

## BILL OF MATERIALS

Item	Quantity	Reference	Part / Value	Tolerance %	Voltage Current	WATT	TECNOLOGY information	PACKAGE	Manufacturer	Manufacturer Code	RS/Distelec/Other Code	More Info
1	1	B1	TD-0341 [RESET/Black]				Surface Mount Tactile Switch	SMD	any		RS code: 183-701	
2	1	C1	1nF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805				
3	13	C2,C3,C7,C10,C12,C13,C14,C16,C17,C18,C19,C20,C21	100nF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805				
4	3	C4,C5,C6	N.M.				Do Not Fit	Do Not Fit	Do Not Fit	Do Not Fit	Do Not Fit	
5	2	C8,C9	22pF	+/- 10%	50V		Ceramic capacitor X7R	SMD 0805				
6	1	C11	1uF	+/-20%	25V		Electrolytic Capacitor	Through Hole	Any		RS code: 176-8230	
7	1	C15	47uF	+/-20%	25V		Electrolytic Capacitor	Through Hole	Any		RS code: 449-1034	
8	1	TP_CH4	TEST POINT				Test Point	Test Point	Test Point	Test Point	Test Point	
9	3	DAC1,DAC2,GND	TEST POINT				1 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code:495-8470	
10	2	D1,D2	LL4148				Switching diode	SOD-80	any		Distrelec code: 601496	
11	2	JP1,JP2	JUMPER				3 way single row strip line connector (male connector) 2,00mm pitch	Vertical Through Hole	Any		RS code: 670-3689	Mount with Jumper (item 29) between pin 1 an pin 2, like silkscreen
12	1	J1	MOTOR_CONN				34 way IDC low profile boxed header 2,54mm pitch	Vertical Through Hole	Any		RS code: 461-792	
13	1	J4 (Place on bottom layer)	MOTOR_CONN				Strip line connector (female connector) 2x34 way double row 2,54mm pitch	Vertical Through Hole	Any		RS code: 4881730	Place on bottom layer
14	1	J2	SWD				20 way IDC low profile boxed header 2,54mm pitch	Vertical Through Hole	Any		RS code: 461-770	
15	1	J3	16 pin SPI, I2C, SCI				16 way IDC low profile boxed header 2,54mm pitch	Vertical Through Hole	Any		RS code: 461-764	
16	1	P1	DB9-Female				9 way r/a PCB D female,US footprint 8.1mm	Through Hole	Any		RS code: 542-8043	
17	1	R1	3.3K	+/-1%		1/8W	Resistor	SMD 0805				
18	2	R6,R8	330	+/-1%		1/8W	Resistor	SMD 0805				
19	1	R2	100K	+/-1%		1/8W	Resistor	SMD 0805				
20	1	R3	220	+/-1%		1/8W	Resistor	SMD 0805				
21	2	R4,R5	0	+/-1%		1/8W	Resistor	SMD 0805				
22	1	R7	47	+/-1%		1/8W	Resistor	SMD 0805				
23	1	R9	120	+/-1%		1/8W	Resistor	SMD 0805				
24	1	U1	STM32F100CBT6B				STM32F100CBT6B		STMicroelectronics	STM32F100CBT6B		
25	1	U2	L78L33ACUTR				Positive voltage regulators	SOT-89	STMicroelectronics	L78L33ACUTR		
26	1	U3	ST3232CTR				3 to 5.5 V, low power, up to 400 kbps RS-232 drivers and receivers	TSSOP16	STMicroelectronics	ST3232CTR		
27	2	U4,U5	SFH6156-2T				Optocoupler phototrans	SMD	Vishay/Semiconductors	SFH6156-2T	Digi-Key code: 751-1346-1-ND	
28	1	X1	8MHz				8 MHzCrystal	Through Hole	Any		RS code: 672-0268	
29	2	Jumper					2.54mm female jumper				RS code: 674-2381	