

Bill of Materials

PCB-mounted component

| Ref | Qty | Value | Description |
|----------------------------------|-----|-----------|---|
| 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 |
| 3 | GX12-3 panel-mount male connector w/ matching female connector, temp sensors |
| 3 | RCA Female panel-mount connectors |
| 3 | Waterproof DS18B20 temperature sensors |
| 5 | 12-volt LEDs for power and heater status |
| 1 | Temp/humidity sensor module: DHT11/21, HTU21D, AM2301 |
| 1 | 1.3" 128x64 OLED display |
| | JST-XH female connectors and pins as needed |

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| Source |
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<https://www.amazon.com/gp/product/B089YT6LFN>

<https://www.amazon.com/gp/product/B06XRT2YFV>

<https://www.amazon.com/gp/product/B07SS7JDLN>

<https://www.amazon.com/gp/product/B012C597T0>

<https://www.amazon.com/dp/B07M9YT8C8>

<https://www.ebay.com/itm/191464821805>

<https://www.ebay.com/itm/391731053045>