Analog and Digital Signals

Analog Signals

Our world is analogue, with infinite values of for example sounds, or colour values.

With an Arduino board, you use the analogue pins to read spans of values from sensors, or the Pulse Width Modulation (PWM) pins marked with a ~(tilde) symbol to control the current flow to a connected component.

On a Raspberry Pi, there are no pure analogue input pins, hence two alternative options are made the scene. The 1st option is to use a specially designed A/D circuit chip (a Raspberry Pi "hat"). The 2nd option is to use an Arduino as an analogue sensor board, in conjunction with the Snap4Arduino software package.

Digital Signals

Digital signals have a set span of values.

When you use an Arduino, digital signals are either On or Off - 'HIGH' or 'LOW' - 0V or 5V/3.3V. On an Arduino board, there are 14 digital pins that can be used to write or read to and from electronic components.

On a Raspberry Pi, there is a considerable number of digital inputs/outputs on its 40-pin connector that comply with 3.3V logic.

You won´t miss the difference between analog and digital signs after watching this video.

This project has received funding from the European Union's Horizon 2020 Coordination & Research and Innovation Action under Grant Agreement No 731345.