



**SNS COLLEGE OF TECHNOLOGY**  
(An Autonomous Institution)  
**COIMBATORE-35**  
**DEPARTMENT OF COMPUTER SCIENCE AND**  
**ENGINEERING**



**19ITT302 INTERNET OF THINGS**

## **Linux on Raspberry Pi**

Raspbian

- Raspbian Linux is a Debian Wheezy port optimized for Raspberry Pi.

Arch

- Arch is an Arch Linux port for AMD devices.

Pidora

- Pidora Linux is a Fedora Linux optimized for Raspberry Pi.

RaspBMC

- RaspBMC is an XBMC media-center distribution for Raspberry Pi.

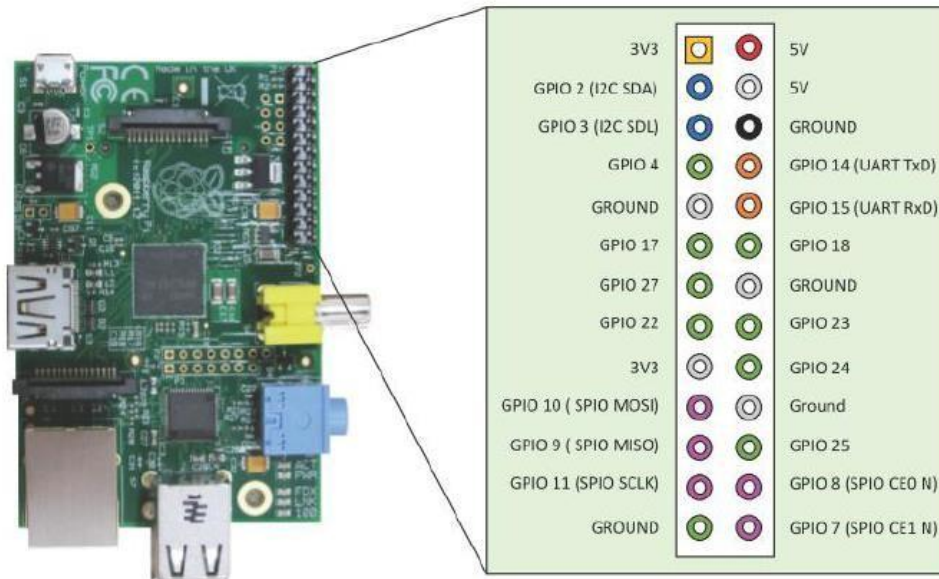
OpenELEC

- OpenELEC is a fast and user-friendly XBMC media-center distribution.

RISC OS

- RISC OS is a very fast and compact operating system.

## **Raspberry Pi GPIO**



## Raspberry Pi Interfaces Serial

- The serial interface on Raspberry Pi has receive (Rx) and transmit (Tx) pins for communication with serial peripherals.

## SPI

- Serial Peripheral Interface (SPI) is a synchronous serial data protocol used for communicating with one or more peripheral devices. In SPI connection, there is one master device and one or more peripheral devices. There are five pins on Raspberry Pi for SPI interface. MISO – (Master In Slave Out) – Master lines for sending data to peripherals MOSI – (Master Out Slave In) – Slave line for sending data to master.

SCK (Serial Clock) – Clock generated by master to synchronize data transmission

CE0 (Chip Enable 0) – To enable or disable devices

CE1 (Chip Enable 1) – To enable or disable devices

## I2C

The I2C interface pins on Raspberry Pi allow you to connect hardware modules. I2C interface allows synchronous data transfer with just two pins - SDA (data line) and SCL (clock line).