

INTRODUCTION

Heated seats are often thought of as a luxury item and are most often found in high-end cars. The actual technology behind heated seats, however, is no different than that used in electric blankets, hair dryers, water heaters, and anything else that uses electricity to produce heat. Heated seats are powered by a heating element, a long strip material that functions as a resistor. A seat heater is a pad or cushion that encompasses an electric heating system which boosts up surface temperature of the automotive seat at the will of the driver. Some of the key components of automotive seat heaters include heating element, resistor, relay, and thermostat. Seat heaters are either available as internally integrated into the seat, which is also called a heated seat, or as an external device in the form of a pad or cushion.

FEATURES

- ATMEGA328 microcontroller
- Temperature sensor
- Heat controller
- Button sensor
- Display LCD

SWOT Analysis

SWOT ANALYSIS

Strengths

- Strong capital position
- Low debt
- Defensible intellectual property
- Best salespeople

Weaknesses

- Branding could be better
- Products not differentiated enough
- Recent scandal from product failure

Opportunities

- Use strong financial position to make acquisition
- Acquire market share through branding
- Hire more talent

Threats

- Competitors could leverage brand strength
- Lack of differentiation could lead to price war
- May lose talent

4W & 1H

WHERE:

Seat heater is used in automobile cars

Who

Passengers or drivers in car

When

Depending on the temperature

What

It heats the car seat

How :

- 1.Button sensor will check the passenger is seated or not
- 2.Temperture sensor work as per mentioned
- 3.Display CDD-CRO will give the temperature value by showing PWM
- 4.Led actuator shows the driver is seated
- 5.Heater will check the heater button in ON

REQUIREMENTS

HIGH LEVEL REQUIREMENT

ID	DESCRIPTION	Status
HLR_1	Button sensor will check the passenger is seated or not	Implemented
HLR_3	Temperature sensor as per mentioned	Implemented
HLR_3	.Display CDD-CRO will give the temperature value by showing PWM	Implemented
HLR_4	Led actuator shows the driver is seated	Implemented

LOW LEVEL REQUIREMENT

ID	HLR	ADC VALUE	TEMP	STATUS
LLR_1	HLR_2	0-200	20 C	Implemented
LLR_2	HLR_2	210-500	25 C	Implemented
LLR_3	HLR_2	510-700	29 C	Implemented
LLR_4	HLR_2	710-1024	30 C	Implemented