Michal Hrušecký

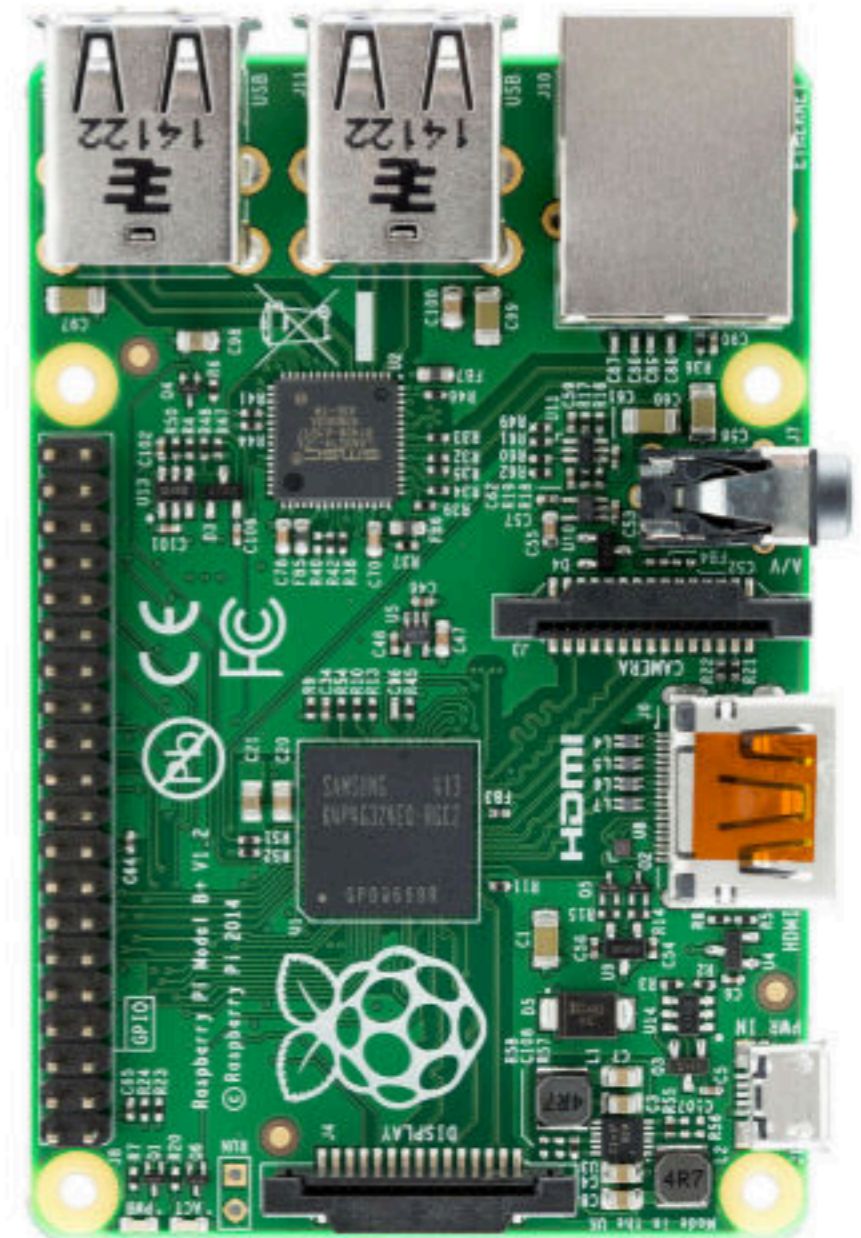# Instaling Linux on ARM

ARM boards
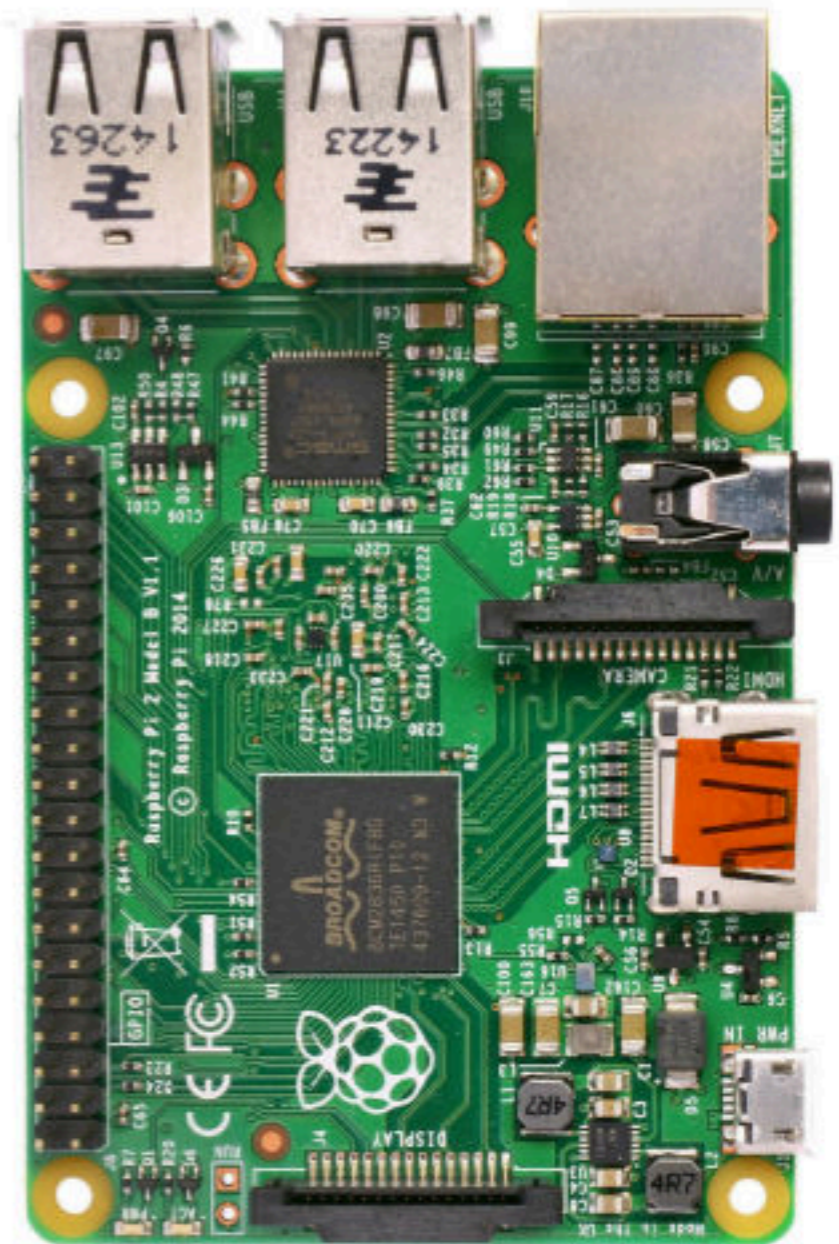
RaspberryPi 1/0

- **armv6**

- **1 core @ 700 MHz**

- **256M / 512M RAM**

- **USB connected 100M Ethernet**

- **~ 940 Kč**

ARM boards

RaspberryPi 2

- armv7

- 4 cores @ 900 MHz

- 1G RAM

- USB connected 100M Ethernet

- ~ 1 350 Kč

ARM boards

BananaPi

- armv7
- 2 cores @ 1 GHz
- 1G RAM
- native 1Gbit Ethernet
- SATA
- ~ 1 090 Kč

Booting

Most arm boards

- board loads U-Boot from fixed address
  - written to NAND or MMC or ...

- U-Boot loads kernel and initrd and dtb
  - can be on filesystem
  - can be at some address
  - can be on server

- U-Boot executes kernel

Booting

RaspberryPi

- searches for bootcode.bin on first FAT partition

- loads it, executes it, it searches for start.elf

- loads it, executes it, it searches for config.txt

- reads it, figures out what to execute next

    - can be kernel

    - can be U-Boot

- searches for it and execute it

What we need for installation

- SD card

- rootfs for our architecture

- maybe kernel for our board

- serial cable can be helpful

- qemu-user can be helpful

- qemu-nbd can be helpful

Let's get working