EN - For pricing and availability in your local country please visit one of the below links:

DE - Informationen zu Preisen und Verfügbarkeit in Ihrem Land erhalten Sie über die unten aufgeführten Links:

FR - Pour connaître les tarifs et la disponibilité dans votre pays, cliquez sur l'un des liens suivants:

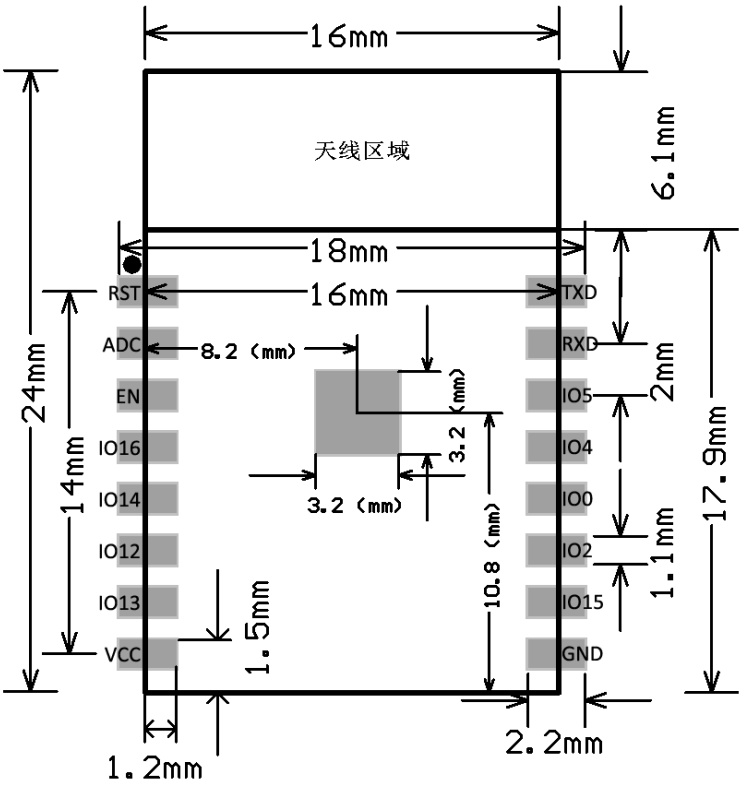
ESP-12S

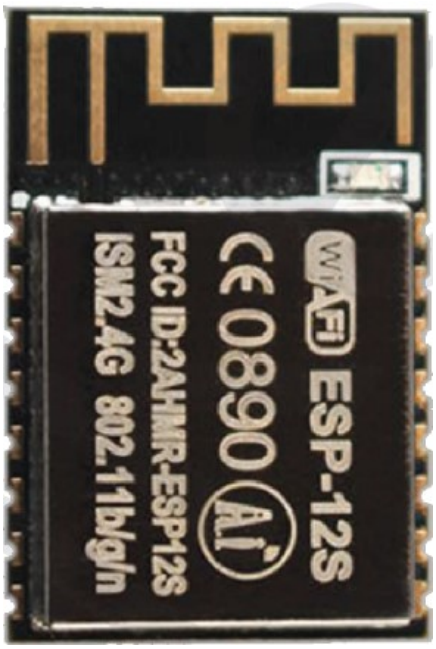
EN
This Datasheet is presented by the manufacturer

DE
Dieses Datenblatt wird vom Hersteller bereitgestellt

FR
Cette fiche technique est présentée par le fabricant

ESP-12S 802.11 b/g/n Wi-Fi Module





Features

- The smallest 802.11b/g/n Wi-Fi SOC module
- Low power 32-bit CPU, can also serve as the application processor
- Up to 160MHz clock speed
- Built-in 10 bit high precision ADC
- Supports UART/HSPI/IIC/PWM/ADC
- SMD-16 package for easy welding
- Integrated Wi-Fi MAC/BB/RF/PA/LNA
- Deep sleep current as low as 20uA
- Embedded lwIP protocol stack
- Supports STA/AP/STA + AP operation mode
- Support Smart Config/AirKiss technology
- UART baudrate up to 4Mbps
- General AT commands can be used quickly
- Supports remote firmware upgrade (FOTA)

Overview

ESP-12S has a highly competitive package size and ultra-low power technology.

ESP-12S can be widely used in a variety of networking, for home automation, industrial wireless control, baby monitors, wearable electronic products, wireless location sensing devices, wireless positioning system signals and other networking applications.

ESP-12S is packaged in SMD, through the standard SMT equipment to achieve rapid production of products, to provide customers with high reliability of the connection, especially for automation, large-scale, low-cost modern production methods. It’s suitable for all kinds of Internet of Things hardware terminal occasions.

Product Specifications

Module Model	ESP-12
Package	SMD-16
Size	24 x 16 x 3 (+/- 0.2)mm
SPI Flash	Default 32Mbit
Interface	UART/ HSPI/ IIC/ PWM/ ADC
IO Port	9
UART Baudrate	Support 300– 4608000 bps, Default 115200 bps
Frequency Range	2412– 2484MHz
Antenna	PCB antenna, 2 dBi
Transmit Power	802.11b: 16 +/- dBm (@11Mbps)
	802.11g: 14 +/-2 dBm (@54Mbps)
	802.11n: 13 +/- dBm (@HT20, MCS7)
Receiving Sensitivity	CCK, 1 Mbps: -90dBm
	CCK, 11Mbps: -85dBm
	6 Mbps (1/2 BPSK): -88dB
	54 Mbps (3/4 64-QAM): -70dBm
Power (Typical Values)	Continuous Transmission=> Avg: - 71mA, Peak: 300mA
	Modem Sleep: -20mA
	Light Sleep: -2mA
	Deep Sleep: -0.02mA
Security	WEP/WPA-PSK/WPA2-PSK
Power Supply	Voltage 3.0V– 3.6V, Current> 300mA
Operating Temperature	-20°C– 85°C
Storage Environment	-40°C– 90°C, <90%RH
Weight	0.45g
Certification	FCC. CE

EN - For pricing and availability in your local country please visit one of the below links:

DE - Informationen zu Preisen und Verfügbarkeit in Ihrem Land erhalten Sie über die unten aufgeführten Links:

FR - Pour connaître les tarifs et la disponibilité dans votre pays, cliquez sur l'un des liens suivants:

ESP-12S

EN
This Datasheet is presented by the manufacturer

DE
Dieses Datenblatt wird vom Hersteller bereitgestellt

FR
Cette fiche technique est présentée par le fabricant