

<b>Invention Title:</b>	Internet of Things Electrical Wall Switch
<b>Invention Summary:</b>	Provides a method for integrating the electrical switches in the home with the Internet of Things devices that are connect to the building internal power grid.
<b>Invention Description:</b>	see below
<b>Invention Commercial Value/Customers:</b>	Integrates mechanical switches with digital switches for IoT adoption Scalability Reduced costs to consumers Dedicated power supply
<b>Invention Differences:</b>	Updates existing infrastructure Solves issue for permanent fix lighting in residential and commercial buildings such as canned lighting

### *Internet of Things Electrical Wall Switch*

The adoption of the Internet of Things is creating problems in the electrical switches individuals have been using in their dwellings for past hundred plus years to control a variety of commercial products. The issue is the disjointedness created between mechanical light switches and remote controllable lighting through a wireless power outlet or an embedded within a light socket or bulb. The result is a dysfunctional light switch that has no meaningful purpose and causes confusion in consumers. This proliferates throughout the more than 130+ million households<sup>1</sup> in the U.S.

This document proposes a new design that can either replace or update an electrical wall switch in existing residential or commercial building. The design calls for the addition of three new elements into the switch: gears, a motor (similar to those used in a watch) and a Wi-Fi chip all attached to a computer circuit board, Figure 1 shows an example of one possible design (not to scale).

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<sup>1</sup> According to the 2013 Census Bureau estimates.

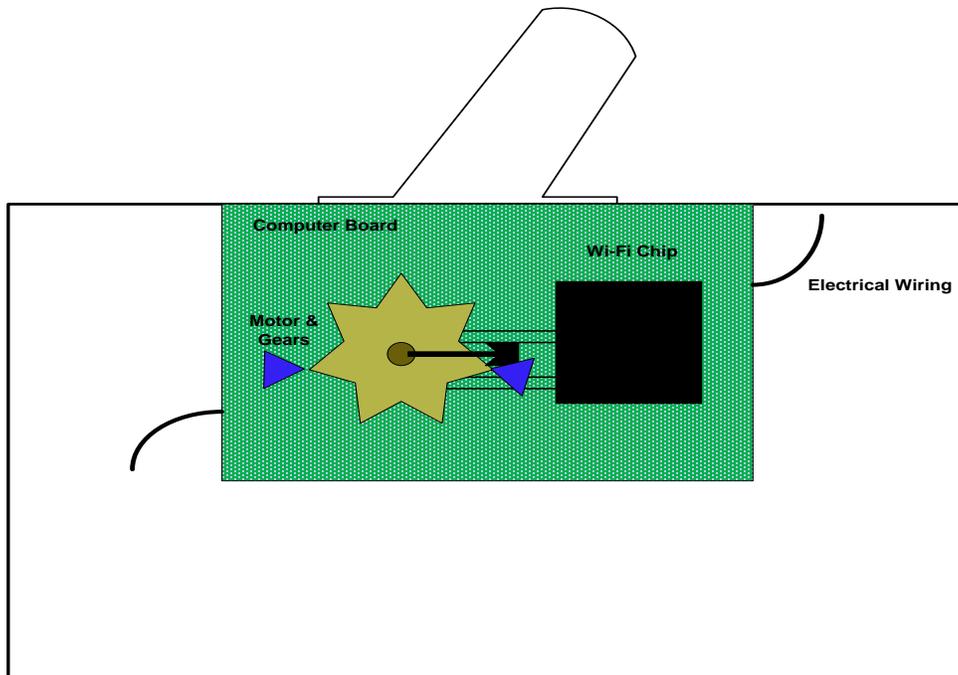


Figure 1 – IoT Electrical Wall Switch

The computer board is directly connected to the wiring in the switch for continuous power. As the consumer changes the power setting on a device controlled by the switch from a wireless device, the information is conveyed to the Wi-Fi chip in the Switch causing the gears and motor to toggle the switch to the appropriate position based upon the current setting of the device; on or off. When the Electrical Wall Switch is toggle, the motor and gears cause a message to be generated from the Computer Board to home automation system for relay to the appropriate user interfaces.