

Temperature Control System

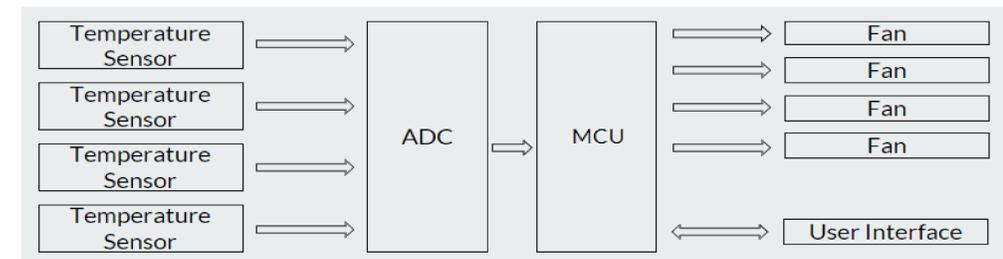
Project

Electronic devices need to stay cool to run properly. When you put an electronic device in an enclosed area it can block air flow and potentially cause the device to overheat. Temperature control systems are needed to monitor and prevent devices from overheating.

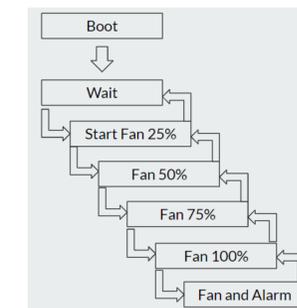
The temperature control systems most people use only have one sensor for an area. This requires multiple systems to cool cabinets with multiple shelves. My temperature control system will use four sensors to control the fans. Allowing up to four individual areas to be cooled with one system.



System



software

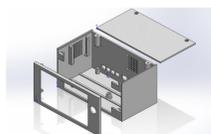


Methods

- PCB Design
 - The PCB uses 24V to reduce current
 - The PCB has connectors for fans and temperature sensors



- Case Design
 - Main Case used to mount the PCB and MCU
 - Face plate used to cover the mounting screws
 - Lid designed to be attached while reducing the number of screws needed



- GUI Design.
 - Timer for convenience
 - Clock for user to see the time
 - Displays temperature data and history



Conclusion

- The system graphs the last ten minutes of temperature data
- The system uses four temperature sensors
- The system displays real time temperature
- The system has a timer
- The system has a clock