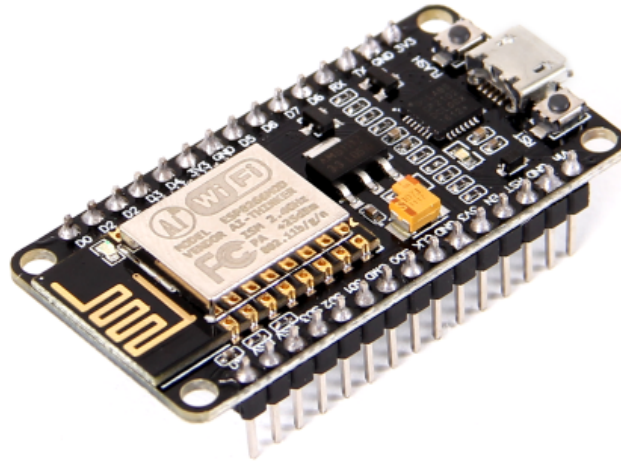


ESP8266 NodeMCU USB Wifi Module

Model:ESP-12E



Description:

The ESP8266 WiFi Module is a self-contained SOC with integrated TCP/IP protocol stack that can give any microcontroller access to your WiFi network. The ESP8266 is capable of either hosting an application or offloading all Wi-Fi networking functions from another application processor. Each ESP8266 module comes pre-programmed with an AT command set firmware, meaning, you can simply hook this up to your Arduino device and get about as much WiFi-ability as a WiFi Shield offers (and that's just out of the box)! The ESP8266 module is an extremely cost effective board with a huge, and ever growing, community.

This module has a powerful enough on-board processing and storage capability that allows it to be integrated with the sensors and other application specific devices through its GPIOs with minimal development up-front and minimal loading during runtime. Its high degree of on-chip integration allows for minimal external circuitry, including the front-end module, is designed to occupy minimal PCB area. The ESP8266 supports APSD for VoIP applications and Bluetooth co-existence interfaces, it contains a self-calibrated RF allowing it to work under all operating conditions, and requires no external RF parts.

Features:

- Modern high level mature LUA based technology. It is an integrated unit with all available resources on board. It is super simple to complement your existing Arduino projects or any development board that has I/O pins available.
- Modern Internet development tools such as Node.js can take advantage the NodeMCU with the built-in API to put your idea on the fast track immediately.
- It is built based on the mature ESP8266 technology to take advantage the abundant resources available on the web.
- It has ESP-12E based serial WiFi integrated on board to provide GPIO, PWM, ADC, I2C and 1-WIRE resources at your finger tips. Please refer to the listing details for ESP-12E.
- It has built-in USB-TTL serial with super reliable industrial strength CH340G for superior stability on all supported platforms.

Specifications:

- 802.11 b/g/n
- Wi-Fi Direct (P2P), soft-AP
- Integrated TCP/IP protocol stack
- Integrated TR switch, balun, LNA, power amplifier and matching network
- Integrated PLLs, regulators, DCXO and power management units
- +19.5dBm output power in 802.11b mode
- Power down leakage current of <10uA
- Communication interface voltage: 3.3V.
- 1MB Flash Memory
- Integrated low power 32-bit CPU could be used as application processor
- SDIO 1.1 / 2.0, SPI, UART
- STBC, 1×1 MIMO, 2×1 MIMO
- A-MPDU & A-MSDU aggregation & 0.4ms guard interval
- Wake up and transmit packets in < 2ms
- Standby power consumption of < 1.0mW (DTIM3)
- Applications: Smart Car, Home automation, Sensor networks, Industrial wireless control

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