



STATE OF THE ART
LIGHTING.

www.meshtek.com



VISION

Illuminated Homes | Stunning Businesses | Beautified Smart Cities

MeshTek's reliable and worlds only long range Bluetooth mesh technology powers BlueHopper's lighting solution for homes, businesses, and municipalities. The 30+ patented, ready-to-go-hardware and the revolutionary Bluetooth mesh network solution gives reliable broadcast, connection, and remote access to 5000+ lighting devices spread over tens of millions of square feet.

With MeshTek's network technology home owners are able to control lights according to the holiday, businesses are able to create a delightful customer experience by controlling lights during various occasions. Municipalities benefit from the most versatile, robust, and affordable network technology that is capable of broadcasting, connecting, and controlling thousands of lighting devices.

THE CHALLENGE

Its very simple to describe the technology, but it took a lot of time and effort to research, plan, develop and implement the hardware and technology solution to enable customers to control the various aspects of their lighting installation remotely.

We identified some opportunities in lighting across the three main segments that we serve:

- Municipalities can have requirements that require controlling lights spread over a large volume of area with thousands of lighting devices.
- Manual control of lights, colors, effects during different occasions in a year can take up a lot of time and effort.
- There was a need of a device that can collectively enable all devices to send and receive signals to ensure streamlined communication.
- Wired system can be very complex when large volumes of devices are connected.
- Not everyone is present at all times to control lighting from the installation site.
- Traditional lights do not have the ability to send, store, analyze, and interpret any data.
- The lighting cannot be automated based on the dawn and dusk timings of a given region.

THE SOLUTION

The idea of being able to put up lights and never take them down, and being able to celebrate all year long in every season, holiday or just because, was never possible until Blue Hopper happened. We developed several lightings and devices for various applications that can be controlled via a single network gateway.

Meshtek Labs developed the proprietary BlueRoots Application that enabled users to control lighting remotely with a host of functions.



The Approach

MeshTek Labs has experts in lighting engineering with a team of highly experienced engineers in embedded systems, wireless systems, software applications, iOS/Android applications, Linux, database and backend systems, hardware designs. The team built a custom solution, which involved engineering the lights to communicate effectively within a wireless environment to send and receive signals. The solution was based on the world's only long range Bluetooth mesh technology.



- ▬ Schedules & Automation
- ▬ Effects, Presets & Scenes
- ▬ Multi-User Control
- ▬ Account Management
- ▬ Firmware & Feature Updates
- ▬ Installer Tools
- ▬ Integrations
- ▬ Google & Alexa Supported



APP SUPPORT

Bluetooth H52

It's a long range connectivity module with onboard PA + LNA and PCB Antenna. This complete platform solution includes software drivers, sample applications, API guide, user documentation and world-class support.

| Feature Support

Add network, Add group, Add devices, Alert on adding device, Controller pairing, Light selection, Installer can select no. of lights in each stripe, Color palette, Whites, Sliders, Effects (Color selection, custom color, preview), Scheduler, Multiple Logins, Manage Users, Music Sync.

Features Exclusive To Installers: Configure channel, Scale stripe length, Change direction, Over the Air Update enables updates for all devices in the network.

Repeater

The MeshTek Bluetooth repeater acts as a long range extender required in large projects or for extended control range requirements of over hundreds of meters. With a simple app based commissioning, the repeater becomes the part of the networked devices under the network, further enhancing the range of the Bluetooth mesh.

Astro Timer

MeshTek® Astronomical Timer allows users to Schedule Fixed or Astronomical Operations (Dawn / Dusk) using MeshTek® iOS or Android apps over a simple Bluetooth Low Energy (BLE) protocol. Device has an in-built Real Time Clock for time stamping and scheduling purposes.

**“ 35+ PATENTED READY-TO-GO
HARDWARE AND SOFTWARE ”**

BLE Remote

The MeshTek® BLE Remote allows users to control and monitor MeshTek® devices. The customizable buttons functionality, coupled with RGBW and CCT+/-, Dim+/- controls, make this remote versatile and user-friendly.

| Feature Support

On/Off Function for lighting, Warm and Cool Lighting Options, Dim +/- controls.

Smart Plug

Control devices connected to the MeshTek® SmartPlug using MeshTek® iOS or Android apps over a simple Bluetooth Low Energy (BLE) protocol.

Gateway: BLE-Ethernet-WiFi-Cellular

The MeshTek Gateway is a BLE to Wi-Fi IoT gateway. It allows users to control and monitor MeshTek® devices from MeshTek® app or cloud. The MeshTek® Gateway supports both Ethernet and Wi-Fi for connectivity to the local network and the internet.

Controllers (PWM, 4ch, 1ch, 0-10V)

Types of Lighting Controlled: 4 wire nuggets permanent roofline lighting, 3 wire C9 and Bullet types of lighting, string/patio lighting, and strip lighting.

Channel:
Single and 4 channel

Certifications:
FCC and IC

Scheduling Options:
Weekly, Annually and Calendar Wise

THE OUTCOME

BlueHopper's robust lighting system requires a one-time installation for many years of celebrations. You can choose and control the lights as per your holiday or occasion.



Schedules

Users can schedule lighting on weekly, monthly, yearly basis or even on astronomical timings with the help of BlueRoots app.

Effects, Presets, & Scenes

Whatever the occasion, users can select and customize light effects, presets, and scenes to set the perfect ambience.

Multi-User Account

With minimal training, anyone from home, business, or municipality establishment can control lighting with the help of the BlueRoots app.

RGBW Sliders

Users are able to schedule from the 16M colors available in different lighting, save their favorite slider effect, and create custom scenes for any festival or occasion.

Whites Control

From candle light warm white of 1800K to cool energetic white of 6800K, users have the option to set or schedule the white shade they prefer.

Feature Updates

New features are automatically added to your network and connected devices with our over-the-air (OTA) firmware update.



Celebrate any season or any reason with BlueHopper's state-of-art lighting and automation technology for your home, business, or municipality. BlueHopper's roofline & landscape lighting is a permanent decorative lighting solution for homes and businesses. Roofline lighting is designed to look like a string of traditional C9's at night, but during the day, they are invisible, hidden away under a decorative trim molding, while the landscape lighting has a complete range of products & solutions. App-controlled, with scheduling abilities and hundreds of color and dynamic and static motion patterns to choose from, the power-efficient and digitally addressable permanent LED lighting system is sure to add to any holiday, or event, or bring attention to a social cause. The plug-and-play control system is simple and complemented by advanced features and functionality.