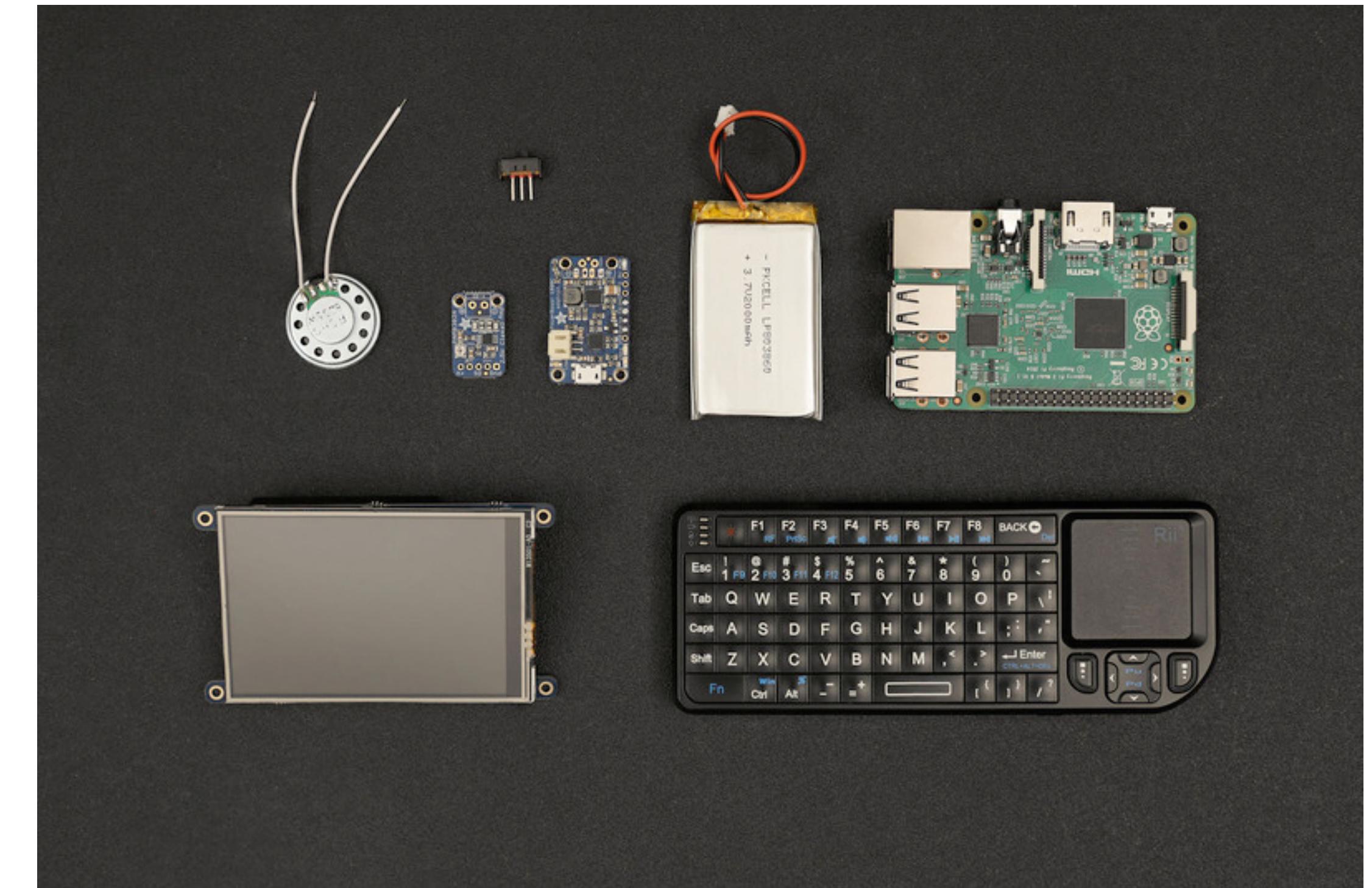
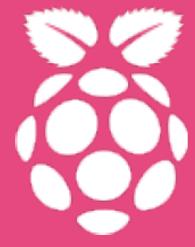
- Single-Board-Computer
- Linux operating system
- Run Python programs
- Different I/O ports
- Price: ≈\$35



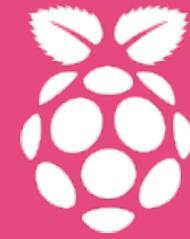




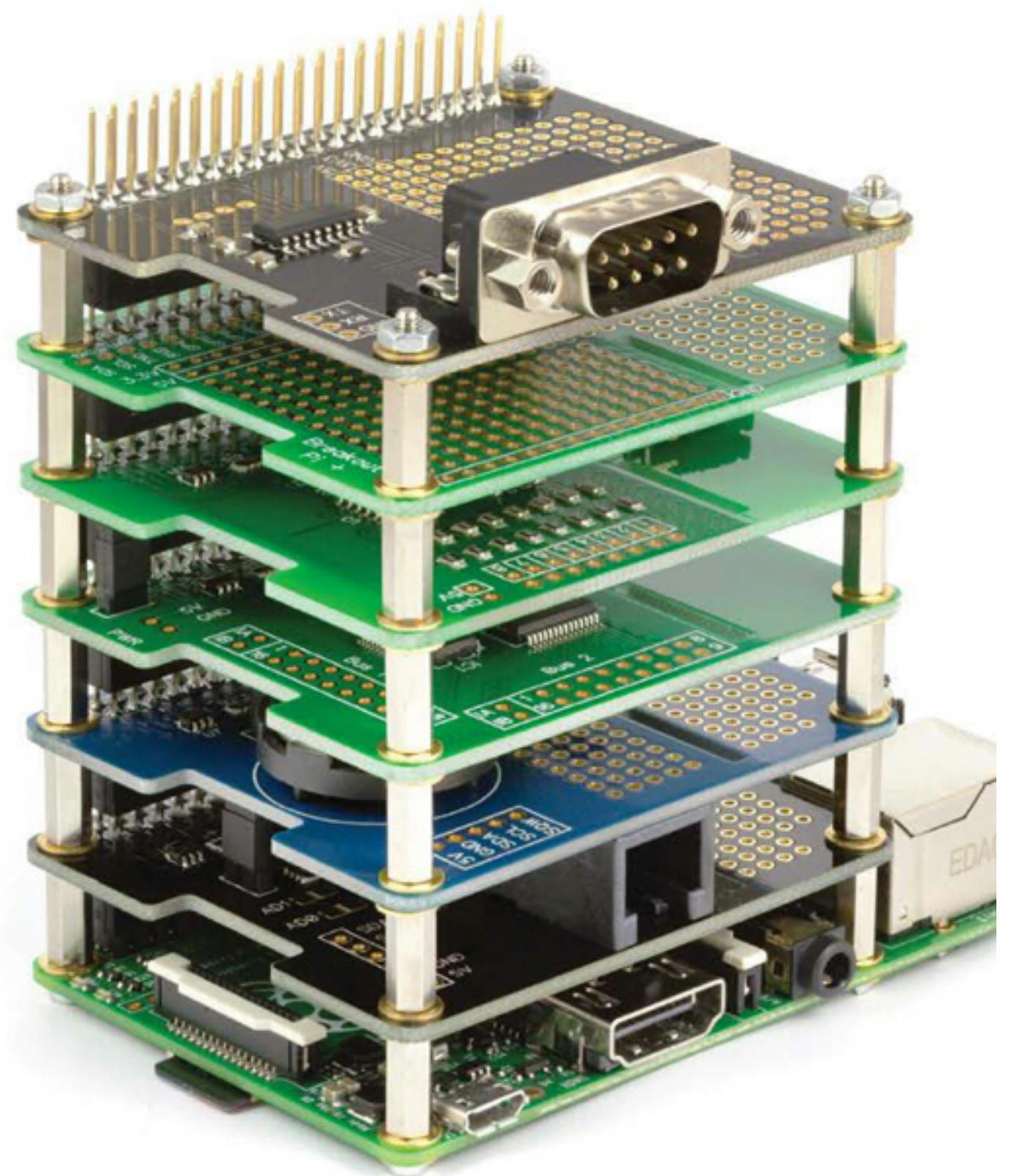
<http://blog.parts-people.com/2012/12/20/mobile-raspberry-pi-computer-build-your-own-portable-rpi-to-go/>

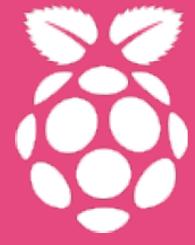


<https://learn.adafruit.com/mini-raspberry-pi-handheld-notebook-palmtop>

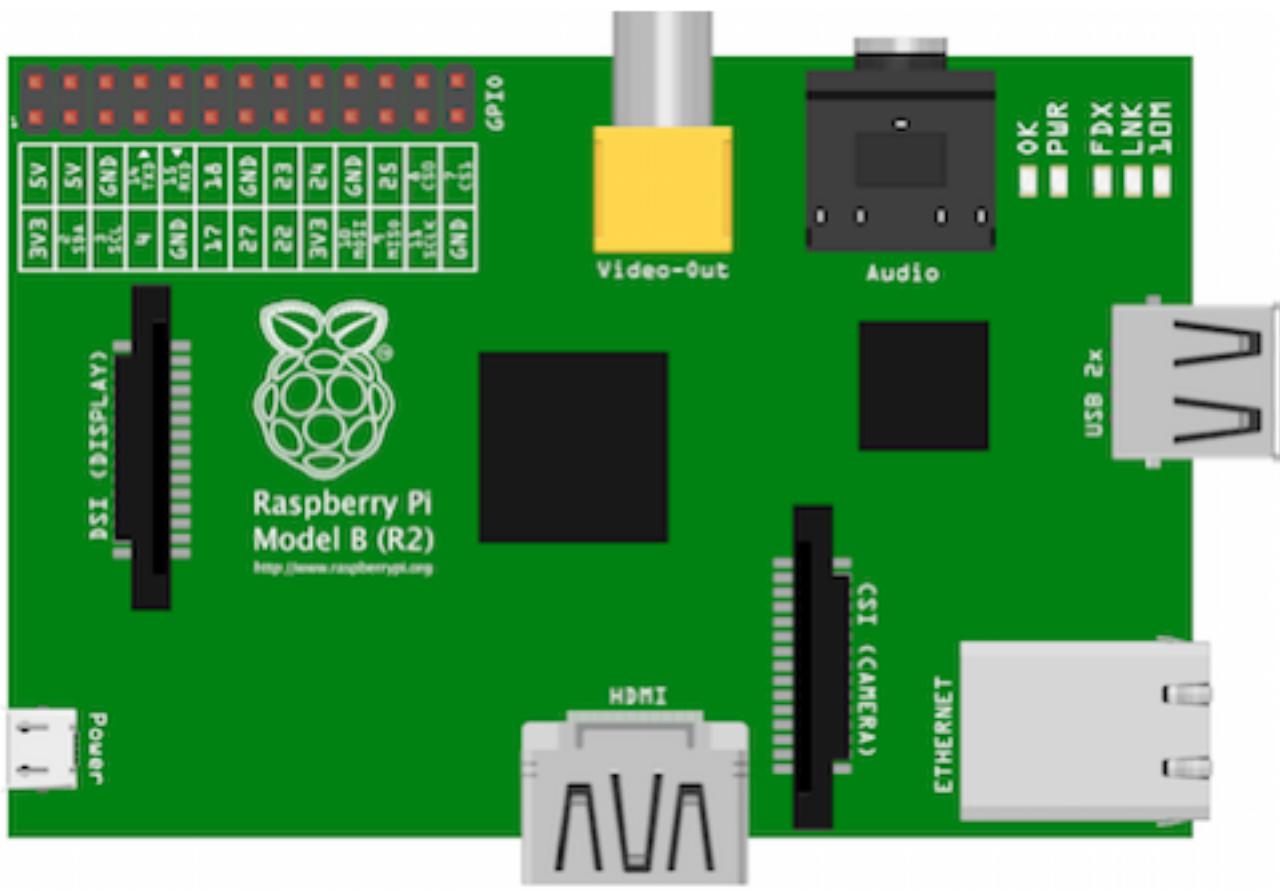


Expansions

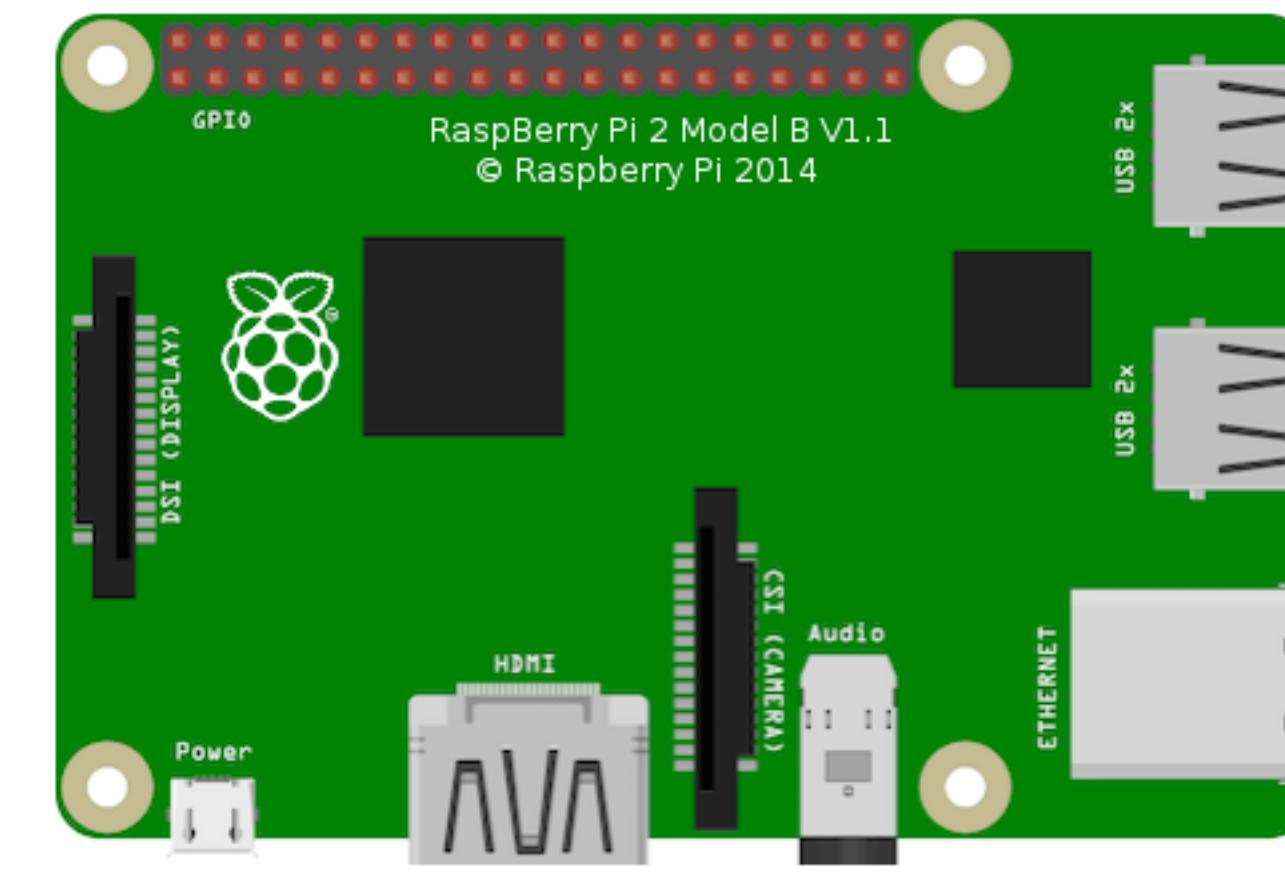




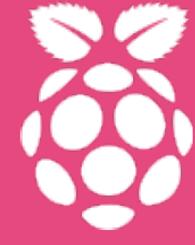
Different Models



Raspberry Pi



Raspberry Pi 2



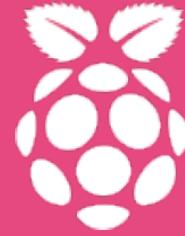
Different Models



Raspberry Pi 3

#3

What can RPi do?



What can RPi do?

- Good at processing graphics / sound / multimedia
- Connect with different sensors and process data
- Simple hardware controls with GPIO pins
- Add wifi capabilities to communicate wirelessly
- As a portable computer embedded in small projects

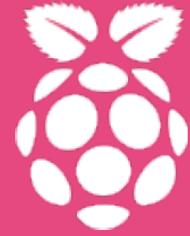


Examples#1

Gif Camera

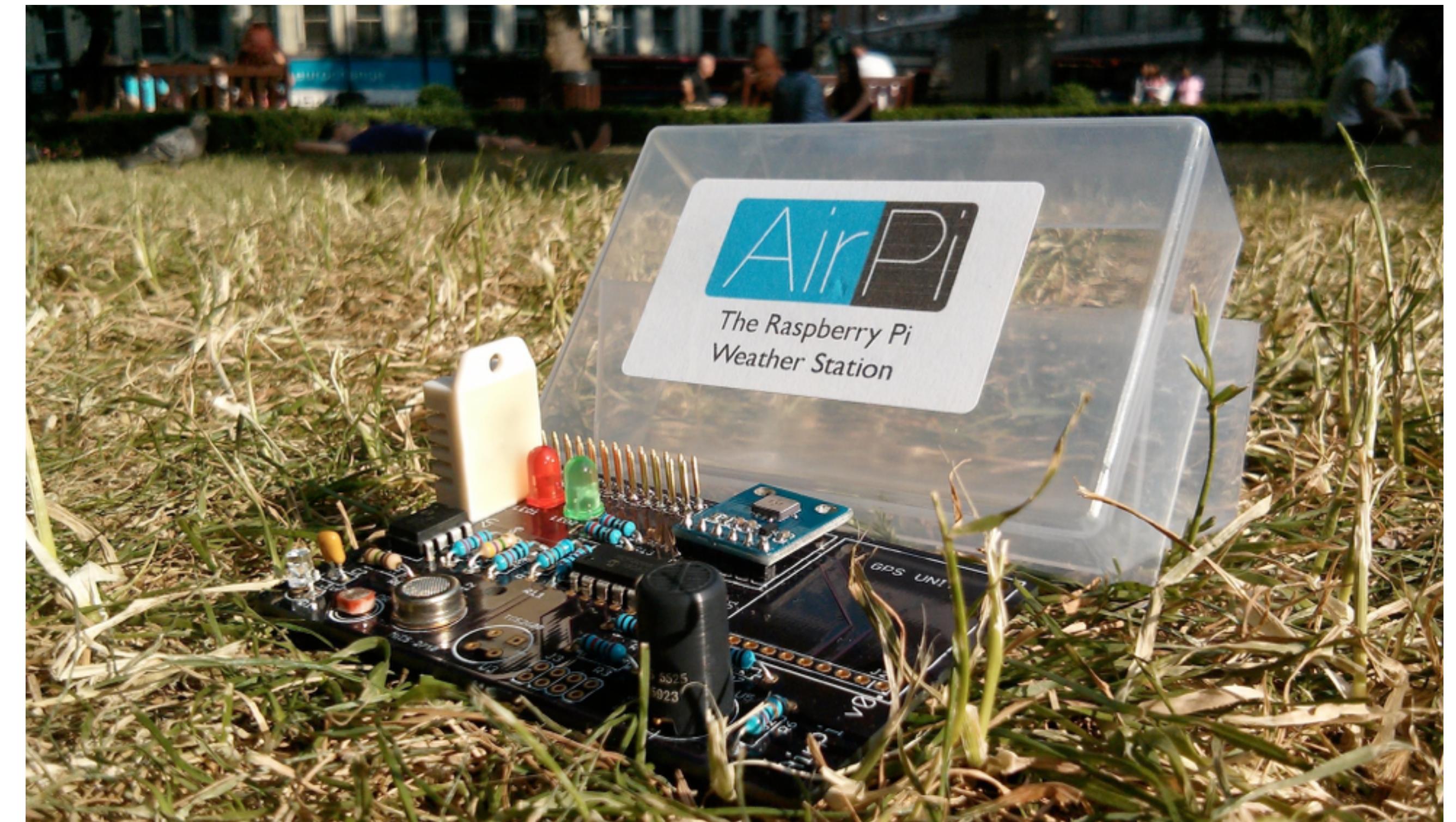


<https://www.kickstarter.com/projects/1598272670/meet-otto-the-hackable-gif-camera/description>



Examples#2

Weather Station



<http://airpi.es>

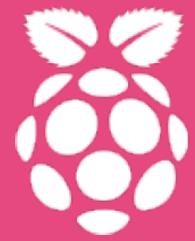


Examples#3

Drawing Machine

<http://www.blackstripes.nl/>



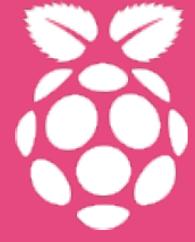


Examples#4

Music Instrument

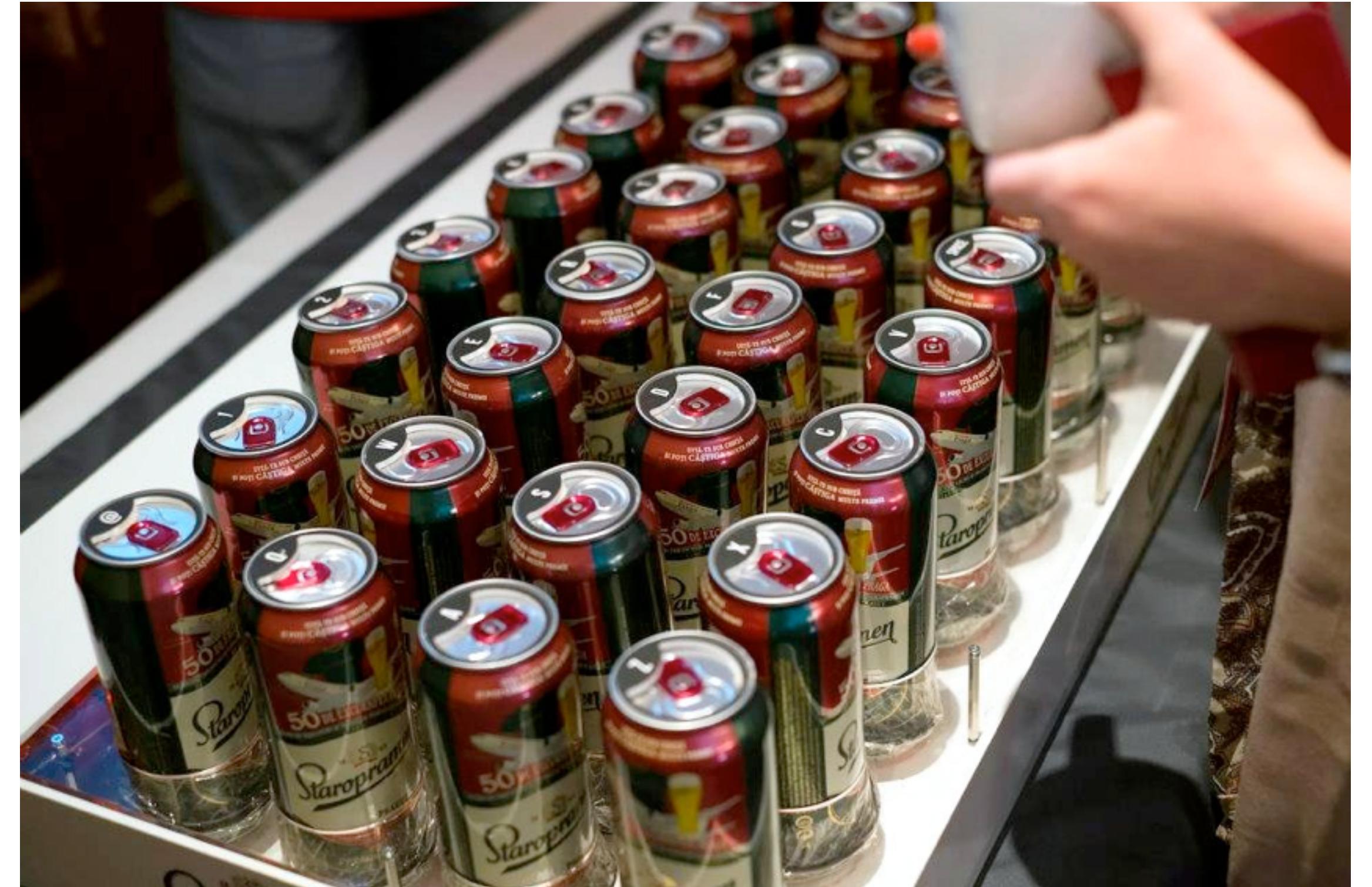


<http://www.scottmadethis.net/interactive/beetbox/>



Examples#5

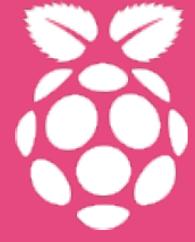
Beer Keyboard



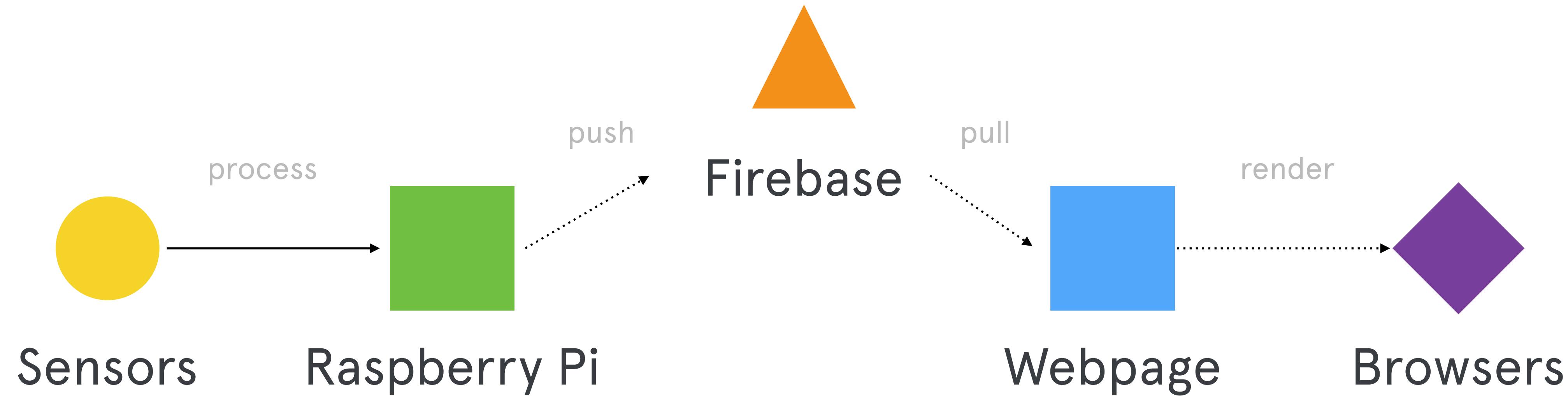
<http://www.robofun.ro/create/beer-keyboard/>

#4

Mini Demonstration

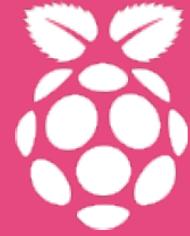


Mini Demonstration



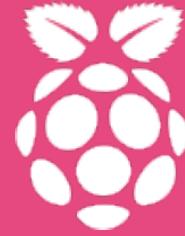
#5

How can I learn about RPi?



How can I learn about RPi?

- **Beginners:**
 - Watch youtube channels or read articles about RPi
- **Advanced:**
 - Learn Python programming + Linux environment
 - Learn wiring circuit boards and sensors
 - Build awesome projects



Resources

- <https://www.raspberrypi.org/resources/>
- <https://www.raspberrypi.org/magpi/>
- <https://www.modmypi.com/blog>
- <https://github.com/raspberrypi/learning>
- <https://learn.adafruit.com/category/learn-raspberry-pi>