

EMBEDDED CONTROLLER SETUP

An Embedded Controller considered to be a microcontroller/microprocessor, with I/O and internal features targeted to suit the typical needs of a low power platform.

Raspberry pi

The Raspberry Pi is a very cheap computer that runs Linux, but it also provides a set of GPIO (general purpose input/output) pins that allow you to control electronic components for physical computing and explore the Internet of Things (IoT). The original Pi had a single-core 700MHz CPU and just 256MB RAM, and the latest model has a quad-core 1.4GHz CPU with 1GB RAM. It has Quad-core 64 bit ARM Cortex A53 clocked at 1.2 GHz, 4 USB ports, 10/100Mbps Ethernet and 802.11n Wireless LAN speed.



Arduino

Arduino is an open-source electronics platform based on easy-to-use hardware and software. Arduino boards are able to read inputs - light on a sensor, a finger on a button. It has 5 volt operating voltage. The input voltage ranges from 6v to 20V. The recommended input voltage will range from 7v to 12V. DC Current for each input/output pin is 40 mA. DC Current for 3.3V Pin is 50 mA



NODE MCU

The NodeMCU ESP8266 development board comes with the ESP-12E module containing ESP8266 chip having Tensilica Xtensa 32-bit LX106 RISC microprocessor. This microprocessor supports RTOS and operates at 80MHz to 160 MHz adjustable clock frequency. NodeMCU has 128 KB RAM and 4MB of Flash memory to store data and programs. Its high processing power with in-built Wi-Fi / Bluetooth and Deep Sleep Operating features make it ideal for IoT projects. It supports UART, SPI, and I2C interface.



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Firebird V

The Fire Bird V provides an excellent environment for experimentation, algorithm development and testing. It uses multiple processors such as 8051, AVR and ARM7 etc. A 2.4GHz ZigBee module provides secure and multi-channel wireless communication up to a range of one kilometer line of sight. It has a wireless color camera, GPS receiver, 2*16 character LCD and 4 DOF robotic arm.



EVIVE KIT

Evive kit is a most versatile electronics prototyping platform. Contains hundreds of electronic and mechanical components. Free graphical programming software and project-making app. With Arduino Mega at its heart, Evive is compatible with Softwares like Matlab, Labview, Scratch and many more. And since evive is arduino based it is a great prototyping tool for beginners. To power evive, you can either use its 3.7v Li-ion battery giving it portability or connect a 12 v adapter to it.

