The user manual for Android Bluetooth 4.0 SDK

Version 1.7.2

2020/05/07

Catalog

1.Version Information

1.1.Update Record

1.1.1. Version1.0.0

Android Bluetooth Module SDK is a new Bluetooth communication interface version, which is used for Transtek's body scales, body fat analyzer, blood pressure monitor, height gauge and activity tracker of A2 or A3 protocol. This version mainly provided some common interface methods and opens a group of standard interfaces to realize Bluetooth function, such as searching Transtek's measuring equipments, pairing with equipments, activating the service of auto receiving measurement data and so on.

1.1.2. Version1.2.0

Add interface destoryAllResources().
Add interface registerMessageService()、unregisterMessageService().
Fix mambo watch OTA issue in some smart phone.
Fix some BUG.

1.1.3. Version1.2.1

Fix the error when call destoryAllResources().

1.1.4. Version1.2.2

Fix the connection issue with A3 device when reconnect after disconnection.
Fix the issue of resolve device SN.
Fix the issue of some smart phone that no message notification.
Modify the definition of DeviceUpgradeStatus.
Add property "dataType" and "sportMode" in PedometerRunningStatus.
Add interface "updatePhoneGpsStatus(boolean isGpsWorking)".

1.1.5. Version1.2.3

Add callback for GPS mode
Fix the NumberFormatException.

1.1.6. Version1.2.4

Add interface to set Wi-Fi password.
Add error status: *DEVICE_CONFIG_FAILURE.*

1.1.7. Version1.2.5

Add A5 pedometer distance unit settings.
Add A5 pedometer time format settings.
Add more message reminder. E.g. Facebook, Gmail, Twitter.
Fix some BUG.

1.1.8. Version1.2.6

Fix the bug of connection unstable with A2, A3 device.

1.1.9. Version1.2.7

Add A6 protocol.
Add interface to registered device with device ID (A6 protocol).
Add interface to setting device information (A6 protocol).
Add interface to delete data (A6 protocol).
Add interface to enter command when connecting or pairing.
Add interface to cancel pairing.
Add callback:onDeviceOperationCommandUpdate for return the command when pairing.

1.1.10. Version1.2.8

Fix the problem of no message notification of KakaoTalk(com.kakao.talk).
Add interface to filter device by device when connecting.

1.1.11. Version1.2.9

Change the data resolve method of BasalMeabolism.

1.1.12. Version1.3.0

Fix the bug of NumberFormatException when set user info.
Fix the bug of could not setting user info an alarm clock to some A2,A3 protocol device.

1.1.13. Version1.3.1

Fix the bug of connection with A2/A3 device.
Add device broadcast data – manufactureData

1.1.14. Version1.3.2

Code optimization, improve the stability of the connection with multi-device.
Fix “NullPointException” when export log.
Add interface of ziva plus, such as reminder, encourage settings, weather reminder, heart rate warning, language settings, sport information, etc.

1.1.15. Version1.3.3

Fix bugs and optimize device connection stability
Added device real-time heart rate switch settings interface
Added device heartbeat data acquisition switch setting interface.

1.1.16. Version1.3.4

Update the FDA calculation formula.

1.1.17. Version1.3.5

Fix the pairing problem of A5 product.

1.1.18. Version1.3.6

Added custom service uuid(20568521-5acd-4c5a-9294-eb2691c8b8bf) of A6 product.

1.2.19. Version1.3.7

Fixed the problem of where the incoming call alert was not available.

1.1.20. Version1.3.8

Add device behavior wake up set function, such as drinking water, etc.

1.2.21. Version1.3.9

Merge device battery callback interface, and add new power percentage return.

1.1.22. Version1.4.0

Fix the problem of data duplicate sending in some product.

1.1.23. Version1.4.1

Added device prompt message setting interface,such as Health Score Info.
Fix scale user information settings failed.

1.1.24. Version1.4.2

Added device prompt message setting,such as Device Positioning Info,Photography State.
Fix shortened local name(0x08) parsing failed in Advertisement Data .

1.1.25. Version1.4.3

Added aerobic exercise 12 minutes running mode.
Modify the callback interface of the motion mode notification.
Added real-time measurement data analysis of A6 Scale.

1.1.26. Version1.4.4

Fix the power percentage analysis error of device 428 (Mambo3).
Added Moodbeam device support
Added Mood Record Reminder function.

1.1.27. Version1.4.5

Added support for DMD A3 protocol products, such as 380 (GBF-1251-B), 382 (GBF-1270-B1), 385 (GBF-1270-F)

Fixed the Device’s ID and Device’s SN parsing issues in device Bluetooth broadcast packet.

1.1.28. Version1.4.6

Added user info setting for S9 device.

1.1.29. Version1.4.7

Added appointment reminder, simple reminder,message reminder,wakeup reminder setting for Kchiing device.

1.1.30. Version1.4.8

Added SDK working configuration settings interface. such as set the custom scan time or pauses time in scan interval.

1.1.31. Version1.4.9

Added M5 device support.
Added quiet mode setting for M5 device.

1.1.32. Version1.5.0

Fix advertisement data parsing error of some A3 products.

1.1.33. Version1.5.1

Added measurement status analysis of Blood Pressure Meter.

1.1.34. Version1.5.2

Added support for Standard Blood Pressure Meter.
Added Configuration for default call information display for the device.

1.1.35. Version1.5.3

Fixed the heart rate data parsing in the broadcast data of device H-402..

1.1.36. Version1.5.4

Added reminder query interface.

1.1.37. Version1.5.5

Fixed the frequent disconnection problems when the 1014B BPM sends historical data

1.1.38. Version1.5.6

Added mambo HR 2 drinking water, meals, and sleep reminder settings
Added a reminder type property to the event reminder object.

1.1.39. Version1.5.7

Optimized GPS connection request processing logic (removed the default status cache reply processing)

1.1.40. Version1.5.8

Added device binding and data synchronization function implementation for BPM of A6 protocol.

Added device automatic registration setting function.

Modify the definition of WeightAppendData's properties,rename muscleMassRatio to muscleMass.

1.1.41. Version1.5.9

Added device UUID (e492c1fb-2466-4749-ab37-69433d2d7846) support.

1.1.42. Version1.7.2

Added device authentication authority.

Update Version Information

2. Access Authentication

2.1 Pre-Conditions

Prepare Materials：
1、Company&Organization

2、Describe the application scenarios where you access the SDK and evaluate the number of devices expected to be activated

3、Confirm your Application's packageName (iOS: bundle identifier) ,we will verify the legality of the packageName

4、Confirm the list of device models that the application needs to access

5、Prepare a GitHub Account (Used to obtain the Android development SDK).

6、After the materials are confirmed, Please send apply email to Us, and the approval will be completed within 1 working day.

The template is as follows:

Receiver: zheng.lu@lifesense.com, jason@lifesense.com
Cc:
jie.shen@lifesense.com,
longlong.pan@lifesense.com,
zhicheng.liu@lifesense.com,
yong.wu@lifesense.com
Subject:Apply lifesense bluetooth SDK

If Approved,you will receive two emails:

1、An authorized "appid"
2、Github invite message, invite you as an out-side collaborators to join the @leshiguang organization

2.2 Integration

2.2.1 Add Reporsitory

```
maven {
  url "https://maven.pkg.github.com/leshiguang/maven-repository"
  credentials {
    username GITHUB_USERNAMNE
```

```
        password GITHUB_TOKEN
    } }
```

Patameter：

Username: your github profile name
password: github accesstoken(how to Creating a personal access token for the command line)

2.2.2 Config Gradle

Add gradle plugin in your Application(do not add to library project) project

```
dependencies {
        classpath "com.lifesense.android:lifesense-android-service-plugin:0.1.0"
}
```

2.2.3 Add Dependency

Add sdk dependency in your Library or Application project

```
dependencies {
    api 'com.lifesense.bluetooth:lifesense-ble-module:1.7.2'
}
```

3.Interface

3.1. Description

3.1.1. getInstance

static LsBleManager getInstance()

Static method of LsBleManager, used to obtain LsBleManager.

Parameter: None

Return: LsBleManager. Reference the definition of LsBleManager.

3.1.2. initialize

boolean initialize(Context appContext)

Initial LsBleManager before you call any method in LsBleManager.

Parameter: Context appContext

Return: boolean. Return true if initialization is successful, else false;

3.1.3. hasInitialized

boolean hasInitialized()

Check if LsBleManager has initialized

Parameter:void

Return: boolean. Return true if LsBleManager has initialized, else false.

3.1.4. isSupportLowEnergy

boolean isSupportLowEnergy()

Check if smart phone is support BLE

Parameter: None

Return: boolean. Return true if smart phone is support BLE, else false.

3.1.5. isOpenBluetooth

boolean isOpenBluetooth()

Check if bluetooth is working.

Parameter: None

Return: boolean. Return true if bluetooth is working, else false.

3.1.6. getLsBleManagerStatus

ManagerStatus getLsBleManagerStatus()

Get the work status of LsBleManager.

Parameter:None

Return: ManagerStatus. Reference the definition of ManagerStatus.

3.1.7. unregisterBluetoothBroadcastReceiver

void unregisterBluetoothBroadcastReceiver()

Unregister a deleget that to be invoked when the status of bluetooth has changed.

Parameter:None

Return: void

3.1.8. registerBluetoothBroadcastReceiver

void registerBluetoothBroadcastReceiver(Context appContext)

Register a delegate to be invoked when the status of bluetooth has changed.

Parameter:

① Context appContext

Return: void

3.1.9. searchLsDevice

boolean searchLsDevice(SearchCallback,List<DeviceType>,BroadcastType)

Search device which has specific broadcast

Parameter:

① SearchCallback SearchCallback: Interface to be invoked when search device.

② List<DeviceType> typeList: Device type list

③ BroadcastType broadcastType: Reference the definition of BroadcastType

Return: boolean. Return true if search device successful, else false.

3.1.10. stopSearch

boolean stopSearch()

Stop search

Parameter: None

Return: boolean. Return true if stop successful, else false.

3.1.11. pairingWithDevice

boolean pairingWithDevice(LsDeviceInfo lsDevice,PairCallback pairCallback)

Pairing with device if device is supported

Parameter:

① LsDeviceInfo lsDevice: Reference the definition of LsDeviceInfo.

② PairCallback pairCallback. Interface to be invoked when pair with device.

Return: boolean. Return true if device support pairing, else false.

3.1.12. bindDeviceUser

boolean bindDeviceUser(String macAddress,int,String)

Binding a user of device when pairing.

Parameter:

① String macAddress: Device MAC address

② int userNumber: Device user number.

③ String username: User name, the length must be least than 16 bytes.

Return: boolean. Return true if binding successful, else false.

3.1.13. setMeausreDevice

boolean setMeausreDevice(List<LsDeviceInfo> lsDevicelist)

Set device list those you want to get measurement data.

Parameter:List<LsDeviceInfo> lsDevicelist: Device list.

Return: boolean. Return true if setting successful, else false.

3.1.14. addMeausreDevice

boolean addMeausreDevice(LsDeviceInfo lsDevice)

Add a device which you want to get measurement data.

Parameter:LsDeviceInfo lsDevice. Reference the definition of LsDeviceInfo.

Return: boolean. Return true if setting successful, else false.

3.1.15. deleteMeasureDevice

boolean deleteMeasureDevice(String broadcastId)

Delete bluetooth device according to broadcast ID.

Parameter:String broadcastId. Broadcast ID

Return: boolean. Return true if delete successful, else false.

3.1.16. startDataReceiveService

boolean startDataReceiveService(ReceiveDataCallback dataCallback)

Automatically receive data from bluetooth device

Parameter:

① ReceiveDataCallback dataCallback. Interface to be invoked when receive measurement data.

Return: boolean. Return true if start service successful, else false.

3.1.17. stopDataReceiveService

boolean stopDataReceiveService()

Stop automatically receive data from bluetooth device.

Parameter: None

Return: boolean. Return true if stop service successful, else false.

3.1.18. setCustomBroadcastID

boolean setCustomBroadcastID(String broadcastId,String devices,List<DeviceType> types)

Set a custom broadcast ID when pair with device.

Parameter:

① String broadcastId. Custom broadcast ID. The broadcast ID must be hex string and length must be 8.

② String devices. Device name when scan.

③ List<DeviceType> types. Device type list. Reference the definition of DeviceType.

Return: void

3.1.19. setEnableScanBroadcastName

boolean setEnableScanBroadcastName(List<String> enableNames)

The device can be found only when it broadcast name matches the set one.

Parameter:

① List<String> enableNames. Device name list.

Return: boolean. Return true if setting successful, else false.

3.1.20. parseAdiposeData

WeightAppendData parseAdiposeData(SexType userSex,double weight_kg,double height_m,int age,double resistance_2,boolean isAthlete)

Body composition calculation.

Parameter:

① double resistance_2: the resistance_2 values of weight data.

② double height_m: User height, unit: m

③ double weight_kg: User weight, unit: kg

④ int age. User age.

⑤ SexType sex. User sex, reference the definition of SexType.

⑥ boolean isAthlete. Althlete flag, set true if user is athlete, else false.

Return: WeightAppendData. Reference the definition of WeightAppendData.

3.1.21. setProductUserInfo

void setProductUserInfo(WeightUserInfo weightUserInfo)

Set the user info to scale.

Parameter:WeightUserInfo weightUserInfo. Reference the definition of WeightUserInfo.

Return: boolean. Return true if setting successful, else false.

3.1.22. setPedometerUserInfo

void setPedometerUserInfo(PedometerUserInfo peUserInfo)

Set the user info to pedometer.

Parameter:PedometerUserInfo peUserInfo. Reference the definition of PedomterUserInfo.

Return: void

3.1.23. setPedometerAlarmClock

void setPedometerAlarmClock(PedometerAlarmClock alarmClock)

Set alarm to A2 pedometer.

Parameter:

① PedometerAlarmClock alarmClock. Reference the definition of PedomterAlarmClock.

Return: void

3.1.24. setVibrationVoice

void setVibrationVoice(VibrationVoice vibrationVoice)

Set the vibration voice of scale

Parameter:VibrationVoice vibrationVoice. Reference the definition of VibrationVoice.

Return: void

3.1.25. analysisSleep

List<SleepData> analysisSleep(List<PedometerData> dataList)

Analysis sleep data.

Parameter:

① List<PedometerData> dataList. Pedometer data list.

Return: List<SleepData>: Sleep data, reference the definition of SleepData.

3.1.26. checkDeviceConnectState

DeviceConnectState checkDeviceConnectState(String address)

Check the device connect status.

Parameter:String address. Device MAC address

Return: DeviceConnectState: Reference the definition of DeviceConnectState.

3.1.27. setEnableGattServiceType

void setEnableGattServiceType(String address,GattServiceType type)

Reference the definition of GattServiceType, default is ALL.

Parameter:

① String address: Device MAC address

② GattServiceType serviceType. Reference the definition of GattServiceType.

Return: void

Remark: Only use for A5 pedometer.

3.1.28. updatePedometerUserInfo

void updatePedometerUserInfo(String mac,PedometerUserInfo us , OnSettingListener lis)

Update user information to pedometer

Parameter:

① String mac: Device MAC address

② PedometerUserInfo userInfo. Reference the definition of PedometerUserInfo.

③ OnSettingListener listener. Interface to be invoked with update result.

Return: void

3.1.29. updatePedometerAlarmClock

void updatePedometerAlarmClock(String,boolean,List<PedometerAlarmClock>,OnSettingListener)

Update alarm clock settings to pedometer.

Parameter:

① String address: Device MAC Address

② boolean enable: Switch of alarm

③ List<PedometerAlarmClock> clocklist: Alarm clock list

④ OnSettingListener listener. Interface to be invoked with update result.

Return: void

3.1.30. updateHeartRateDetection

void updateHeartRateDetection(String,boolean,String,String,OnSettingListener)

Update heart rate detection settings to pedometer

Parameter:

① String address: Device MAC Address

② boolean enable: The switch of heart rate detection

③ String startTime: Useless

④ String endTime: Useless

⑤ OnSettingListener listener: Interface to be invoked with update result.

Return: void

3.1.31. updatePedometerAntiLostInfo

void updatePedometerAntiLostInfo(String,PedometerAntiLostInfo,OnSettingListener settingListener)

Update anti-lost settings to pedometer

Parameter:

① String String address: Device MAC address

② PedometerAntiLostInfo antilost: Reference the definition of PedometerAntiLostInfo

③ OnSettingListener listener. Interface to be invoked with update result.

Return: void

3.1.32. updatePedometerSedentary

void updatePedometerSedentary(String,boolean,List<PedometerSedentaryInfo>,OnSettingListener)

Update sedentary settings to pedometer.

Parameter:

① String address; Device MAC address

② boolean enable: The switch of sedentary setting

③ List<PedometerSedentaryInfo> sedentaryInfos: Reference the definition of PedometerSedentary.

④ OnSettingListener listener. Interface to be invoked with update result.

Return: void

3.1.33. updatePedometerStepGoal

void updatePedometerStepGoal(String,boolean,int,OnSettingListener)

Update the goal of step to pedometer.

Parameter:

① String address， Device MAC address

② boolean enable: The switch of goal settings

③ int stepGoal: The goal of step.

④ OnSettingListener listener: Interface to be invoked with update result.

Return: void

3.1.34. updateHeartRateRange

void updateHeartRateRange(String,int,OnSettingListener)

Update heart rate range settings to pedometer

Parameter:

① String address: Device MAC address

② int userAge: User age.

③ OnSettingListener listener: Interface to be invoked with update result

Return: void

3.1.35. updateMessageRemind

void updateMessageRemind (String, boolean, MessageType, OnSettingListener)

Update message remind settings to pedometer.

Parameter:

① String address: Device MAC address

② boolean enable: The switch of message reminder

③ MessageType messageType: Reference the definition of MessageType.

④ OnSettingListener listener. Interface to be invoked with update result.

Return: void

3.1.36. updatePedometerHeartDetectionMode

void updatePedometerHeartDetectionMode(String,HeartRateDetectionMode,OnSettingListener)

Update heart rate detection mode to pedometer.

Parameter:

① String address: Device MAC address

② HeartRateDetectionMode detectMode: Reference the definition of HeartRateDetectionMode

③ OnSettingListener listener: Interface to be invoked with update result.

Return: void

3.1.37. updatePedometerNightMode

void updatePedometerNightMode(String,boolean,PedometerNightMode,OnSettingListener)

Update night display mode to pedometer.

Parameter:

① String address: Device MAC address

② boolean enable. The switch of night mode.

③ PedometerNightMode nightMode. Reference the definition of PedometerNightMode

④ OnSettingListener listener: Interface to be invoked with update result.

Return: void

3.1.38. updatePedometerWearingStyles

void updatePedometerWearingStyles(String,PedometerWearingStyles,OnSettingListener)

Update wearing style settings to pedometer.

Parameter:

① String address: Device MAC address

② PedometerWearingStyles wearingStyles: Reference the definition of PedometerWearingStyles

③ OnSettingListener listener: Interface to be invoked with update result.

Return: void

3.1.39. updatePedometerScreenMode

void updatePedometerScreenMode(String,PedometerScreenMode,OnSettingListener)

Update the screen mode settings to pedometer.

Parameter:

① String address: Device MAC address

② PedometerScreenMode screenMode. Reference the definition of PedometerScreenMode

③ OnSettingListener listener: Interface to be invoked with update result.

Return: void

3.1.40. updatePedometerPageSequence

void updatePedometerPageSequence(String,List<PedometerPage>,OnSettingListener)

Update the page sequence settings to pedometer

Parameter:

① String address,Device MAC address

② List<PedometerPage> pages. Reference the definition of PedometerPage.

③ OnSettingListener listener. Interface to be invoked with update result.

Return: void

3.1.41. updatePedometerCallRemind

updatePedometerCallRemind(String,boolean,PedometerCallReminderInfo,OnSettingListener)

Update the call reminder to pedometer.

Parameter:

① String address: Device MAC address

② boolean enable: The switch of call reminder.

③ PedometerCallReminderInfo callReminderInfo, Reference the definition of PedometerCallReminderInfo.

④ OnSettingListener listener: Interface to be invoked with update result.

Return: void

3.1.42. readDeviceVoltage

void readDeviceVoltage(String,OnDeviceReadListener)

Get the device voltage.

Parameter:

① String address: Device MAC address

② OnDeviceReadListener readListener. Interface to be invoked with read device voltage.

Return: void

3.1.43. upgradeDeviceFirmware

void upgradeDeviceFirmware(String,File,OnDeviceUpgradeListener)

Upgrade device firmware.

Parameter:

① String address,Device MAC address

② File upgradeFile. The update firmware file.

③ OnDeviceUpgradeListener upgradeListener. Interface to be invoked with upgrade device firmware.

Return: void

3.1.44. interruptUpgradeProcess

void interruptUpgradeProcess(String macAddress)

Stop upgrade firmware.

Parameter:

① String address,Device MAC address

Return: void

3.1.45. destoryAllResources

void destoryAllResources

Release all resources of LsBleManager

Parameter: None

Return: void

3.1.46. registerMessageService

void registerMessageService ()

Register message service. Please declarationNotificationService in AndroidManifest.xml before call this method.

Parameter:None

Return: void

3.1.47. unregisterMessageService

void unregisterMessageService

Unregister Message service.

Parameter: None

Return: void

3.1.48. *updatePhoneGpsStatus*

void updatePhoneGpsStatus(boolean isGpsWorking)

Update GPS status to pedometer

Parameter:boolean: true if the GPS is working, else false.

Return: void

3.1.49. *configDeviceWifiPassword*

boolean configDeviceWifiPassword(LsDeviceInfo,String,String,PairCallback)

Set device Wi-Fi password.

Parameter:

① LsDeviceInfo lsDevice. Reference the definition of LsDeviceInfo.

② String ssid,wifi: Net work name（SSID）

③ String wifiPassword: The password of Net work.

④ PairCallback callback: Interface to be invoked with settings.

Return: boolean. Return true if setting password enable, else false.

3.1.50. *updateDeviceDistanceUnit*

void updateDeviceDistanceUnit(String, LengthUnit, OnSettingListener)

Update the distance unit to pedometer.

Parameter:

① String macAddress

② LengthUnit unit. Reference the definition of LengthUnit.

③ OnSettingListener listener. Interface to be invoked with settings.

Return: void

3.1.51. *updateDeviceTimeFormat*

void updateDeviceTimeFormat(String, HourSystem, OnSettingListener)

Update the time format to pedometer.

Parameter:

① String macAddress,

② HourSystem timeFormat. Reference the definition of HourSystem.

③ OnSettingListener listener. Interface to be invoked with settings.

Return: void

3.1.52. *setAppMessageFilter*

void setAppMessageFilter(String, boolean, AppMessage)

Set the App Message reminder type.

Parameter:

① String macAddress,

② boolean enable. True if enable the message filter, else false.

③ AppMessage appMsg. Reference the definition of AppMessage.

Return: void

3.1.53. *registeringDeviceID*

void registeringDeviceID(String, String, DeviceRegisterState)

Register device id (A6 protocol)

Parameter:

① String macAddress,

② String deviceId. Device ID.

③ DeviceRegisterState. Reference the definition of DeviceRegisterState.

Return: void

3.1.54. *updateWeightScaleSetting*

void updateWeightScaleSetting(String, DeviceConfigInfoType, Object, OnSettingListener)

Update the device settings info (A6 protocol).

Parameter:

① String macAddress,

② DeviceConfigInfoType: Reference the definition of DeviceConfigInfoType.

③ Object obj: Device settings info.

④ OnSettingListener listener. Interface to be invoked with settings.

Return: void

3.1.55. *clearDeviceData*

void clearDeviceData(String, DeviceData data, OnSettingListener)

Clear the data of device (A6 protocol).

Parameter:

① String macAddress,

② DeviceData data: Reference the definition of DeviceData.

③ OnSettingListener listener. Interface to be invoked with settings.

Return: void

3.1.56. *inputOperationCommand*

int inputOperationCommand(String, OperationCommand, Object)

Input operation command when connecting or pairing.

Parameter:

① String macAddress,

② OperationCommand cmd: Reference the definition of OperationCommand.

③ Object obj: command content.

Return: void

3.1.57. *cancelDevicePairing*

boolean cancelDevicePairing(LsDeviceInfo)

Cancel the operation when pairing.

Parameter:

① LsDeviceInfo lsDevice: Reference the definition of LsDeviceInfo.

Return: boolean. Return true if start operation successful, else false.

3.1.58. *setDeviceFilterInfo*

boolean SetDeviceFilterInfo(List<DeviceFilterInfo>, ManagerStatus)

Input operation command when connecting or pairing.

Parameter:

① List<DeviceFilterInfo> filters: the filter list.

② ManagerStatus status: the status of SDK, Reference the definition of ManagerStatus.

Return: boolean. Return true if start operation successful, else false.

3.1.59. *updatePedometerDialPeace*

void updatePedometerDialPeace(String,PedometerDialPeaceInfo,OnSettingListener)

Update the pedometer dial peace style setting.

Parameter:

① String macAddress

② PedometerDialPeaceInfo dialPeaceInfo: Reference the definition of PedometerDialPeaceInfo.

③ OnSettingListener listener: Interface to be invoked with settings.

Return: void

3.1.60. *updatePedometerAutoRecognition*

Void updatePedometerAutoRecognition(String, List<PedometerAutoRecognition>, OnSettingListener)

Update the pedometer auto sport mode setting.

Parameter:

① String macAddress

② List<PedometerAutoRecognition>: Reference the definition of PedometerAutoRecognition

③ OnSettingListener listener: Interface to be invoked with settings.

Return: void

3.1.62. *updatePedometerEventReminder*

updatePedometerEventReminder(String,PedometerEventReminder,OnSettingListener)

Update the pedometer event reminder.

Parameter:

① String macAddress

② PedometerEventReminder eventReminder: Reference the definition of PedpmeterEventReminder

③ OnSettingListener listener: Interface to be invoked with settings.

Return: void

3.1.63. *updatePedometerEncourage*

void updatePedometerEncourage(String,PedometerEncourage,OnSettingListener)

Update the pedometer encourage setting.

Parameter:

① String macAddress

② PedometerEncourage encourageInfo: Reference the definition of PedometerEncourage.

③ OnSettingListener listener: Interface to be invoked with settings.

Return: void

3.1.64. *updatePedometerWeather*

void updatePedometerWeather(String,PedometerWeather, OnSettingListener)

Update the pedometer weather setting.

Parameter:

① String macAddress

② PedometerWeather weather: Reference the definition of PedometerWeather.

③ OnSettingListener listener: Interface to be invoked with settings.

Return: void

3.1.65. *updatePedometerHeartRateAlert*

updatePedometerHeartRateAlert(String,PedometerHeartRateAlert,OnSettingListene)

Update the pedometer heart rate alert setting.

Parameter:

① String macAddress

② PedometerHeartRateAlert heartRateAlertInfo: Reference the definition of PedometerHeartRateAlert.

③ OnSettingListener listener: Interface to be invoked with settings.

Return: void

3.1.66. *updateDeviceLanguage*

void updateDeviceLanguage(String, DeviceLanguage, OnSettingListener)

Update the pedometer language setting.

Parameter:

① String macAddress

② DeviceLanguage language: Reference the definition of DeviceLanguage.

③ OnSettingListener listener: Interface to be invoked with settings.

Return: void

3.1.67. *updatePedometerSportsInfo*

void updatePedometerSportsInfo(String, PedometerSportsInfo, OnSettingListener)

Update the pedometer sport information setting.

Parameter:

① String macAddress

② PedometerSportsInfo sportsInfo: Reference the definition of PedometerSportsInfo.

③ OnSettingListener listener: Interface to be invoked with settings.

Return: void

3.1.68. *updatePedometerSwimmingInfo*

updatePedometerSwimmingInfo(String, PedometerSwimmingInfo, OnSettingListener)

Update the pedometer swimming information setting.

Parameter:

① String macAddress

② PedometerSwimmingInfo swimmingInfo: Reference the definition of PedometerSwimmingInfo.

③ OnSettingListener listener: Interface to be invoked with settings.

Return: void

Added in version 1.3.3

3.1.69. *setRealtimeHeartRateSyncState*

setRealtimeHeartRateSyncState (String, boolean, OnSettingListener)

Update the real time heart rate sync state of pedometer

Parameter：

① String macAddress,

② **boolean** enable,true enable real time heart rate sync，false disable real time heart rate sync

③ OnSettingListener listener, Interface to be invoked with settings

Return：void

Added in version 1.3.3

3.1.70. *updateDeviceFunctionInfo*

updateDeviceFunctionInfo(String, DeviceFunctionInfo, OnSettingListener)

Update device function information of pedometer

Parameter：

① String macAddress,

② **DeviceFunctionInfo** functionInfo, Reference the definition of **DeviceFunctionInfo**

③ OnSettingListener listener, Interface to be invoked with settings.

Return：void

Added in version 1.3.9

3.1.71. *updateDeviceBehaviorReminder*

updateDeviceBehaviorReminder (String, BehaviorRemindInfo, OnSettingListener)

Update the behavior reminder setting information of device.

Parameter：

① String macAddress,

②**BehaviorRemindInfo** info, Reference the definition of **BehaviorRemindInfo**

③ OnSettingListener listener, Interface to be invoked with settings.

Return：void

Added in version 1.4.1

3.1.72. *pushDeviceMessage*

pushDeviceMessage (String, DeviceMessage, OnSettingListener)

Push device prompt message setting information of device.

Parameter：

① String macAddress,

② DeviceMessage obj, abstract class, refer to the subclass definition

③ OnSettingListener listener, Interface to be invoked with settings.

Return： void

Added in version 1.4.8

3.1.73. *setCustomConfig*

setCustomConfig (ManagerConfig config)

Set SDK working configuration, such as update or disable the defaut scan interval settings of sdk.

Parameter：

① ManagerConfig config, abstract class

please use the definition of the subclass ScanIntervalConfig.

Return： void

4.Delegate

4.1.SearchCallback

com.lifesense.ble.SearchCallback is an Abstract Class. When calling the interface searchLsDevice to search devices, the info of the matched devices will be returned asynchronously through the interface onSearResults(LsDeviceInfo lsDevice) and the result of the connected devices will be returned through the interface onSystemConnectedDevice.

4.1.1. onSearchResults

void onSearchResults(LsDeviceInfo lsDevice)

Return the matched device info.

Parameter:

① LsDeviceInfo lsDevice: Reference the definition of LsDeviceInfo.

Return: void

4.1.2. onSystemConnectedDevice

void onSystemConnectedDevice(String name,String macAddress)

Return the connected device info.

Parameter:

① String name. Device name.

② String address. The MAC address of device

Return: void

4.2.PairCallback

com.lifesense.ble.PairCallback is an Abstract Class. When calling the interface pairingWithDevice to pair with the device the user list will be returned asynchronously through the interface onDiscoverUserInfo and the result of pairing will be returned through the callback interface onPairResults.

4.2.1. onDiscoverUserInfo

void onDiscoverUserInfo(String macAddress,List<DeviceUserInfo> userList)

Return the user list on the device which is using A3 protocol.

Parameter:

① String macAddress: The MAC address of device.

② List<DeviceUserInfo> userlist. The user list of device.

Return: void

4.2.2. onPairResults

void onPairResults(LsDeviceInfo lsDevice, int status)

Return the result of pairing.

Parameter:

① LsDeviceInfo lsDevice: Reference the definition of LsDeviceInfo.

② int status. The pair status. 0 is success, else fail.

Return: void

4.3.ReceiveDataCallback

com.lifesense.ble.ReceiveDataCallback is an Abstract Class. When calling the interface startDataReceiveService, all the measurement data will be returned asynchronously through the callback interface. The interfaces are different for different devices.

4.3.1. onDeviceConnectStateChange

void onDeviceConnectStateChange(DeviceConnectState connectState,String broadcastId)

Retrun current status of the device.

Parameter:

① DeviceConnectState connectState. Reference the definition of DeviceConnectState.

② String broadcastId. Broadcast ID.

Return: void

4.3.1. onReceiveDeviceInfo

void onReceiveDeviceInfo(LsDeviceInfo lsDevice)

Return the device info of the connected device.

Parameter:

① LsDeviceInfo lsDevice: Reference the definition of LsDeviceInfo.

Return: void

4.3.3. onReceiveWeightDta_A2

void onReceiveWeightDta_A2(WeightData_A2 weightData)

Return the measurement data of the scale which is using A2 protocol.

Parameter:

① WeightData_A2 weightData: Reference the definition of WeightData_A2

Return: void

4.3.4. onReceiveWeightData_A3

void nReceiveWeightData_A3(WeightData_A3 wData_A3)

Return the measurement data of the scale which is using A3 protocol.

Parameter:

① WeightData_A3 weightData. Reference the definition of WeightData_A3

Return: void

4.3.5. onReceiveBloodPressureData

void onReceiveBloodPressureData(BloodPressureData data)

Return the measurement data of the BPM

Parameter:

① BloodPressureData data: Reference the definition of BloodPressureData.

Return: void

4.3.6. onReceivePedometerData

void onReceivePedometerData(PedometerData pData)

Return the measurement data of the pedometer which is using A2 protocol.

Parameter:

① PedometerData data: Reference the definition of PedometerData.

Return: void

4.3.7. onReceiveHeightData

void onReceiveHeightData(HeightData data)

Return the measurement data of the height meter.

Parameter:

① HeightData data: Reference the definition of HeightData.

Return: void

4.3.8. onReceiveKitchenScaleData

void onReceiveKitchenScaleData(KitchenScaleData data)

Return the measurement data of the kitchen scale.

Parameter:

① KitchenScaleData data: Reference the definition of KitchenScaleData.

Return: void

4.3.9. onReceiveUserInfo

void onReceiveUserInfo(WeightUserInfo userInfo)

Return user profile of the scale which is using A3 protocol.

Parameter:

① WeightUserInfo userInfo: Reference the definition of WeightUserInfo.

Return: void

4.3.10. onReceivePedometerMeasureData

void onReceivePedometerMeasureData(Object obj,PacketProfile type,String data)

Return the measurement data of the pedometer which is using A5 protocol.

Parameter:

① Object obj: Measurement data.

② PacketProfile type: Reference the definition of PacketProfile.

③ String sourceData,: Source data(byte)

Return: void

4.3.11. onReceiveBloodGlucoseData

void onReceiveBloodGlucoseData (BloodGlucoseData bgData)

Return the measurement data of the Blood Glucose Meter.

Parameter:

①BloodGlucoseData data: Reference the definition of BloodGlucoseData.

Return: void

4.4. OnDeviceUpgradeListener

OnDeviceUpgradeListener is an Interface Class, When calling the upgradeDeviceFirmware interface,you must override the two callback methods, the result will be returned asynchronously through the callback method of this class.

4.4.1. onDeviceUpdradeStateChange

onDeviceUpdradeStateChange(String mac,DeviceUpgradeStatus status,int errorCode)

To be invoked when device upgrade status change. If device display “update mode”, return ENTER_UPGRADE_MODE; If device upgrade success, return UPGREADE_SUCCESS and eooroCode = 0; If device upgrade fail, return UPGRAGE_FAILURE and error code.

Parameter:

① String address: The MAC address of device.

② DeviceUpgradeStatus status: Reference the definition of DeviceUpgradeStatus.

③ int errorCode. Reference the definition of ErrorCode.

Return: void

4.4.2. onDeviceUpgradeProcess

void onDeviceUpgradeProcess(int value)

Return the upgrading process data of the pedometer.

Parameter:

① int value. Upgrading proccess, from 0 to 99.

Return: void

4.5. OnSettingListener

com.lifesense.ble.OnSettingListener is a Abstract Class. When update the settings of the connected device, the result will be returned asynchronously through the callback method of this class.

4.5.1. onSuccess

void onSuccess(String macAddress)

Being invoked if setting successful.

Parameter:

① String macAddress: The MAC address of device.

Return: void

4.5.2. onFailure

void onFailure(int errorCode)

Parameter:

Being invoked if setting failure.

① int errorCode. Reference the definition of ErrorCode.

Return: void

4.6. OnDeviceReadListener

com.lifesense.ble.OnDeviceReadListener is a Interface Class. When it calls the interface readDeviceVoltage to read the real-time power of the device, the result will be returned asynchronously through the callback method of this class.

4.6.1. onDeviceVoltageValue

void onDeviceVoltageValue(byte[] sourceData,int flag,float voltageValue,int percentage)

Parameter:

① byte[] sourceData: Source data(byte)

② int flag: Battery status, 0x00 - working normal; 0x01 - charging; other - not support;

③ float voltageValue: Battery voltage

④ int percentage; Battery percentage.

Return: void

5.Class

5.1.Constant

All the constants in this SDK are included in the packet com.lifesense.ble.bean.constant.

5.1.1. DeviceType

Type	Property	Remark	Version
enum	UNKNOWN	Unknown type	V1.0.0
enum	WEIGHT_SCALE	Weight scale	V1.0.0
enum	PEDOMETER	Pedometer	V1.0.0
enum	SPHYGMOMANOMETER	Blood pressure monitor	V1.0.0
enum	KITCHEN_SCALE	Kitchen scale	V1.0.0
enum	HEIGHT_RULER	Height meter	V1.0.0
enum	FAT_SCALE	Body fat scale	V1.0.0

5.1.2. BroadacstType

Type	Property	Remark	Version
enum	ALL	All broadcast	V1.0.0
enum	NORMAL	Normal broadcast	V1.0.0
enum	PAIR	Pairing broadcast	V1.0.0

5.1.3. SexType

Type	Property	Remark	Version
enum	MALE	Male	V1.0.0
enum	FEMALE	Female	V1.0.0

5.1.4. UnitType

Type	Property	Remark	Version
enum	UNIT_KG	Unit: KG	V1.0.0
enum	UNIT_LB	Unit: LB	V1.0.0
enum	UNIT_ST	Unit: ST	V1.0.0

5.1.5. HourSystem

Type	Property	Remark	Version
enum	HOUR_24	24-hour	V1.0.0
enum	HOUR_12	12-hour	V1.0.0

5.1.6. LengthUnit

Type	Property	Remark	Version

enum	KILOMETER	Unit: km	V1.0.0
enum	MILE	Unit: mile	V1.0.0

5.1.7. DeviceConnectState

Type	Property	Remark	Version
enum	CONNECTED_SUCCESS	Successful	V1.0.0
enum	CONNECTED_FAILED	Failure	V1.0.0
enum	DISCONNECTED	Disconnect	V1.0.0
enum	UNKNOWN	Unknown	V1.0.0

5.1.8. WeekDay

Type	Property	Remark	Version
enum	MONDAY	Monday	V1.0.0
enum	TUESDAY	Tuesday	V1.0.0
enum	WEDNESDAY	Wednesday	V1.0.0
enum	THURSDAY	Thursday	V1.0.0
enum	FRIDAY	Friday	V1.0.0
enum	SATURDAY	Saturday	V1.0.0
enum	SUNDAY	Sunday	V1.0.0

5.1.9. VibrationMode

Type	Property	Remark	Version
enum	CONTINUOUS_VIBRATION	Continuous vibration	V1.0.0
enum	INTERMITTENT_VIBRATION1	ntermittent, the intensity is the same	V1.0.0
enum	INTERMITTENT_VIBRATION2	Intermittent, the intensity is from small to big	V1.0.0
enum	INTERMITTENT_VIBRATION3	Intermittent, the intensity is from big to small	V1.0.0
enum	INTERMITTENT_VIBRATION4	Intermittent, the intensity is periodic change	V1.0.0

5.1.10. GattServiceType

Type	Property	Remark	Version
enum	ALL	All services	V1.0.0
enum	CALL_SERVICE	Call services	V1.0.0
enum	USER_DEFINED	Custom services	V1.0.0

5.1.11. DeviceUpgradeStatus

Type	Property	Remark	Version
enum	UNKNOWN	Unknown	V1.0.0
enum	ENTER_UPGRADE_MODE	Update mode	V1.0.0
enum	UPGRADE_SUCCESS	Upgrade success	V1.0.0

enum	UPGRADE_FAILURE	Upgrade failure	V1.2.2
enum	UPGRADING	Upgrading	V1.2.2

5.1.12. PedometerTargetState

Type	Property	Remark	Version
enum	STEP	Goal of steps for one week	V1.0.0
enum	CALORIES_KAL	Goal of calories for one week	V1.0.0
enum	DISTANCE_M	Goal of distance for one week	V1.0.0
enum	EXERCISE_AMOUNT	Goal of exercise amount for one week	V1.0.0

5.1.13. PacketProfile

Type	Property	Remark	Version
enum	PEDOMETER_DEVIE_INFO	Device information	V1.0.0
enum	DAILY_MEASUREMENT_DATA	Daily measurement data	V1.0.0
enum	PER_HOUR_MEASUREMENT_DATA	Hourly measurement data	V1.0.0
enum	SLEEP_DATA	Sleep data	V1.0.0
enum	HEART_RATE_DATA	Heart reate data	V1.0.0
enum	SWIMMING_LAPS	Swimming laps	V1.0.0
enum	RUNNING_CALORIE_DATA	Calorie of running	V1.0.0
enum	HEART_RATE_STATISTICS	Heart rate rang	V1.0.0
enum	PEDOMETER_DATA_CE	Sleep data(For WeChat)	V1.0.0
enum	PEDOMETER_DATA_C9	Hourly data(For WeChat)	V1.0.0
enum	PEDOMETER_DATA_CA	Daily data(For WeChat)	V1.0.0
enum	PEDOMETER_DATA_83	Sleep data(For WeChat)	V1.0.0
enum	PEDOMETER_DATA_8B	Hourly data(For WeChat)	V1.0.0
enum	PEDOMETER_DATA_82	Daily data(For WeChat)	V1.0.0

5.1.14. ErrorCode

Type	Property	Remark	Version
int	UNKNOWN_ERROR=-1	Unknown error	V1.0.0
int	UNINITIALIZED=-2	LSBleManager has not initialization	V1.0.0
int	PARAMETER_ERROR_CODE=1	Parameter is wrong	V1.0.0
int	FILE_FORMAT_ERROR_CODE=2	The format of file is wrong	V1.0.0
int	FILE_UPDATE_MODEL_ERROR_CODE=3	The file update model is wrong	V1.0.0
int	FILE_CHECK_MODEL_ERROR_CODE=4	The type of file is wrong	V1.0.0
int	BLE_MANAGER_STATE_ERROR_CODE=5	The working status is wrong	V1.0.0
int	DEVICE_NOT_CONNECTED=7	Device has not connected	V1.0.0
int	DEVICE_UNSUPPORTED=8	Device don’t support upgrade	V1.0.0
int	FILE_VERIFY_ERROR_CODE=9	Verify file failure	V1.0.0

int	DATA_RECEIVE_ERROR_CODE=10	Receive data failure	V1.0.0
int	LOW_BATTERY=11	Electricity is not enough	V1.0.0
int	CODE_VERSION_NOT_MATCH=12	Firmware version is wrong	V1.0.0
int	FILE_HEADER_CHECK_FAIL=13	Verify header of file failure	V1.0.0
int	FLASH_SAVE_FAIL=14	Device save flash failed	V1.0.0
int	SCAN_ERROR=15	Scanning time out	V1.0.0
int	CONNECTION_FAILED=17	Connect device fail	V1.0.0
int	CONNECTION_ERROR=21	Connection time out	V1.0.0
int	BlLUETOOTH_DISABLE=23	Bluetooth is unavailable	V1.0.0
int	ABNORMAL_DISCONNECT=24	Bluetooth disconnect with abnormal	V1.0.0
int	WRITE_CHARACTERISTIC_FAILURE=25	Write character fail	V1.0.0
int	CANCEL_UPGRADE=26	Cancel upgrade initiative	V1.0.0
int	DEVICE_CONFIG_FAILURE=27	Set Wi-Fi password failure	V1.2.4

5.1.15. OperationCommand

Type	Property	Remark	Version
enum	UNKNOWN	Unknown status.	V1.2.7
enum	CMD_RANDOM_NUMBER	Command for bind with random number	V1.2.7
enum	CMD_DEVICE_ID	Command for registered device id	V1.2.7
enum	CMD_PAIRED_CONFIRM	Confirm if paired	V1.2.7
enum	CMD_UNBIND_CONFIRM	Confirm if unbind	V1.2.7

5.1.16. DeviceRegisterState

Type	Property	Remark	Version
enum	UNKNOWN	Unknown status.	V1.2.7
enum	NORMAL_UNREGISTER	Unregister device	V1.2.7
enum	REGISTER	Register device	V1.2.7
enum	ILLEGAL	Illegal device	V1.2.7
enum	OTHER	Other device	V1.2.7

5.1.17. BroadcastNameMatchWay

Type	Property	Remark	Version
enum	PREFIX	Prefix match, case sensitive	V1.2.8
enum	PREFIX_IGNORE_CASE	Prefix match, not case sensitive	V1.2.8
enum	SUFFIX	Suffix match, case sensitive	V1.2.8
enum	SUFFIX_IGNORE_CASE	Suffix match, not case sensitive	V1.2.8
enum	EQUALS	Complete match, case sensitive	V1.2.8
enum	EQUALS_IGNORE_CASE	Complete match, not case sensitive	V1.2.8

5.1.18. DialPeaceStyle

type	Property	Remark	Version
enum	DialPeace1	Style 1	V1.3.2
enum	DialPeace2	Style 2	V1.3.2
enum	DialPeace3	Style 3	V1.3.2
enum	DialPeace4	Style 4	V1.3.2
enum	DialPeace5	Style 5	V1.3.2
enum	DialPeace6	Style 6	V1.3.2

5.1.19. AutoRecognitionType

type	Property	Remark	Version
enum	RUNNING	Running mode	V1.3.2
enum	WALKING	Walking mode	V1.3.2
enum	CYCLING	Riding mode	V1.3.2
enum	SWIMMING	Swimming mode	V1.3.2
enum	BODY_BUILDING	Fitness mode	V1.3.2

5.1.20. DeviceLanguage

type	Property	Remark	Version
enum	CHINESE_CN	Simplified Chinese	V1.3.2
enum	CHINESE_TW	Traditional Chinese	V1.3.2
enum	ENGLISH	English	V1.3.2
enum	JAPANESE	Japanese	V1.3.2
enum	KOREAN	Korean	V1.3.2
enum	FRENCH	French	V1.3.2

5.1.21. DeviceFunctionType

Type	Property	Remark	version
enum	*HEARTBEAT*	Heartbeat data collection	V1.3.3
enum	*LIFT_WRIST_POWER_SWITCH*	Screen bright screen switch	V1.4.3
enum	*MANUAL_EXERCISE_MODE*	Manual exercise mode control cmd	V1.4.3
enum	*LOW_BATTERY_VIBRATION_REMINDER*	Low battery vibration reminder	V1.4.4

5.1.22. KReminderType

Type	Property	Remark	Version
enum	Appointment= 0x00	Appointment Reminder	V1.2.6

Enum	Simplpe=0x01	Simple Reminder	V1.2.6
Enum	Message=0x02	Message Reminder	V1.2.6
Enum	SilentWakeup=0x03	Silent Wakeup Reminder	V1.2.6

5.1.23. KRepeatType

Type	Property	Remark	Version
enum	None= 0x00	No repeat	V1.2.6
enum	Numbers=0x01	Repeat based on number	V1.2.6
enum	Minutes=0x02	Repeat based on time period	V1.2.6

5.2.Entry class

5.2.1. LsDeviceInfo

Type	Property	Remark	Version
String	deviceId	Device ID	V1.0.0
String	deviceSn	Device SN	V1.0.0
String	deviceName	Device Name	V1.0.0
String	broadcastID	Broadcast ID	V1.0.0
String	password	Password	V1.0.0
String	deviceType	Device Type	V1.0.0
String	modelNumber	Model	V1.0.0
String	softwareVersion	Software Version	V1.0.0
String	hardwareVersion	Hardware Version	V1.0.0
String	firmwareVersion	Firmware Version	V1.0.0
String	manufactureName	Manufacture Name	V1.0.0
int	deviceUserNumber	Device user number	V1.0.0
int	pairStatus	Paired flag	V1.0.0
int	maxUserQuantity	Maximum user number	V1.0.0
String	protocolType	Protocol Type	V1.0.0
String	macAddress	MAC address	V1.0.0
String	manufactureData	Manufacture Data	V1.3.1
Int	heartRate	Current Heart Rate	V1.5.3
boolean	delayDisconnect	Status of delay disconnect	V1.5.5
boolean	autoRegister	Auto Register message	V1.5.8

5.2.2. PedometerInfo

Type	Property	Remark	Version
String	macAddress	MAC address	V1.0.0
String	modelNumber	Model number	V1.0.0
String	softwareVersion	Software Version	V1.0.0
String	hardwareVersion	Hardware Version	V1.0.0
int	currentTimeZone	Time zone	V1.0.0
boolean	enableHeartRateDetection	Enable/Disable HR detection	V1.0.0
String	disableDetectionStartTime	Reserved	V1.0.0
String	disableDetectionEndTime	Reserved	V1.0.0

5.2.3. DeviceUserInfo

Type	Property	Remark	Version
int	userNumber	User number	V1.0.0
String	userName	User name	V1.0.0
String	deviceId	Device ID	V1.0.0

5.2.4. HeightData

Type	Property	Remark	启动 Version
String	deviceId	Device ID	V1.0.0
String	deviceSn	Device SN	V1.0.0
String	broadcastId	Broadcast ID	V1.0.0
String	date	Time stamp	V1.0.0
int	userNo	User number	V1.0.0
double	height	Height	V1.0.0
String	unit	Unit	V1.0.0
int	battery	Battery level	V1.0.0
int	heightStatus	Measuring status	V1.0.0

5.2.5. KitchenScaleData

Type	Property	Remark	Version
String	deviceId	Device ID	V1.0.0
String	deviceSn	Device SN	V1.0.0
double	weight	Weight	V1.0.0
String	unit	Unit	V1.0.0
int	battery	Battery level	V1.0.0
int	sectionWeight	Value for stone	V1.0.0
int	countDownSeconds	Count down	V1.0.0

5.2.6. BloodPressureData

Type	Property	Remark	Version
String	deviceId	Device ID	V1.0.0
String	deviceSn	Device SN	V1.0.0
String	broadcastId	Broadcast ID	V1.0.0
String	date	Measurement time	V1.0.0
float	systolic	Systolic(unit: mmHg)	V1.0.0
float	diastolic	Diastolic(unit: mmHg)	V1.0.0
float	meanArterialPressure	Mean arterial pressure	V1.0.0
long	utc	Time stamp	V1.0.0
float	pulseRate	Heart rate	V1.0.0
int	userId	User number	V1.0.0
int	battery	Battery level	V1.0.0
String	deviceSelectedUnit	Blood pressure Unit	V1.0.0
BPMeasurementStatus	measurementStatus	Measurement Status	V1.5.1

5.2.7. WeightAppendData

Type	Property	Remark	Version
double	basalMetabolism	Basal metabolism	V1.0.0
double	bodyFatRatio	Body fat	V1.0.0
double	bodyWaterRatio	Body water Ratio	V1.0.0
double	muscleMassRatio	Muscle mass ratio	V1.0.0
double	boneDensity	Bone Density	V1.0.0

5.2.8. WeightData_A2

Type	Property	Remark	Version
String	deviceId	Device ID	V1.0.0
String	deviceSn	Device SN	V1.0.0
String	broadcastId	Broadcast ID	V1.0.0
String	date	Measurement time	V1.0.0
int	userNo	User number	V1.0.0
double	weight	Weight	V1.0.0
double	pbf	Body fat	V1.0.0
double	resistance_1	Resistance1	V1.0.0
double	resistance_2	Resistance2	V1.0.0
String	deviceSelectedUnit	Weight unit	V1.0.0
int	flag	Scale flag, 1-Body fat scale, 0-weight scale	V1.0.0
float	basalMetabolism	Basal Metabolism	V1.0.0
float	bodyFatRatio	Body fat (Body fat scale only)	V1.0.0
float	bodyWaterRatio	Body water (Body fat scale only)	V1.0.0
float	visceralFatLevel	Visceral fat (Body fat scale only)	V1.0.0
float	muscleMassRatio	Muscle mass ratio (Body fat scale only)	V1.0.0
float	boneDensity	Bone density (Body fat scale only)	V1.0.0
byte	battery	Battery level (7 level)	V1.0.0
int	weightStatus	Measurement status, 0-stable, 1-unstable	V1.0.0
int	impedanceStatus	Impedance status	V1.0.0
boolean	hasAppendMeasurement	Body composition measurement flag	V1.0.0
double	voltageData	Impedance status	V1.0.0
double	lbWeightValue	Weight (Unit:LB)	V1.0.0
double	stWeightValue	The Decimal path of weight (Unit: ST)	V1.0.0
int	stSectionValue	The Integer path of weight (Unit: ST)	V1.0.0

5.2.9. WeightData_A3

Type	Property	Remark	Version
String	deviceId	Device ID	V1.0.0
String	deviceSn	Device SN	V1.0.0
String	broadcastId	Broadcast ID	V1.0.0
String	date	Measurement time	V1.0.0
int	userNo	User number	V1.0.0
double	weight	Weight	V1.0.0
String	weightDifferenceValue	The difference of weight	V1.0.0
double	impedance	Impedance	V1.0.0
String	deviceSelectedUnit	Unit	V1.0.0
String	accuracyStatus	The accuracy status of measurement data	V1.0.0
float	basalMetabolism	Basal metabolism (body fat scale only)	V1.0.0

float	bodyFatRatio	Body fat (body fat scale only)	V1.0.0
float	bodyWaterRatio	Body water (body fat scale only)	V1.0.0
float	visceralFatLevel	Visceral fat (body fat scale only)	V1.0.0
float	muscleMassRatio	Muscle mass ratio (body fat scale only)	V1.0.0
float	boneDensity	Bone density (body fat scale only)	V1.0.0
int	battery	Battery level, values from 0 to 7.	V1.0.0
String	weightStatus	Measurement status	V1.0.0
String	impedanceStatus	Impedance status	V1.0.0
boolean	appendMeasurement	Body composition measurement flag	V1.0.0
double	lbWeightValue	Weight (unit: lg)	V1.0.0
double	stWeightValue	The decimal path of weight (unit: st)	V1.0.0
int	stSectionValue	The integer path of weight(unit: st)	V1.0.0

5.2.10. SleepData

Type	Property	Remark	Version
long	startTime	The time of falling sleep	V1.0.0
long	endTime	The time of getting up	V1.0.0
int	deepSleep	The total time of deep sleep (unit: min)	V1.0.0
int	somnolence	The total time of shallow sleep(unit:min)	V1.0.0
int	wakeUp	The total time of awake(unit:min)	V1.0.0
int	timeWakeUp	Awake times	V1.0.0
int	avgLevel	Sleep level	V1.0.0
String	SleepStatus	Sleep status data list(Interval is 5 min)	V1.0.0

5.2.11. PedometerData

Type	Property	Remark	Version
String	deviceId	Device ID	V1.0.0
String	deviceSn	Device SN	V1.0.0
String	broadcastId	Broadcast ID	V1.0.0
String	date	Measurement time	V1.0.0
int	userNo	User number	V1.0.0
int	walkSteps	Walk steps	V1.0.0
int	runSteps	Run steps	V1.0.0
double	examount	Exercise amount	V1.0.0
double	calories	Calories	V1.0.0
int	exerciseTime	Exercise time	V1.0.0
int	distance	Distance	V1.0.0
int	battery	Battery level	V1.0.0
int	sleepStatus	Sleep status	V1.0.0
int	intensityLevel	Intensity level	V1.0.0
long	utc	Time stamp	V1.0.0

float	batteryVoltage	Battery level	V1.0.0
int	batteryPercent	Battery percent	V1.2.3

5.2.12. PedometerHeartRateData

Type	Property	Remark	Version
String	deviceId	Device ID	V1.0.0
String	broadcastId	Broadcast ID	V1.0.0
int	sendingPeriod	Sending period(0-daily, 1-hourly)	V1.0.0
long	utc	The time stamp of the first data	V1.0.0
Int	remainCount	Unsent data count	V1.0.0
int	deltaUtc	The interval time of each data(unit: s)	V1.0.0
List<Integer>	heartRates	Heart rate data list	V1.0.0
Date	measureTime	Measurement time	V1.0.0

5.2.13. PedometerSleepData

Type	Property	Remark	Version
String	deviceId	Device ID	V1.0.0
String	broadcastId	Broadcast ID	V1.0.0
int	sendingPeriod	Send period (0-daily, 1-hourly)	V1.0.0
long	utc	The time stamp of the first data	V1.0.0
int	remainCount	Unsent data count	V1.0.0
int	deltaUtc	The interval time of each data(unit: s)	V1.0.0
List<Integer>	sleeps	Sleep data list	V1.0.0
Date	measureTime	Measurement time	V1.0.0

5.2.14. PedometerRunningStatus

Type	Property	Remark	Version
String	deviceId	Device ID	V1.0.0
String	broadcastId	Broadcast ID	V1.0.0
List<RunningStat>	stateList	Running start and running end time stamp list	V1.0.0
int	runningTime	Total time of running	V1.0.0
int	totalSteps	Total steps of running	V1.0.0
double	maxCalories	The maximum calories	V1.0.0
int	maxHeartRate	The maximum heart rate	V1.0.0
int	avgHeartRate	The average heart rate	V1.0.0
int	maxPitch	The max step frequency	V1.0.0
int	avgPitch	The average step frequency	V1.0.0
int	dataType	Data Type 0:Mambo watch's data 1:Automatic identification running data 2:Track running data with GPS	V1.2.2

		3:Track running data without GPS	
Int	sportsMode	Running mode Running: 0x01	V1.2.2

5.2.15. PedometerHeartRateStatisticsData

Type	Property	Remark	Version
String	deviceId	Device ID	V1.0.0
String	broadcastId	Broadcast ID	V1.0.0
long	utc	The time stamp of the first data	V1.0.0
int	heartRateRange1	Cumulative time of heart rate interval 1 (unit:s)	V1.0.0
int	heartRateRange2	Cumulative time of heart rate interval 2 (unit:s)	V1.0.0
int	heartRateRange3	Cumulative time of heart rate interval 3 (unit:s)	V1.0.0
Date	measureTime	The start time of statics heart rate	V1.0.0

5.2.16. PedometerRunningCalorieData

Type	Property	Remark	Version
String	deviceId	Device ID	V1.0.0
String	broadcastId	Broadcast ID	V1.0.0
long	utc	The time stamp of the first data	V1.0.0
int	deltaUtc	The interval time of each data(unit: s)	V1.0.0
int	remainCount	Unsent data count	V1.0.0
int	currentUploadingCount	Current data count	V1.0.0
List<Float>	calories	Calories data list	V1.0.0
Date	measureTime	Measurement time	V1.0.0

5.2.17. DeviceFilterInfo

Type	Property	Remark	Version
String	broadcastName	Device broadcast name	V1.2.8
BroadcastNameMatchWay	broadcastId	Match way	V1.2.8

5.2.18. PedometerHeartRateAlert

Type	Property	Remark	Version
boolean	enable	Switch of heart rate alert	V1.3.2
int	minHeartRate	The minimal heart rate	V1.3.2
int	maxHeartRate	The maximum heart rate	V1.3.2

5.2.19. PedometerSwimmingInfo

Type	Property	Remark	Version
int	poolLength	The length of pool	V1.3.2

5.2.20. PedometerSportsInfo

Type	Property	Remark	Version
short	speed	Speed	V1.3.2
int	distance	Distance	V1.3.2

5.2.21. PedometerEventReminder

Type	Property	Remark	Version
int	index	The index of event, from 1 to 5	V1.3.2
String	reminderContent	Reminder content	V1.3.2
boolean	enable	Switch of event reminder	V1.3.2
Int	hour	Reminder time, hour	V1.3.2
Int	Minute	Reminder time, minute	V1.3.2
List<WeekDay>	repeatDay	Repeat	V1.3.2
VibrationMode	vibrationMode	Vibration mode	V1.3.2
int	vibrationDuration	Vibration duration	V1.3.2
int	vibrationIntensity1	Vibration Intensity, from 0 to 9	V1.3.2
Int	vibrationIntensity2	Vibration Intensity， from 0 to 9	V1.3.2

5.2.22. DeviceFunctionInfo

Type	Property	Remark	Version
DeviceFunctionType	type	Device Function Type	V1.3.3
boolean	enable	Function Switch	V1.3.3

5.2.23. HeartbeatData

Type	Property	Remark	Version
int	offset	Time Offset	V1.3.3
int	value	G-Sensor Data	V1.3.3

5.2.24. PedometerHeartbeatData

Type	Property	Remark	Version
String	deviceId	Device ID	V1.3.3
String	broadcastId	Broadcast ID	V1.3.3
long	utc	UTC	V1.3.3
int	remainCount	The number of unsent count	V1.3.3
int	currentUploadingCount	The number of current send	V1.3.3
List<HeartbeatData>	heartBeats	Heartbeat Data list	V1.3.3

5.2.25. BloodGlucoseData

Type	Property	Remark	Version

String	deviceId	Device ID	V1.3.4
String	broadcastId	Broadcast ID	V1.3.4
long	utc	UTC	V1.3.4
float	concentration	Blood Glucose Concentration	V1.3.4
String	unit	Measurement Unit	V1.3.4

5.2.26. MoodbeamData

Type	Property	Remark	Version
String	deviceId	Device ID	V1.4.4
String	broadcastId	Broadcast ID	V1.4.4
int	remainingAmount	Remaining amount of Mood record	V1.4.4
int	count	Number of synced	V1.4.4
int	length	Length of Mood Record	V1.4.4
List<MoodRecord>	records	Mood Record list	V1.4.4

5.2.27. MoodRecord

Type	Property	Remark	Version
long	utc	UTC	V1.4.4
int	value	Value of Mood Record	V1.4.4

5.2.28. MoodRecordReminder

Type	Property	Remark	Version
boolean	enable	Status of reminder	V1.4.4
String	startTime	Start time of Mood record reminder	V1.4.4
String	endTime	End time of Mood record reminder	V1.4.4
int	vibrationTime	Vibration Time,Unit(seconds)	V1.4.4
int	vibrationInterval	Vibration Interval,Unit(minutes)	V1.4.4

5.2.29. KReminder extends DeviceMessage

Type	Property	Remark	Version
int	reminderIndex	Index of reminder,1~25	V1.4.7
BOOL	status	Status of reminder,enable or disable	V1.4.7
BOOL	totalStatus	Status of all reminder switch	V1.4.7
KReminderType	type	Reminder type	V1.4.7
int	iconIndex	Icon of reminder	V1.4.7
String	title	Title of reminder	V1.4.7
String	content	Content of reminder	V1.4.7
long	remindTime	Time of reminder setting	V1.4.7
int	vibrationLength	Vibration length of reminder,unit:minute	V1.4.7
BOOL	joinAgenda	Whether to join the agenda,yes or no	V1.4.7

KRepeatSetting	repeatSetting	Repeat setting of this minder	V1.4.7

5.2.30. KAppointmentReminder

Type	Property	Remark	Version
long	appointmentTime	Time of appointment	V1.4.7
NSString	location	Appointment location	V1.4.7

5.2.31. KSimpleReminder

Type	Property	Remark	Version

5.2.26. KMessageReminder

Type	Property	Remark	Version

5.2.32. KWakeupReminder

Type	Property	Remark	Version
int	snoozeLength	Snooze length,unit:minute	V1.4.7

5.2.33. KRepeatSetting

Type	Property	Remark	Version
KRepeatType	repeatType	Repeat type	V1.4.7
List<WeekDay>	weekDays	Week days array	V1.4.7
long	startTime	Start Time of time period	V1.4.7
long	endsTime	Ends Time of time period	V1.4.7
int	value	Repeat value	V1.4.7
List<Long>	multiRemindTimes	Multiple reminder time	V1.4.7
long	expirationDate	Expiration date of repeat reminder	V1.4.7

5.2.34. ScanIntervalConfig

Type	Property	Remark	Version
boolean	enable	false:disable the default scan interval config true:ebale the default scan interval config or update	V1.4.8
long	scanTime	scan time in each scan interval,minimum value:10s	V1.4.8
long	pausesTime	pauses time in each scan interval,minimum value:3s	V1.4.8

5.2.35. BPMeasurementStatus

Type	Property	Remark	Version

int	bodyMovement	0=No body movement 1=Body movement during measurement	V1.5.1
int	cuffFit	0=Cuff fits properly 1=Cuff too loose	V1.5.1
int	pulseRateRange	0=Pulse rate is within the range 1=Pulse rate exceeds upper limit 2=Pulse rate is less than lower limit	V1.5.1
int	irregularPulse	0=No irregular pulse detected 1=Irregular pulse detected	V1.5.1
int	measurementPosition	0=Proper measurement position 1=Improper measurement position	V1.5.1

5.2.36. DefaultCallConfig

Type	Property	Remark	Version
String	phoneNumber	default call phone number display on device	V1.5.2