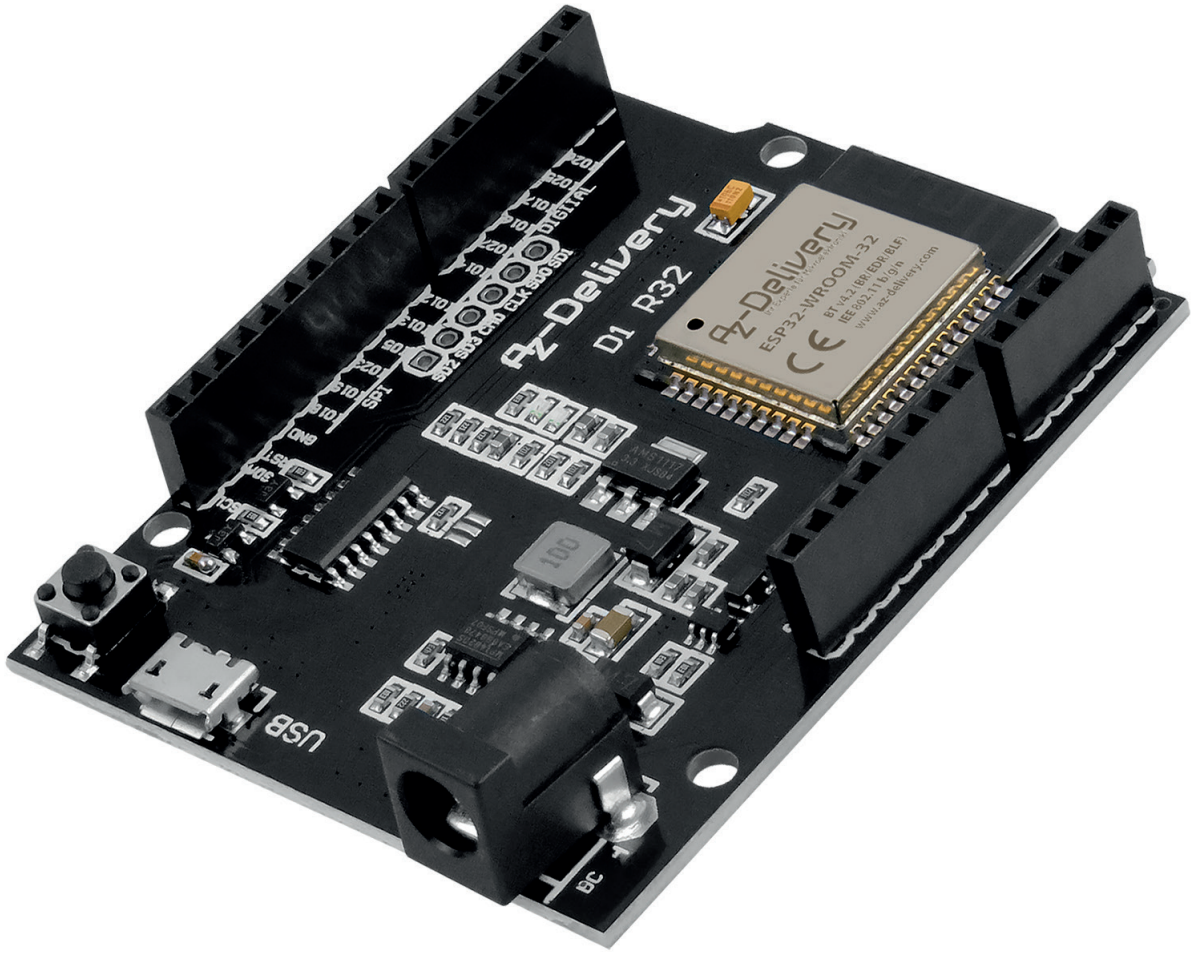
Ihr Experte für Mikroelektronik!

D1 R32 Board
Datenblatt



Content:

1. Specifications

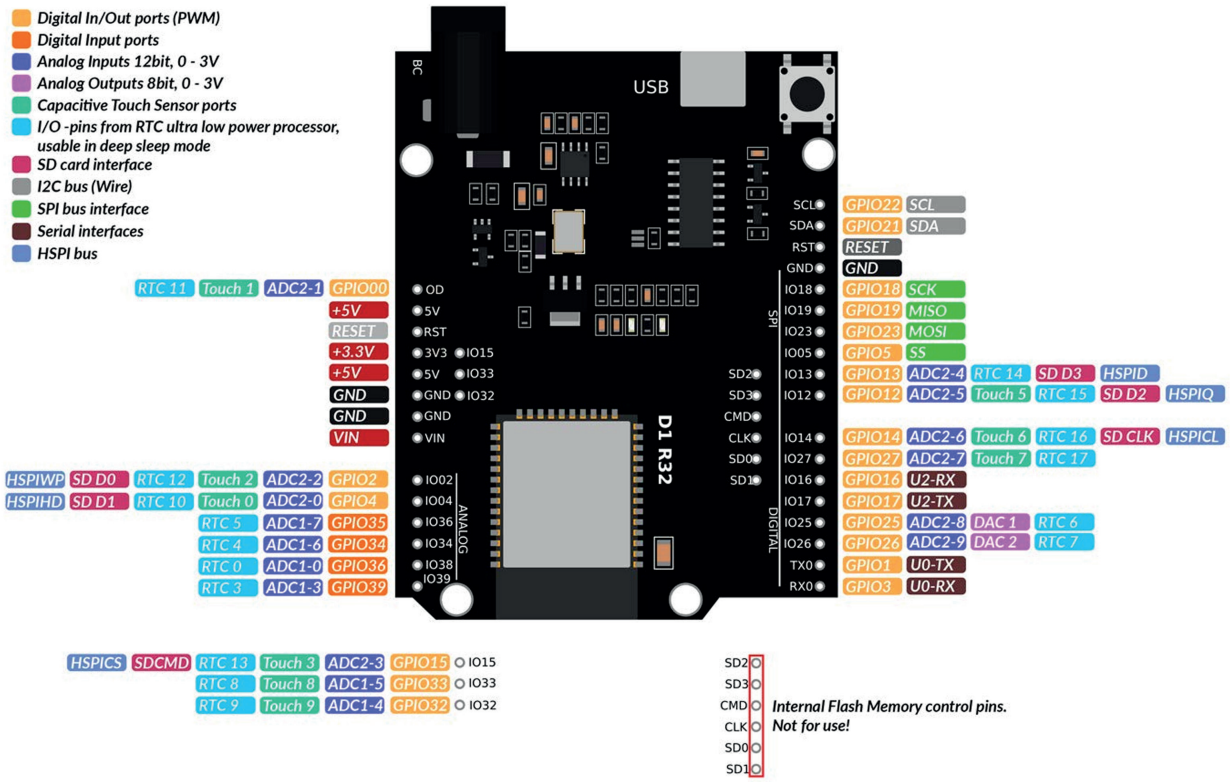
Power supply voltage (microUSB)	5VDC
DC input voltage	7-12V
Input/Output voltage	3.3V
Operating current required	min. 250mA
SoC	ESP32 WROOM-32
Clock frequency range	240MHz
RAM	512kB
External flash memory	4MB
Digital pins	20
Analog pins	6
Communication interfaces	SPI, I2C, I2S, IR, UART, PWM
Wi-Fi protocols	802.11 b/g/n/i (802.11n up to 150Mbps)
Wi-Fi frequency	2.4 GHz - 2.5 GHz
Wireless antenna	PCB
USB to Serial chip	CH340
Dimensions	70x55x13mm(2.7x2.1x0.5in)

2. Features

This module comes with many GPIOs and support for a variety of protocols like SPI, I2C, I2S, UART, and more. Remarkable is that it comes with wireless networking included, which makes it different to other micro controllers like the Arduino. This means that it can easily control and monitor devices remotely via Wi-Fi and Bluetooth® at an affordable price.

ESP32 WROOM-32 is a system-on-chip (SoC) integrating a 32-bit Tensilica microcontroller, standard digital peripheral interfaces, antenna switches, RF balun, power amplifier, low noise receiver amplifier, filters and power management modules into a small package. It provides 2.4GHz Wi-Fi (802.11 b/g/n, supporting speed up to 150MB/s), BLE and classic Bluetooth® wireless communication, Overall pins provide connectivity to GPIO pins supporting PWM (Pulse Width Modulation), GPI pins (input only), Capacitive Touch Sensors, I2C and I2S interfaces, ADC (analog to digital conversion), DAC (digital to analog conversion), SPI interface or UART on dedicated pins.

3. Pinout



D1 R32 has digital input/output pins (GPIO pins - General Purpose Input/Output pins). These digital input/outputs operate at 3.3V.

5V voltage must not be connected to any ESP32 chip pins!

The pins are not 5V tolerant, applying more than 3.3V on any pin will destroy the chip.
The GPIO pins 34 to 39 are GPIs – input only pins. These pins do not have internal pull-ups or pull-down resistors. They cannot be used as outputs, so use these pins only as inputs: GPIO34, GPIO35, GPIO36, GPIO39.
There is an integrated SPI flash on the ESP-WROOM-32 chip. The pins GPIO6 to GPIO11 are exposed in certain ESP32 development boards. These pins: GPIO6(SCK/CLK), GPIO7(SDO/SD0),GPIO8(SDI/SD1), GPIO9(SHD/SD2), GPIO10(SWP/SD3), GPIO11(CSC/CMD) are connected to the integrated SPI flash on the chip and are not recommended for other uses.