

States:
OFF
HEAT
COOL
Transitions:
Button press cycles between them:
OFF → HEAT
HEAT → COOL
COOL → OFF
Actions:
On Enter HEAT → Red LED fades, Blue off
On Enter COOL → Blue LED fades, Red off
On Enter OFF → Both off
UP/DOWN buttons adjust temperature
UART sends data, LCD updates display

SysTec Smart Thermostat State Machine Diagram

