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CNIT 176 Intro Computer Architecture

Lab 1 Raspberry Pi Map

GPIO Headers – Allow the raspberry pi to interact with external devices such as sensors and relays.

CPU – Handles all computations for the computer to function (taking input, performing calculations, and creating output).

RAM – Provides applications with a place to store/access data on a short-term basis. (Information that the computer is using for quick access).

GPU – Create images in a frame buffer to output to a display (graphics processing).

Micro SD Card Slot – Provides storage for operating system and files.

The raspberry pi 4 has 2 USB 3.0 ports along with 2 USB 2.0 ports, while all 4 of the USB ports on the pi 2 are USB 2.0. The pi 4 also has a Wi-Fi and Bluetooth antenna which is not found in the pi 2 as well as gigabit ethernet capabilities. Instead of a micro-USB port, the pi 4 has a usb-C port and 2 micro-HDMI ports instead of 1 HDMI port on the pi 2. The USB and ethernet controllers are separate modules on the pi 4 whereas on the pi 2 they are combined. The pi 4 also has a POE header. Finally, the ram is located on the front of the raspberry pi 4. There are no notable differences on the bottom between the two besides the RAM location.