Item	Build Level	Designator	Qty	Part Number	Alternatives	Mouser Ref	Banggood Ref	Optional?	Notes	Link
1	PCB	U5	1	DS3231SN#T&R	DS3231S#T&R, DS3231SN#, DS3231S#	700-DS3231SN#T&R-	-	Yes, fit if you want the real time clock (RTC)	DS3231S is rated for 0 to 70°C, DS3231SN is rated for -40 to 85°C	https://www.mouser.co.uk/ProductDetail/700-DS3231SN#T&R-
2	PCB	BZ1	1	CMI-1295-0585T	Any 12mm x 9.5mm 5V Buzzer	490-CMI-1295-0585T	-	Yes, used for low voltage alarm		https://www.mouser.co.uk/ProductDetail/490-CMI-1295-0585T
3	PCB	P12	1	SSW-120-01-T-D	Any 2.54mm 20x2 8.51mm tall header, single strips also work	200-SSW12001TD	-	No		https://www.mouser.co.uk/ProductDetail/200-SSW12001TD
4	PCB	BT1	1	Keystone Electronics 1069	-	534-1069	-	Yes, fit if you want the real time clock (RTC)		https://www.mouser.co.uk/ProductDetail/534-1069
5	PCB	C1,C2	2	C0805C104KMRECAUTO	Any 0805 X7R 100nF capacitor	80-C0805C104KMRECAUT	-	Yes, these are decoupling capacitors for INA219 and DS3231.		https://www.mouser.co.uk/ProductDetail/ 80-C0805C104KMRECAUT
6	PCB	D1,D3	2	150080VS75000	Any 0805 LED	710-150080VS75000	-	Yes, only fit if you want the onboard power and status LED's	These are driven by 3.3V so check forward volt drop if using blue or white LED's and adjust 220r resistor accordingly	https://www.mouser.co.uk/ProductDetail/710-150080VS75000
7	PCB	P1	1	XT60 Male	Wire manually to the pad	-	45394	No		https://www.banggood.com/search/45394.html
8	PCB	P2,P3,P16,P17,P18	5	Not required	-	Not required	-	Yes, you can direct solder if required		https://www.mouser.co.uk/ProductDetail/Not required
9	PCB	P4	1	3 pin JST SM Female	-	485-1663	-	Yes, only needed if you want to use LED rope		https://www.mouser.co.uk/ProductDetail/485-1663
10	PCB	P5,P14,P15	3	Not required	-	Not required	-	Yes, you can direct solder if required		https://www.mouser.co.uk/ProductDetail/Not required
11	PCB	P11	1	Not required	-	Not required	-	Yes, you can direct solder if required		https://www.mouser.co.uk/ProductDetail/Not required
12	PCB	Q1,Q2	2	IRLML6344TRPBF	Any GSD SOT-23 N channel MOSFET	942-IRLML6344TRPBF	-	Yes, 1 is used for optional switched buzzer, the other is used for optional fan enable control	Make sure if you use an alternative the gate, source and drain pins match the suggested one	https://www.mouser.co.uk/ProductDetail/942-IRLML6344TRPBF
13	PCB	R1	1	TLRP3A30WR100FTE	Any 2512 0.1 ohm 1% 3W resistor	279-TLRP3A30WR100FTE	-	Yes, only fit if you wish to use the current reference		https://www.mouser.co.uk/ProductDetail/279-TLRP3A30WR100FTE
14	PCB	R2,R7,R8,R9,R11,R12,R13	7	CR0805-JW-104ELF	Any 0805 100k 5% (or better) resistor	652-CR0805JW-104ELF	-	No	Buy a few extra in case you drop some	https://www.mouser.co.uk/ProductDetail/652-CR0805JW-104ELF
15	PCB	R3,R4,R5,R10,R14	5	CR0805-JW-103ELF	Any 0805 10k 5% (or better) resistor	652-CR0805-JW-103ELF	-	No	Buy a few extra in case you drop some	https://www.mouser.co.uk/ProductDetail/652-CR0805-JW-103ELF
16	PCB	R6,R29	2	CR0805-JW-221ELF	Any 0805 220r 5% (or better) resistor	652-CR0805-JW-221ELF	-	Yes, only fit if you want the onboard power and status LED's	Buy a few extra in case you drop some	https://www.mouser.co.uk/ProductDetail/652-CR0805-JW-221ELF
17	PCB	RX1,RX2,RX3,RX4,RX5,RX6	6	RX5808	IDC-RF variant may be cheaper on banggood	-	84775	Yes, 1 of these is required for each node you wish to fit		https://www.banggood.com/search/84775.html
18	PCB	U1	1	INA219AIDR	INA219AID, INA219BID, INA219BIDR	595-INA219AIDR	-	Yes, only fit if you wish to use the current reference	The INA219B is more accurate than the A variant	https://www.mouser.co.uk/ProductDetail/595-INA219AIDR
19	PCB	U2,U3,U4	3	MP1584	-	713-106990005	-	Yes, 1 of these is optional and only used for RGB LED's	Mouser variant only claims up to 18V input voltage, variants up to 28V exsist on eBay and are also cheaper, make sure you get the board and not a single IC	https://www.mouser.co.uk/ProductDetail/713-106990005
20	PCB	U2,U3,U4	1	22-28-4301	Any 2.54mm header	538-22-28-4301	-	No		https://www.mouser.co.uk/ProductDetail/538-22-28-4301
21	PCB	U6	1	STM32F103C8T6	-	-	1668936	No		https://www.banggood.com/search/1668936.html
22	PCB	BT1	1	CR1632	CR1620, CR1616	-	-	Yes, fit if you want the real time clock (RTC)	CR1632 (140mAh) will last the longests. CR1620 (75mAh), CR1616 (50mAh)	
23	PCB	PCB	1	From Github	-	-	-	No		https://www.pcbway.com/project/shareproject/RotorHazard_6_Node_STM32_Lap_Timer.html
24	Assembly		1	RASPBERRYPI_3B+	Raspberry Pi 4	-	1041862	No		https://www.banggood.com/search/1041862.html
25	Assembly		1	8GB + Micro SD card	Any micro SD card between 8GB and 64GB	467-SDSDQAF3-008G-I	-	No		https://www.mouser.co.uk/ProductDetail/467-SDSDQAF3-008G-I
26	Assembly		1	Raspberry Pi heat syncs	-	-	1047433	Yes, either use this or the fans		https://www.banggood.com/search/1047433.html
27	Assembly		1	LCD Voltage Screen	-	-	1530256	Yes, only needed if you want to have a voltage LED on the case		https://www.banggood.com/search/1530256.html
28	Assembly		6	RX5808 Heat Syncs	Anything up to 24x20x6.5mm	-	1593902	Yes, either use these or the fans	The part linked in a 5 pack from banggood	https://www.banggood.com/search/1593902.html
29	Assembly		1	Thermal Glue	-	-	-	Yes, either use this or the fans	used to secure the RX5808 heat syncs	

30	Assembly		11	M3 8mm Screw	Longer screws may be ok too	-		-	No		
31	Assembly		4	M2.5 Countersunk 10mm screw	Longer screws may be ok too	-		-	No		
32	Assembly		2	M2 5mm screw	Longer screws may be ok too	-		-	Yes, only needed if the voltage LCD is fitted		