

Title of Article : *Design of INTEL 8751 microcontroller based system for temperature monitoring and control of thermal process.*

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Abstract: An Intel 8751 microcontroller-based system was developed to monitor and control the temperature of an oven. The IN4148 signal diode was used as the temperature sensor and the on-off control algorithm was utilized with the system switching off the heating process whenever it attains the preset value. The system provides a digital readout of the system temperature and a status/blinker indicator showing whether heating is in progress or terminated. The control programs were loaded onto the memory of the microcontroller and the enable the selection of the different temperature values. The system improves accuracy by eliminating human participation and saves operator time. The system is easy to operate, maintain, and upgrade.