



The PHY is setted up as follows:
MODE: All capable(10/100Base)
–Auto–negotiation enabled
–RMII Configuration
–SMI address: 0x00

[illegible]

ESP-WROOM-32 MODULE

Pinout diagram for the ESP-WROOM-32 module. The diagram shows a 40-pin package with pins numbered 1 to 40. The connections are as follows:

- Pins 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40 are labeled.
- Pin 1: 3.3V
- Pin 2: GND
- Pin 3: R32
- Pin 4: 1K/RA0402
- Pin 5: ESP_EN
- Pin 6: GND
- Pin 7: THERMAL_PAD
- Pin 8: EN
- Pin 9: NC
- Pin 10: GPIO12/ADC2_CH5/TOUCH5/RTC_GPIO15/MTD0/HSPIO4/HS2_DATA2/SD_DATA2/EMAC_TXD3
- Pin 11: GPIO13/ADC2_CH4/TOUCH4/RTC_GPIO14/MTCK/HSPIB/HS2_DATA3/SD_DATA3/EMAC_RX_ER
- Pin 12: GPIO14/ADC2_CH6/TOUCH6/RTC_GPIO16/MTMS/HSPICLK/HS2_CLK/SD_CLK/EMAC_TX_ER
- Pin 13: GPIO15/ADC2_CH3/TOUCH3/MTD0/HSPIC50/RTC_GPIO13/HS2_CMD/SD_CMD/EMAC_RXD3
- Pin 14: GPIO16/HS1_DATA4/UTXRXD/EMAC_CLK_OUT
- Pin 15: GPIO17/HS1_DATA5/UTXD/EMAC_CLK_OUT_180
- Pin 16: GPIO18/VSPICLK/HS1_DATA7
- Pin 17: GPIO19/VSPIDU/UTCS/EMAC_TXD0
- Pin 18: GPIO21/VSPHID/EMAC_TX_EN
- Pin 19: GPIO22/VSPWIP/UARTS/EMAC_TXD1
- Pin 20: GPIO23/VSPID/HS1_STROBE
- Pin 21: GPIO25/DAC_1/ADC2_CH8/RTC_GPIO6/EMAC_RXD0
- Pin 22: GPIO26/DAC_2/ADC2_CH9/RTC_GPIO7/EMAC_RXD1
- Pin 23: GPIO27/ADC2_CH7/TOUCH7/RTC_GPIO17/EMAC_RX_DV
- Pin 24: GPIO32/XTAL_32K_P/ADC1_CH4/TOUCH4/RTC_GPIO32/XTAL_32K_N/ADC1_CH5/TOUCH8/RTC_GPIO8
- Pin 25: GPIO34/ADC1_CH6/RTC_GPIO4
- Pin 26: GPIO35/ADC1_CH7/RTC_GPIO5
- Pin 27: GPIO36/SENSOR_VP/ADC1_CH/ADC1_CH0/RTC_GPIO10
- Pin 28: GPIO39/SENSOR_VN/ADC1_CH3/ADC1_CH/RTC_GPIO3
- Pin 29: R44
- Pin 30: RA0402
- Pin 31: 3.3V
- Pin 32: GPIO0
- Pin 33: GPIO1/UTXD0
- Pin 34: GPIO2/HS2_DATA0
- Pin 35: GPIO3/UTXRXD
- Pin 36: GPIO4/UTXD0
- Pin 37: GPIO5/SPI_CS
- Pin 38: GPIO12/PW_PWR
- Pin 39: GPIO13/I2C_SDA
- Pin 40: GPIO14/HS2_CLK
- Pin 41: GPIO15/HS2_CMD
- Pin 42: GPIO16/I2C_SCL
- Pin 43: GPIO17/EMAC_CLK_OUT_180
- Pin 44: GPIO18/MQI0(RMI)
- Pin 45: GPIO19/EMAC_TXD0(RMI)
- Pin 46: GPIO21/EMAC_TX_EN(RMI)
- Pin 47: GPIO22/EMAC_TXD1(RMI)
- Pin 48: GPIO23/MDC(RMI)
- Pin 49: GPIO25/EMAC_RXD0(RMI)
- Pin 50: GPIO26/EMAC_RXD1(RMI)
- Pin 51: GPIO27/EMAC_RX_CRS_DV
- Pin 52: GPIO32
- Pin 53: GPIO33
- Pin 54: GPIO34/BUT1
- Pin 55: GPIO35
- Pin 56: GPIO36/UTXRXD
- Pin 57: GPIO39

The Input filter capacitor must be $>5 \mu\text{F}$ for MPS1

250mV(50mA@5V) minimal power consumption on the PD required for Maintain Power Signature(MPS1)!

Class=0 (0.44 to 12.95W)

$V_{\text{OUT}} = 1.35 * (1 + R_a/R_b)$

Si3402-B-GM(QFN-20, 5x5mm)

Internal Bootstrapping Resistors			
MTDI/GPIO12:		Pull—Down	
GPIO0:		Pull—Up	
GPIO2:		Pull—Down	
GPIO4:		Pull—Down	
MTDO/GPIO15:		Pull—Up	
GPIO5:		Pull—Up	

Voltage of Internal LDO(VDD_SDI0)			
Pin	Default	3.3V	1.0V
GPIO12/MTDI	Pull—Down:	0	1

Bootling Mode			
Pin	Default	SPI Flash Boot	Downloaded Boot
GPIO0	Pull—Up	1	0
GPIO2	Pull—Down:	Don't-care	0

Debugging Log on UOTXD During Booting			
Pin	Default	UOTXD Toggling	UOTXD Silent
GPIO15/MTDO	Pull—Up	0	1

Timing of SDIO Slave			
Pin	Default	Falling-edgeOutput	Rising-edgeInput
GPIO15/MTDO	Pull—Up	Falling-edgeOutput	Rising-edgeOutput
GPIO5	Pull—Up	0	0
GPIO0	Pull—Up	0	1
GPIO5	Pull—Up	0	1

EXT1

Pin	Signal
1	+5V
2	+3.3V
3	GND
4	ESP_EN
5	GPIO0
6	GPIO1/UART0
7	GPIO2/HWS_DATA
8	GPIO3/UART0
9	GPIO4/UART0
10	GPIO5/SPIL

NS(HN1x10)

EXT2

Pin	Signal
1	GPI39
2	GPI36/UART0
3	GPI35
4	GPI34/UART1
5	GPI33
6	GPI32
7	GPI31/UART2-SCL
8	GPI30/HWS_CMD
9	GPI24/HWS_CLK
10	GPI33/UART2-SDA

NS(HN1x10)

Figure 1: Pin connections of the UEXT1 module. The diagram shows two 10-pin headers. The left header (UEXT1) is connected to a +3.3V supply via a 2.2k resistor (R31). The right header (UEXT2) is connected to a +3.3V supply via two 10k resistors (R35 and R37). The pins are labeled as follows: Pin 1: GPIO4/UITXD; Pin 2: GND; Pin 3: GPIO16/IZC-SC1; Pin 4: 1M81/MS4(SMT-123); Pin 5: GPIO15/HS2_CMP; Pin 6: HS2P; Pin 7: HS2CLK; Pin 8: HS2CLK; Pin 9: HS2CLK; Pin 10: HS2CLK. The right header (UEXT2) is connected to a +3.3V supply via two 10k resistors (R35 and R37). The pins are labeled as follows: Pin 1: GPIO36/UITRXD; Pin 2: GPIO13/IZC-SDA; Pin 3: GPIO2/HS2_DATA0; Pin 4: GPIO5/SPI_CS.



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