

Bill Of Materials for 04 FLACUARIOT ESP32 MODULE

Design Title 04 FLACUARIOT ESP32 MODULE
Author
Document Number
Revision
Design Created Wednesday, September 8, 2021
Design Last Modified Wednesday, September 15, 2021
Total Parts In Design 130

0 Modules

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>PCB Package</u>	<u>Description</u>
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Sub-totals:

21 Capacitors

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>PCB Package</u>	<u>Description</u>
9	C1-C4,C9-C12,C17	100nF	0603_CAP	100nF, 25V nickel barrier SMT ceramic chip capacitor
2	C5,C26	220uF	CAP SMD 6.3X7.7MM ALUMINUM 220UF/16V	Generic electrolytic capacitor
5	C6,C23,C25,C29,C35	100nF	0603_CAP	CAP .1uF 25V CERAMIC Y5V 0603
3	C18-C19,C34	10uF	1206_CAP	4.7uF, 16V nickel barrier SMT ceramic chip capacitor
1	C21	470uF	CAP SMD 10.5X10MM ALUMINUM 470UF/35V	470u 16V 440mA Radial Electrolytic capacitor
1	C22	47uF	CAP SMD 6.3X7.7MM ALUMINUM 220UF/16V	Generic electrolytic capacitor

Sub-totals:

51 Resistors

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>PCB Package</u>	<u>Description</u>
17	R1-R4,R9-R12,R34,R37,R40,R43,R58-R59,R61-R62,R76	10k	0603_RES	Generic resistor symbol
8	R13-R16,R21-R24	4.7K	0603_RES	Generic resistor symbol
4	R17-R20	20k	0603_RES	Generic resistor symbol
4	R25-R28	680	0603_RES	Generic resistor symbol
9	R33,R36,R39,R42,R57,R60,R64,R71,R77	1k	0603_RES	Generic resistor symbol
4	R35,R38,R41,R44	4.7k	0603_RES	Generic resistor symbol
3	R63,R74-R75	10k	0805_RES	Generic resistor symbol
2	R84,R168	470	0603_RES	Generic resistor symbol

Sub-totals:

17 Integrated Circuits

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>PCB Package</u>	<u>Description</u>
1	U1	74HC14	TSSOP14	Hex Schmitt-Triggered Inverters
2	U2,U19	74LS541	DIL20	Octal Buffers And Line Drivers With Tristate Outputs
6	U3-U4,U6,U9,U14,U16	PC817X11J	PC817X11J	Transistor Output Optocouplers
1	U5	ESP32DEVKITV1	ESP32DEVKITV1	
1	U7	TS78M05CP	TS78M05CP	5 V FIXED POSITIVE REGULATOR, PSSO2
1	U10	DS3231SN	SOIC127P1032X265-16N	Real Time Clock Serial Maxim DS3231SN# Real Time Clock, Battery Backup, Calendar, Clock, I2C, 5.5 V, 16-Pin SOIC
1	U11	LM2576-3,3	TO170P1410X464-6	Power Converter 150-kHz 1-A Step-Down Voltage Regulator.

1	U12	7812 TO263	TO263	12V Fixed 1A Positive Power Supply Regulator.
1	U13	LD1117S33 SOT-223	SOT230P700X180-4	Low Dropout Fixed and Adjustable Positive Voltage Regulators.
1	U15	LM358N	SO8	Dual, Low Power Operational Amplifier
1	U18	AT24C512B	SO8	512k-bit 65536x8 I2C serial EEPROM memory with WPT and address select (400kHz @ 1.8V/5ms)

Sub-totals:

8 Transistors

Quantity	References	Value	PCB Package	Description
7	Q1-Q4,Q9-Q10,Q13	PMBT3904,215	SOT23-3	Silicon NPN Low Power High Frequency Bipolar Transistor (350mW, 150°C)
1	Q14	P2003ED	TO252	100V P-Channel MOSFET

Sub-totals:

17 Diodes

Quantity	References	Value	PCB Package	Description
4	D1-D4	LED smd 0603	LEDC1608X60	Animated LED model (Green)
4	D10,D12,D14,D16	1n4007 Smd Do-214	SOD2614X116	Silicon Rectifier. Maximum Recurrent Peak Reverse Voltage 50V. Maximum Average Forward Rectified Current 1.0A
4	D11,D13,D15,D17	LED smd 0603	LEDC2012X120	Animated LED model (Red)
1	D28	SS14-TP	DIOM5226X230N	DIODE SCHOTTKY 30V 1A DO-214AA
1	D29	B330A-13-F	DIOM5226X230N	DIODE SCHOTTKY 30V 1A DO-214AA
1	D30	LED-RED	LEDC2012X120	Animated LED model (Red)
2	D33,D66	1N4148W	SOD123	1kV 1A 1.3V @ 1A SOD-123 Diodes - General Purpose RoHS

Sub-totals:

16 Miscellaneous

Quantity	References	Value	PCB Package	Description
1	BAT1	3V	BAT 3V EG	Battery (single-cell)
2	BLUETOOTH,LCD	CONN-H4	CONN-SIL4	Generic header block (mixed SIL/DIL packaging)
1	F1	1A	FUSE SMD	Animated Fuse model
2	J2,J4	TBLOCK-M4	TBLOCK-M4	Metric pitch terminal block
2	J3,J5	TBLOCK-M2	TBLOCK-M2	Metric pitch terminal block
1	J8	TBLOCK-M2	T-BLOCK 2PIN BLUE	Metric pitch terminal block
1	L1	100u	SMD 12.5X12.5X5MM	INDUCTOR FIXED SMD 100uH 10%
1	LCD1	OLED12864I2C	NULL	128x64 Graphical LCD with SSD1306 controller.
4	RELAY5-RELAY8	12 Vcc. 10 Amp	117211503	Relay: electromagnetic; SPDT; Ucoil:12VDC; 10A/277VAC; 10A/28VDC
1	SPI	CONN-SIL6	CONN-SIL6	0.1in pitch SIL connector strip

Sub-totals:

Totals:

Thursday, September 16, 2021 11:06:17 AM