

BPI-UNO32 Hardware specifications

BPI-UNO32 uses a fully compatible Arduino-based interface, pin layout and design of the exterior, using Espressif ESP-WROOM-32 as the core, the module is equipped with on-board PCB antenna, also supports Wi-Fi & BLE. Board left a group of 0.96" I2C interface LCD screen interface. The module power supply mode can use Micro USB or 5.5mm DC POWER, and supports automatic switching, the left side of the module has 4 LED, including two serial transceiver indicator, a power indicator and a SPI_SCK indicator. Each group GPIO and I2C screen with 2.54mm pitch pin header.

Burning interface for the Micro USB interface, and automatic download circuit board, but also reserved EN and IO0 button as a manual download option to use

Module specifications:

Category	Item	Product specifications
Wi-Fi	RF certification	FCC/CE/IC/TELEC/KCC/SRRC/NCC
	Protocol	802.11b/g/n/e/i & A-MSDU 和 A-MPDU
	Frequency Range	2.4 GHz - 2.5GHz
Bluetooth	Protocol	Bluetooth V4.2 BR/EDR 和 BLE standard
	RF	-97dBm Sensitivity 、 NZIF receiver
		Class-1/-2/-3 launcher & AFH
Hardware	Onboard clock	40MHz
	Working temperature range	-40°C - 85°C
	Ambient temperature range	Normal temperature range
	Interface	UART、SPI、I2C、PWM、GPIO、ADC、DAC
Software	Firmware programming	USB programming or UART programming
	Internet Protocol	TCP/UDP/HTTP/FTP/MQTT、IPv4、IPv6、SSL
	Wi-Fi Mode	Station/SoftAP/SoftAP+Station/P2P
	Wi-Fi Safety range	WPA/WPA2/WPA2-Enterprise/WPS
	Encryption type	AES/RSA/ECC/SHA

Module Pin description :

Num	Pin name	IO	Function
1	IO16	IO16	IO、GPIO16、U2RXD
2	IO17	IO17	IO、GPIO17、U2TXD
3	EN	EN	I、RESET PIN
4	3V3	—	O、DC POWER OUT
5	5V	—	O、DC POWER OUT
6	GND	—	—、GROUND
7	GND	—	—、GROUND
8	VIN	—	I、DC POWER IN
9	AD10	IO04	IO、GPIO04、ADC
10	AD13	IO15	IO、GPIO15、ADC
11	AD14	IO13	IO、GPIO13、ADC
12	AD15	IO12	IO、GPIO12、ADC
13	AD16	IO14	IO、GPIO14、ADC
14	AD17	IO27	IO、GPIO27、ADC
15	SDL	IO22	IO、GPIO22、I2C_SCL
16	SDA	IO21	IO、GPIO21、I2C_SDA
17	IO02	IO02	IO、GPIO02、ADC
18	GND	GND	—、GROUND
19	SCK	IO18	IO、GPIO18、SPI_SCK
20	MISO	IO19	IO、GPIO19、SPI_MISO
21	MOSI	IO23	IO、GPIO23、SPI_MOSI
22	SS	IO05	IO、GPIO05、SPI_SS
23	DA2	IO26	IO、GPIO26、DAC、ADC
24	DA1	IO25	IO、GPIO25、DAC、ADC
25	IO33	IO33	IO、GPIO33、ADC
26	IO32	IO32	IO、GPIO32、ADC
27	IO35	IO35	I、GPIO35、ADC
28	IO34	IO34	I、GPIO34、ADC
29	IO39	IO39	I、GPIO39、ADC
30	IO36	IO36	I、GPIO36、ADC
31	TX	IO01	IO、GPIO01、USART1_TX
32	RX	IO03	IO、GPIO03、USART1_RX

Electrical characteristics :

Power supply range : 5V1A (Micro USB) /12V1A (DC POWER)

Two kinds of power supply support automatic switching.

Port Electrical Characteristics :

Parameter	Name	Min	Type	Max	Unit
Input logic low	VIL	-0.3	-	0.825	V
Input logic high	VIH	2.475	-	3.6	V
Output logic low	VOL	-	-	0.3	V
Output logic high	VOH	2.64	-	-	V

Ep : ESP-WROOM-32 Supply voltage is 3.3V

Appearance Structural features:

I2C LCD screen fixing hole is M2 screw hole

Module fixing hole M3 fixing hole