
SWS3009 – Part B

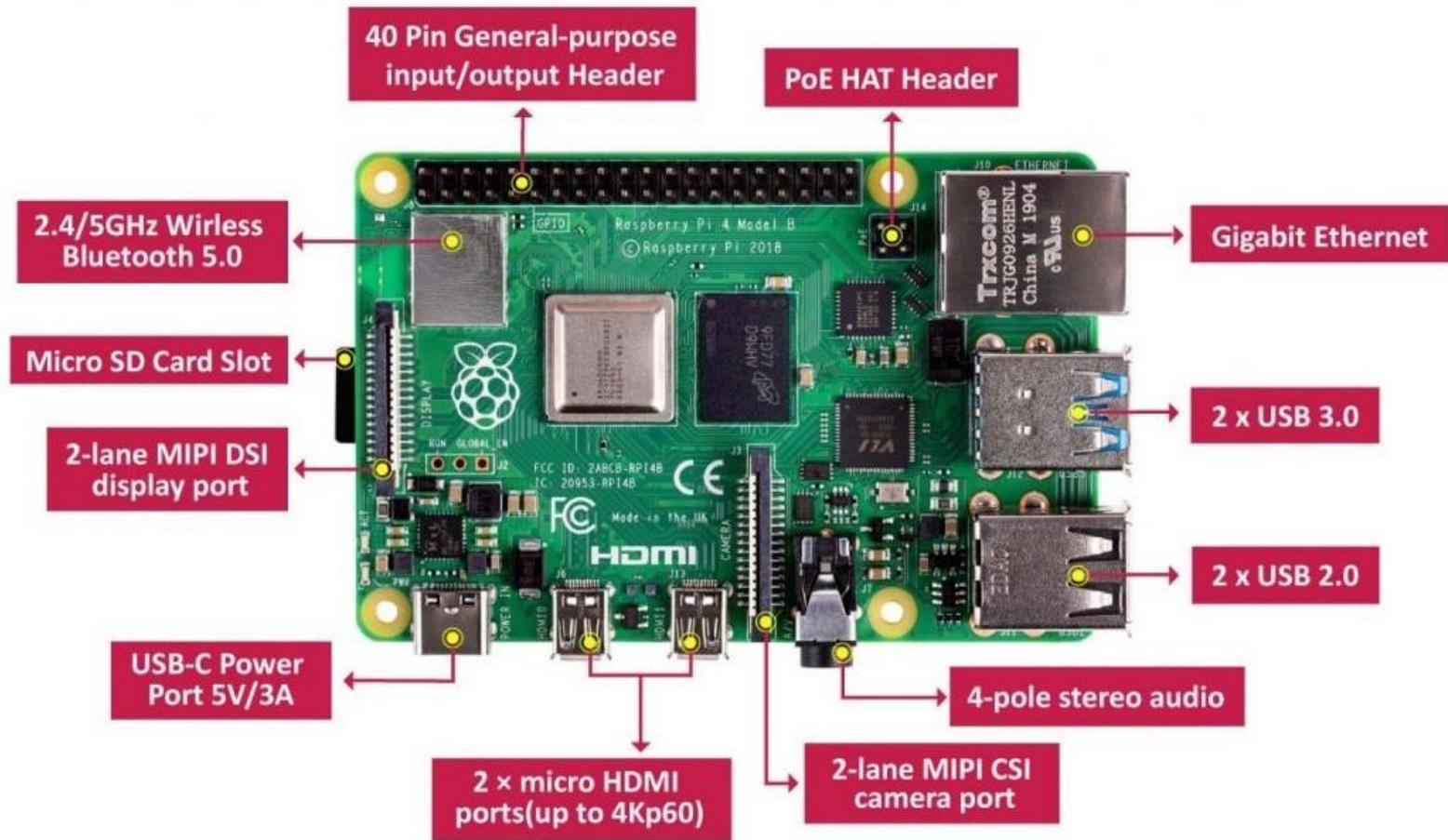
Robotics / TeleOperation

Section 2: Raspberry Pi

Raspberry Pi, Apple Pi, Banana Pi,

PI BASICS

Raspberry Pi 4 – Layout



Key Characteristics

- Pi is simply a **tiny computer**
 - ❑ **Processor** = Quad-Core ARM Processor
 - ❑ **Memory** = Built-in
 - ❑ **Hard disk** = SD Card (16Gb in our case)
 - ❑ **Operating System** = Commonly Linux based (**Raspbian** in our case)
 - ❑ **I/O interfaces** = HDMI, USB, Audio etc
- Useful functionalities for us:
 - ❑ **Networking**: Wifi, Lan
 - ❑ **Interfaces**: GPIO, Camera

And then.....?

- Raspberry Pi is essentially a miniscule computer
- Instead of “talking about it”, we are going to do a number of demonstrations to show how Pi works in real life
- The slides after these are just the list of demonstrations 😊

Demonstration

- Basic layout
- Booting
- GUI / Command line
- Package Manager
- Networking
- Coding Environments
- Secure shell
- Remote desktop
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Say: "Berry Good!"

PI CAMERA

Demonstration



Reference

- Pi Camera, "Getting Started"

- <https://projects.raspberrypi.org/en/projects/getting-started-with-picamera>

END