Power Supply

+5V_Only!!!

Battery Measurement

LiPo Charger

IBAT = 1000/Rprog = 500mA

Vout=0.6*(1+Ra/Rb)

ESP-WROOM-32 MODULE

ESP-WROOM-32 MODULE

Extension

Ethernet

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

LANB710A-EZC(QFN32)

Relays

Infrared Communication

UEXT

SD/MMC Card

Buttons

USB to UART

USB-UART1
MISB-SWMM-5B-LF(USB_MICRO)

Auto program

DTR	RTS	-> EN	IO0
1	1	1	1
0	0	1	1
1	0	0	1
0	1	1	0

CH340T(SSOP20W)

CAN Driver

SIT1050T(SOIC-8_150mil)

Options: MCP2562-E/SN, MCP2551-I/SN, SIT1050T , SIT1042T/3, SIT1051T/3 or SN65HVD232DI

Software Selectable Pins

Interface	Signal	Pin
EMAC	EMAC_MDC_out	Any GPIO
	EMAC_MDI_in	
	EMAC_MDO_out	
	EMAC_CRS_out	
	EMAC_COL_out	
I2C	I2CEXT0_SCL_in	Any GPIO
	I2CEXT0_SDA_in	
	I2CEXT0_SCL_in	
	I2CEXT0_SDA_in	
	I2CEXT0_SCL_out	
	I2CEXT0_SDA_out	
	I2CEXT1_SCL_out	
	I2CEXT1_SDA_out	
General Purpose SPI	HSPIQ_in/_out	Any GPIO
	HSPID_in/_out	
	HSPICLK_in/_out	
	HSPICS0_in/_out	
	HSPICS1_in/_out	
	HSPICS2_in/_out	
	VSPIQ_in/_out	
	VSPID_in/_out	
	VSPICLK_in/_out	
	VSPICS0_in/_out	
	VSPICS1_in/_out	
	VSPICS2_in/_out	

Mounting Holes

GND — MH2
GND — MH3

Internal Bootstrapping Resistors

MTDI/GPIO12:	Pull-Down
GPIO0:	Pull-Up
GPIO2:	Pull-Down
MTDO/GPIO15:	Pull-Up
GPIO5:	Pull-Up

Bootstrapping Pins Settings

		Voltage of Internal LDO(VDD_SDIO)	
	Default	3.3V	1.8V
GPIO12/MTDI	Pull-Down		
		Booting Mode	
Pin	Default	SPI Flash Boot	Download Boot
GPIO0	Pull-Up		
GPIO2	Pull-Down	Don't-care	
		Debugging Log on UDTXD During Booting	
Pin	Default	UDTXD Toggling	UDTXD Silent
GPIO15/MTDO	Pull-Up		
		Timing of SDIO Slave	
Pin	Default	Falling-edgeInput Falling-edgeOutput	Falling-edgeinput Rising-edgeOutput	Rising-edgeinput Falling-edgeOutput	Rising-edgeinput Rising-edgeOutput
GPIO15/MTDO	Pull-Up		
GPIO5	Pull-Up		

For more information refer to esp_wroom_32_datasheet_en.pdf.

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Sheet: /
File: ESP32-EVB_Rev_K1.sch
Title: ESP32-EVB
Size: A2   Date: 2023-04-14   Rev: K1
KiCad E.D.A. kicad 5.1.12-84ad8e8a8692ubuntu18.04.1   Id: 1/1