EE-595

The follower of sun

--Solar Tracking Power Charging

Team 10

Picture from Wikipedia
https://en.wikipedia.org/wiki/Solar_tracker#/media/File:CPV_dual_axis_tracker.JPG

- Xiaoxiao Tian

- Ying Tan

- Jiahui He

- Zhuoxin Lu

- Lei Wang

- Shenghui Guo

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Description

- **Purpose of Product** It's a device that orients solar panels toward the Sun to improve efficiency of PV system.
- **Feature 1**

  Improves efficiency compared with the common system
- **Feature 2**

  Possess high tracking accuracy
- **Feature 3**

  Improves safety of power supply
- **Market**

  USA only

EE-595
Key Requirements

- **Cost**
  - Sales Price: $ 90 , Component Cost: $ 40 , Assembly & Test Costs: $ 10
- **Environment**
  - Outdoor, Stationary
  - Operating Temp Range: -20 - +45 ℃
  - Operating Humidity Range: 0 - 100%
- **Power Input(s)**
  - Other Power Input: Solar panels, 18 Volts, Max 0.56 Amps, 10W
  - Battery Power: Qty 1 of Lead-acid battery, 12 Volts, 20Ah
- **Major Functions, Quantities Measured, Displayed**
  - Function Examples: On, Off, Measure, Sleep, Program
  - Photo sensor

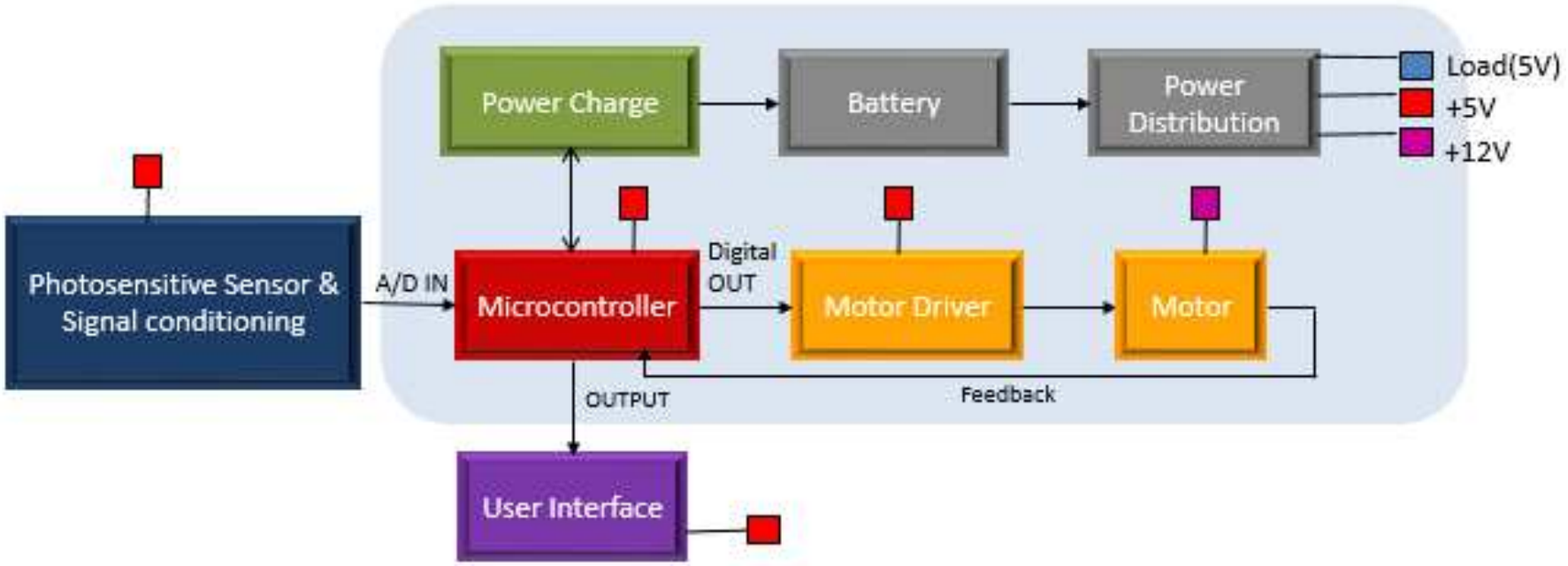
  Range :1000~120000Lux, Accuracy : +/- 50 Lux, Resolution:20Lux
  - Temp sensor

  Range: -20 - +45 ℃ , Accuracy: +/- 1 ℃, Resolution: 0.1 ℃
  - Voltage sensor

  Range: 0 to 12Volts, Accuracy: +/- 0.1volts, Resolution: 0.01V

U2

EE-595



Power Charge(Block A) : Shenghui Guo
Power Distribution(Block B) : Xiaoxiao Tian
Photo Sensor(Block C) : Ying Tan
Microcontroller(Block D): Lei Wang
Motor Driver(Block E): Zhuoxin Lu
User Interface(Block F) : Jiahui He