Module

U1
ESP32-S3-WROOM-1

BOOT	27	GPIO0/BOOT
EN	3	EN
GPIO1	39	GPIO1/TOUCH1/ADC1_CH0
GPIO2	38	GPIO2/TOUCH2/ADC1_CH1
GPIO3	15	GPIO3/TOUCH3/ADC1_CH2
GPIO4	4	GPIO4/TOUCH4/ADC1_CH3
GPIO5	5	GPIO5/TOUCH5/ADC1_CH4
GPIO6	6	GPIO6/TOUCH6/ADC1_CH5
GPIO7	7	GPIO7/TOUCH7/ADC1_CH6
GPIO8	12	GPIO8/TOUCH8/ADC1_CH7/SUBSPICS1
GPIO9	17	GPIO9/TOUCH9/ADC1_CH8/FSPIHD/SUBSPIHD
GPIO10	18	GPIO10/TOUCH10/ADC1_CH9/FSPICS0/FSPIIO4/SUBSPICS0
GPIO11	19	GPIO11/TOUCH11/ADC2_CH0/FSPID/FSPIIO5/SUBSPID
GPIO12	20	GPIO12/TOUCH12/ADC2_CH1/FSPICLK/FSPIIO6/SUBSPICLK
GPIO13	21	GPIO13/TOUCH13/ADC2_CH2/FSPIQ/FSPIIO7/SUBSPIQ
GPIO14	22	GPIO14/TOUCH14/ADC2_CH3/FSPIWP/FSPIDQS/SUBSPIWP
U0RTS	8	GPIO15/U0RTS/ADC2_CH4/XTAL_32K_P
U0CTS	9	GPIO16/U0CTS/ADC2_CH5/XTAL_32K_NH5
U1TXD	10	GPIO17/U1TXD/ADC2_CH6
U1RXD	11	GPIO18/U1RXD/ADC2_CH7/CLK_OUT3
3V3	2	3V3

GPIO20/U1CTS/ADC2_CH9/CLK_OUT1/USB_D+	14	USB_DP
GPIO19/U1RTS/ADC2_CH8/CLK_OUT2/USB_D−	13	USB_DN
U0TXD/GPIO43/CLK_OUT1	37	U0TXD
U0RXD/GPIO44/CLK_OUT2	36	U0RXD
GPIO21	23	GPIO21
GPIO45	26	GPIO45
GPIO46	16	GPIO46
GPIO48/SPICLK_N/SUBSPICLK_N_DIFF	25	GPIO48
GPIO47/SPICLK_P/SUBSPICLK_P_DIFF	24	GPIO47
SPIIO6/GPIO35/FSPID/SUBSPID	28	GPIO35
SPIIO7/GPIO36/FSPICLK/SUBSPICLK	29	GPIO36
SPIDQS/GPIO37/FSPIQ/SUBSPIQ	30	GPIO37
GPIO38/FSPIWP/SUBSPIWP	31	GPIO38
MTCK/GPIO39/CLK_OUT3/SUBSPICS1	32	MTCK
MTDO/GPIO40/CLK_OUT2	33	MTDO
MTDI/GPIO41/CLK_OUT1	34	MTDI
MTMS/GPIO42	35	MTMS
GND	1	GND
GND	40	GND
GND	41	GND

ESP32-S3-WROOM-1

GPIOs

GPIO47	LED_1
GPIO48	LED_2

Power

+3V3

3V3

GND

3V3

C2	C3
10uF	0.1uF

GND

Connector

J1
M2_E_KEY

GPIO46	44		43	GPIO9
GPIO45	42		41	GPIO10
GPIO38	40		39	GPIO11
GPIO37	38		37	GPIO12
GPIO36	36		35	GPIO13
GPIO35	34		33	GPIO14
GPIO21	32			

75	3V3
73	U1TXD
71	U1RXD
69	GND
67	USB_DP
65	USB_DN
63	GND
61	3V3
59	GPIO1
57	GPIO2
55	GPIO3
53	GPIO4
51	GPIO5
49	GPIO6
47	GPIO7
45	GPIO8

GND	22		23	MTMS
GND	20		21	MTDI
GND	18		19	MTDO
GND	16		17	MTCK
GND	14		15	GND
GPIO47	12		13	GND
GPIO48	10		11	U0CTS
EN	8		9	U0RTS
BOOT	6		7	U0RXD
3V3	4		5	U0TXD
3V3	2		3	3V3
			1	3V3

Module Supports

3V3

R1
10K

EN

C1
1uF

GND

3V3

R2
680

R3
510

R4
1K

LED_1

LED_2

D1
LED_BLUE

D2
LED_GREEN

D3
LED_RED

GND

SW1
SW_EN

EN

SW2
SW_BOOT

BOOT

GND

Please note ESP32-S3-WROOM-1 (None U) module won't fit on 2230 length board
Do NOT install this module in a normal computer!
This desing is not meant to be used in standard M.2 sockets.

BlendEthanol by BZH Embedded Solutions

Sheet: /
File: CORE_ESP32S3U_NGFF_KEY_E.kicad_sch

Title: ESP32-S3-WROOM-1[U] M.2(E-Key) Module

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