

Item	Qty	Reference(s)
	16	4 H1, H2, H3, H4
	23	1 J8
	53	1 U9
	56	1 U12
	29	1 R4
	33	1 R14
	35	1 R17
	38	1 R26
	40	1 R31
	27	2 R1, R2
	30	2 R5, R10
	34	2 R15, R16
	36	2 R20, R21
	39	2 R29, R30
	28	3 R3, R23, R24
	37	3 R25, R27, R28
	9	1 C19
	32	4 R8, R18, R19, R22
	7	2 C8, C9
	11	2 C43, C44
	41	1 RN1
	44	1 RN7
	31	11 R6, R7, R9, R11, R12, R13, R32, R33, R34, R35, R36
	4	3 C4, C14, C26
	10	3 C21, C24, C34
	26	2 Q1, Q2
	2	4 C1, C2, C36, C37
	45	3 RN8, RN13, RN14
	3	7 C3, C27, C28, C29, C30, C31, C32
	5	7 C5, C6, C10, C11, C12, C13, C16
	6	7 C7, C15, C22, C25, C45, C46, C47
	43	4 RN3, RN4, RN5, RN6
	19	1 J3
	42	5 RN2, RN9, RN10, RN11, RN12
	8	11 C17, C18, C20, C23, C33, C35, C38, C39, C40, C41, C42
	13	1 D2
	46	1 SW1
	12	1 D1
	49	1 U4
	54	2 U10, U13
	20	1 J5
	58	1 Y1
	24	2 L1, L2
	14	1 D3
	18	2 J2, J4
	1	1 BT1
	50	2 U5, U6
	21	1 J6

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48	2 U2, U3
17	1 J1
25	1 LS1
15	6 D4, D5, D6, D7, D8, D9
22	1 J7
47	1 U1
52	1 U8
57	1 U14
51	1 U7
55	1 U11

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Value	LibPart
MountingHole_Pad	Mechanical:MountingHole_Pad
PROG	Connector_Generic:Conn_01x06
ESP32-WROVER	mch2021-rescue:ESP32-WROVER-corelib
LY68L6400	spiflash:SPIFLASH_QSPI
100R	Device:R
3.4k	Device:R
75k	Device:R
	100 Device:R_Small
10k	Device:R_Small
5k1	Device:R_Small
2k	Device:R
4k7	Device:R_Small
DNP	Device:R
TBD	Device:R_Small
	47 Device:R_Small
100k	Device:R_Small
2.2n	Device:C_Small
45.3k	Device:R
22p	Device:C
20p	Device:C
TBD	Device:R_Pack04
	47 Device:R_Pack04_Split
10k	Device:R
10u	Device:C
10u	Device:C_Small
Q_NMOS_GSD	Device:Q_NMOS_GSD
C_Small	Device:C_Small
	47 Device:R_Pack04
1u	Device:C
22u	Device:C
100n	Device:C
10k	Device:R_Pack04
AudioJack3	Connector:AudioJack3
100k	Device:R_Pack04
100n	Device:C_Small
LED	Device:LED
Power switch	Switch:SW_SPDT
RGB-5050	led:RGB-5050
XT4054K421MR-G	Battery_Management:MCP73831-2-OT
74LVC1G125	74xGxx:74LVC1G125
Micro SD card	Connector:Micro_SD_Card
16MHz	Device:Crystal_GND24_Small
2.2u	Device:L
CDBU0130R	Device:D_Schottky_Small
SAO	Connector_Generic:Conn_02x03_Odd_Even
LiPo	Connector:Conn_01x03_Male
SY6280AAC	Power_Management:AAT4610BIGV-1-T1
PMOD	Connector_Generic:Conn_02x06_Odd_Even

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SY8079AAC	Regulator_Switching:TLV62568DBV
USB_C_Receptacle_USB2.0	Connector:USB_C_Receptacle_USB2.0
Speaker_Crystal	Device:Speaker_Crystal
WS2812B	LED:WS2812B
LCD	Connector_Generic:Conn_01x40
IR1261	Interface_Optical:TSMP58000
MPR121Q	mch2021-rescue:MPR121Q-corelib
STM32F103C8Tx	MCU_ST_STM32F1:STM32F103C8Tx
MPU-6050	Sensor_Motion:MPU-6050
ICE40UP5K-SG48ITR	FPGA_Lattice:ICE40UP5K-SG48ITR

Footprint	Datasheet
corecode:HOLE-M3-COND	~
Connector:Tag-Connect_TC2030-IDC-NL_2x03_P1.27mm_Vertical	~
custom:ESP32-WROVER	<a href="https://www.espressif.c">https://www.espressif.c</a>
Package_SO:SOIC-8-1EP_3.9x4.9mm_P1.27mm_EP2.41x3.81mm	
Resistor_SMD:R_0603_1608Metric	~
Resistor_SMD:R_0603_1608Metric	~
Resistor_SMD:R_0603_1608Metric	~
Resistor_SMD:R_0603_1608Metric	~
Resistor_SMD:R_0603_1608Metric	~
Resistor_SMD:R_0603_1608Metric	~
Resistor_SMD:R_0603_1608Metric	~
Resistor_SMD:R_0603_1608Metric	~
Resistor_SMD:R_0603_1608Metric	~
Resistor_SMD:R_0603_1608Metric	~
Resistor_SMD:R_0603_1608Metric	~
Resistor_SMD:R_0603_1608Metric	~
Capacitor_SMD:C_0603_1608Metric	~
Resistor_SMD:R_0603_1608Metric	~
Capacitor_SMD:C_0603_1608Metric	~
Capacitor_SMD:C_0603_1608Metric	~
Resistor_SMD:R_Array_Convex_4x0603	~
Resistor_SMD:R_Array_Convex_4x0603	
Resistor_SMD:R_0603_1608Metric	~
Capacitor_SMD:C_0603_1608Metric	~
Capacitor_SMD:C_0603_1608Metric	~
Package_TO_SOT_SMD:SOT-23	~
Capacitor_SMD:C_0603_1608Metric	~
Resistor_SMD:R_Array_Convex_4x0603	~
Capacitor_SMD:C_0603_1608Metric	~
Capacitor_SMD:C_0603_1608Metric	~
Capacitor_SMD:C_0603_1608Metric	~
Resistor_SMD:R_Array_Convex_4x0603	~
Connector_Audio:Jack_3.5mm_PJ320D_Horizontal	~
Resistor_SMD:R_Array_Convex_4x0603	~
Capacitor_SMD:C_0603_1608Metric	~
LED_SMD:LED_0805_2012Metric_Castellated	~
Button_Switch_SMD:SW_SPDT_PCM12	~
LED_SMD:LED_RGB_5050-6	
Package_TO_SOT_SMD:SOT-23-5	
Package_TO_SOT_SMD:SOT-353_SC-70-5	<a href="http://www.ti.com/lit/sg">http://www.ti.com/lit/sg</a>
custom:MicroSD-SOFNG-TF-002-H18	<a href="http://katalog.we-onli">http://katalog.we-onli</a>
Crystal:Crystal_SMD_3225-4Pin_3.2x2.5mm	~
custom:Inductor_MSC20FC	~
Diode_SMD:D_0603_1608Metric	
Connector_PinSocket_2.54mm:PinSocket_2x03_P2.54mm_Vertical	~
Connector_JST:JST_PH_S3B-PH-SM4-TB_1x03-1MP_P2.00mm_Horizontal	~
Package_TO_SOT_SMD:SOT-23-5	
Connector_PinSocket_2.54mm:PinSocket_2x06_P2.54mm_Horizontal	~

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Package_TO_SOT_SMD:SOT-23-5	
Connector_USB:USB_C_Receptacle_HRO_TYPE-C-31-M-12	<a href="https://www.usb.org/site">https://www.usb.org/site</a>
Buzzer_Beeper:Buzzer_Murata_PKMCS0909E4000-R1	~
LED_SMD:LED_WS2812B_PLCC4_5.0x5.0mm_P3.2mm	<a href="https://cdn-shop.adafr">https://cdn-shop.adafr</a>
Connector_FFC-FPC:Hirose_FH12-40S-0.5SH_1x40-1MP_P0.50mm_Horizontal	~
OptoDevice:Vishay_MINICAST-3Pin	
Package_DFN_QFN:QFN-20-1EP_3x3mm_P0.4mm_EP1.65x1.65mm	
Package_QFP:LQFP-48_7x7mm_P0.5mm	<a href="http://www.st.com/st-we">http://www.st.com/st-we</a>
Sensor_Motion:InvenSense_QFN-24_4x4mm_P0.5mm	<a href="https://store.invense">https://store.invense</a>
Package_DFN_QFN:QFN-48-1EP_7x7mm_P0.5mm_EP5.6x5.6mm	<a href="http://www.latticesem">http://www.latticesem</a>

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LCSC	Mouser	Price	Sponsored	Total price
-	-	0 -		0
-	-	0 -		0
-	-	0 Y		0
-	-	0 Y		0
-	-	0.0005 N		0.0005
-	-	0.0005 N		0.0005
-	-	0.0005 N		0.0005
-	-	0.0005 N		0.0005
-	-	0.0005 N		0.0005
-	-	0.0005 N		0.001
-	-	0.0005 N		0.001
-	-	0.0005 N		0.001
-	-	0.0005 N		0.001
-	-	0.0005 N		0.001
-	-	0.0005 N		0.0015
-	-	0.0005 N		0.0015
-	-	0.002 N		0.002
-	-	0.0005 N		0.002
-	-	0.002 N		0.004
-	-	0.002 N		0.004
-	-	0.0042 N		0.0042
-	-	0.0042 N		0.0042
-	-	0.0005 N		0.0055
-	-	0.002 N		0.006
-	-	0.002 N		0.006
C313495	-	0.0035 N		0.007
-	-	0.002 N		0.008
-	-	0.0042 N		0.0126
-	-	0.002 N		0.014
-	-	0.002 N		0.014
C14663	-	0.002 N		0.014
-	-	0.0042 N		0.0168
C431535	-	0.018 N		0.018
C173315	-	0.0042 N		0.021
C14663	-	0.002 N		0.022
C396645	-	0.022 N		0.022
C319020	-	0.023 N		0.023
C219409	-	0.024 N		0.024
C141405	-	0.028 N		0.028
C703585	-	0.02 N		0.04
C125814	-	0.044 N		0.044
C13738	-	0.045 N		0.045
C375944	-	0.026 N		0.052
-	750-CDBU0130R	0.053 N		0.053
-	-	0.03 N		0.06
C265101	-	0.12 N		0.12
C55136	-	0.061 N		0.122
C239357	-	0.13 N		0.13

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C133751	-	0.067 N	0.134
C165948	-	0.19 N	0.19
-	-	0.21 N	0.21
C139127	-	0.037 N	0.222
C202114	-	0.37 N	0.37
-	-	0.4 N	0.4
C91322	-	0.77 N	0.77
C8734	-	0.97 N	0.97
C24112	-	1.27 N	1.27
-	842-40UP5KSG48ITR	5.29 N	5.29
Total			10.7848