



Product Name	Smart Home with building energy management system (Under Development)
Category	Smart Home/office/building
Product Pictures	Not available (Under Development)
Product Scope	To develop smart home or office or building enabled with IoT interface and energy management system to provide user convenience and to help reduce power bills.
Need/Problem statement	<ul style="list-style-type: none"> • Presently primarily focusing on small and medium sized offices • Providing them user conveniences like controlling devices remotely through app or voice commands using Amazon Alexa or google home • With added advantage of monitoring electricity energy consumption. • Many studies suggests that there is potential for 30-40% of energy savings by optimizing the operations of electrical devices. Our product will help to identify and manage potential electrical energy wastage.
Product Details	<p>We are developing Smart Switch Boards (SSBs) which supports following features :</p> <ul style="list-style-type: none"> • On/Off control of devices connected to it • Speed control of devices like AC Fans • Intensity control of devices like LED Lights • Options to include sensors like temperature, humidity, fire, air quality, etc. <p>All these SSBs will be connected to a Host gateway module via 6LoWPAN based wireless Mesh network. Host gateway will be connected to internet by both GSM network using SIM Card and Local Wi-Fi network available. By having feature of GSM connectivity will eliminate need for 24 hours Wi-Fi availability. Android App will be used to control the devices. These Apps can connect with our SSBs either using Bluetooth or local Wi-Fi or global internet facility. Having Bluetooth connectivity from mobile phones will eliminate need of any kind of internet connection both to our SSBs and Mobile Phone users.</p>
Working	Working of Smart Switch Boards (SSBs) as explained above is based on Wireless Sensor Network concept where SSBs will act as end nodes connected to one Host gateway module. Host gateway module will create a 6LoWPAN based secure wireless Mesh network, with all communication routed to itself. Host gateway can have all types of connectivity like Wi-Fi, GSM, Bluetooth, etc. Android App on user mobile phone can connect to our SSBs either by Bluetooth without using internet or by using internet connectivity.
Technical Keywords	Wireless Sensor Network, MESH topology, Hopping concept, 865/868 MHz frequency, 6LoWPAN, RPL, UDP, Home Automation, Energy Management, Sensor technology