BLOCK DIAGRAM:

POWER SUPPLY
(5V / 3.3V Regulator)

LM35
Temperature Sensor
(10mV/°C)

ACS712
Current Sensor
(Hall Effect)

CRYSTAL
Oscillator
(8 MHz)

Analog

Analog

Clock

STM32F103C8 MICROCONTROLLER

- 12-bit ADC (PA0, PA1)
- Data Processing Unit
- USART1 Communication
- 72 MHz System Clock

- Temperature Conversion
- Current Calculation
- Data Formatting
- Real-time Logging

USART (9600 baud)

VIRTUAL TERMINAL
(PC Monitor / Data Logger)