

Tools

Raspberry Pi

Raspberry Pi is defined as a minicomputer the size of a credit card that is interoperable with any input and output hardware device like a monitor, a television, a mouse, or a keyboard – effectively converting the set-up into a full-fledged PC at a low cost.

Raspberry Pi is a programmable device. It comes with all the critical features of the motherboard in an average computer but without peripherals or internal storage.

Raspberry 4B is a vast improvement from its predecessors, with a varying memory capacity from 2GB RAM to 8GB RAM. It also has a faster 1.5GHz processor and a good mix of 2.0 and 3.0 USB ports.

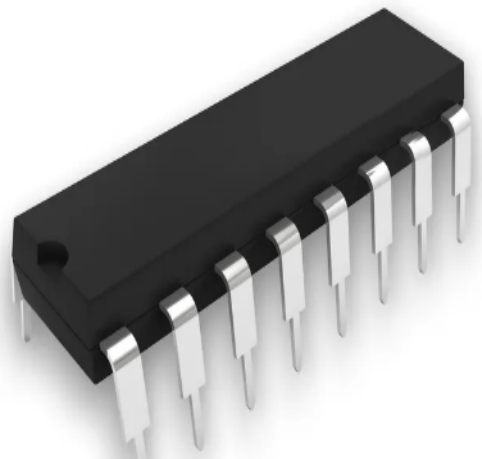
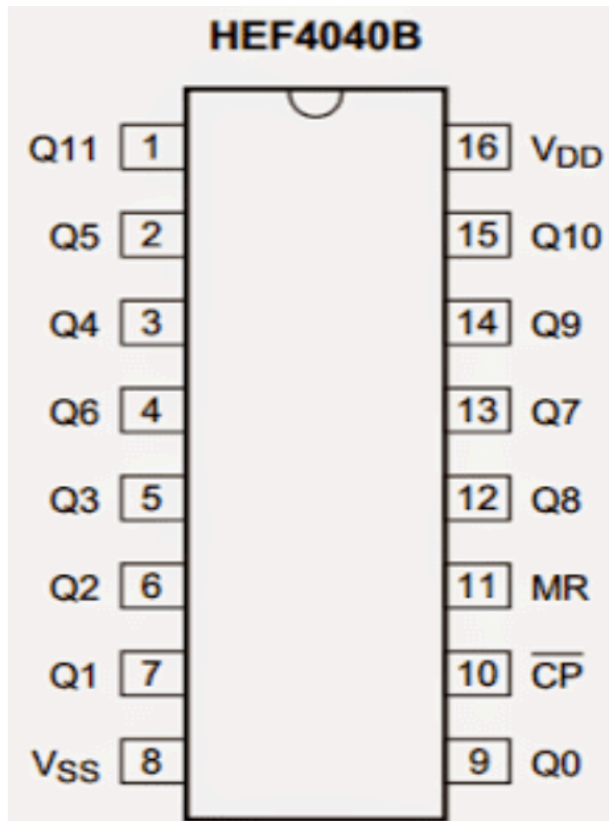
Servo motors

Servo motors or “servos”, as they are known, are electronic devices and rotary or linear actuators that rotate and push parts of a machine with precision. Servos are mainly used for angular or linear position and for specific velocity, and acceleration.



Counter IC 4040

The IC 4040 is technically a 12-stage binary ripple counter chip, in simple words a device which will produce a calculated delayed frequency output in response to every pulse applied at its clock input. This delay is incremented at the rate of 2^n where n is the pinout order in the sequence of its outputs.



- Supply Voltage (V_{dd}) = Typically between 3 V and 15 V, 18 V being the maximum limit.
- Input Voltage (V_i) = The voltage that may be applied at the inputs such as CP, MR etc should be typically below V_{dd} or at the most = $V_{dd} + 0.5V$
- Optimal Operating Current Requirement = 50mA since so many outputs are involved and each output

TCS3200 Color Sensor

TCS3200 is the colorama-to-frequency programmable converter launched by TAOS company. As the first RGB color sensor in the industry, it has the single CMOS circuit integrated with configurable silicon photodiode and current frequency converter; also, it integrates three kinds of RGB light filters into the single chip

