



Bluetooth® Mesh ADK 4.2.3.0

January 24, 2024

Bluetooth mesh is a new topology available for Bluetooth Low Energy (LE) devices that enables many-to-many (m:m) communication. It's optimized for creating large-scale device networks, and is ideally suited for building automation, sensor networks, and asset tracking. Our software and SDK for Bluetooth development supports Bluetooth Mesh and Bluetooth 5 functionality. Developers can add mesh networking communication to LE devices such as connected lights, home automation, and asset tracking systems. The software also supports Bluetooth beaconing, beacon scanning, and GATT connections so Bluetooth mesh can connect to smart phones, tablets, and other Bluetooth LE devices.

These release notes cover ADK version(s):

4.2.3.0 released on January 24, 2024 (underlying Bluetooth changes only)
4.2.2.0 released on August 16, 2023 (underlying Bluetooth changes only)
4.2.1.0 released on May 3, 2023
4.2.0.0 released on March 8, 2023
4.1.1.0 released on February 1, 2023
4.1.0.0 released on December 14, 2022
4.0.0.0 released on June 22, 2022



KEY FEATURES

- Support for mesh draft specification 1.1:
 - Mesh Protocol
 - Mesh Binary Large Object Transfer Model (MBT)
 - Mesh Device Firmware Update Model (DFU)

Compatibility and Use Notices

- This release is to be used with Bluetooth Mesh SDK 4.2.3.0.
- The iOS ADK supports the last three major releases of the iOS system (iOS 14, iOS 15 and iOS 16).
- The Android ADK supports the Android 8+ for the framework and Android 11+ for the reference application (the last three major releases of the Android system)

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1 Android

1.1 New Items

Added in release 4.1.0.0

Added Mesh Protocol 1.1: Remote Provisioning

Added Advertisement Extension feature configured via Silicon Labs Configuration vendor model.

Added in release 4.0.0.0

Added Mesh Protocol 1.1: Certificate-based Provisioning

Added Device Firmware Update (DFU) using Mesh Binary Large Object Transfer

1.2 Improvements

Changed in release 4.2.0.0

Performance and stability improvements

Changed in release 4.1.1.0

Performance and stability improvements

Changed in release 4.1.0.0

ID #	Description
1074002	Change calculation of automatic BLOB chunk size.
695846	Update Mesh Protocol 1.1 model identifiers.

1.3 Fixed Issues

Fixed in release 4.2.0.0

ID #	Description
1103503	Fixed losing connection with nodes
1081815	Fixed node being disconnected after certificate-based provisioning when on configuration screen of the Demo Application
1080430	Fixed Demo Application crash on remote provisioning when both device and root certificates are loaded from file.

Fixed in release 4.1.0.0

ID #	Description
1036367	Fix ProxyControl when connected to a node with a network identity.

1.4 Known Issues in the Current Release

None

1.5 Deprecated Items

In a future release, Application Key will be separated from Group because the Bluetooth Mesh Specification does not indicate a relationship between Application Key and Group.

1.6 Removed Items

None

1.7 API changes between 3.x and 4.

- Changed `setNetworks` and `getNetworks` to `setNetKeys` and `getNetKeys` in `BluetoothMeshConfigurationLimits`.
- Removed `BluetoothMeshConfigurationLimits.rplSize`.
- Removed `Network.primarySubnet`.
- Removed `Subnet.isPrimary`.
- Changed parameter type `result` for `SubnetRemovalCallback.error`.
- `ProvisionerConnection` has been rewritten to Kotlin.

2 iOS

2.1 New Items

Added in release 4.1.0.0

Added Mesh Protocol 1.1: Remote Provisioning

Added Advertisement Extension feature configured via Silicon Labs Configuration vendor model.

Added in release 4.0.0.0

Added Mesh Protocol 1.1: Certificate-based Provisioning

Added Device Firmware Update (DFU) using Mesh Binary Large Object Transfer

2.2 Improvements

Changed in release 4.2.0.0

Performance and stability improvements

Changed in release 4.1.1.0

Performance and stability improvements

Changed in release 4.1.0.0

ID #	Description
1077633	Supported iOS versions are: 14, 15 and 16
1074001	Change calculation of automatic BLOB chunk size.
695846	Update Mesh Protocol 1.1 model identifiers.

2.3 Fixed Issues

Fixed in release 4.2.0.0

ID #	Description
1103503	Fixed losing connection with nodes

Fixed in release 4.1.0.0

ID #	Description
856958	Use correct version for ADK logs.
711210	Fix SBMProxyControl when connected to a node with a network identity.

Fixed in release 4.0.0.0

ID #	Description
813278	Fix memory leaks and not working callbacks related to SBMProxyConnection. Only one connection object exists for a given device now.
758254	Fix typo in one of SBMSensorPropertiesGet properties.
448775	Fixed memory leaks causing provisioning fail.

2.4 Known Issues in the Current Release

None

2.5 Deprecated Items

In a future release, Application Key will be separated from Group because the Bluetooth Mesh Specification does not indicate a relationship between Application Key and Group.

2.6 Removed Items

None

2.7 API changes between 3.x and 4.x

- Added the `SBMDevice` protocol with fields `uuid` and `name` extracted from the `SBMConnectableDevice`.
- Removed `getPrimarySubnet` from `SBMNetwork` (it was redundant to calling `SBMNetwork.subnets.first`).
- Removed `primary` from `SBMSubnet` – the specification defines the primary subnet as the one with the `NetKey` at index 0x000.
- Removed error `SBMStackErrorBtSynchronousConnectionLimitExceeded`.
- Errors renamed:
 - `SBMErrorProxyAllowPacketsFromGroupsFailure` to `SBMErrorProxyAcceptPacketsFromGroupsFailure`
 - `SBMErrorProxyDenyPacketsFromGroupsFailure` to `SBMErrorProxyRejectPacketsFromGroupsFailure`
- `SBMBluetoothMeshConfiguration.initWithLocalVendorModels:andLogger:` adds the Silabs Config Client by default now.
- Changed `setNetworks` and `getNetworks` to `setNetKeys` and `getNetKeys`.
- Added new cases in `SBMControlValueSetVendorModel.h`.

3 Using This Release

3.1 Installation and Use

See *AN1200.1: iOS and Android ADK for Bluetooth® Mesh SDK 2.x and Higher* for information about required tools and compatible platforms.

3.2 Support

Development Kit customers are eligible for training and technical support. Use the [Silicon Labs Bluetooth LE web page](#) to obtain information about all Silicon Labs Bluetooth products and services, and to sign up for product support.

Contact Silicon Laboratories support at <http://www.silabs.com/support>.

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