STBLEMesh

Data brief

BLE Mesh application for Android and iOS

Product summary	
BLE Mesh application for Android and iOS	STBLEMesh
Mesh over Bluetooth low energy	STSW-BNRG-Mesh
Bluetooth low energy wireless system-on-chip/Bluetooth low energy network processor	BlueNRG-1 and BlueNRG-2/ BlueNRG-MS
Evaluation platform based on BlueNRG-132/ BlueNRG-232/ BlueNRG-248	STEVAL-IDB007V2/ STEVAL-IDB008V2/ STEVAL-IDB009V1
Bluetooth Low Energy expansion board based on SPBTLE-RF module for STM32 Nucleo	X-NUCLEO-IDB05A1
Mesh over Bluetooth low energy software expansion for STM32Cube	X-CUBE-BLEMESH1
STM32Cube function pack for IoT node with BLE Mesh connectivity and sensor model	FP-SNS-BLEMESH1

Features

- Android and iOS Mesh library based on Bluetooth® Specification Mesh Profile v1.0 and Mesh Model v1.0
- Creates connection with the Mesh nodes using the GATT bearer
- Node publication and subscription for group control
- Node configuration support for Proxy, Relay and Friend features
- Configuration database exchange via e-mail or Cloud
- Mesh message logging with onscreen logger for easy troubleshooting
- Generic model on/off control
- Generic level for intensity control
- Lighting model support (Lightness, CTL, HSL)
- Sensor model support for motion and environmental sensors
- Vendor model support
- Heartbeat feature
- Configuration and Health model support to configure and monitor nodes
- Applications available on Google Play store and iTunes store
- App sources and SDK available in STSW-BNRG-Mesh for user application development

Applications

- Smart home (lighting, HVAC, security and access control, healthcare)
- Asset tracking
- Assisted living
- Smart city (street lighting, general purpose messaging)

Description

STBLEMesh application for Android and iOS allows you to create your own Bluetooth® Mesh Profile compliant mobile Apps. The App can be used for provisioning, configuring and controlling multiple Bluetooth® Mesh Profile compliant devices in a BLE Mesh network for Internet of Things (IoT) solutions. Pre-compiled, ready-to-use Apps based on STBLEMesh SDK are available on Google Play and iTunes stores for a quick evaluation.

The STBLEMesh mobile App allows the user to provision the devices using the secure key distribution method (based on ECDH) and assign the unique addresses to the nodes. Once provisioned, the smartphone can configure, control and un-provision the nodes. It can create and delete groups, assign publication address and control the nodes. The STBLEMesh App can be used with firmware examples available in STSW-BNRG-Mesh, X-CUBE-BLEMESH1 and FP-SNS-BLEMESH1.

The App can share the Mesh network configuration among other provisioners (Android or iOS) via Cloud or e-mail, enabling more than one provisioner in the same Mesh network. You can download the App sources and SDK (STSW-BNRG-Mesh) and develop your own applications. The available SDK is intended to be used with ST BLE devices and includes Bluetooth® Mesh Profile stack implementation provided in binary format along with a full-fledged BLE Mesh App with complete source code. The SDK is available for both Android and iOS platforms with identical features.

Revision history

Table 1. **Document revision history**

Date	Version	Changes
06-Mar-2019	1	Initial release.

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