**Project Requirements**

1. **Customer Requirement:** The switch needs to work for household lights.

**Engineering Requirement:** The system will turn off and on at least 2 independent household lamps with up to 100W incandescent bulbs and report current, watts delivered by each channel.

**Video Link:** [**https://drive.google.com/open?id=16yEdlWDlFFpG6QOw5JxOZOtGQ275PeD2**](https://drive.google.com/open?id=16yEdlWDlFFpG6QOw5JxOZOtGQ275PeD2)

1. **Customer Requirement:** The system needs to have a simple application

**Engineering Requirement:** 9 out of 10 users will be able to turn the switches off and on from a mobile phone in less than 10 seconds without any training or having previously seen the interface.

**Video Link:** <https://drive.google.com/open?id=1O1EyOcDLu12New8I2GFcWm_yCnhrgijb>

1. **Customer Requirement:** The system must be safe.

**Engineering Requirement:** The system will use only US standard plugins for connecting to external devices and will not allow any object with a diameter greater than 1mm to enter the enclosure, and will be disable if more than 5A is drawn from the wall power.

**Video Link: n/a**

1. **Customer Requirement:** The system must have a timer

**Engineering Requirement:** The system must turn off the output after a time of upto 1 hour ± 1 minute when enabled.

**Video Link:**

1. **Customer Requirement:** The system must be wireless

**Engineering Requirement:** The system will be able to accept commands from a mobile phone over 20 feet away from the plugins.

**Video Link:** [**https://drive.google.com/open?id=16yEdlWDlFFpG6QOw5JxOZOtGQ275PeD2**](https://drive.google.com/open?id=16yEdlWDlFFpG6QOw5JxOZOtGQ275PeD2)

**Custom Requirements**

1. **Customer Requirement:** The system must have also have WiFi capabilities.

**Engineering Requirement:** The system will have WiFi capabilities 10m or more away from a standard household router and will have a web interface that is accessible from a laptop/browser.

**Video Link:** [**https://drive.google.com/open?id=19mwZAKYE-ISRbzGWQtPqgo2kJu3UbFjF**](https://drive.google.com/open?id=19mwZAKYE-ISRbzGWQtPqgo2kJu3UbFjF)

1. **Customer Requirement:** The system must have voice activation.

**Engineering Requirement:** The system must be able to accept voice commands through a mobile phone using the Google Now API for all functionality.  
**Video Link:** [**https://drive.google.com/open?id=14tiYX14Z124CaG4tt63vk4F\_OdVqUOqo**](https://drive.google.com/open?id=14tiYX14Z124CaG4tt63vk4F_OdVqUOqo)