

BOM and Overview

For this project I am in the works of designing a humidity chamber for controlling the temperature of popcorn. My goals for this is for it to be under 50 dollars and to not look like a piece of crap.

Parts

- Sterilite 20 quart airtight container (could be any container)
- [W3005 Digital Display Microcomputer Humidity Controller 12V](#) (x2) (13.68)
- [Portable Mini Humidifier](#) (3.71)
- [Small Thermoelectric cooler kit](#) (5.89)
- [Thermoelectric Cooler 12706](#) (3.35)
- [Power Supply 12V 5A](#) (7.90)
- [DC-DC Buck Converter Single Square USB](#) (3.60)
- [DC-DC Buck Converter 12V-24V to 5V 3A](#) (4.62)

This makes the total cost 42.75\$ (excluding the container and other mounting hardware such as 3d prints). I will work on finding cheaper alternatives but as for the time being these are the cheapest parts. I hope to order these parts on 03/08/26.

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