

Bill of Materials

PCB-mounted components

Ref	Qty	Value	Description	Source
A1	1		Arduino Nano v3.x	
C1	1	0.33 uF	Ceramic Capacitor	
C2	1	0.1 uF	Ceramic Capacitor	
D1, D3, D4, D5	4	1N5822	Diode	
D2	1	10A10	Diode	
J1, J2, J3, J12, J15-J22, J30	13	2-pin	JST-XH PCB-mount male connector	
J4, J5, J6, J8	4	4-pin	JST-XH PCB-mount male connector	
J9-J11, J14	4	3-pin	JST-XH PCB-mount male connector	
Q1, Q2, Q3, Q4	4	FQP30N06L	30A Id, 50V Vds, N-Channel Power MOSFET, TO-220	
R1, R10, R12, R15, R16, R17	6	10k	Resistor	
R2, R9, R11, R14	4	330R	Resistor	
R3, R4, R5	3	1k2	Resistor	
R6	1	1M	Resistor	
R7, R8, R13, R20	4	4k7	Resistor	
R18	1	1k	Resistor	
R19	1	2k2	Resistor	
U1	1	LM7808	Positive 1A 35V Linear Regulator, Fixed Output 8V, TO-220	

Additional Components

1	GX12-2 panel-mount male connector w/ matching female connector, power in	https://www.amazon.com/gp/product/B089YT6LFN
3	GX12-3 panel-mount male connector w/ matching female connector, temp sensors	https://www.amazon.com/gp/product/B06XRT2YFV

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3	RCA Female panel-mount connectors	https://www.amazon.com/gp/product/B07SS7JDLN
3	Waterproof DS18B20 temperature sensors	https://www.amazon.com/gp/product/B012C597T0
5	12-volt LEDs for power and heater status	https://www.amazon.com/dp/B07M9YT8C8
1	Temp/humidity sensor module: DHT11/21, HTU21D, AM2301	https://www.ebay.com/itm/191464821805
1	1.3" 128x64 OLED display	https://www.ebay.com/itm/391731053045
	JST-XH female connectors and pins as needed	