

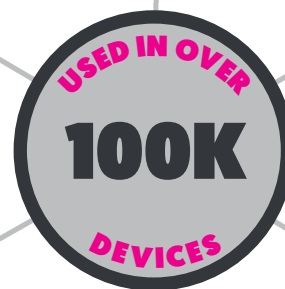


## Bluetooth® Mesh IoT Communication Platform

Control over 100 devices with self healing data routing

ilumi Solution's MeshTek™ Bluetooth Mesh is a software extension of the Bluetooth standard that creates an Internet of Things (IoT) platform to connect residential and commercial products, such as smart lights, sensors, and other items into a meshed network that increases both the number of devices that can work together and exponentially expands the effective range of meshed Bluetooth devices.

Products equipped with MeshTek software automatically join their network and can be programmed to connect to surrounding third party devices. The MeshTek network is self healing, enabling devices to be added or removed without compromising the overall mesh network communication structure. Both Bluetooth SIG standardized\* flooding mesh with a high speed, two way routing mesh data structure, MeshTek enables sophisticated operations such as over-the air firmware updates, confirmation, troubleshooting and other critical functions over standard Bluetooth channels, creating a supplemental capillary network perfect for consumer and commercial IoT functions.



### Features

#### Self Healing Mesh Network

MeshTek's networks will automatically add or remove devices from the meshed network without any additional custom code or software. ([Video](#))

#### Industry Standard Flooding Mesh

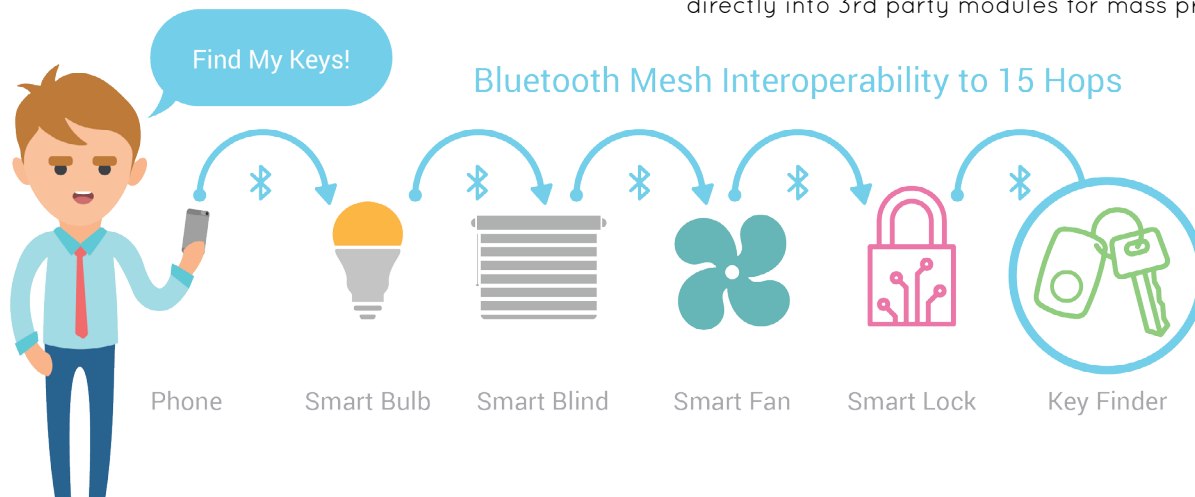
Support for Bluetooth SIG industry standard\*, "Flooding" or broadcast mesh for device interoperability.

#### Two-way High Speed Routing Mesh

Simultaneous two way data device meshing utilizing dynamic routing tables for embedded & Linux based applications with 110KB and higher\* data rates with large data packets for faster device communication.

#### Drop-in Meshing Software

Easy to install software stack using standard tools directly into 3rd party modules for mass production.



## Scalability

### Support over 100 devices on a single Bluetooth network

MeshTek software can create a large scale meshed device networks over 100 devices that can be controlled by a smartphone, gateway, or Linux controller. You can combine controllers and gateways for even larger implementations.

### Expanded range using Bluetooth meshing

Each device can communicate messages to other devices on the network up to 15 hops away, exponentially increasing the range of devices using a MeshTek enabled module such as key trackers to over 150m.

### Voice Control with ilumi Connect Gateway

Each MeshTek enabled device can be controlled by the leading voice control platforms such as Alexa and Google using when connected to the ilumi Connect gateway.

### Enhanced Beacon support

Control and update large numbers of Bluetooth beacons and manage location based data over long distances through the mesh for new and innovative applications such as IoT alarms, advertising, and inventory tracking.

## Cloud and Network Support

### Local, Phone, or Wi-Fi Cloud access

Products using MeshTek software can access the cloud using a dedicated controller, Wi-Fi gateway, or directly from a smart phone.

### No internet connection required

MeshTek networks can be locally controlled without any need for WiFi or dedicated connections. Perfect for remote or other applications where internet access may be limited.

### Unmatched Meshing Flexibility

Using MeshTek software, your device can switch from direct Bluetooth connection, flooding, or high speed two way routing mesh networking to deliver the right data to your IoT product and delight your customers.

### Security Layers

Each MeshTek enabled device has three layers of security, 1) Standard Bluetooth security, 2) Password protected network provisioning, and 3) Optional packet encryption.

### Three Channel Frequency Hopping

MeshTek software enhances reliability by utilizing all three Bluetooth channels. If one channel is blocked, it will automatically switch to another frequency.

## SDK & Application Support

### Easy Integration

ilumi provides a native mobile SDK for iOS and Android for easy integration into your application.

### Over the Air (OTA) Firmware upgrades

Each MeshTek enabled device will update its children's firmware automatically over-the-air in a chain reaction - where multiple devices are updating simultaneously, significantly reducing the time and hassle of maintain your devices.

### Future SDK Support for Linux\*

Create your own custom controllers and device environments using Linux SDK (under development).

### REST API for Lighting control

MeshTek software libraries are included to enable your device to connect and mesh with ilumi Smartbulbs and partner products.

To learn more please visit: [www.ilumisolutions.com](http://www.ilumisolutions.com) or email: [info@ilumisolutions.com](mailto:info@ilumisolutions.com)



Click here to see the self healing network in action

