

裂变智能穿戴产品 SDK 使用说明 (iOS)

前言: SDK 希望你理解 BLE (Bluetooth Low Energy) 基本概念, 熟练使用苹果的蓝牙框架 CoreBluetooth。

➤ 目录	
➤ 目录	2
➤ 更新记录	10
➤ 环境要求	15
➤ 导入 SDK	15
方式一：通过 CocoaPods 安装. 在 Podfile 中添加以下内容	15
方式二：手动导入 SDK (.xcframework 支持模拟器、真机 编译运行)	15
➤ 设置蓝牙后台模式	16
➤ 设置隐私权限	17
➤ 开始使用, 导入头文件	17
➤ 固定流程说明	20
➤ 基础控制与查询 API (FBAtCommand)	21
1、 获取设备电量信息	21
2、 获取设备版本信息	21
3、 获取协议版本信息	22
4、 获取 UTC 时间	22
5、 获取时区	22
6、 同步 UTC 时间 (建议使用 fbAutomaticallySynchronizeSystemTimeWithBlock: 替换)	
.	22
7、 设置时区 (建议使用 fbAutomaticallySynchronizeSystemTimeWithBlock: 替换)	22

8、 设置系统时间 (同步 UTC 时间+设置时区)	23
9、 设置时间显示模式	23
10、 设置语言	23
11、 设置距离单位	24
12、 设置震动提醒开关	24
13、 设置抬腕亮屏开关	25
14、 进入/退出拍照模	25
15、 开启/关闭数据流	25
16、 设置心率开关	25
17、 收到设备即使拍照的回调	25
18、 手机查找设备	25
19、 收到设备查找手机的回调	26
20、 手机确认被找到	26
21、 收到设备取消查找手机的回调	26
22、 收到蓝牙配对成功的回调	26
23、 重启设备	26
24、 恢复出厂设置	26
25、 软关机	26
26、 启动 OTA 升级模式	27

27、安全确认	27
28、启动/退出自检模式	27
29、清除用户信息	27
30、清除运动数据	27
31、设置设备主动断开连接	27
32、界面跳转测试	27
33、女性生理状态设定	28
34、获取未使用的 记事体醒/闹钟信息 ID	28
35、开启/退出短跑模式	28
36、监听设备的定位请求	29
37、OTA 类型通知	29
38、进入/退出生产模式	29
39、监听设备端功能状态变更回调	29
40、设置温度单位	31
41、获取亮屏时长	31
42、设置亮屏时长	32
43、切换至指定表盘	32
44、设置震动反馈	32
45、请求绑定设备	32

46、	请求解绑设备	33
47、	获取当天静息心率	33
48、	获取指定提示功能	33
49、	设置指定提示功能	33
50、	app 端同步 GPS 运动状态到设备端	34
51、	监听设备端 GPS 运动状态变更回调	34
52、	定时心率检测开关设置	34
53、	定时血氧检测开关设置	35
54、	定时精神压力检测开关设置	35
55、	获取通话音频开关状态	35
56、	设置通话音频开关状态	35
57、	获取多媒体音频开关状态	35
58、	设置多媒体音频开关状态	35
➤	记录报告同步 API (FBBgCommand)	36
1、	获取设备硬件信息	36
2、	获取当日实时测量数据	38
3、	获取当前睡眠实时统计报告	41
4、	获取当前睡眠实时状态记录	42
5、	获取每日活动统计报告	45

6、	获取整点活动统计报告	47
7、	获取睡眠统计报告	48
8、	获取睡眠状态记录	48
9、	获取运动记录列表	48
10、	获取运动统计报告	49
11、	获取心率记录	52
12、	获取计步记录	55
13、	获取血氧记录	55
14、	获取血压记录	56
15、	获取精神压力记录	56
16、	获取运动详情记录	56
17、	获取 运动统计报告+运动详情纪录	56
18、	获取运动定位记录	56
19、	获取运动高频心率记录(1 秒 1 次)	56
20、	获取手动测量数据记录	57
21、	获取指定的记录和报告	58
22、	获取个人用户信息	58
23、	设置用户个人信息	60
24、	获取记事提醒/闹铃信息	60

25、	设置记事提醒/闹铃信息	61
26、	获取消息推送开关信息	61
27、	设置消息推送开关信息	66
28、	获取久坐提醒信息	66
29、	设置久坐提醒信息	67
30、	获取心率等级判定信息	67
31、	设置心率等级判定信息	68
32、	获取喝水提醒信息	68
33、	设置喝水提醒信息	69
34、	获取勿扰提醒信息	69
35、	设置勿扰提醒信息	69
36、	获取心率检测信息	70
37、	设置心率检测信息	70
38、	获取抬腕亮屏信息	70
39、	设置抬腕亮屏信息	71
40、	获取运动目标信息	71
41、	设置运动目标信息	72
42、	设置今日天气详情	72
43、	设置未来天气预报信息	75

44、 app 推送手机定位信息	76
45、 获取女性生理周期信息	76
46、 设置女性生理周期信息	78
47、 获取心率异常提醒信息	78
48、 设置心率异常提醒信	79
49、 GPS 运动互联数据交互	79
50、 获取常用联系人信息	81
51、 设置常用联系人信息	81
52、 读取片外 flash 空间数据（设备意外重启信息，供固件分析问题）	81
53、 请求获取设备日志（埋点数据，读取 OTA 缓存数据，总共 60K）	82
54、 获取系统功能开关信息	82
55、 设置系统功能开关信息	82
56、 推送 AGPS 位置基础信息(经纬度 UTC)	82
➤ 获取流数据 API (FBAtCommand)	83
➤ OTA 工具 API (FBBluetoothOTA)	85
1. 生成自定义表盘 bin 文件数据 (FBCustomDataTools)	85
2. 生成多项目自定义表盘 bin 文件数据 (FBCustomDataTools)	85
3. 生成自定义运动类型 bin 文件数据(多个运动类型 Bin 文件压缩合并成一个 Bin 文件) (FBCustomDataTools)	85

4. 传入不同的 <i>OTA</i> Type 进行 <i>OTA</i> 数据同步, 为避免变砖, 请先确认项目是否支持	85
➤ 错误码枚举定义 <i>FB_RET_CMD</i>	86
➤ 运动模式枚举定义 <i>FB_MOTIONMODE</i>	87

➤ 更新记录

版本号	更新内容	发布日期	备注
V1.0.0	<ul style="list-style-type: none"> ✧ 定义 SDK 基础架构，以及功能 api 接口，具体分为四类： ✧ 1. 蓝牙管理器 (FBBluetoothManager) ✧ 2. AT 协议指令集 (FBAtCommand) ✧ 3. BG 协议指令集 (FBBgCommand) ✧ 4. OTA 管理器 (FBBluetoothOTA) 	20201231	首次发版
V2.0.0	<ul style="list-style-type: none"> ✧ 1. 优化已知问题 ✧ 2. AT 指令回调数据类型由 NSDictionary 字典转换为使用对象模型，详见各回调 block ✧ 3. 增加自定义表盘压缩算法协议 	20220414	
V3.0.0	<ul style="list-style-type: none"> ✧ 1. 优化已知问题 ✧ 2. 重构 block 回调方式，修复 block 回调异常问题 	20220715	
V3.0.1	<ul style="list-style-type: none"> ✧ 1. 广播信息解析：适配号兼容 ✧ 2. 新增印地语、孟加拉语、乌尔都语、波斯语 ✧ 3. 新增获取精神压力记录协议、血压协议暂不可用 	20221119	
V3.0.2	<ul style="list-style-type: none"> ✧ 1. 优化 OTA 通知问题 ✧ 2. GPS 运动互联控制增加 确认/取消 指令 	20221214	
V3.0.3	<ul style="list-style-type: none"> ✧ 1. 新增定时心率、定时血氧、定时精神压力 检测开关设置协议 ✧ 2. FBMessageModel 新增消息推送类型 ✧ 3. FB_MOTIONMODE 新增运动类型 	20221230	
V3.0.4	<ul style="list-style-type: none"> ✧ 1. 新增 get、set 通话音频开关协议 ✧ 2. 新增 get、set 多媒体音频开关协议 ✧ 3. EM_FUNC_SWITCH 新增类型 	20230105	
V3.0.5	<ul style="list-style-type: none"> ✧ 1. 修正获取血压记录协议 ✧ 2. 新增获取运动高频心率记录 (1 秒 1 次) ✧ 3. 新增获取精神压力协议 ✧ 4. 兼容获取手动测量记录协议 ✧ 5. FBFirmwareVersionObject 新增配置 ✧ 6. 自动同步系统时间 (同步 UTC 时间 + 设置时区)、获取 运动统计报告+运动详情记录 	20230130	

	<ul style="list-style-type: none"> ✧ 7.FB_RECORDTYPE 新增类型 ✧ 8.FB_MULTIPLERECORDREPORTS 新增类型 		
V3.0.6	<ul style="list-style-type: none"> ✧ 1.修正 set 心率异常提醒参数合法性判断 	20230202	
V3.0.7	<ul style="list-style-type: none"> ✧ 1.优化设备搜索性能 ✧ 2.优化数据发送间隔 ✧ 3.新增"确认手机被找到"协议 (FBAtCommand) fbUpPhoneConfirmedFoundDataWithBlock: 	20230209	
V3.0.8	<ul style="list-style-type: none"> ✧ 1.绑定请求超时时长由 30s 延长至 60s ✧ 2.新增获取设备 log 数据协议 	20230211	
V3.0.9	<ul style="list-style-type: none"> ✧ 1.FBFirmwareVersionObject 新增配置: ✧ 是否支持一次性推送多种运动模式 ✧ 支持一次性推送多种运动模式的个数, 0 不支持 ✧ 2.新增一次性推送多种运动模式协议 ✧ 3.FB_OTANOTIFICATION 新增 OTA 通知类型: ✧ FB_OTANotification_Multi_Sport(9) ✧ 4.FBCustomDataTools 新增「多个运动类型 Bin 文件压缩合并成一个 Bin 文件」, 配合「一次性推送多种运动模式」使用 ✧ 5.FBBluetoothOTA 新增进度模型 FBProgressModel, 兼容一个 bin 文件包含多个包时的升级进度问题 ✧ 6.修正部分地区使用冬/夏令时, 时区无法设置导致时间错误问题 ✧ 7.绑定设备请求可传入 Mac 地址, 但是建议传 nil, SDK 内部会为你管理绑定密钥 ✧ 8.GPS 运动控制增加错误码 FB_GPS_MOTION_STATE_NONE 本地无此运动信息 ✧ 9.优化搜索设备, 使用数据模型 FBPeripheralModel ✧ 10.FB_MOTIONMODE 新增运动类型: ✧ 法式拳击(139) 	20230301	
V3.1.0	<ul style="list-style-type: none"> ✧ 1.FB_OTANOTIFICATION 新增 OTA 通知类型: ✧ FB_OTANotification_Multi_Dial_Built_in(200) 	20230324	

	<ul style="list-style-type: none"> ✧ FB_OTANotification_Multi_Sport_Built_in(201) ✧ 2.FBCustomDataTools「多个运动类型 Bin 文件压缩合并成一个 Bin 文件」压缩算法 API 调整 (2048 或 4096) ✧ 3.新增"获取设备运动类型列表"协议 (FBBgCommand) fbGetListOfDeviceMotionTypesWithBlock: ✧ 4.原厂 OTA SDK 更新: RTKOTASDK.framework 		
V3.1.1	<ul style="list-style-type: none"> ✧ 1.优化内部压缩算法 ✧ 2.修复"获取设备硬件信息"结构体版本错误问题 ✧ 2.新增"获取设备绑定状态"协议 (FBAAtCommand) fbGetBindingStatusRequestWithBlock: ✧ 3.新增"获取当前运动状态"协议 (FBAAtCommand) fbGetCurrentExerciseStateStatusWithBlock: 	20230329	
V3.1.2	<ul style="list-style-type: none"> ✧ 1.新增图片资源, 自定义表盘, 不同分辨率使用不同大小的切图 	20230403	
V3.1.3	<ul style="list-style-type: none"> ✧ 1.新增"设备确认被找到"协议 (FBAAtCommand) fbUpDeviceConfirmedFoundDataWithBlock: ✧ 2.新增"获取系统功能开关信息"协议 (FBBgCommand) fbGetSystemFunctionSwitchInformationWithBlock: ✧ 3.新增"设置系统功能开关信息"协议 (FBBgCommand) fbSetSystemFunctionSwitchInformation: withBlock: ✧ 4.FBFirmwareVersionObject 新增配置: ✧ 是否支持日常心率检测开关控制 ✧ 是否支持日常血氧检测开关控制 ✧ 是否支持日常血压检测开关控制 ✧ 是否支持日常精神压力检测开关控制 ✧ 5.新增二进制数据埋点 log 完整解析 ✧ 6.OTA 新增错误状态 	20230412	

	<p>FB_OTANotification_ERROR_Busy_Sport: 设备处于运动中, 请结束运动后重试...</p> <p>✧ 7.修正"界面跳转测试"协议错误 (FBAtCommand)</p> <p>fbUpInterfaceJumpTestCode:</p>		
V3.1.4	<p>✧ 1.优化已知问题</p> <p>✧ 2.新增"自定义表盘支持抗锯齿"处理</p> <p>✧ 3.FBFirmwareVersionObject 新增配置:</p> <p>✧ 是否支持系统功能开关的设定和获取大数据指令 (0252H / 0352H)</p> <p>✧ 是否支持零星小睡</p> <p>✧ 是否支持自定义表盘抗锯齿</p> <p>✧ 4.新增尼泊尔语</p> <p>✧ 5.新增乌克兰语</p> <p>✧ 6.报告/记录 按时间戳由小到大排序</p> <p>✧ 7.广播信息中设配号兼容</p>	20230518	
V3.1.5	<p>✧ 1.修复"设置/获取 个人用户信息"协议已知错误问题</p> <p>✧ 2.新增"读取片外 flash 空间数据"协议, 用于获取设备意外重启信息, 供固件分析问题 (FBBgCommand)</p> <p>fbReadOffChipFlashWithAddress: withLength: withBlock:</p> <p>✧ 3.FBFirmwareVersionObject 新增: 适配号, 长整形 (部分手表支持) Hardfault 信息空间地址 Hardfault 信息空间尺寸 系统参数空间地址 系统参数空间尺寸 是否支持带适配号验证的 OTA 通知指令 是否支持hardfault 信息和系统参数读取</p> <p>✧ 4.EM_FUNC_SWITCH 新增类型: FS_TIMING_BP_WARN(33) FS_DEVICE_EXCEPTION_WARN(34)</p> <p>✧ 5.新增表盘数据校验 (UTC 或 CRC)</p> <p>✧ 6.原厂 OTA SDK 更新至 v1.4.9 版本 (RTKOTASDK.framework、RTKLEFoundation.framework) 修改多包 OTA 文件顺序</p> <p>✧ 7.FBTypeRecordModel 记录生成周期</p>	20230718	

	<p>参数名由原先 createTimes 改为 recordingCycle, 避免歧义, 并且单位统一为秒; 新增参数</p> <ul style="list-style-type: none"> ✧ 8.FBRecordDetailsModel 运动详情记录新增参数 一公里用时 (一公里配速, 单位秒) KilometerPace, 一英里用时 (一英里配速, 单位秒) MilePace, 仅部分设备支持, 具体根据参数 记录格式定义 (recordDefinition) 而定 ✧ 9. 自定义表盘抗锯齿切图更新 ✧ 10. 优化记录/报告排序及其他已知问题 		
V3.1.6	<ul style="list-style-type: none"> ✧ 1.EM_FUNC_SWITCH 新增类型: FS_AGPS_LOCATION_REQUEST(35) FS_AGPS_DATA_REQUEST(36) ✧ 2.FB_OTANOTIFICATION 新增 OTA 通知类型: FB_OTANotification_AGPS_Package(30) ✧ 3. 新增"推送 AGPS 位置基础信息 (经纬度 UTC) "协议 (FBBgCommand) fbPushAGPSLocationInformation: withBlock: ✧ 4. 新增"同步 AGPS 定位数据"协议 (FBBgCommand) fbSynchronizeAGPSPositioningData: withBlock: ✧ 5.FB_MOTIONMODE 新增运动类型: 沙滩排球(140) ✧ 6.FB_LANGUAGES 新增语言类型: FB_SDK_ms(29) FB_SDK_sk(30) FB_SDK_my(31) FB_SDK_da(32) ✧ 6.SDK 同时支持 真机、模拟器 编译运行 (注意: 模拟器无法使用蓝牙) 	20230824	
V3.1.7	<ul style="list-style-type: none"> ✧ 1.FBFirmwareVersionObject 新增标志位: 是否支持静息心率 是否支持 AGPS 定位 ✧ 2. 修复"获取运动定位记录"协议已知错误问题 (FBBgCommand) fbGetMotionLocationRecordDataStartTime: forEndTime: withBlock: 	20231010	

➤ 环境要求

iOS 10 及以上操作系统，支持模拟器、真机编译(即 x86_64、arm64 指令集)

依赖

- CoreBluetooth.framework

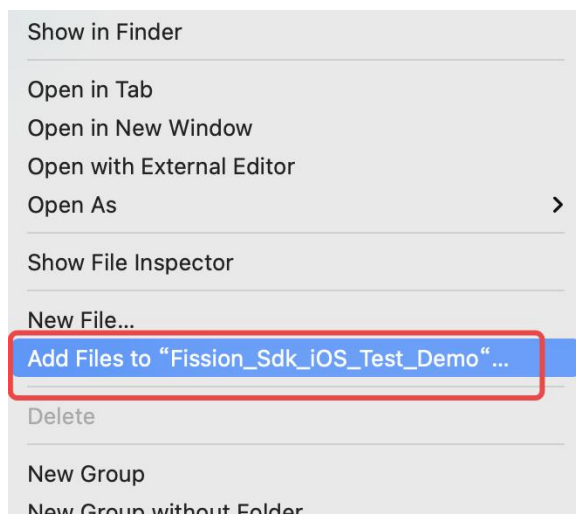
➤ 导入 SDK

方式一：通过 CocoaPods 安装. 在 Podfile 中添加以下内容

```
pod 'Fission_Sdk_iOS', git: 'https://github.com/linwear/Fission_Sdk_iOS.git'
```

方式二：手动导入 SDK (.xcframework 支持模拟器、真机 编译运行)

1、将 Fission_Sdk_iOS.xcframework、RTKOTASDK.xcframework、RTKLEFoundation.xcframework 文件 Add File 导入工程:



Destination: ☒ Copy items if needed

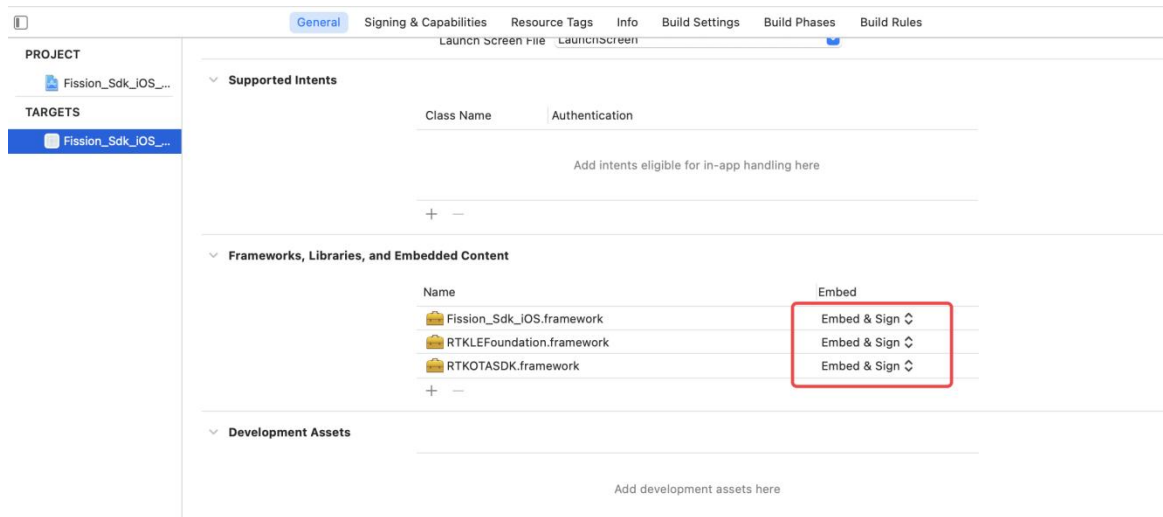
Added folders: ☒ Create groups
☐ Create folder references

Add to targets: ☒ ☐ Fission_Sdk_iOS_Test_Demo

New Folder Options Cancel Add

此时应注意勾选选项:

2、在 project 中修改 Fission_Sdk_iOS.xcframework、RTKOTASDK.xcframework、RTKLEFoundation.xcframework 的嵌入方式为 Embed&Sign:



Note: 为了使 app 能够执行 SDK 的代码，framework 需要包含在 app bundle 中。如果无法执行，console 中打印 image not found，表示这一步没有完成。

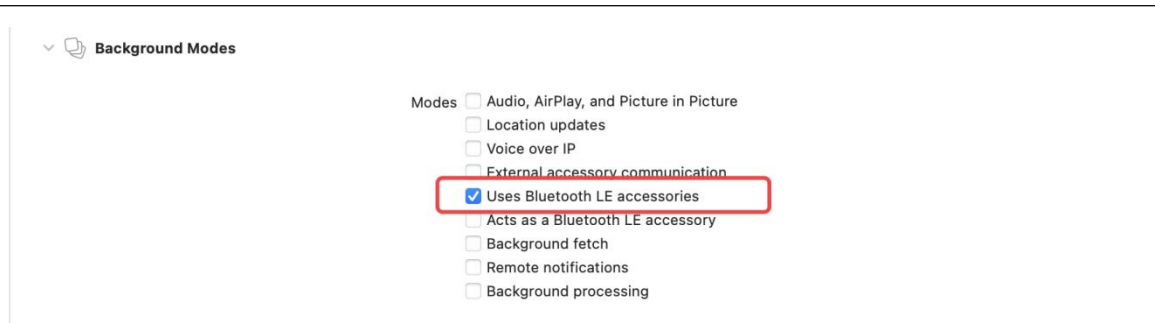
```

dyld: Library not loaded: @rpath/RTKLEFoundation.framework/RTKLEFoundation
  Referenced from: /private/var/containers/Bundle/Application/4632858E-2000-48AD-B5B6-D927D0B58DE4/FissionBluetooth
  Reason: image not found
dyld: launch, loading dependent libraries
DYLD_LIBRARY_PATH=/usr/lib/system/introspection
DYLD_INSERT_LIBRARIES=/Developer/usr/lib/libBacktraceRecording.dylib:/Developer/usr/lib/libMainThreadChecker
.dylib:/Developer/Library/PrivateFrameworks/DTDDISupport.framework/libViewDebuggerSupport.dylib
(11db)

```

➤ 设置蓝牙后台模式

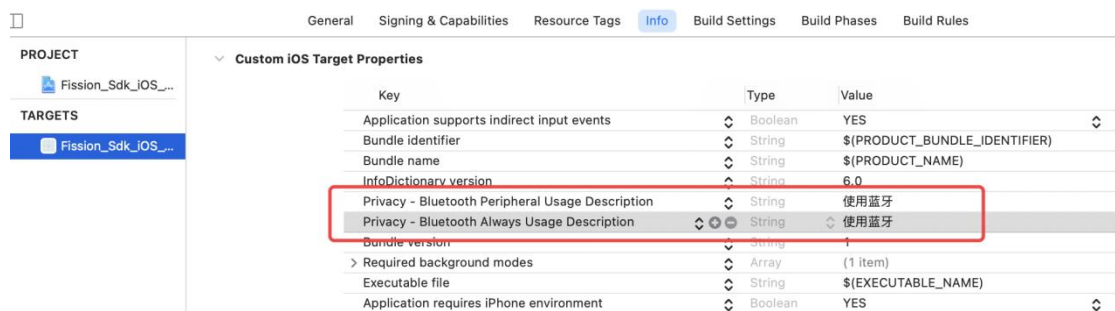
后台运行模式，开启以下 Background mode:



➤ 设置隐私权限

隐私数据使用说明，iOS 需要 app 对使用的隐私数据提供可视化的文字说明描述，否则 app 无法启动，需要在 info plist 中添加以下使用描述：

- Privacy - Bluetooth Peripheral Usage Description
- Privacy - Bluetooth Always Usage Description



➤ 开始使用，导入头文件

在使用 SDK 接口的源代码中，使用 `#import <Fission_Sdk_iOS/Fission_Sdk_iOS.h>` 引入头文件即可使用相关 API

① 初始化蓝牙管理器 **FBBluetoothManager.sharedInstance** 设置回调监听方法：

```
/// 蓝牙状态改变回调
-(void)fbOnCentralManagerDidUpdateStateWithBlock:(FBOnCentralManagerDidUpdateStateBlock)fbBlock;
```

```
/// 搜索蓝牙设备回调
-(void)fbDiscoverPeripheralsWithBlock:(FBDiscoverPeripheralsBlock)fbBlock;
```

```
/// 设备连接 成功/失败 回调
-(void)fbOnConnectedAtChannelWithBlock:(FBOnConnectedAtChannelBlock)fbBlock;
```

```
/// 设备断开连接回调
```

```

-(void)fbOnDisconnectAtChannelWithBlock:(FBOnDisconnectAtChannelBlock)fbBlock;

/// 蓝牙系统错误回调
-(void)fbBluetoothSystemErrorWithBlock:(FBBluetoothSystemErrorBlock)fbBlock;

/// 开始扫描设备
- (void)scanForPeripherals;

/// 停止扫描设备
- (void)cancelScan;

/// 连接设备
- (void)connectToPeripheral:(CBPeripheral * _Nonnull)peripheral;

/// 断开设备
- (void)disconnectPeripheral;

```

更多 api 接口方法使用参考 **FBBluetoothManager** 类；

代码示例 1，设置监听扫描到设备的回调：

```

// 扫描到设备回调方法
[FBBluetoothManager.sharedInstance fbDiscoverPeripheralsWithBlock:^(BOOL isPair, NSString * _Nonnull device_Name, NSString * _Nonnull mac_Address, NSString * _Nonnull adapt_Number, CBPeripheral * _Nonnull peripheral, NSDictionary * _Nonnull advertisementData, NSNumber * _Nonnull RSSI) {

    // do something...
}];

```

代码示例 2，开始扫描设备：

```

// 开始扫描设备
[FBBluetoothManager.sharedInstance scanForPeripherals];

```

② AT 指令集 **FBAAtCommand.sharedInstance**，更多 api 接口方法使用参考 **FBAAtCommand** 类；

代码示例，请求绑定设备：

```
// 绑定设备请求
[FBAtCommand.sharedInstance fbBindDeviceRequestWithBlock:^(NSInteger responseObject, NSError * _Nullable error) {
    if (error) {
        // 失败
    } else {
        // 根据自身业务处理结果
    }
}];
```

③ BG 指令集 **FBBgCommand.sharedInstance**，具体 api 接口方法使用参考

FBBgCommand 类；

代码示例，请求设备硬件信息：

```
// 获取设备硬件信息请求
[FBBgCommand.sharedInstance fbGetHardwareInformationDataWithBlock:^(FB_RET_CMD status, float progress, FBDeviceInfoModel * _Nullable responseObject, NSError * _Nullable error) {
    if (error) {
        // 失败
    } else if (status == FB_DATATRANSMISSIONDONE) {
        // 成功
    }
}];
```

④ OTA 管理器 **FBBluetoothOTA.sharedInstance**，固件升级、在线表盘、自定义表盘、运动推送 · · · 通过传入 **FB_OTANOTIFICATION** 参数，区分 OTA 类型，具体 api 接口方法使用参考 **FBBluetoothOTA** 类；

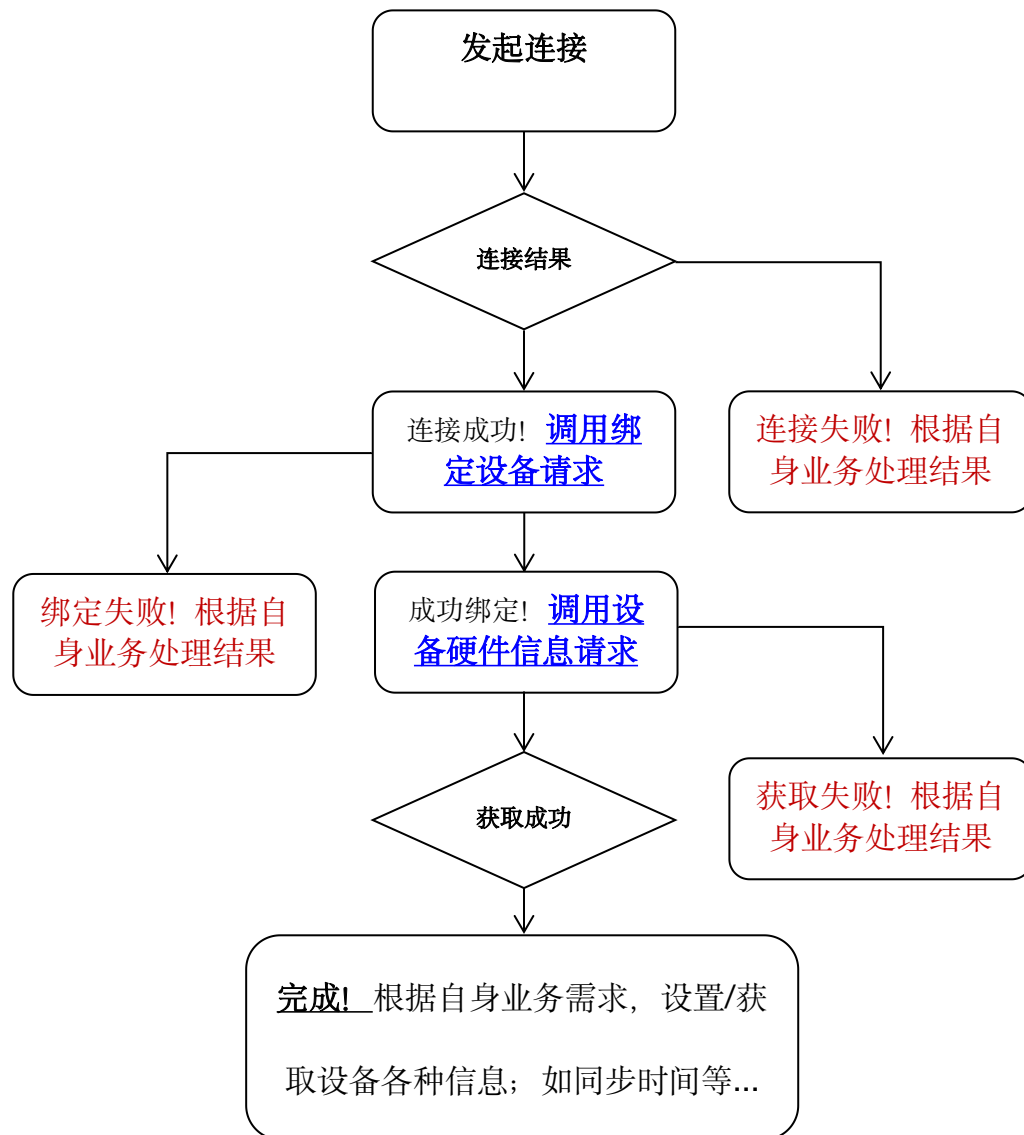
代码示例，固件升级：

```
// 升级固件
[FBBluetoothOTA.sharedInstance fbStartCheckingOTAWithBinFileData:binFile withOTAtype:FB_OTANotification_Firmware
withBlock:^(FB_RET_CMD status, float progress, FBOTADoneModel * _Nonnull responseObject, NSError * _Nonnull error) {
    if (error) {
        // 失败
    } else if (status==FB_DATATRANSMISSIONDONE){
        // 成功
    } else if (status==FB_INDATATRANSMISSION){
        // progress进度
    }
}];
```

自定义表盘 bin 文件支持本地生成，请参考：

```
// 生成自定义表盘文件
NSData *file = [FBCustomDataTools.sharedInstance fbGenerateCustomDialBinFileDataWithDialModel:model];
```

➤ 固定流程说明



Note: SDK 底层部分功能处理依赖【设备硬件信息】，硬件功能相关信息

FBAllConfigObject.firmwareConfig 详见 **FBFirmwareVersionObject** 类;

①发起连接

②连接成功，请求绑定设备

③绑定设备成功，请求获取设备硬件信息

④设备硬件信息请求成功，开始根据自身业务需求，调用其他协议接口...

➤ 基础控制与查询 API (FBAtCommand)

1、获取设备电量信息

```
- (void)fbReqBatteryStatusDataWithBlock:(FBReqBatteryStatusBlock
_Nonnull)fbBlock;
```

```
/*
```

```
手表设备电量信息 | Watch device battery info
```

```
*/
```

```
@interface FBBatteryInfoModel : NSObject
```

```
/**
```

```
电池电量状态 | Battery state
```

```
*/
```

```
@property (nonatomic, assign) FB_BATTERYLEVEL batteryState;
```

```
/**
```

```
电池电量 | Battery level
```

```
*/
```

```
@property (nonatomic, assign) NSInteger batteryLevel;
```

```
@end
```

```
typedef enum {
```

```
    BATT_NORMAL      = 0, //正常 | Normal
```

```
    BATT_LOW_POWER   = 1, //低压 | Low power
```

```
    BATT_CHARGING     = 2, //充电中 | Charging
```

```
    BATT_FULL        = 3, //电池满 | Full power
```

```
}FB_BATTERYLEVEL;
```

2、获取设备版本信息

```
- (void)fbReqDeviceVersionDataWithBlock:(FBReqDeviceVersionBlock
_Nonnull)fbBlock;
```

```
/*
```

```
设备版本信息 | Device version information
```

```
*/
```

```
@interface FBDeviceVersionModel : NSObject
```

```
/**
```

```
硬件版本号 | Hardware version number
```

```
*/
```

```
@property (nonatomic, copy) NSString *hardwareVersion;
```

```
/**
```

```
软件版本号 | Software version number
```

```
*/
```

```
@property (nonatomic, copy) NSString *softwareVersion;
@end
```

3、获取协议版本信息

```
- (void)fbReqProtocolVersionDataWithBlock:(FBReqProtocolVersionBlock
__Nonnull)fbBlock;
/**
 协议版本号 | Protocol version number
 */
NSString *responseObject;
```

4、获取 UTC 时间

```
- (void)fbReqUTCTimeDataWithBlock:(FBGet_AT_ResultCallbackBlock
__Nonnull)fbBlock;
/**
  UTC 时间（秒） | UTC time (seconds)
 */
NSInteger responseObject;
```

5、获取时区

```
- (void)fbReqTimezoneDataWithBlock:(FBGet_AT_ResultCallbackBlock
__Nonnull)fbBlock;
/**
 时区（分钟） | Time zone (minutes)
 */
NSInteger responseObject;
```

6、同步 UTC 时间（建议使用 fbAutomaticallySynchronizeSystemTimeWithBlock: 替换）

```
-(void)fbSynchronizeUTCTimeWithBlock:(FBResultCallbackBlock
__Nonnull)fbBlock;
```

7、设置时区（建议使用 fbAutomaticallySynchronizeSystemTimeWithBlock: 替换）

```
-(void)fbUpTimezoneMinuteData:(NSInteger)timeZoneMinute
withBlock:(FBResultCallbackBlock__Nonnull)fbBlock;
/**
 时区（分钟） | Time zone (minutes)
 */
```

```
NSInteger timeZoneMinute;
```

8、设置系统时间（同步 UTC 时间+设置时区）

–

```
(void)fbAutomaticallySynchronizeSystemTimeWithBlock:(FBResultCallbackBlock _Nonnull)fbBlock;
```

9、设置时间显示模式

– (void)fbUpTimeModeData:(FB_TIMEDISPLAYMODE)hoursMode
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;

/**

时间显示模式 | Time display mode

*/

```
TIMEDISPLAYMODE hoursMode;
```

```
typedef enum {
```

```
    FB_TimeDisplayMode12Hours = 12, //12 小时制 | 12 hour system
```

```
    FB_TimeDisplayMode24Hours = 24, //24 小时制 | 24 hour system
```

```
}FB_TIMEDISPLAYMODE;
```

10、设置语言

– (void)fbUpLanguageData:(FB_LANGUAGES)language
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;

/**

语言 | language

*/

```
LANGUAGES language;
```

```
typedef enum {
```

```
    FB_SDK_zh_Hans = 0, //中文简体 | Simplified Chinese
```

```
    FB_SDK_en = 1, //英文 | English
```

```
    FB_SDK_ja = 2, //日语 | Japanese
```

```
    FB_SDK_fr = 3, //法语 | French
```

```
    FB_SDK_de = 4, //德语 | German
```

```
    FB_SDK_es = 5, //西班牙语 | Spanish
```

```
    FB_SDK_it = 6, //意大利语 | Italian
```

```
    FB_SDK_pt = 7, //葡萄牙语 | Portuguese
```

```
    FB_SDK_ru = 8, //俄语 | Russian
```

```
    FB_SDK_cs = 9, //捷克语 | Czech
```

```
    FB_SDK_pl = 10, //波兰语 | Polish
```

```

FB_SDK_zh_Hant = 11, //中文繁体 | Chinese traditional
FB_SDK_ar      = 12, //阿拉伯语 | Arabic
FB_SDK_tr      = 13, //土耳其语 | Turkish
FB_SDK_vi      = 14, //越南语 | Vietnamese
FB_SDK_ko      = 15, //韩语 | Korean
FB_SDK_he      = 16, //希伯来语 | Hebrew
FB_SDK_th      = 17, //泰语 | Thai
FB_SDK_id      = 18, //印尼语 | Indonesian
FB_SDK_nl      = 19, //荷兰语 | Dutch
FB_SDK_el      = 20, //希腊语 | Greek
FB_SDK_sv      = 21, //瑞典语 | Swedish
FB_SDK_ro      = 22, //罗马尼亚语 | Romanian
FB_SDK_hi      = 23, //印地语 | Hindi
FB_SDK_bn      = 24, //孟加拉语 | Bangla
FB_SDK_ur      = 25, //乌尔都语 | Urdu
FB_SDK_fa      = 26, //波斯语 | Persian
FB_SDK_ne      = 27, //尼泊尔语 | Nepali
FB_SDK_uk      = 28, //乌克兰语 | Ukrainian

```

```

}FB_LANGUAGES;

```

// 更多类型请查看 SDK 内 FBMacro.h 文件

11、设置距离单位

```

- (void)fbUpDistanceUnitData:(FB_DISTANCEUNIT)units
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;

```

```

/**

```

```

    单位 | Unit

```

```

*/

```

```

FB_DISTANCEUNIT units;

```

```

typedef enum {

```

```

    FB_EnglishUnits = 0, //英制单位 | English units

```

```

    FB_MetricUnit   = 1, //公制单位 | Metric unit

```

```

}FB_DISTANCEUNIT;

```

12、设置震动提醒开关

```

- (void)fbUpShakeAlterSwitchData:(BOOL)switchMode
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;

```

```

/** YES 开 NO 关 | YES ON NO OFF */

```

```

BOOL switchMode;

```


13、设置抬腕亮屏开关

```
- (void)fbUpWristSwitchData:(BOOL)switchMode
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;

/** YES 开 NO 关 | YES ON NO OFF */
BOOL switchMode;
```

14、进入/退出拍照模

```
- (void)fbUpTakePhotoStatusData:(BOOL)switchMode
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;

/** YES 进入 NO 退出 | YES Enter NO Exit */
BOOL switchMode;
```

15、开启/关闭数据流

```
- (void)fbUpDataStreamData:(NSInteger)second
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;

/**
数据返回时间间隔（单位秒） 0 表示关闭 | Data return time interval (unit: second) 0 means closed
*/
NSInteger second;
```

16、设置心率开关

```
- (void)fbUpHeartRateData:(BOOL)switchMode
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;

/** YES 开 NO 关 | YES ON NO OFF */
BOOL switchMode;
```

17、收到设备即使拍照的回调

```
- (void)fbUpTakePhotoClickDataWithBlock:(FBUpTakePhotoClickBlock
_Nonnull)fbBlock;
// 设备端操作了摇一摇拍照，会主动通过此回调通知 app 端
```

18、手机查找设备

```
- (void)fbUpFindDeviceDataWithBlock:(FBResultCallbackBlock
_Nonnull)fbBlock;
```

19、收到设备查找手机的回调

```
- (void)fbUpFindPhoneDataWithBlock:(FBUpFindPhoneBlock _Nonnull)fbBlock;  
// 设备端操作了查找手机，会主动通过此回调通知 app 端
```

20、手机确认被找到

```
- (void)fbUpPhoneConfirmedFoundDataWithBlock:(FBResultCallbackBlock  
_Nonnull)fbBlock;  
// 当设备成功查找到手机时，APP 调用该方法可停止设备查找手机
```

21、收到设备取消查找手机的回调

```
- (void)fbAbandonFindingPhoneWithBlock:(FBAbandonFindingPhoneBlock  
_Nonnull)fbBlock;  
// 设备端取消了查找手机，会主动通过此回调通知 app 端
```

22、收到蓝牙配对成功的回调

```
- (void)fbUpPairingCompleteDataWithBlock:(FBUpPairingCompleteBlock  
_Nonnull)fbBlock;  
// 设备与手机蓝牙配对成功，会主动通过此回调通知 app 端
```

23、重启设备

```
- (void)fbUpRebootDeviceDataWithBlock:(FBResultCallbackBlock  
_Nonnull)fbBlock;
```

24、恢复出厂设置

```
- (void)fbUpResetDeviceDataWithBlock:(FBResultCallbackBlock  
_Nonnull)fbBlock;
```

25、软关机

```
- (void)fbUpSoftDownDataWithBlock:(FBResultCallbackBlock  
_Nonnull)fbBlock;
```

26、启动 OTA 升级模式

```
- (void)fbUpOpenOTADataWithBlock:(FBResultCallbackBlock  
_Nonnull)fbBlock;
```

27、安全确认

```
- (void)fbUpSafetyConfirmDataWithBlock:(FBResultCallbackBlock  
_Nonnull)fbBlock;
```

28、启动/退出自检模式

```
- (void)fbUpSelfTestData:(BOOL)switchMode  
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;  
/** YES 启动 NO 退出 | YES Start NO Exit */  
BOOL switchMode;
```

29、清除用户信息

```
- (void)fbUpClearUserInfoDataWithBlock:(FBResultCallbackBlock  
_Nonnull)fbBlock;
```

30、清除运动数据

```
- (void)fbUpClearSportDataWithBlock:(FBResultCallbackBlock  
_Nonnull)fbBlock;
```

31、设置设备主动断开连接

```
- (void)fbUpDisconnectDataWithBlock:(FBResultCallbackBlock  
_Nonnull)fbBlock;
```

32、界面跳转测试

```
- (void)fbUpInterfaceJumpTestCode:(NSInteger)interfaceCode  
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;  
/**  
指定界面代号 | Specify interface code  
*/  
NSInteger interfaceCode;
```

33、女性生理状态设定

```
–(void)fbUpFemalePhysiologicalStateData:(FB_FEMALEPHYSIOLOGICALSTATE)stateCode withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;

/**
 女性生理状态 | Female's physiological state
 */
FB_FEMALEPHYSIOLOGICALSTATE stateCode;

typedef enum {
    FB_FPS_NotUsed          = 0, //未启用 | Not used
    FB_FPS_Pregnancy        = 1, //怀孕期 | Pregnancy
    FB_FPS_Menstruation     = 2, //月经期 | Menstruation
    FB_FPS_Safety           = 3, //安全期 | Safety period
    FB_FPS_Ovulation        = 4, //排卵期 | During ovulation
    FB_FPS_OvulationDay     = 5, //排卵日 | Ovulation day
    FB_FPS_PregnancyPreparation = 6, //备孕期 | Pregnancy preparation period
}FB_FEMALEPHYSIOLOGICALSTATE;
```

34、获取未使用的 记事体醒/闹钟信息 ID

```
– (void)fbGetUnusedClockIDWithBlock:(FBGet_AT_ResultCallbackBlock
_Nonnull)fbBlock;
```

// 在 app 端新建记事体醒/闹钟信息时，需先调用该接口查询可用的 ID

```
/**
 可用 ID | Available IDs
 */
NSInteger responseObject;
```

35、开启/退出短跑模式

```
– (void)fbUpSprintMode:(FB_SPRINTMODE)mode
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;
// 开启后采集速度由一分钟一笔运动详情，改为一秒一次

/**
 短跑模式开关 | Sprint mode switch
 */
FB_SPRINTMODE mode;
```

```
typedef enum {
    FB_SPRINTMODE_OFF = 0, //关闭 | Close
    FB_SPRINTMODE_ON = 1, //开启 | Open
}FB_SPRINTMODE;
```

36、监听设备的定位请求

– (void)fbUpPositioningSwitchWithBlock:(FBUpPositioningSwitchBlock
_Nonnull)fbBlock;

// app 端接收到该回调时，需要主动上报一次定位信息给设备端

```
15 @interface FBBgCommand : NSObject
363 #pragma mark - App推送手机定位信息 | App push mobile location information
364 /**
365 App推送手机定位信息 | App push mobile location information
366 @param longitude 经度 | Longitude
367 @param latitude 纬度 | Latitude
368 */
369 - (void)fbPushMobileLocationInformationWithLongitude:(float)longitude withLatitude:(float)latitude withBlock:(FBResultCallBackBlock
_Nonnull)fbBlock;
```

37、OTA 类型通知

– (void)fbUpOTANotificationWithType:(FB_OTANOTIFICATION)type
withBlock:(FBResultCallBackBlock _Nonnull)fbBlock;

38、进入/退出生产模式

– (void)fbUpProductionTestModeIsOpen:(BOOL)isOpen withBlock:(FBResultCallBackBlock
_Nonnull)fbBlock;

/** YES 进入 NO 退出 | YES Enter NO Exit */

BOOL isOpen;

39、监听设备端功能状态变更回调

–(void)fbReceiveFunctionSwitchSynchronizationWithBlock:(FBReceiveFunctionSwitchSynchronizationBlock _Nonnull)fbBlock;

/*

手表设备功能变更通知 | Watch device function change notice

*/

@interface FBWatchFunctionChangeNoticeModel : NSObject

/**

变更的功能 | Changed functions

*/

@property (nonatomic, assign) EM_FUNC_SWITCH functionMode;

/**

功能更改值 | Function change value

@note 根据变更的功能类型，功能更改值代表的含义不同，具体参考上述枚举【EM_FUNC_SWITCH】 / According to the changed function type, the meaning of the function change value is different. Refer to the above enumeration 【EM_FUNC_SWITCH】 for details
*/

@property (nonatomic, assign) NSInteger functionChangeValue;

@end

typedef enum {

FS_NULL = 0, //无 | Nothing

FS_SENSOR_GATHER = 1, //体征数据采集总开关状态, 0 关 1 开 | Sign data acquisition master switch status, 0 off and 1 on

FS_MOTOR_ENABLE = 2, //振动开关状态, 0 关 1 开 | Vibration switch status, 0 off, 1 on

FS_DONT_DISTURB_WARN = 3, //勿扰开关状态, 0 关 1 开 | Do not disturb switch status, 0 off and 1 on

FS_CLOCK_1_WARN = 4, //闹钟 1 的开关状态, 0 关 1 开 | Alarm 1 switch status, 0 off and 1 on

FS_CLOCK_2_WARN = 5, //闹钟 2 的开关状态, 0 关 1 开 | Alarm 2 switch status, 0 off and 1 on

FS_CLOCK_3_WARN = 6, //闹钟 3 的开关状态, 0 关 1 开 | Alarm 3 switch status, 0 off and 1 on

FS_CLOCK_4_WARN = 7, //闹钟 4 的开关状态, 0 关 1 开 | Alarm 4 switch status, 0 off and 1 on

FS_CLOCK_5_WARN = 8, //闹钟 5 的开关状态, 0 关 1 开 | Alarm 5 switch status, 0 off and 1 on

FS_LOWBATTERY_WARN = 9, //低压提醒功能开关状态, 0 关 1 开 | Low voltage reminder function switch status, 0 off and 1 on

FS_TARGET_DAY_WARN = 10, //日目标提醒检测总开关状态, 0 关 1 开 | Daily target alert detection master switch status, 0 off and 1 on

FS_TARGET_WEEK_WARN = 11, //周目标提醒检测总开关状态, 0 关 1 开 | Weekly target alert detection master switch status, 0 off and 1 on

FS_TARGET_SELF_WARN = 12, //自我鼓励目标提醒检测总开关状态, 0 关 1 开 | Self encouragement target alert detection master switch status, 0 off and 1 on

FS_HEARTRATE_LEVEL_WARN = 13, //心率超标提醒开关状态, 为 0 关 非 0 开 | The heart rate exceeds the limit reminder switch status, which is 0 off and not 0 on

FS_WEARING_STATE_WARN = 14, //佩戴状态, 0 未佩戴 1 佩戴 | Wearing status, 0 not wearing, 1 wearing

FS_TAKEPHOTOS_WARN = 15, //拍照模式开关状态, 0 关 1 开 | Photo mode switch status, 0 off and 1 on

FS_STATEOFCHARGE_WARN = 16, //设备充电状态更新, 0 放电状态、1 低压状态、2 充电状态、3 充满状态 | The charging state of the equipment is updated, including 0 discharge state, 1 low voltage state, 2 charging state and 3 full state

FS_MUSICINTERFACESTATUS = 17, //进入音乐界面状态 | Music interface status

FS_BRIGHTSCREENIMECHANGES = 18, //亮屏时长改变 | The duration of bright screen changes

FS_WRISTLIFT_WARN = 19, //抬腕开关状态, 0 关 1 开 | Wrist lifting switch status, 0 off and 1 on

FS_PERCENTAGE_BATTERY = 20, //当前电池电量百分比 | Current battery power percentage

FS_WATER_DRINKING_WARN = 21, //喝水提醒开关状态, 0 关 1 开 | Water drinking reminder switch status, 0 off and 1 on

FS_SEDENTARY_WARN = 22, //久坐提醒开关状态, 0 关 1 开 | Sedentary reminder switch status, 0 off and 1 on

FS_OTA_PERCENTAGE = 23, //OTA 百分比 | OTA percentage

FS_MUTE_SWITCH = 24, //静音开关同步 (安卓专用) | Mute switch synchronization (Android only)

FS_OTA_INTERFACE_STATUS = 25, //手表 OTA 升级界面状态, 1 进入 OTA 界面, 0 退出 OTA 界面 | Watch OTA upgrade interface status, 1 enters the OTA interface, 0 exits the OTA interface

```

    FS_ALARMLOCK_CHANGENOTICE = 26, //手表记事提醒/闹钟信息变更通知事件 | Watch reminder / alarm clock
information change notification event

    FS_TIMING_HR_WARN          = 28, //定时心率检测开关状态,0 关 1 开 | Timing heart rate detection switch status,
0 off 1 on
    FS_TIMING_SPO2_WARN        = 29, //定时血氧检测开关状态, 0 关 1 开 | Timing blood oxygen detection switch
status, 0 off 1 on
    FS_TIMING_STRESS_WARN      = 30, //定时精神压力检测开关状态, 0 关 1 开 | Timing mental stress detection
switch status, 0 off 1 on
    FS_CALLAUDIO_WARN          = 31, //通话音频开关状态, 0 关 1 开 | Call audio switch status, 0 off 1 on
    FS_MULTIMEDIAAUDIO_WARN    = 32, //多媒体音频开关状态, 0 关 1 开 | Multimedia audio switch status, 0 off
1 on
    FS_TIMING_BP_WARN          = 33, //定时血压检测开关状态, 0 关 1 开 | Timing blood pressure detection switch
status, 0 off 1 on
    FS_DEVICE_EXCEPTION_WARN    = 34, //设备异常信息读取请求 | Device exception information read request
    FS_AGPS_LOCATION_REQUEST    = 35, //AGPS 位置基础信息(经纬度 UTC)请求 | AGPS location basic information
(longitude and latitude UTC) request
    FS_AGPS_DATA_REQUEST       = 36, //AGPS 定位数据请求 | AGPS positioning data request

    FS_OTHER_EXPAND            = 255 //更多功能待拓展 | More functions to be expanded
}EM_FUNC_SWITCH;

```

// 更多类型请查看 SDK 内 FBMacro.h 文件

40、设置温度单位

```

- (void)fbUpTemperatureUnitWithUnit:(FB_TEMPERATUREUNIT)unit
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;

```

/**

温度单位 | Temperature unit

*/

```

FB_TEMPERATUREUNIT unit;

```

```

typedef enum {

```

```

    FB_Centigrade          = 0, //摄氏度 C | Centigrade(C)

```

```

    FB_FahrenheitDegree = 1, //华氏度 F | Fahrenheit degree(F)

```

```

}FB_TEMPERATUREUNIT;

```

41、获取亮屏时长

```

- (void)fbGetTheDurationOfBrightScreenWithBlock:(FBGet_AT_ResultCallback
Block _Nonnull)fbBlock;

```

/**

亮屏时长（秒） | Duration of screen lighting (seconds)

*/

```
NSInteger responseObject;
```

42、设置亮屏时长

```
- (void)fbSetTheDurationOfBrightScreenWithDuration:(int)duration  
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;
```

```
/**
```

```
亮屏时长（秒） | Duration of screen lighting (seconds)
```

```
*/
```

```
int duration;
```

43、切换至指定表盘

```
- (void)fbTogglesTheSpecifiedDialWithIndex:(int)index  
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;
```

```
/**
```

```
表盘索引 | Dial index
```

```
*/
```

```
int index;
```

44、设置震动反馈

```
- (void)fbVibrationFeedbackSwitchWithMode:(BOOL)mode  
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;
```

```
/** YES 开 NO 关 | YES ON NO OFF */
```

```
BOOL mode;
```

45、请求绑定设备

```
/** macAddress 手表 Mac 地址，可不传，为 nil 时 SDK 内部处理，建议传 nil */
```

```
- (void)fbBindDeviceRequest:(NSString * _Nullable)macAddress  
withBlock:(FBGet_AT_ResultCallbackBlock _Nonnull)fbBlock;
```

```
/**
```

```
绑定结果 | Binding Results
```

```
0 拒绝绑定
```

```
1 同意绑定
```

```
2 已被绑定
```

```
3 确认超时
```

```
4 递交密钥错误
```

```
5 递交密钥正确
```

```
6 无需绑定
```

```
*/
```

```
NSInteger responseObject;
```


46、请求解绑设备

```
– (void)fbUnbindDeviceRequestWithBlock:(FBResultCallbackBlock  
_Nonnull)fbBlock;
```

47、获取当天静息心率

```
–(void)fbGetRestingHeartRateOfTheDayWithBlock:(FBGet_AT_ResultCallbackBlock  
_Nonnull)fbBlock;
```

```
/**
```

```
当天静息心率 | The resting heart rate of the day
```

```
*/
```

```
NSInteger responseObject;
```

48、获取指定提示功能

```
– (void)fbGetPromptFunctionWithMode:(FB_PROMPTFUNCTION)mode  
withBlock:(FBGet_AT_ResultCallbackBlock _Nonnull)fbBlock;
```

```
/**
```

```
提示阈值，等于 0 则代表关闭 | Prompt threshold value, equal to 0 means closed
```

```
*/
```

```
NSInteger responseObject;
```

```
/**
```

```
提示功能 | Prompt function
```

```
*/
```

```
FB_PROMPTFUNCTION mode;
```

```
typedef enum {
```

```
    FB_ExerciseHeartRate = 1, //运动心率超高提示 | Exercise heart rate ultra-high prompt
```

```
    // 更多... 待拓展 | More... To be expanded
```

```
}FB_PROMPTFUNCTION;
```

49、设置指定提示功能

```
– (void)fbSetPromptFunctionWithMode:(FB_PROMPTFUNCTION)mode  
withThreshold:(NSInteger)threshold withBlock:(FBResultCallbackBlock  
_Nonnull)fbBlock;
```

```
// 参考上述参数
```

50、app 端同步 GPS 运动状态到设备端

```
– (void)fbSynchronizationGPS_MotionWithModel:(FBGPSMotionActionModel *)model withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;
```

```
/*
```

```
GPS 运动状态信息 | GPS motion status information
```

```
*/
```

```
@interface FBGPSMotionActionModel : NSObject
```

```
/**
```

```
运动模式 | Movement mode
```

```
*/
```

```
@property (nonatomic, assign) FB_MOTIONMODE MotionMode;
```

```
/**
```

```
GPS 运动状态 | GPS Motion status
```

```
*/
```

```
@property (nonatomic, assign) FB_GPS_MOTION_STATE MotionState;
```

```
/**
```

```
当前运动总时间，单位秒 | Total current movement time, in seconds
```

```
*/
```

```
@property (nonatomic, assign) NSInteger totalTime;
```

```
@end
```

更多运动模式参考 [FB_MOTIONMODE](#)

```
typedef enum {
```

```
    FB_SettingStopMotion = 0, //停止运动 | Stop motion
```

```
    FB_SettingStartMotion = 1, //开始运动 | Start motion
```

```
    FB_SettingPauseMotion = 2, //暂停运动 | Pause motion
```

```
    FB_SettingKeepMotion = 3, //继续运动 | Keep motion
```

```
}FB_GPS_MOTION_STATE;
```

51、监听设备端 GPS 运动状态变更回调

```
–(void)fbGPS_MotionWatchStatusChangeCallbackWithBlock:(FBGPSMotionWatch StatusChangeBlock _Nonnull)fbBlock;
```

```
// 参考上述参数
```

52、定时心率检测开关设置

```
– (void)fbTimingHeartRateDetectionSwitchData:(BOOL)switchMode withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;
```

```
/** YES 开 NO 关 | YES ON NO OFF */
```

```
BOOL switchMode;
```

53、定时血氧检测开关设置

```
- (void)fbTimingBloodOxygenDetectionSwitchData:(BOOL)switchMode  
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;  
/** YES 开 NO 关 | YES ON NO OFF */  
BOOL switchMode;
```

54、定时精神压力检测开关设置

```
- (void)fbTimingStressDetectionSwitchData:(BOOL)switchMode  
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;  
/** YES 开 NO 关 | YES ON NO OFF */  
BOOL switchMode;
```

55、获取通话音频开关状态

```
- (void)fbGetCallAudioSwitchWithBlock:(FBGet_AT_ResultCallbackBlock  
_Nonnull)fbBlock;
```

56、设置通话音频开关状态

```
- (void)fbSetCallAudioSwitchData:(BOOL)switchMode  
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;  
/** YES 开 NO 关 | YES ON NO OFF */  
BOOL switchMode;
```

57、获取多媒体音频开关状态

```
-  
(void)fbGetMultimediaAudioSwitchWithBlock:(FBGet_AT_ResultCallbackBlock  
_Nonnull)fbBlock;
```

58、设置多媒体音频开关状态

```
- (void)fbSetMultimediaAudioSwitchData:(BOOL)switchMode  
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;  
/** YES 开 NO 关 | YES ON NO OFF */  
BOOL switchMode;
```

➤ 记录报告同步 API (FBBgCommand)

1、获取设备硬件信息

```
-(void)fbGetHardwareInformationDataWithBlock:(FBGetHardwareInformationBlock _Nonnull)fbBlock;
```

```
/*
```

```
设备硬件信息 | Device hardware information
```

```
*/
```

```
@interface FBDeviceInfoModel : NSObject
```

```
/**
```

```
结构体版本 | Structure version
```

```
*/
```

```
@property (nonatomic, assign) NSInteger structVersion;
```

```
/**
```

```
硬件标志 | Hardware logo
```

```
*/
```

```
@property (nonatomic, copy) NSString *hardwareIdentifier;
```

```
/**
```

```
mac 地址 | MAC address
```

```
*/
```

```
@property (nonatomic, copy) NSString *mac;
```

```
/**
```

```
硬件版本 | Hardware version
```

```
*/
```

```
@property (nonatomic, copy) NSString *hardWareVersion;
```

```
/**
```

```
固件版本 | Firmware version
```

```
*/
```

```
@property (nonatomic, copy) NSString *firmwareVersion;
```

```
/**
```

```
UI 版本 | UI version
```

```
*/
```

```
@property (nonatomic, copy) NSString *UI_Version;
```

```
/**
```

```
协议版本 | Protocol version
```

```
*/
```

```
@property (nonatomic, copy) NSString *protocolVeriosn;
```

```
/**
```

```
设备名称 | Equipment name
```

```
*/
```

```
@property (nonatomic, copy) NSString *deviceName;
```

```
/**
设备 ID | Device ID
*/
@property (nonatomic, assign) NSInteger deviceId;
/**
设备 SN 号 | Equipment Sn number
*/
@property (nonatomic, copy) NSString *deviceSN;
/**
固件更新日期 | Firmware update date
*/
@property (nonatomic, copy) NSString *firmwareUpdateTime;
/**
适配号 | Matching number
*/
@property (nonatomic, copy) NSString *fitNumber;
/**
二维码信息 | QR code information
*/
@property (nonatomic, assign) NSInteger QR_code;
/**
MAC 二维码版本 | Mac QR code version
*/
@property (nonatomic, assign) NSInteger Mac_QR_code_version;
/**
显示屏型号 | Display model
*/
@property (nonatomic, assign) NSInteger display_model;
/**
TP 型号 | TP model
*/
@property (nonatomic, assign) NSInteger TP_model;
/**
手表表盘形状 | Watch dial shape
@note shape          手表表盘形状，0:长方形、1:圆形、2:正方形 | Watch dial shape, 0: rectangle, 1: circle, 2: Square
*/
@property (nonatomic, assign) NSInteger shape;
/**
手表显示分辨率宽高 | Watch display resolution width and height
*/
@property (nonatomic, assign) CGSize watchDisplaySize;
/**
表盘缩略图显示分辨率宽高 | Dial thumbnail display resolution width and height
*/
```

```
@property (nonatomic, assign) CGSize dialThumbnailDisplaySize;
```

```
/**
```

```
音频库版本 | Audio library version
```

```
*/
```

```
@property (nonatomic, copy) NSString *audioTimeVersion;
```

```
@end
```

@note 该接口请求成功时，内部会自动更新 **FBFirmwareVersionObject** 本地缓存，更多信息请查看 **FBAIConfigObject.firmwareConfig**

2、获取当日实时测量数据

```
-(void)fbGetCurrentDayActivityDataWithBlock:(FBGetCurrentDayActivityDataBlock _Nonnull)fbBlock;
```

```
/*
```

```
当日实时测量数据 | Real time measurement data of the day
```

```
*/
```

```
@interface FBCurrentDataModel : NSObject
```

```
/**
```

```
本次数据产生时间点，时间戳 GMT 秒 | Time point of data generation, time stamp GMT seconds
```

```
*/
```

```
@property (nonatomic, assign) NSInteger GMTTimeInterval;
```

```
/**
```

```
GMT 转年月日时分秒 | GMT to YYYY-MM-dd HH:mm:ss
```

```
*/
```

```
@property (nonatomic, copy) NSString *dateTimeStr;
```

```
/**
```

```
当前累计步数 | Current cumulative steps
```

```
*/
```

```
@property (nonatomic, assign) NSInteger currentStep;
```

```
/**
```

```
当前累计消耗卡路里（千卡） | Current cumulative calories consumed (kcal)
```

```
*/
```

```
@property (nonatomic, assign) NSInteger currentCalories;
```

```
/**
```

```
当前累计行程（米） | Current cumulative travel (m)
```

```
*/
```

```
@property (nonatomic, assign) NSInteger currentDistance;
```

```
/**
```

```
当前心率（次/分钟） | Current heart rate (times / min)
```

```
*/
```

```
@property (nonatomic, assign) NSInteger currentHeartRate;
```

```
/**
```

```
当前心率等级 | Current heart rate level
```

```

*/
@property (nonatomic, assign) FB_CURRENTHEARTRANGE HeartRateRange;
/**
    当前血氧（%） | Current blood oxygen (%)
*/
@property (nonatomic, assign) NSInteger currentOxy;
/**
    当前血氧等级 | Current blood oxygen level
*/
@property (nonatomic, assign) FB_CURRENTOXYRANGE OxyRange;
/**
    当前电池电量（%） | Current battery level (%)
*/
@property (nonatomic, assign) NSInteger batteryLevel;
/**
    当前收缩血压（高压，mmHg） | Current systolic blood pressure (high pressure, mmHg)
*/
@property (nonatomic, assign) NSInteger currentShrinkBlood;
/**
    当前舒张血压（低压，mmHg） | Current diastolic blood pressure (low pressure, mmHg)
*/
@property (nonatomic, assign) NSInteger currentDiastoleBlood;
/**
    当前累计运动时间（分钟） | Current cumulative movement time (minutes)
*/
@property (nonatomic, assign) NSInteger currentSportTimes;
/**
    当前累计激烈运动时间（分钟） | Current accumulated intense exercise time (minutes)
*/
@property (nonatomic, assign) NSInteger currentSportFierceTimes;
/**
    当前发生久坐累计时间（分钟） | Current accumulated sitting time (minutes)
*/
@property (nonatomic, assign) NSInteger sittingTime;
/**
    当前久坐期间平均步数，步数/小时 | Average steps during current sedentary period, steps / hour
*/
@property (nonatomic, assign) NSInteger sittingStep;
/**
    当前的经度 | Current longitude
*/
@property (nonatomic) float currentLongitude;
/**
    当前的纬度 | Current latitude

```

```

*/
@property (nonatomic) float currentLatitude;

/**
    当天每小时步数曲线, 一小时一笔, 固定 24 笔 | Steps per hour curve of the day, one transaction per hour, 24 fixed transactions

    @note 第一笔为 0 时~1 时的步数, 第二笔为 1 时~2 时, 以此类推... | The first stroke is the number of steps from 0 hour to 1 hour, the
    second stroke is from 1 hour to 2 hours, and so on
*/

@property (nonatomic, strong) NSArray <NSNumber *> *currentStepCurve;

/**
    当前精神压力值 | Current stress value
*/

@property (nonatomic, assign) NSInteger currentStress;

/**
    当前精神压力等级 | Current stress level
*/

@property (nonatomic, assign) FB_CURRENTSTRESSRANGE StressRange;
@end

typedef enum {
    FB_HR_NORMAL          = 0, // 正常的 | Normal
    FB_HR_MODERATE        = 1, // 缓和的 | Moderate
    FB_HR_VIGOROUS        = 2, // 充沛的 | Vigorous
    FB_HR_MAX_HR          = 3, // 心率过快 | The heart rate is too fast
    FB_HR_TAKE_IT_EASY     = 4, // 别紧张 | Take it easy
    FB_HR_WATCH_YOUR_LIMITS = 5, // 注意你的极限 | Watch your limits
    FB_HR_DONT_OVEREXERT   = 6, // 不要用力过猛 | Don't overdo it
}FB_CURRENTHEARTRANGE;

typedef enum {
    FB_OXY_NORMAL    = 0, // 正常 | Normal
    FB_OXY_MILD      = 1, // 轻度缺氧 | Mild hypoxia
    FB_OXY_MODERATE  = 2, // 中度缺氧 | Moderate hypoxia
    FB_OXY_SEVERE    = 3, // 重度缺氧 | Severe hypoxia
}FB_CURRENTOXYRANGE;

typedef enum {
    FB_STRESS_RELAX      = 1, // 1-25 放松 | 1-25 Relax
    FB_STRESS_NORMAL     = 2, // 26-50 正常 | 26-50 normal
    FB_STRESS_SECONDARY  = 3, // 51-75 中等 | 51-75 Medium
    FB_STRESS_HIGN       = 4, // 76-99 偏高 | 76-99 high
}FB_CURRENTSTRESSRANGE;

```


3、获取当前睡眠实时统计报告

```
-(void)fbGetCurrentSleepStatisticsReportDataWithBlock:(FBGetSleepStatisticsReportBlock _Nonnull)fbBlock;
```

```
/*
```

```
睡眠统计报告 | Sleep statistics report
```

```
*/
```

```
@interface FBSleepCaculateReportModel : NSObject
```

```
/**
```

```
时间戳 GMT 秒 | Time stamp GMT seconds
```

```
*/
```

```
@property (nonatomic, assign) NSInteger GMTTimeInterval;
```

```
/**
```

```
GMT 转年月日时分秒 | GMT to YYYY-MM-dd HH:mm:ss
```

```
*/
```

```
@property (nonatomic, copy) NSString *dateTimeStr;
```

```
/**
```

```
结构体版本 | Structure version
```

```
*/
```

```
@property (nonatomic, assign) NSInteger structVersion;
```

```
/**
```

```
本次开始睡觉时间，GMT 秒 | Time to go to bed this time, GMT seconds
```

```
*/
```

```
@property (nonatomic, assign) NSInteger startSleepTime;
```

```
/**
```

```
本次开始睡觉时间，GMT 转年月日时分秒 | Time to go to bed this time, GMT to YYYY-MM-dd HH:mm:ss
```

```
*/
```

```
@property (nonatomic, copy) NSString *startDateTimerStr;
```

```
/**
```

```
本次结束睡觉时间，GMT 秒 | The end of the sleep time, GMT seconds
```

```
*/
```

```
@property (nonatomic, assign) NSInteger endSleepTime;
```

```
/**
```

```
本次结束睡觉时间，GMT 转年月日时分秒 | The end of the sleep time, GMT to YYYY-MM-dd HH:mm:ss
```

```
*/
```

```
@property (nonatomic, copy) NSString *endDateTimerStr;
```

```
/**
```

```
本次睡眠持续总时间（分钟） | Total sleep duration (minutes)
```

```
*/
```

```
@property (nonatomic, assign) NSInteger continueSleepTime;
```

```
/**
```

```
本次睡眠清醒累计时间（分钟） | Cumulative time of waking up in this sleep (minutes)
```

```
*/
```

```
@property (nonatomic, assign) NSInteger awakeTime;
```

```

/**
 本次睡眠浅睡累计时间（分钟） | Cumulative time of light sleep (minutes)
*/
@property (nonatomic, assign) NSInteger lightSleepTime;
/**
 本次睡眠深睡累计时间（分钟） | Cumulative time of deep sleep (minutes)
*/
@property (nonatomic, assign) NSInteger deepSleepTime;
/**
 本次睡眠眼动累计时间（分钟） | Cumulative time of eye movement in this sleep (minutes)
*/
@property (nonatomic, assign) NSInteger eyeMoveTime;
/**
 本次睡眠零星小睡累计时间（分钟） | Cumulative time of this sporadic nap (minutes)
*/
@property (nonatomic, assign) NSInteger sporadicNapTime;
/**
 本次睡眠时最大血氧（%） | Maximum blood oxygen during this sleep (%)
*/
@property (nonatomic, assign) NSInteger maxOxy;
/**
 本次睡眠时最小血氧（%） | Minimum blood oxygen during this sleep (%)
*/
@property (nonatomic, assign) NSInteger minOxy;
/**
 本次睡眠时最大心率（次/分钟） | Maximum heart rate during this sleep (times / min)
*/
@property (nonatomic, assign) NSInteger maxHeartRate;
/**
 本次睡眠时最小心率（次/分钟） | Minimum heart rate during this sleep (times / min)
*/
@property (nonatomic, assign) NSInteger minHeartRate;
/**
 本次睡眠时静息心率 | Resting heart rate during sleep
*/
@property (nonatomic, assign) NSInteger restingHeartRate;
@end

```

4、获取当前睡眠实时状态记录

```

-(void)fbGetCurrentSleepStateRecordingDataWithBlock:(FBGetSleepStateRecordingBlock _Nonnull)fbBlock;
/*
 睡眠状态记录 | Sleep state recording

```

```

*/
@interface FBSleepStatusRecordModel : NSObject

/**
时间戳 GMT 秒 | Time stamp GMT seconds
*/

@property (nonatomic, assign) NSInteger GMTTimeInterval;

/**
GMT 转年月日时分秒 | GMT to YYYY-MM-dd HH:mm:ss
*/

@property (nonatomic, copy) NSString *dateTimeStr;

/**
结构体版本，0:不支持眼动，1:支持眼动 | Structure version, 0: eye movement is not supported, 1: eye movement is supported
*/

@property (nonatomic, assign) NSInteger structVersion;

/**
是否有零星小睡，YES:有零星小睡，NO:无零星小睡 | Whether there are sporadic naps, yes: sporadic naps, No: no sporadic naps
*/

@property (nonatomic, assign) BOOL isNap;

/**
零星小睡数据的偏移位置长度 | Offset position length of sporadic nap data
*/

@property (nonatomic, assign) NSInteger napDataOffset;

/**
开始睡眠时间，GMT 秒 | Sleep start time, GMT seconds
*/

@property (nonatomic, assign) NSInteger startSleepTime;

/**
开始睡眠时间，GMT 转年月日时分秒 | Sleep start time, GMT to YYYY-MM-dd HH:mm:ss
*/

@property (nonatomic, copy) NSString *startDateTimerStr;

/**
睡眠结束时间，GMT 秒 | Sleep end time, GMT seconds
*/

@property (nonatomic, assign) NSInteger endSleepTime;

/**
睡眠结束时间，GMT 转年月日时分秒 | Sleep end time, GMT to YYYY-MM-dd HH:mm:ss
*/

@property (nonatomic, copy) NSString *endDateTimerStr;

/**
当天深度睡眠时间（分钟） | Deep sleep time of the day (minutes)
*/

@property (nonatomic, assign) NSInteger deepSleepTime;

/**
当天浅睡时间（分钟） | Light sleep time of the day (minutes)

```

```

*/
@property (nonatomic, assign) NSInteger lightSleepTime;
/**
    当天眼动时间（分钟） | Eye movement time of the day (minutes)
*/
@property (nonatomic, assign) NSInteger eyeMoveTime;
/**
    睡眠状态数组有效长度 | Effective length of sleep state array
*/
@property (nonatomic, assign) NSInteger EffectiveLength;
/**
    夜间睡眠状态数组 | Night sleep status array
*/
@property (nonatomic, strong) NSArray <FBSleepStateModel *> *sleepStateArray;
/**
    零星小睡状态数组 | Sporadic nap status array
*/
@property (nonatomic, strong) NSArray <FBSleepStateModel *> *napStateArray;
@end

/*
    睡眠状态详细 | Sleep status details
*/
@interface FBSleepStateModel : NSObject
/**
    睡眠状态起始时间戳 GMT 秒 | Sleep state start timestamp GMT seconds
*/
@property (nonatomic, assign) NSInteger startStatusGMT;
/**
    起始 GMT 转年月日时分秒 | From GMT to YYYY-MM-dd HH:mm:ss
*/
@property (nonatomic, copy) NSString *startDateTimeStr;
/**
    睡眠状态结束时间戳 GMT 秒 | Sleep state end timestamp GMT seconds
*/
@property (nonatomic, assign) NSInteger endStatusGMT;
/**
    结束 GMT 转年月日时分秒 | End GMT to YYYY-MM-dd HH:mm:ss
*/
@property (nonatomic, copy) NSString *endDateTimeStr;
/**
    睡眠状态 | Sleep state
*/

```

```

@property (nonatomic, assign) FB_SLEEPSTATE SleepStatus;

/**
持续睡眠时间（分钟） | Duration of sleep (minutes)
*/
@property (nonatomic, assign) NSInteger durationSleepTime;
@end

typedef enum {
    Awake_state    = 0, //清醒状态 | Awake state
    Shallow_sleep  = 1, //浅层睡眠 | Shallow sleep
    Deep_sleep     = 2, //深层睡眠 | Deep sleep

    Eye_move       = 3, //眼动状态（结构体版本不等于 0 时才有此类型） | Eye move (This type is only available when
the structure version is not equal to 0)
}FB_SLEEPSTATE;

```

5、获取每日活动统计报告

– (void)fbGetDailyActivityDataStartTime:(NSInteger)startTime
forEndTime:(NSInteger)endTime withBlock:(FBGetDailyActivityDataBlock
_Nonnull)fbBlock;

```

/**
每日活动统计报告 | Daily activity statistics report
*/
@interface FBDayActivityModel : NSObject

/**
时间戳 GMT 秒 | Time stamp GMT seconds
*/
@property (nonatomic, assign) NSInteger GMTTimeInterval;

/**
GMT 转年月日时分秒 | GMT to YYYY-MM-dd HH:mm:ss
*/
@property (nonatomic, copy) NSString *dateTimeStr;

/**
结构体版本 | Structure version
*/
@property (nonatomic, assign) NSInteger structVersion;

/**
当天的累计步数 | Cumulative steps of the day
*/
@property (nonatomic, assign) NSInteger totalSteps;

/**
当天消耗的卡路里（千卡） | Calories consumed that day (kcal)
*/

```

```
@property (nonatomic, assign) NSInteger totalCalories;

/**
 当天的累计行程（米） | Cumulative itinerary of the day (m)
 */

@property (nonatomic, assign) NSInteger totalDistance;

/**
 当天的平均心率（次/分钟） | Average heart rate of the day (times / min)
 */

@property (nonatomic, assign) NSInteger avgHeartRate;

/**
 当天最高心率（次/分钟） | Maximum heart rate of the day (times / min)
 */

@property (nonatomic, assign) NSInteger maxHeartRate;

/**
 当天最低心率（次/分钟） | Lowest heart rate of the day (times / min)
 */

@property (nonatomic, assign) NSInteger minHeartRate;

/**
 当天平均血氧（%） | Average blood oxygen of the day (%)
 */

@property (nonatomic, assign) NSInteger avgOxy;

/**
 当天累计运动时间（分钟） | Accumulated exercise time of the day (minutes)
 */

@property (nonatomic, assign) NSInteger totalSportTime;

/**
 当天激烈运动时间（分钟） | Intense exercise time of the day (minutes)
 */

@property (nonatomic, assign) NSInteger violentSportTime;

/**
 当天深度睡眠时间（分钟） | Deep sleep time of the day (minutes)
 */

@property (nonatomic, assign) NSInteger deepSleeTime;

/**
 当天浅睡眠时间（分钟） | Light sleep time of the day (minutes)
 */

@property (nonatomic, assign) NSInteger lightSleepTime;

/**
 当天睡眠眼动时间（分钟） | Sleep eye movement time of the day (minutes)
 */

@property (nonatomic, assign) NSInteger eyeMoveTime;

/**
 当天最高血压（mmHg） | Highest blood pressure of the day (mmHg)
```

```

*/
@property (nonatomic, assign) NSInteger maxBlood;
/**
    当天最低血压 (mmHg) | Lowest blood pressure of the day (mmHg)
*/
@property (nonatomic, assign) NSInteger minBlood;
/**
    当天最高精神压力值 | Maximum stress value of the day
*/
@property (nonatomic, assign) NSInteger maximumStress;
/**
    当天最高精神压力等级 | Maximum stress level of the day
*/
@property (nonatomic, assign) FB_CURRENTSTRESSRANGE StressRange;
@end

```

6、获取整点活动统计报告

– (void)fbGetHourlyActivityDataStartTime:(NSInteger)startTime
forEndTime:(NSInteger)endTime withBlock:(FBGetHourlyActivityDataBlock
_Nonnull)fbBlock;

```

/*
    整点活动统计报告 | Statistical report of on-time activities
*/
@interface FBHourReportModel : NSObject
/**
    时间戳 GMT 秒 | Time stamp GMT seconds
*/
@property (nonatomic, assign) NSInteger GMTTimeInterval;
/**
    GMT 转年月日时分秒 | GMT to YYYY-MM-dd HH:mm:ss
*/
@property (nonatomic, copy) NSString *dateTimeStr;
/**
    结构体版本 | Structure version
*/
@property (nonatomic, assign) NSInteger structVersion;
/**
    到此刻为止的累计计步数 | Cumulative steps up to now
*/
@property (nonatomic, assign) NSInteger hourStep;
/**
    到此刻为止的累计行走距离 (米) | Accumulated walking distance up to now (m)
*/

```

```

@property (nonatomic, assign) NSInteger hourdDistance;

/**
 到此刻为止的累计消耗卡路里（千卡） | Cumulative calories burned so far (kcal)
 */
@property (nonatomic, assign) NSInteger hourCalories;
@end

```

7、获取睡眠统计报告

```

- (void)fbGetSleepStatisticsReportDataStartTime:(NSInteger)startTime
forEndTime:(NSInteger)endTime
withBlock:(FBGetSleepStatisticsReportBlock _Nonnull)fbBlock;
// 参考上述睡眠实时统计报告参数

```

8、获取睡眠状态记录

```

- (void)fbGetSleepStateRecordingDataStartTime:(NSInteger)startTime
forEndTime:(NSInteger)endTime withBlock:(FBGetSleepStateRecordingBlock
_Nonnull)fbBlock;
// 参考上述睡眠实时状态记录参数

```

9、获取运动记录列表

```

- (void)fbGetMotionRecordListDataStartTime:(NSInteger)startTime
forEndTime:(NSInteger)endTime withBlock:(FBGetMotionRecordListBlock
_Nonnull)fbBlock;

/**
 运动记录列表 | Sports record list
 */
@interface FBSportRecordModel : NSObject

/**
 时间戳 GMT 秒 | Time stamp GMT seconds
 */
@property (nonatomic, assign) NSInteger GMTTimeInterval;

/**
 GMT 转年月日时分秒 | GMT to YYYY-MM-dd HH:mm:ss
 */
@property (nonatomic, copy) NSString *dateTimeStr;

/**
 结构体版本 | Structure version
 */
@property (nonatomic, assign) NSInteger structVersion;

/**

```



```

开始运动时间，GMT 秒 | Start time of exercise, GMT seconds
*/
@property (nonatomic, assign) NSInteger startSportTime;
/**
开始运动时间，GMT 转年月日时分秒 | Start time of exercise, GMT to YYYY-MM-dd HH:mm:ss
*/
@property (nonatomic, copy) NSString *startDateTimerStr;
/**
结束运动时间，GMT 秒 | End exercise time, GMT seconds
*/
@property (nonatomic, assign) NSInteger endSportTime;
/**
结束运动时间，GMT 转年月日时分秒 | End exercise time, GMT to YYYY-MM-dd HH:mm:ss
*/
@property (nonatomic, copy) NSString *endDateTimerStr;
/**
运动模式 | Motion mode
*/
@property (nonatomic, assign) FB_MOTIONMODE MotionMode;
@end

```

10、获取运动统计报告

– (void)fbGetSportsDataReportDataStartTime:(NSInteger)startTime
forEndTime:(NSInteger)endTime withBlock:(FBGetSportsDataReportBlock
_Nonnull)fbBlock;

```

/*
运动统计报告 | Sports statistics report
*/
@interface FBSportCaculateModel : NSObject
/**
时间戳 GMT 秒 | Time stamp GMT seconds
*/
@property (nonatomic, assign) NSInteger GMTTimeInterval;
/**
GMT 转年月日时分秒 | GMT to YYYY-MM-dd HH:mm:ss
*/
@property (nonatomic, copy) NSString *dateTimeStr;
/**
结构体版本 | Structure version
*/
@property (nonatomic, assign) NSInteger structVersion;
/**

```

运动开始时间戳，作为每笔运动的唯一识别 id， GMT 秒 | The movement start time stamp is used as the unique identification ID of each movement, GMT seconds.

*/

@property (nonatomic, assign) NSInteger startSportTime;

/**

运动开始时间，GMT 转年月日时分秒 | Start time of exercise, GMT to YYYY-MM-dd HH:mm:ss

*/

@property (nonatomic, copy) NSString *startDateTimerStr;

/**

运动结束时间戳，GMT 秒 | Movement end timestamp, GMT seconds

*/

@property (nonatomic, assign) NSInteger endSportTime;

/**

运动结束时间，GMT 转年月日时分秒 | End time of exercise, GMT to YYYY-MM-dd HH:mm:ss

*/

@property (nonatomic, copy) NSString *endDateTimerStr;

/**

运动总时间（秒） | Total exercise time (seconds)

*/

@property (nonatomic, assign) NSInteger totalSportTime;

/**

运动总步数 | Total movement steps

*/

@property (nonatomic, assign) NSInteger totalSteps;

/**

运动总卡路里（千卡） | Total exercise calories (kcal)

*/

@property (nonatomic, assign) NSInteger totalCalories;

/**

运动总距离（单位米，通过计步估算） | Total distance of movement (in meters, estimated by steps)

*/

@property (nonatomic, assign) NSInteger totalDistance;

/**

本次运动轨迹运动距离（单位米，通过 gps 定位 计算） | The movement distance of this movement track (unit: m, calculated by GPS positioning)

*/

@property (nonatomic, assign) NSInteger gpsDistance;

/**

运动模式 | Motion mode

*/

@property (nonatomic, assign) FB_MOTIONMODE MotionMode;

/**

本次运动最大心率（次/分钟） | Maximum heart rate of this exercise (times / min)

*/

```
@property (nonatomic, assign) NSInteger maxHeartRate;

/**
 本次运动最小心率（次/分钟） | Minimum heart rate of this exercise (times / min)
 */
@property (nonatomic, assign) NSInteger minHeartRate;

/**
 本次运动平均心率，运动结束时计算，心率和/ 记录次数（次/分钟） | Average heart rate of the exercise, calculated at the end of the
exercise, heart rate and / or record times (times / minute)
 */
@property (nonatomic, assign) NSInteger avgHeartRate;

/**
 本次运动最大步频（步/分钟） | Maximum stride frequency (step / min)
 */
@property (nonatomic, assign) NSInteger maxStride;

/**
 本次运动平均步频 = 步频和/记录次数（步/分钟） | Average stride frequency = stride frequency and / or recording times (step / minute)
 */
@property (nonatomic, assign) NSInteger avgStride;

/**
 运动次数，中途休息次数 | Number of exercises, number of breaks
 */
@property (nonatomic, assign) NSInteger breakTimes;

/**
 中断 UTC 记录，同时用于统计运动总时间 | The UTC record is interrupted and used to count the total movement time at the same time
 */
@property (nonatomic, strong) NSArray <FBSPortPauseModel *> *sportPauseArray;

/**
 本次运动最大速度(单位:米/秒) | Maximum speed of this movement (unit: M / s)
 */
@property (nonatomic, assign) NSInteger maxSpeed;

/**
 本次运动平均速度 = 距离/用时（米/秒） | Average speed of this movement = distance / time (M / s)
 */
@property (nonatomic, assign) NSInteger avgSpeed;

/**
 本次无轨迹运动平均配速（秒/公里） | Average speed of this trackless movement (s / km)
 */
@property (nonatomic, assign) NSInteger noTrackAvgSpeed;

/**
 本次有轨迹运动配速（秒/公里） | This time, there is track movement speed (s / km)
 */
@property (nonatomic, assign) NSInteger trackAvgSpeed;

/**
 重复运动的周期数(来回次数，圈数)(单位：圈) | Number of cycles of repeated motion (number of cycles, number of turns) (unit: turns)
 */
```

```

*/
@property (nonatomic, assign) NSInteger sportRepeatCount;
/**
    摆臂次数，划水次数(单位:次) | Arm swing times, stroke times (unit: Times)
*/
@property (nonatomic, assign) NSInteger armSwingTimes;
/**
    热身运动时间，单位分钟 | Warm up exercise time in minutes
*/
@property (nonatomic, assign) NSInteger heartRate_level_1;
/**
    燃脂运动时间，单位分钟 | Fat burning exercise time in minutes
*/
@property (nonatomic, assign) NSInteger heartRate_level_2;
/**
    有氧运动时间，单位分钟 | Aerobic exercise time in minutes
*/
@property (nonatomic, assign) NSInteger heartRate_level_3;
/**
    无氧运动时间，单位分钟 | Anaerobic exercise time in minutes
*/
@property (nonatomic, assign) NSInteger heartRate_level_4;
/**
    极限运动时间，单位分钟 | Extreme exercise time in minutes
*/
@property (nonatomic, assign) NSInteger heartRate_level_5;
@end

```

11、获取心率记录

```

- (void)fbGetHeartRateRecordDataStartTime:(NSInteger)startTime
forEndTime:(NSInteger)endTime withBlock:(FBGetHeartRateRecordBlock
_Nonnull)fbBlock;

```

```

/*
    类型记录/报告 | Type record / Report
*/
@interface FBTypeRecordModel : NSObject
/**
    第一条记录(结构体)的形成时间戳 GMT 秒 | Time stamp GMT seconds
*/
@property (nonatomic, assign) NSInteger GMTTimeInterval;
/**
    GMT 转年月日时分秒 | GMT to YYYY-MM-dd HH:mm:ss
*/

```

```

@property (nonatomic, copy) NSString *dateTimeStr;

/**
 本次运动的开始时间戳 GMT 秒（仅记录类型为：运动详情记录、运动定位记录 时 有值） | The start time stamp of this movement is GMT
seconds (only the record types are: motion detail record and motion positioning record)
*/

@property (nonatomic, assign) NSInteger sportTimeStamp;

/**
 记录生成周期（记录类型为心率/计步/血氧/血压记录时，单位分钟；为运动详情/运动定位记录时，单位秒） | Record generation cycle
(record type: heart rate / step / blood oxygen / blood pressure record, unit: minute; record type: movement details / movement
positioning record, unit: Second)
*/

@property (nonatomic, assign) NSInteger createTimeS;

/**
 有效记录条数 | Number of effective records
*/

@property (nonatomic, assign) NSInteger EffectiveRecord;

/**
 单条记录长度 | Length of single record
*/

@property (nonatomic, assign) NSInteger recordLength;

/**
 记录类型 | Record type
*/

@property (nonatomic, assign) FB_RECORDTYPE RecordType;

/**
 类型记录数组 | Type record array
*/

@property (nonatomic, strong) NSArray <FBRecordDetailsModel *> *recordArray;
@end

/*
 * 记录类型 | Record type
 */

typedef enum {
    FB_HeartRecord      = 0, //心率记录 | Heart rate recording
    FB_StepRecord       = 1, //计步记录 | Step count record
    FB_BloodOxyRecord   = 2, //血氧记录 | Blood oxygen recording
    FB_BloodPreRecord   = 3, //血压记录 | Blood pressure recording
    FB_SportsRecord     = 4, //运动详情记录 | Sports detail record
    FB_MotionGpsRecord  = 5, //运动定位记录 | Motion location record
    FB_HFHeartRecord    = 6, //运动高频心率记录(1秒1次) | Sports high-frequency heart rate recording (1 time
per second)
    FB_StressRecord     = 7, //精神压力记录 | Stress Record
}FB_RECORDTYPE;

```

```

/*
    类型记录数组详情（具体参考枚举值 FB_RECORDTYPE） | Type record array details (refer to enumeration value
    FB_RECORDTYPE for details)
*/

@interface FBRecordDetailsModel : NSObject

#pragma mark - 以下值，通用，有值 | The following values, general, have values

/** 记录形成时间戳 GMT 秒 | Record the formation time stamp GMT seconds */

@property (nonatomic, assign) NSInteger GMTTimeInterval;

/** GMT 转年月日时分秒 | GMT to YYYY-MM-dd HH:mm:ss */

@property (nonatomic, copy) NSString *dateTimeStr;

#pragma mark - 当 FB_RECORDTYPE 为 FB_HeartRecord、FB_HFHeartRecord 时（心率记录、运动高频心率记录(1秒1次)），
以下有值 | When FB_RECORDTYPE is FB_HeartRecord, FB_HFHeartRecord (heart rate record, exercise
high-frequency heart rate record (1 time per second)), the following values

/** 心率值 | Heart rate value */

@property (nonatomic, assign) NSInteger hr;

#pragma mark - 当 FB_RECORDTYPE 为 FB_StepRecord 时（计步记录），以下有值 | When FB_RECORDTYPE is FB_StepRecord
(step counting record), the following values

/** 计步数累加值 | Accumulated value of step count */

@property (nonatomic, assign) NSInteger step;

#pragma mark - 当 FB_RECORDTYPE 为 FB_BloodOxyRecord 时（血氧记录），以下有值 | When FB_RECORDTYPE is
FB_BloodOxyRecord (blood oxygen record), the following values

/** 血氧值（%） | Blood oxygen value (%) */

@property (nonatomic, assign) NSInteger SpO2;

#pragma mark - 当 FB_RECORDTYPE 为 FB_BloodPreRecord 时（血压记录），以下有值 | When FB_RECORDTYPE is
FB_BloodPreRecord (blood pressure record), the following values

/** 收缩压（高压，mmHg） | Systolic blood pressure (high pressure, mmHg) */

@property (nonatomic, assign) NSInteger pb_max;

/** 舒张压（低压，mmHg） | Diastolic blood pressure (low pressure, mmHg) */

@property (nonatomic, assign) NSInteger pb_min;

#pragma mark - 当 FB_RECORDTYPE 为 FB_StressRecord 时（精神压力记录），以下有值 | When FB_RECORDTYPE is
FB_StressRecord (mental stress record), the following values

/** 精神压力值 | Mental stress value */

@property (nonatomic, assign) NSInteger stress;

/** 精神压力等级 | Mental stress level */

@property (nonatomic, assign) FB_CURRENTSTRESSRANGE StressRange;

#pragma mark - 当 FB_RECORDTYPE 为 FB_SportsRecord 时（运动详情记录），以下有值 | When FB_RECORDTYPE is
FB_SportsRecord (sports details record), the following values

```

```

/** 实时配速（秒/千米） | Real time pace (SEC / km) */
@property (nonatomic, assign) NSInteger pace;

/** 一分钟内消耗的卡路里值（千卡） | Calories consumed in one minute (kcal) */
@property (nonatomic, assign) NSInteger calories;

/** 一分钟内的步数（实时步频，步/分钟） | Steps in one minute (real time step frequency, step / minute) */
@property (nonatomic, assign) NSInteger stepFrequency;

/** 运动中的实时距离（米） | Real time distance in motion (m) */
@property (nonatomic, assign) NSInteger distance;

/** 实时心率（次/分钟） | Real time heart rate (times / min) */
@property (nonatomic, assign) NSInteger heartRate;

/** 实时体力，0~100 | Real time physical strength, 0-100 */
@property (nonatomic, assign) NSInteger stamina;

/** 运动状态。NO 正常，YES 暂停 | Motion state. NO normal, YES pause */
@property (nonatomic, assign) BOOL isSuspend;

#pragma mark - 当 FB_RECORDTYPE 为 FB_MotionGpsRecord 时（运动定位记录），以下有值 | When FB_RECORDTYPE is
FB_MotionGpsRecord (motion positioning record), the following values

/** 纬度 | Real time distance in motion */
@property (nonatomic) float latitude;

/** 经度 | Real time heart rate */
@property (nonatomic) float longitude;

/** GPS 速度（米/秒） | GPS speed (M / s) */
@property (nonatomic, assign) NSInteger speed;

/** 状态。NO 正常，YES 暂停 | Status. NO normal, YES pause */
@property (nonatomic, assign) BOOL gpsIsSuspend;
@end

```

12、获取计步记录

```

- (void)fbGetStepCountRecordDataStartTime:(NSInteger)startTime
forEndTime:(NSInteger)endTime withBlock:(FBGetStepCountRecordBlock
_Nonnull)fbBlock;

```

// 参考上述记录参数

13、获取血氧记录

```

- (void)fbGetBloodOxygenRecordDataStartTime:(NSInteger)startTime
forEndTime:(NSInteger)endTime withBlock:(FBGetBloodOxygenRecordBlock
_Nonnull)fbBlock;

```

// 参考上述记录参数

14、获取血压记录

```
- (void)fbGetBloodPressureRecordsDataStartTime:(NSInteger)startTime  
forEndTime:(NSInteger)endTime withBlock:(FBGetBloodPressureRecordsBlock  
_Nonnull)fbBlock;  
// 参考上述记录参数
```

15、获取精神压力记录

```
- (void)fbGetStressRecordsDataStartTime:(NSInteger)startTime  
forEndTime:(NSInteger)endTime withBlock:(FBGetStressRecordsBlock  
_Nonnull)fbBlock;  
// 参考上述记录参数
```

16、获取运动详情记录

```
- (void)fbGetExerciseDetailsDataStartTime:(NSInteger)startTime  
forEndTime:(NSInteger)endTime withBlock:(FBGetExerciseDetailsBlock  
_Nonnull)fbBlock;  
// 参考上述记录参数
```

17、获取 运动统计报告+运动详情纪录

```
-  
(void)fbGetSportsStatisticsDetailsReportsWithStartTime:(NSInteger)start  
Time forEndTime:(NSInteger)endTime  
withBlock:(FBGetSportsStatisticsDetailsRecordBlock _Nonnull)fbBlock;  
// 参考上述记录参数
```

18、获取运动定位记录

```
- (void)fbGetMotionLocationRecordDataStartTime:(NSInteger)startTime  
forEndTime:(NSInteger)endTime withBlock:(FBGetMotionLocationRecordBlock  
_Nonnull)fbBlock;  
// 参考上述记录参数
```

19、获取运动高频心率记录(1 秒 1 次)

```
-  
(void)fbExerciseHighFrequencyHeartRateRecordsDataStartTime:(NSInteger)s  
tartTime forEndTime:(NSInteger)endTime  
withBlock:(FBGetExerciseHFHRRecordsBlock _Nonnull)fbBlock;
```


// 参考上述记录参数

20、获取手动测量数据记录

```
- (void)fbGetManualMeasurementDataStartTime:(NSInteger)startTime  
forEndTime:(NSInteger)endTime withBlock:(FBGetManualMeasureDataBlock  
_Nonnull)fbBlock;
```

```
/*
```

手动测量数据记录 | Manual measurement data record

```
*/
```

```
@interface FBManualMeasureDataModel : NSObject
```

```
/**
```

时间戳 GMT 秒 | Time stamp GMT seconds

```
*/
```

```
@property (nonatomic, assign) NSInteger GMTTimeInterval;
```

```
/**
```

GMT 转年月日时分秒 | GMT to YYYY-MM-dd HH:mm:ss

```
*/
```

```
@property (nonatomic, copy) NSString *dateTimeStr;
```

```
/**
```

心率值 | Heart rate value

```
*/
```

```
@property (nonatomic, assign) NSInteger hr;
```

```
/**
```

血氧值 (%) | Blood oxygen value (%)

```
*/
```

```
@property (nonatomic, assign) NSInteger SpO2;
```

```
/**
```

收缩压 (高压, mmHg) | Systolic blood pressure (high pressure, mmHg)

```
*/
```

```
@property (nonatomic, assign) NSInteger pb_max;
```

```
/**
```

舒张压 (低压, mmHg) | Diastolic blood pressure (low pressure, mmHg)

```
*/
```

```
@property (nonatomic, assign) NSInteger pb_min;
```

```
/**
```

精神压力值 | Mental stress value

```
*/
```

```
@property (nonatomic, assign) NSInteger stress;
```

```
/**
```

精神压力等级 | Mental stress level

```
*/
```

```
@property (nonatomic, assign) FB_CURRENTSTRESSRANGE StressRange;
```

@end

21、获取指定的记录和报告

```
–(void)fbGetSpecialRecordsAndReportsDataWithType:(FB_MULTIPLE_RECORD_REPORTS)recordTypes startTime:(NSInteger)startTime  
forEndTime:(NSInteger)endTime  
withBlock:(FBGetSpecialRecordsAndReportsBlock _Nonnull)fbBlock;
```

typedef enum {

FB_CurrentDayActivityData	= 1<<0,	//当日实时测量数据 Real time measurement data of the day
FB_HeartRateRecording	= 1<<1,	//心率记录 Heart rate recording
FB_StepCountRecord	= 1<<2,	//计步记录 Step counting record
FB_BloodOxygenRecording	= 1<<3,	//血氧记录 Blood oxygen record
FB_BloodPressureRecording	= 1<<4,	//血压记录 Blood pressure record
FB_HFHeartRateRecording	= 1<<5,	//运动高频心率记录(1秒1次) Sports high-frequency heart

rate recording (1 time per second)

FB_StressRecording	= 1<<6,	//精神压力记录 Stress Record
FB_SportsDetailsRecord	= 1<<7,	//运动详情记录 Sports detail record
FB_SportsPositioningRecord	= 1<<8,	//运动定位记录 Sports positioning record
FB_DailyActivityReport	= 1<<9,	//每日活动报告 Daily activity report
FB_OnHourActivityReport	= 1<<10,	//整点活动报告 On hour activity report
FB_SleepStatisticsReport	= 1<<11,	//睡眠统计报告 Sleep statistics report
FB_SleepStateRecording	= 1<<12,	//睡眠状态记录 Sleep state recording
FB_CurrentSleepStatisticsReport	= 1<<13,	//当前睡眠实时统计报告 Current sleep real time

statistics report

FB_CurrentSleepStateRecording	= 1<<14,	//当前睡眠实时状态记录 Current sleep real time status
-------------------------------	----------	---

record

FB_SportsRecordList	= 1<<15,	//运动记录列表 Sports record list
FB_SportsStatisticsReport	= 1<<16,	//运动统计报告 Sports statistics report
FB_Sports_Statistics_Details_Report	= 1<<17,	//运动统计报告+运动详情纪录 Sports statistics report +

sports details record

FB_ManualMeasurementData	= 1<<18,	//手动测量数据 Manual measurement data
--------------------------	----------	------------------------------------

}FB_MULTIPLE_RECORD_REPORTS;

// 其他参数参考对应的数据模型

22、获取个人用户信息

```
– (void)fbGetPersonalUserInforWithBlock:(FBGetPersonalUserInforBlock  
_Nonnull)fbBlock;
```

/*

用户个人信息 | User personal information

*/

@interface FBUserInforModel : NSObject

```

/**
 用户 ID（大于 0，小于 0xFFFFFFFF） | User ID (greater than 0, less than 0xFFFFFFFF)
*/
@property (nonatomic, assign) NSInteger userId;

/**
 用户昵称（长度小于或等于 31 个字节，用户昵称超出最大长度，自动截取） | User nickname (the length is less than or equal to 31 bytes,
and the user nickname exceeds the maximum length, automatically intercepted)
*/
@property (nonatomic, copy) NSString *userNickname;

/**
 用户身高（单位 cm，大于 100，小于 250） | User's height (in cm, greater than 100, less than 250)
*/
@property (nonatomic, assign) NSInteger userHeight;

/**
 用户体重（单位 kg，大于 30，小于 250） | User's weight (in kg, more than 30, less than 250)
*/
@property (nonatomic, assign) NSInteger userWeight;

/**
 时区偏移时间（分钟） | Time zone offset time (minutes)
*/
@property (nonatomic, assign) NSInteger userTimeZoneMinute;

/**
 用户性别 | User gender
*/
@property (nonatomic, assign) FB_USERGENDER UserGender;

/**
 用户年龄（大于 5 岁，小于 130 岁） | User age (over 5, under 130)
*/
@property (nonatomic, assign) NSInteger userAge;

/**
 用户步幅（单位 cm） | User stride (in cm)
*/
@property (nonatomic, assign) NSInteger userStride;

/**
 女性生理周期信息 | Female physiological cycle information
*/
@property (nonatomic, strong) FBFemalePhysiologyModel *physiologyModel;
@end

typedef enum {
    FB_UserMale    = 0,    //男性 | Male
    FB_UserFemale = 1,    //女性 | Female
}FB_USERGENDER;

```

23、设置用户个人信息

```
- (void)fbSetPersonalUserInforWithUserModel:(FBUserInforModel *  
_Nonnull)userModel withBlock:(FBResultCallBackBlock _Nonnull)fbBlock;  
// 参考上述参数
```

24、获取记事提醒/闹铃信息

```
- (void)fbGetClockInforWithBlock:(FBGetClockInforBlock _Nonnull)fbBlock;  
/*  
    记事提醒/闹钟信息 | Reminder / alarm clock  
*/  
@interface FBAlarmClockModel : NSObject  
#pragma mark 以下值，通用，必传 | The following values, general, must be passed  
/**  
    序号 ID (0, 1, 2, 3, 4) 最多 5 个闹钟 | Serial number ID (0, 1, 2, 3, 4) up to 5 alarm clocks  
*/  
@property (nonatomic, assign) NSInteger clockID;  
/**  
    闹铃类别: 备忘提醒 (年月日小时分钟有效), 定时闹钟 (仅小时分钟有效) | Alarm category: reminder (valid for hours and minutes),  
    Time alarm clock (only hours and minutes)  
*/  
@property (nonatomic, assign) FB_ALARMCATEGORY clockCategory;  
/**  
    使能开关 NO:关 YES:开 (默认 YES) | Enable switch NO: off YES: on (default YES)  
*/  
@property (nonatomic, assign) BOOL clockEnableSwitch;  
/**  
    稍后提醒开关 NO:关 YES:开 (默认 NO) | Remind switch later NO: OFF YES: ON (default NO)  
*/  
@property (nonatomic, assign) BOOL remindLater;  
/**  
    描述, 长度小于等于 23 个字节 | Description, the length of description is less than or equal to 23 bytes  
*/  
@property (nonatomic, copy) NSString *clockDescribe;  
  
#pragma mark 当 FB_ALARMCATEGORY==FB_Reminders 时, 为备忘提醒, 以下值, 必传 | When FB_  
ALARMCATEGORY==FB_Reminders, for reminders, the following values must be passed  
/**  
    年月日小时分钟, 格式: YYYY-MM-dd HH:mm (当闹铃类别为 FB_Reminders:备忘提醒, 必传; 为 FB_AlarmClock:定时闹钟可不传) |  
    Month, year, day, hour and minute, format: YYYY-MM-dd HH:mm (When the alarm type is FB_Reminders: reminder, it must be sent;  
    when it is FB_AlarmClock: fixed time alarm, it can not be sent)  
*/  
@property (nonatomic, copy) NSString *clockYMDHm;
```

```

#pragma mark 当 FB_ALARMCATEGORY==FB_AlarmClock 时，为定时闹钟，以下值，必传 | When FB_
ALARMCATEGORY==FB_AlarmClock, for alarm clock, the following values must be passed

/**
 重复性，YES:周期有效，NO:一次有效 | Repeatability, YES: cycle effective, NO: once effective
 */
@property (nonatomic, assign) BOOL isRepeat;

/**
 星期选中标记（星期日、星期一、星期二、星期三、星期四、星期五、星期六；必须设置固定七个数据的数组，传 0「未选中」或 1「选中」） | Week check mark (Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday; fixed array of seven data must be set, transfer 0 (unselected) or 1 (selected))
 */
@property (nonatomic, strong) NSArray <NSNumber *> *clockRepeatArray;

/**
 小时分钟，格式：HH:mm（当闹钟类别为 FB_AlarmClock:定时闹钟，必传；为FB_Reminders:备忘提醒可不传） | Hours and minutes, format: HH: mm (When the alarm type is FB_AlarmClock: timed alarm, it must be sent; when it is FB_Reminders: reminder, it can not be sent)
 */
@property (nonatomic, copy) NSString *clockHm;
@end

typedef enum {
    FB_Reminders = 0, //备忘提醒 | Reminders
    FB_AlarmClock = 1, //定时闹钟 | Alarm clock
}FB_ALARMCATEGORY;

```

25、设置记事提醒/闹铃信息

```

- (void)fbSetClockInforWithClockModel:(FBAlarmClockModel *
Nonnull)clockModel withRemoved:(BOOL)isRemoved
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;
// 参考上述参数

```

26、获取消息推送开关信息

```

- (void)fbGetMessagePushSwitchWithBlock:(FBGetMessagePushSwitchBlock
Nonnull)fbBlock;

/*
 消息推送开关信息 | Message push switch information
 */
@interface FBMessageModel : NSObject

/**
 没有，其他类型 | No, other types
 */
@property (nonatomic, assign) BOOL none;

```

```
/**
 电话 | Telephone
*/
@property (nonatomic, assign) BOOL telephone;
/**
 短信 | SMS
*/
@property (nonatomic, assign) BOOL sms;
/**
 微信 | WeChat
*/
@property (nonatomic, assign) BOOL weChat;
/**
  QQ
*/
@property (nonatomic, assign) BOOL qq;
/**
 脸书 | Facebook
*/
@property (nonatomic, assign) BOOL facebook;
/**
 推特 | Twitter
*/
@property (nonatomic, assign) BOOL twitter;
/**
 领英 | LinkedIn
*/
@property (nonatomic, assign) BOOL linkedIn;
/**
 Whatsapp
*/
@property (nonatomic, assign) BOOL whatsapp;
/**
  Line
*/
@property (nonatomic, assign) BOOL line;
/**
 照片墙 | Instagram
*/
@property (nonatomic, assign) BOOL instagram;
/**
 色拉布 | Snapchat
*/
@property (nonatomic, assign) BOOL snapchat;
```

```
/**
Skype
*/
@property (nonatomic, assign) BOOL skype;
/**
谷歌邮箱 | Gmail
*/
@property (nonatomic, assign) BOOL gmail;
/**
Outlook
*/
@property (nonatomic, assign) BOOL outlook;
/**
Messenger
*/
@property (nonatomic, assign) BOOL messenger;
/**
Viber
*/
@property (nonatomic, assign) BOOL viber;
/**
Googletalk
*/
@property (nonatomic, assign) BOOL googletalk;
/**
Vkontakte
*/
@property (nonatomic, assign) BOOL vkontakte;
/**
Imo
*/
@property (nonatomic, assign) BOOL imo;
/**
Imobeta
*/
@property (nonatomic, assign) BOOL imobeta;
/**
Imolite
*/
@property (nonatomic, assign) BOOL imolite;
/**
Chatapp
*/
@property (nonatomic, assign) BOOL chatapp;
```

```
/**
Kik
*/
@property (nonatomic, assign) BOOL kik;
/**
Skred
*/
@property (nonatomic, assign) BOOL skred;
/**
Telegramx
*/
@property (nonatomic, assign) BOOL telegramx;
/**
Beechat
*/
@property (nonatomic, assign) BOOL beechat;
/**
Teamtalk
*/
@property (nonatomic, assign) BOOL teamtalk;
/**
Kakao
*/
@property (nonatomic, assign) BOOL kakao;
/**
Ftalk
*/
@property (nonatomic, assign) BOOL ftalk;
/**
Rimet
*/
@property (nonatomic, assign) BOOL rimet;
/**
Wework
*/
@property (nonatomic, assign) BOOL wework;
/**
红包 | Red envelope/Hong Bao
*/
@property (nonatomic, assign) BOOL HongBao;
/**
Missedcall
*/
@property (nonatomic, assign) BOOL missedcall;
```



```
/**
Calendar
*/
@property (nonatomic, assign) BOOL calendar;

/**
Applemusic
*/
@property (nonatomic, assign) BOOL applemusic;

/**
Googlemaps
*/
@property (nonatomic, assign) BOOL googlemaps;

/**
Likee
*/
@property (nonatomic, assign) BOOL likee;

/**
Messages
*/
@property (nonatomic, assign) BOOL messages;

/**
Mono
*/
@property (nonatomic, assign) BOOL mono;

/**
Odnoklassniki
*/
@property (nonatomic, assign) BOOL odnoklassniki;

/**
Privat
*/
@property (nonatomic, assign) BOOL privat;

/**
Youtube
*/
@property (nonatomic, assign) BOOL youtube;

/**
Youtubemusic
*/
@property (nonatomic, assign) BOOL youtubemusic;

/**
Zoom
*/
@property (nonatomic, assign) BOOL zoom;
```

```

/**
Telegram
*/
@property (nonatomic, assign) BOOL telegram;

/**
Tiktok
*/
@property (nonatomic, assign) BOOL tiktok;

/**
Pinterest
*/
@property (nonatomic, assign) BOOL pinterest;

/**
总开关 | MasterSwitch
*/
@property (nonatomic, assign) BOOL masterSwitch;
@end
// 更多类型请查看 SDK 内 FBMacro.h 文件

```

27、设置消息推送开关信息

```

- (void)fbSetMessagePushSwitchWithData:(FBMessageModel *)messageModel
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;
// 参考上述参数

```

28、获取久坐提示下信息

```

- (void)fbGetLongSitInforWithBlock:(FBGetLongSitInforBlock
_Nonnull)fbBlock;

/*
久坐提示信息 | Sedentary reminder
*/

@interface FBLongSitModel : NSObject

/**
久坐提醒开关 NO:关闭 YES:打开 (默认 YES) | Sedentary reminder switch NO: off YES: on (Default: YES)
*/
@property (nonatomic, assign) BOOL enable;

/**
检测起始时间，一天的绝对分钟 (大于等于 0 分钟，小于 1440 分钟，起始时间小于结束时间) (默认 480，即 08:00) | Detection start
time, absolute minutes of a day (greater than or equal to 0 minutes, less than 1440 minutes, start time less than end time) (the default is
480, i.e. 08:00)
*/
@property (nonatomic, assign) NSInteger startTime;

/**

```

检测结束时间，一天的绝对分钟（大于等于 0 分钟，小于 1440 分钟，结束时间大于起始时间）（默认 1080，即 18:00） | Detection end time, absolute minutes of a day (greater than or equal to 0 minutes, less than 1440 minutes, end time greater than start time) (the default is 1080, i.e. 18:00)

*/

```
@property (nonatomic, assign) NSInteger endTime;
```

/**

久坐持续时间检测时间(分钟), 在这个时间内步数不达标, 进行久坐提醒(默认 45) | The detection time of sedentary duration (minutes). If the steps are not up to standard within this time, the sedentary reminder will be given (Default: 45)

*/

```
@property (nonatomic, assign) NSInteger continueTime;
```

/**

目标步数, 在持续时间内低于这个值, 进行久坐提醒(默认 100) | If the target step number is lower than this value in the duration, the sedentary reminder will be given (Default: 100)

*/

```
@property (nonatomic, assign) NSInteger targetSteps;
```

```
@end
```

29、设置久坐提醒信息

```
- (void)fbSetLongSitInforWithModel:(FBLongSitModel *  
_Nonnull)longSitModel withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;  
// 参考上述参数
```

30、获取心率等级判定信息

```
- (void)fbGetHeartRateInforWithBlock:(FBGetHeartRateInforBlock  
_Nonnull)fbBlock;
```

/*

心率等级判定信息 | Heart rate level determination information

*/

```
@interface FBHeartRateRatingModel : NSObject
```

/**

超过这个百分比, 认定为 mix_hr | If the percentage exceeds this, it will be regarded as mix_hr

*/

```
@property (nonatomic, assign) NSInteger min_hr;
```

/**

超过这个百分比, 认定为 moderate | If the percentage exceeds this, it will be regarded as moderate

*/

```
@property (nonatomic, assign) NSInteger moderate;
```

/**

超过这个百分比, 认定为 vigorous | If the percentage exceeds this, it will be regarded as vigorous

*/

```
@property (nonatomic, assign) NSInteger vigorous;
```

/**

```

超过这个百分比，认定为 max_hr / If it exceeds this percentage, it is regarded as max_hr
*/
@property (nonatomic, assign) NSInteger max_hr;
/**
最高心率值 | Maximum heart rate
*/
@property (nonatomic, assign) NSInteger height_hr;
/**
只有心率值在这个时间宽度都在某个级别以上，才确定新等级 | Only when the heart rate value is above a certain level in this time width
can the new level be determined
*/
@property (nonatomic, assign) NSInteger other_hr;
@end

```

31、设置心率等级判定信息

```

- (void)fbSetHeartRateInforWithModel:(FBHeartRateRatingModel *_Nonnull)heartAlgoModel withBlock:(FBResultCallBackBlock
_Nonnull)fbBlock;
// 参考上述参数

```

32、获取喝水提醒信息

```

- (void)fbGetDrinkWaterWithBlock:(FBGetDrinkWaterBlock _Nonnull)fbBlock;
/*
喝水提醒信息 | Water drinking reminder information
*/
@interface FBWaterClockModel : NSObject
/**
提醒起始时间，一天的绝对分钟（大于等于 0 分钟，小于 1440 分钟，起始时间小于结束时间）（默认 480，即 08:00） | Reminder start
time, absolute minutes of a day (greater than or equal to 0 minutes, less than 1440 minutes, start time less than end time) (the default is
480, i.e. 08:00)
*/
@property (nonatomic, assign) NSInteger startTime;
/**
提醒结束时间，一天的绝对分钟（大于等于 0 分钟，小于 1440 分钟，结束时间大于起始时间）（默认 1080，即 18:00） | Reminder end
time, absolute minutes of a day (greater than or equal to 0 minutes, less than 1440 minutes, end time greater than start time) (the default
is 1080, i.e. 18:00)
*/
@property (nonatomic, assign) NSInteger endTime;
/**
提醒周期，如果为 0 只提醒一次（默认 60） | Reminder cycle, if it is 0, only remind once (Default: 60)
*/
@property (nonatomic, assign) NSInteger repeatCount;

```

```
/**
提醒开关, NO:关闭 YES:打开 (默认 YES) | Reminder switch, NO: off, YES: on (Default: YES)
*/
@property (nonatomic, assign) BOOL alterSwitch;
@end
```

33、设置喝水提醒信息

```
- (void)fbSetDrinkWaterWithModel:(FBWaterClockModel *
Nonnull)drinkWaterModel withBlock:(FBResultCallbackBlock
Nonnull)fbBlock;
// 参考上述参数
```

34、获取勿扰提醒信息

```
- (void)fbGetNotDisturbWithBlock:(FBGetNotDisturbBlock _Nonnull)fbBlock;
/**
勿扰提醒信息 | Do not disturb reminder message
*/
@interface FBNotDisturbModel : NSObject
/**
勿扰提醒起始时间, 一天的绝对分钟 (大于等于 0 分钟, 小于 1440 分钟, 起始时间小于结束时间) (默认 360, 即 06:00) | Do not disturb
reminder start time, absolute minutes of a day (greater than or equal to 0 minutes, less than 1440 minutes, start time less than end time)
*/
@property (nonatomic, assign) NSInteger startTime;
/**
勿扰提醒结束时间, 一天的绝对分钟 (大于等于 0 分钟, 小于 1440 分钟, 结束时间大于起始时间) (默认 1260, 即 21:00) | Do not disturb
reminder end time, absolute minutes of a day (greater than or equal to 0 minutes, less than 1440 minutes, end time greater than start
time)
*/
@property (nonatomic, assign) NSInteger endTime;
/**
勿扰提醒开关, NO:关闭 YES:打开 (默认 NO) | Reminder switch, NO: off, YES: on (Default: NO)
*/
@property (nonatomic, assign) BOOL alterSwitch;
@end
```

35、设置勿扰提醒信息

```
- (void)fbSetNotDisturbWithModel:(FBNotDisturbModel *
Nonnull)notDisturbModel withBlock:(FBResultCallbackBlock
Nonnull)fbBlock;
// 参考上述参数
```

36、获取心率检测信息

```
- (void)fbGetHeartTestPeriodsWithBlock:(FBGetHeartTestPeriodsBlock
_Nonnull)fbBlock;

/*
    心率检测信息，为全天候检测，建议只可修改提醒周期 | The heart rate detection information is all-weather detection,
    and it is recommended that only the reminder cycle can be modified
*/

@interface FBHrCheckModel : NSObject

/**
    心率检测起始时间，一天的绝对分钟（大于等于 0 分钟，小于 1440 分钟，起始时间小于结束时间） | Start time of heart rate detection,
    absolute minutes of a day (greater than or equal to 0 minutes, less than 1440 minutes, start time less than end time)
*/
@property (nonatomic, assign) NSInteger startTime;

/**
    心率检测结束时间，一天的绝对分钟（大于等于 0 分钟，小于 1440 分钟，结束时间大于起始时间） | End time of heart rate detection,
    absolute minutes of a day (greater than or equal to 0 minutes, less than 1440 minutes, end time greater than start time)
*/
@property (nonatomic, assign) NSInteger endTime;

/**
    心率检测周期，分钟，如果为 0 只检测一次，为 10 的整倍数 | Heart rate detection cycle, minutes, if it is 0, only detect once, it is an
    integral multiple of 10
*/
@property (nonatomic, assign) NSInteger repeatCount;

/**
    自动检测开关，NO:关闭 YES:打开 | Automatic detection switch, NO: off, YES: on
*/
@property (nonatomic, assign) BOOL alterSwitch;
@end
```

37、设置心率检测信息

```
- (void)fbSetHeartTestPeriodsWithModel:(FBHrCheckModel *
_Nonnull)hrCheckModel withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;
// 参考上述参数
```

38、获取抬腕亮屏信息

```
- (void)fbGetWristTimeWithBlock:(FBGetWristTimeBlock _Nonnull)fbBlock;

/*
    抬腕亮屏信息 | Wrist lifting light screen information
*/

@interface FBWristModel : NSObject
```

```

/**
 抬腕有效起始时间, 当天的绝对分钟 (大于等于 0 分钟, 小于 1440 分钟, 起始时间小于结束时间) (默认 360, 即 06:00) | Effective starting
time of wrist lifting, absolute minutes of the day (greater than or equal to 0 minutes, less than 1440 minutes, start time less than end
time) (the default is 360, i.e. 06:00)
*/
@property (nonatomic, assign) NSInteger startTime;

/**
 抬腕有效结束时间, 当天的绝对分钟 (大于等于 0 分钟, 小于 1440 分钟, 结束时间大于起始时间) (默认 1320, 即 22:00) | Effective end
time of wrist lifting, absolute minutes of the day (greater than or equal to 0 minutes, less than 1440 minutes, end time greater than start
time) (the default is 1320, i.e. 22:00)
*/
@property (nonatomic, assign) NSInteger endTime;

/**
 抬腕亮屏开关, NO:关闭 YES:打开 (默认 YES) | Wrist lifting light screen switch, NO: off, 1: YES (Default: YES)
*/
@property (nonatomic, assign) BOOL alterSwitch;
@end

```

39、设置抬腕亮屏信息

```

- (void)fbSetWristTimeWithModel:(FBWristModel * _Nonnull)wristModel
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;
// 参考上述参数

```

40、获取运动目标信息

```

- (void)fbGetSportsTagargetWithBlock:(FBGetSportsTagargetBlock
_Nonnull)fbBlock;

/*
 运动目标信息 | Moving target information
*/
@interface FBSportTargetModel : NSObject

/**
 目标步数开关: NO:关 YES:开 | Target step switch: NO:off YES: on
*/
@property (nonatomic, assign) BOOL stepSwitch;

/**
 目标卡路里开关: NO:关 YES:开 | Target calorie switch: NO:off YES: on
*/
@property (nonatomic, assign) BOOL caculateSwitch;

/**
 目标距离开关: NO:关 YES:开 | Target distance switch: NO:off YES: on
*/
@property (nonatomic, assign) BOOL distanceSwitch;

```

```

/**
运动目标参数开关：NO:关 YES:开 | Moving target parameter switch: NO:off YES: on
*/
@property (nonatomic, assign) BOOL sportSwicth;

/**
目标之步数 | Step target
*/
@property (nonatomic, assign) NSInteger stepTarget;

/**
目标之卡路里消耗（千卡） | Target calorie consumption (kcal)
*/
@property (nonatomic, assign) NSInteger calorieTarget;

/**
目标之里程数（米） | Distance target (m)
*/
@property (nonatomic, assign) NSInteger distanceTarget;

/**
目标之运动时间（分钟） | Sport time target (minute)
*/
@property (nonatomic, assign) NSInteger sportTimeTarget;
@end

```

41、设置运动目标信息

```

- (void)fbSetSportsTagargetWithModel:(FBSportTargetModel *
_Nonnull)sportTargetModel withBlock:(FBResultCallBackBlock
_Nonnull)fbBlock;
// 参考上述参数

```

42、设置今日天气详情

```

- (void)fbPushTodayWeatherDetailsWithModel:(FBWeatherDetailsModel *
_Nonnull)model withBlock:(FBResultCallBackBlock _Nonnull)fbBlock;

/*
推送今日天气详情消息参数 | Push today's weather details message parameters
*/
@interface FBWeatherDetailsModel : NSObject

/**
天气 | Weather
*/
@property (nonatomic, assign) FB_WEATHER Weather;

/**
空气质量等级 | Air quality level
*/

```



```
@property (nonatomic, assign) FB_AIRLEVEL AirCategory;

/**
 空气温度 | air temperature
 */
@property (nonatomic, assign) NSInteger airTemp;

/**
 体感温度 (C) | Somatosensory temperature (c)
 */
@property (nonatomic, assign) NSInteger somatTemp;

/**
 最低温度，可以为负数 | The lowest temperature can be negative
 */
@property (nonatomic, assign) NSInteger tempMin;

/**
 最高温度，可以为负数 | The highest temperature can be negative
 */
@property (nonatomic, assign) NSInteger tempMax;

/**
 日出时间，小时 | Sunrise time, hours
 */
@property (nonatomic, assign) NSInteger sunriseHours;

/**
 日出时间，分钟 | Sunrise time, minutes
 */
@property (nonatomic, assign) NSInteger sunriseMinutes;

/**
 日落时间，小时 | Sunset time, hours
 */
@property (nonatomic, assign) NSInteger sunsetHours;

/**
 日落时间，分钟 | Sunset time, minutes
 */
@property (nonatomic, assign) NSInteger sunsetMinutes;

/**
 湿度 (%) | Humidity (%)
 */
@property (nonatomic, assign) NSInteger humidity;

/**
 风向 | Wind direction
 */
@property (nonatomic, assign) EM_WINDDIRECTION WindDirection;

/**
 风速度 (米/秒) | Wind speed (M / s)
```

```

*/
@property (nonatomic, assign) NSInteger windSpeed;
/**
最近 2 小时降水概率（%） | Precipitation probability in the last 2 hours (%)
*/
@property (nonatomic, assign) NSInteger probability;
/**
降水量（毫米） | Precipitation (mm)
*/
@property (nonatomic, assign) NSInteger precipitation;
/**
气压（百帕） | Air pressure (HPA)
*/
@property (nonatomic, assign) NSInteger airPressure;
/**
能见度（米） | Visibility (m)
*/
@property (nonatomic, assign) NSInteger visibility;
/**
紫外线指数 | UV index
*/
@property (nonatomic, assign) NSInteger UV_index;
@end

typedef enum {
    WT_SUNNY                = 0,    //晴 | Sunny
    WT_PARTLY_CLOUDY        = 1,    //多云 | Cloudy
    WT_WIND                  = 2,    //风 | Wind
    WT_CLOUDY                = 3,    //阴天 | Overcast
    WT_LIGHT_RAIN            = 4,    //小雨 | Light rain
    WT_HEAVY_RAIN            = 5,    //大雨 | Heavy rain
    WT_SNOW                  = 6,    //雪 | Snow
    WT_THUNDER_SHOWER        = 7,    //雷阵雨 | Thunder shower
    WT_SUNNY_NIGHT           = 8,    //晴晚上 | Sunny night
    WT_PARTLY_CLOUDY_NIGHT  = 9,    //多云晚上 | Cloudy night
    WT_STANDSTORM            = 10,   //沙尘暴 | Sand storm
    WT_SHOWER                = 11,   //阵雨 | Shower
    WT_SHOWER_NIGHT          = 12,   //阵雨晚上 | Shower night
    WT_SLEET                 = 13,   //雨夹雪 | Sleet
    WT_SMOG                  = 14,   //雾、霾 | Fog and haze
    WT_LIGHT_SNOW            = 15,   //小雪 | Light snow
    WT_HEAVY_SNOW            = 16,   //大雪 | Heavy snow
    WT_MODERATE_RAIN         = 17,   //中雨 | Moderate rain
    WT_RAINSTORM             = 18,   //暴雨 | Rainstorm

```

```

        WT_UNKNOWN          = 255, //未知天气 | Unknown weather
    }FB_WEATHER;

```

```

typedef enum {
    AL_BAD      = 0,  //差 | Bad
    AL_GOOD     = 1,  //良 | Good
    AL_WONDFUL  = 2,  //优 | Wonderful
}FB_AIRLEVEL;

```

```

typedef enum{
    WD_0 = 0,  //无风 | No wind
    WD_1 = 1,  //东风 | East wind
    WD_2 = 2,  //东南风 | Southeast wind
    WD_3 = 3,  //南风 | South wind
    WD_4 = 4,  //西南风 | Southwest wind
    WD_5 = 5,  //西风 | Westerly
    WD_6 = 6,  //西北风 | Northwest wind
    WD_7 = 7,  //北风 | North wind
    WD_8 = 8,  //东北风 | Northeasterly wind
}EM_WINDDIRECTION;

```

43、设置未来天气预报信息

```

- (void)fbPushWeatherMessageWithModel:(NSArray <FBWeatherModel *>
*)weatherArray support:(BOOL)support_14days_Weather
withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;

```

/*

推送天气消息参数 | Push weather message parameters

*/

```
@interface FBWeatherModel : NSObject
```

/**

序号 ID, 0:昨天、1:今天、2:明天、3:后天..... | Serial number ID, 0: yesterday, 1: today, 2: tomorrow, 3: the day after tomorrow

@note 根据 FBAllConfigObject.firmwareConfig.support_14days_Weather 来标识是否支持未来 14 天天气预报 (YES: 序号 ID 支持 0-15, NO: 序号 ID 支持 0-6) / According to FBAllConfigObject.firmwareConfig.support_14days_Weather to identify whether the weather forecast for the next 14 days is supported (YES: serial number ID supports 0-15, NO: serial number ID supports 0-6)

*/

```
@property (nonatomic, assign) NSInteger days;
```

/**

天气 | Weather

*/

```
@property (nonatomic, assign) FB_WEATHER Weather;
```

/**

```

    最低温度，可以为负数 | The lowest temperature can be negative
    */
    @property (nonatomic, assign) NSInteger tempMin;
    /**
    最高温度，可以为负数 | The highest temperature can be negative
    */
    @property (nonatomic, assign) NSInteger tempMax;
    /**
    空气质量等级 | Air quality level
    */
    @property (nonatomic, assign) FB_AIRLEVEL AirCategory;
    /**
    PM2.5 等级 | PM2.5
    */
    @property (nonatomic, assign) FB_PM25 PM2p5;
@end

typedef enum {
    PM_LEVEL1 = 0, //优 | Wonderful
    PM_LEVEL2 = 1, //良 | Good
    PM_LEVEL3 = 2, //轻度污染 | Light pollution
    PM_LEVEL4 = 3, //中度污染 | Moderate pollution
    PM_LEVEL5 = 4, //重度污染 | Heavy pollution
}FB_PM25;

```

44、~~app~~推送手机定位信息

```

- (void)fbPushMobileLocationInformationWithLongitude:(float)longitude
withLatitude:(float)latitude withBlock:(FBResultCallbackBlock)
_Nonnull)fbBlock;

```

45、获取女性生理周期信息

```

- (void)fbGetFemaleCircadianCycleWithBlock:(FBGetFemaleCircadianCycleBlock
_Nonnull)fbBlock;
/*
    女性生理周期信息 | Female physiological cycle information
    */
@interface FBFemalePhysiologyModel : NSObject
/**
    健康模式设置 | Health mode setting
    */
    @property (nonatomic, assign) FB_FEMALEPHYSIOLOGICALHEALTHMODEL HealthModel;
    /**

```

```

    经期开始提醒提前天数，范围 1-3 天 | The number of days in advance of menstruation start reminder, ranging from 1 to 3 days
    */
    @property (nonatomic, assign) NSInteger daysInAdvance;
    /**
    经期的天数，范围 3-15 天 | The number of days of menstruation, ranging from 3 to 15 days
    */
    @property (nonatomic, assign) NSInteger daysMenstruation;
    /**
    周期长度，范围 17-60 天 | Cycle length, ranging from 17 to 60 days
    */
    @property (nonatomic, assign) NSInteger cycleLength;
    /**
    最近一次月经，年（最近两年） | Last menstruation, year (last two years)
    */
    @property (nonatomic, assign) NSInteger lastYear;
    /**
    最近一次月经，月 | Last menstruation, month
    */
    @property (nonatomic, assign) NSInteger lastMonth;
    /**
    最近一次月经，日 | The last menstruation, day
    */
    @property (nonatomic, assign) NSInteger lastDay;
    /**
    孕期提醒方式：NO 提示已怀孕天数，YES 提示距离预产期天数 | Pregnancy reminder: no indicates the number of days pregnant, yes
    indicates the number of days away from the expected delivery date
    */
    @property (nonatomic, assign) BOOL isPreProduction;
    /**
    提醒时间，小时 | Reminder time, hours
    */
    @property (nonatomic, assign) NSInteger reminderHours;
    /**
    提醒时间，分钟 | Reminder time, minutes
    */
    @property (nonatomic, assign) NSInteger reminderMinutes;
    /**
    设备提醒开关，NO 关，YES 开 | Device reminder switch, no off, yes on
    */
    @property (nonatomic, assign) BOOL reminderSwitch;
@end

typedef enum {
    FB_HealthModel_NotUsed = 0, //未启用 | Not used

```

```

    FB_HealthModel_Menstrual          = 1, //月经期 | Menstrual period
    FB_HealthModel_PregnancyPreparation = 2, //备孕期 | Pregnancy preparation period
    FB_HealthModel_Pregnancy          = 3, //怀孕期 | Pregnancy
}FB_FEMALEPHYSIOLOGICALHEALTHMODEL;

```

46、设置女性生理周期信息

```

- (void)fbSetFemaleCircadianCycleWithModel:(FBFemalePhysiologyModel *
_Nonnull)physiologyModel withBlock:(FBResultCallbackBlock
_Nonnull)fbBlock;
// 参考上述参数

```

47、获取心率异常提醒信息

```

- (void)fbGetAbnormalHeartRateReminderWithBlock:(FBGetAbnormalHeartRateR
eminderBlock _Nonnull)fbBlock;
/*
    心率异常提醒信息 | Abnormal heart rate reminder information
*/
@interface FBHrReminderModel : NSObject
/**
    心率异常提醒开关 NO:关闭 YES:打开 | Abnormal heart rate reminder switch No: off yes: on
*/
@property (nonatomic, assign) BOOL enable;
/**
    心率提醒上限，心率超高提醒 | Heart rate reminder upper limit, heart rate ultra-high reminder
*/
@property (nonatomic, assign) NSInteger highReminder;
/**
    心率提醒下限，心率过低提醒 | Low heart rate reminder
*/
@property (nonatomic, assign) NSInteger lowReminder;
/**
    心率值连续超标次数（达到超标的次数时才会提醒） | The number of times the heart rate value exceeds the standard continuously (it will
be reminded only when the number exceeds the standard)
*/
@property (nonatomic, assign) NSInteger exceedanceTimes;
/**
    检测起始时间，一天的绝对分钟（大于等于 0 分钟，小于 1440 分钟，起始时间小于结束时间） | Detection start time, absolute minutes of
a day (greater than or equal to 0 minutes, less than 1440 minutes, start time less than end time)
*/
@property (nonatomic, assign) NSInteger startTime;
/**

```

检测结束时间，一天的绝对分钟（大于等于 0 分钟，小于 1440 分钟，结束时间大于起始时间） | Detection end time, absolute minutes of a day (greater than or equal to 0 minutes, less than 1440 minutes, end time greater than start time)

*/

@property (nonatomic, assign) NSInteger endTime;

@end

48、设置心率异常提醒信

```
-(void)fbSetAbnormalHeartRateReminderWithModel:(FBHrReminderModel *  
_Nonnull)hrReminderModel withBlock:(FBResultCallbackBlock  
_Nonnull)fbBlock;
```

// 参考上述参数

49、GPS 运动互联数据交互

```
-(void)fbGPSMotionInterconnectionWithModel:(FBMotionInterconnectionMode  
l * _Nonnull)model withBlock:(FBMotionInterconnectionBlock  
_Nonnull)fbBlock;
```

/*

GPS 运动互联数据交互信息 | Interactive information of GPS motion interconnection data

*/

@interface FBMotionInterconnectionModel : NSObject

#pragma mark - 以下数据由 APP 提供填充 | The following data is filled in by app

/ 当前时间(UTC) | Current time (UTC) */**

@property (nonatomic, assign) NSInteger currentTimeUTC;

/ 运动 ID，用运动的开始时间作为每笔运动的唯一识别码 | Motion ID, using the start time of the motion as the unique identification code of each motion */**

@property (nonatomic, assign) NSInteger motionID;

/ 运动开始时间戳(UTC) | Motion start timestamp (UTC) */**

@property (nonatomic, assign) NSInteger startMotionUTC;

/ 运动结束时间(UTC)，进行中的运动填 0 | Motion end time (UTC), fill in 0 for ongoing exercise */**

@property (nonatomic, assign) NSInteger endMotionUTC;

/ 当前运动总时间，单位秒 | Total current movement time, in seconds */**

@property (nonatomic, assign) NSInteger totalTime;

/ 当前运动总卡路里（千卡） | Total calories of current exercise (kcal) */**

@property (nonatomic, assign) NSInteger totalCalories;

/ 当前本次运动轨迹运动距离（单位米，通过 gps 定位计算） | Motion distance of current trajectory (unit: m, calculated by GPS positioning) */**

@property (nonatomic, assign) NSInteger motionDistance;

/ 运动模式 | Motion mode */**

@property (nonatomic, assign) FB_MOTIONMODE MotionMode;

/ 本次运动最大步频（单位：步/分钟） | Maximum step frequency of this movement (unit: step / minute) */**

@property (nonatomic, assign) NSInteger maxStepFrequency;

/ 本次运动平均步频 =步数/时间（单位：步/分钟） | Average step frequency of this exercise = steps / time (unit: steps / minute) */**

```

@property (nonatomic, assign) NSInteger avgStepFrequency;

/** 重复运动的周期数（来回次数，圈数）（单位：圈） | Number of cycles of repeated motion (number of turns, turns) (unit: turns) */
@property (nonatomic, assign) NSInteger cyclesNumber;

/** 本次运动最大速度（单位：米/秒） | Maximum speed of this movement (unit: M / s) */
@property (nonatomic, assign) CGFloat maxSpeed;

/** 本次运动平均速度 = 距离/用时（单位：米/秒） | Average speed of this movement = distance / time (unit: M / s) */
@property (nonatomic, assign) CGFloat avgSpeed;

/** 本次有轨迹运动配速（单位：秒/公里） | This time there is track movement pace (unit: S / km) */
@property (nonatomic, assign) NSInteger trackPace;

#pragma mark - 以下数据 APP 或手表由提供（双方都有权修改） | The following data is provided by app or watch (both parties have the right to modify)

/** 中途休息次数 | Number of breaks */
@property (nonatomic, assign) NSInteger breaksNumber;

/** 运动状态,0 停止,1 进行中,2 暂停(表明当前运动状态,非控制指令) | Motion state, 0 stop, 1 in progress, 2 pause (indicating current motion state, non control command) */
@property (nonatomic, assign) NSInteger motionState;

#pragma mark - 以下数据由手表填充返回, APP 无需设置 | The following data is filled and returned by the watch. App does not need to be set

/** 当前运动总步数 | Total current motion steps */
@property (nonatomic, assign) NSInteger totalSteps;

/** 本次运动当前实时心率（单位：次/分钟） | Current real-time heart rate during this exercise (unit: times / minute) */
@property (nonatomic, assign) NSInteger currentHeartRate;

/** 本次运动最大心率（单位：次/分钟） | Maximum heart rate of this exercise (unit: times / minute) */
@property (nonatomic, assign) NSInteger maxHeartRate;

/** 本次运动最小心率（单位：次/分钟） | Minimum heart rate of this exercise (unit: times / minute) */
@property (nonatomic, assign) NSInteger minHeartRate;

/** 本次运动实时平均心率（单位：次/分钟） | Real time average heart rate of this exercise (unit: times / minute) */
@property (nonatomic, assign) NSInteger avgHeartRate;

/** 当前心率处于的区间（热身，燃脂，有氧，高强度有氧，无氧） | The range of current heart rate (warm-up, fat burning, aerobic, high-strength aerobic, anaerobic) */
@property (nonatomic, assign) FB_MOTIONHEARTRATERANGE currentHrRange;

/** 到当前为止，热身运动时间，单位分钟，随时刷新 | Up to now, the warm-up exercise time, in minutes, is refreshed at any time */
@property (nonatomic, assign) NSInteger heartRate_level_1;

/** 到当前为止，燃脂运动时间，单位分钟，随时刷新 | Up to now, the fat burning movement time, in minutes, can be refreshed at any time */
@property (nonatomic, assign) NSInteger heartRate_level_2;

/** 到当前为止，有氧耐力运动时间，单位分钟，随时刷新 | So far, aerobic endurance exercise time, in minutes, can be refreshed at any time */
@property (nonatomic, assign) NSInteger heartRate_level_3;

/** 到当前为止，高强度有氧运动时间，单位分钟，随时刷新 | So far, the time of high-strength aerobic exercise, in minutes, can be refreshed at any time */

```



```

@property (nonatomic, assign) NSInteger heartRate_level_4;
/** 到当前为止，无氧运动时间，单位分钟，随时刷新 | So far, the anaerobic exercise time, in minutes, can be refreshed at any time */
@property (nonatomic, assign) NSInteger heartRate_level_5;
@end

```

50、获取常用联系人信息

```

-(void)fbGetFavoriteContactListWithBlock:(FBGetFavoriteContactListBlock
_Nonnull)fbBlock;
/*
  常用联系人信息 | Frequently used contact information
 */
@interface FB FavContactModel : NSObject
/**
  联系人姓名(长度小于或等于 64 个字节,超出最大长度,自动截取) | Contact name (less than or equal to 64 bytes in length, automatically
intercepted if the maximum length is exceeded)
 */
@property (nonatomic, copy) NSString *contactName;
/**
  号码归属地(长度小于或等于 64 个字节,超出最大长度,自动截取) | Number location (if the length is less than or equal to 64 bytes, it
will be automatically intercepted if the maximum length is exceeded)
 */
@property (nonatomic, copy) NSString *QCellCore;
/**
  联系人号码(长度小于或等于 20 个字节,超出最大长度,自动截取) | Contact number (less than or equal to 20 bytes in length,
automatically intercepted if the maximum length is exceeded)
 */
@property (nonatomic, copy) NSString *contactNumber;
@end

```

51、设置常用联系人信息

```

- (void)fbSetFavoriteContactListWithModel:(NSArray <FB FavContactModel *>
*)modelList withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;
// 参考上述参数

```

52、读取片外 flash 空间数据 (设备意外重启信息, 供固件分析问题)

```

- (void)fbReadOffChipFlashWithAddress:(NSInteger)address
withLength:(NSInteger)length withBlock:(FBRequestDeviceLogsBlock
_Nonnull)fbBlock;

```

53、请求获取设备日志（埋点数据，读取 OTA 缓存数据，总共 60K）

```
– (void)fbRequestDeviceLogsWithBlock:(FBRequestDeviceLogsBlock  
_Nonnull)fbBlock;
```

54、获取系统功能开关信息

```
–  
(void)fbGetSystemFunctionSwitchInformationWithBlock:(FBRequestSystemFunctionSwitchInfoBlock _Nonnull)fbBlock;
```

55、设置系统功能开关信息

```
–  
(void)fbSetSystemFunctionSwitchInformation:(FBSystemFunctionSwitchModel * _Nonnull)switchModel withBlock:(FBResultCallbackBlock _Nonnull)fbBlock;
```

56、推送 AGPS 位置基础信息(经纬度 UTC)

```
– (void)fbPushAGPSLocationInformation:(FBAGPSLocationModel *  
_Nonnull)locationModel withBlock:(FBResultCallbackBlock  
_Nonnull)fbBlock;
```

➤ 获取流数据 API (FBAtCommand)

1. 开启数据流 **fbUpDataStreamData: withBlock:** 指令后，有数据更新时，设备会按设定的时间间隔通过此回调返回数据

```
- (void)fbStreamDataHandlerWithBlock:(FBStreamDataHandlerBlock
_Nonnull)fbBlock;
```

```
/*
```

```
    流数据 | Stream data
```

```
*/
```

```
@interface FBStreamDataModel : NSObject
```

```
/**
```

```
    流帧计数，自动递增，0-255，溢出后清零 | Stream frame count, auto increment, 0-255, clear after overflow
```

```
*/
```

```
@property (nonatomic, assign) NSInteger streamCount;
```

```
/**
```

```
    当前心率（次/分钟） | Current heart rate (times / minute)
```

```
*/
```

```
@property (nonatomic, assign) NSInteger currentHeartRate;
```

```
/**
```

```
    当前心率等级 | Current heart rate level
```

```
*/
```

```
@property (nonatomic, assign) FB_CURRENTHEARTRANGE HeartRateRange;
```

```
/**
```

```
    当前累计步数 | Current cumulative steps
```

```
*/  
@property (nonatomic, assign) NSInteger currentStepCount;  
/**  
    当前累计距离（米） | Current cumulative distance (m)  
*/  
@property (nonatomic, assign) NSInteger currentDistance;  
/**  
    当前累计消耗卡路里（千卡） | Current cumulative calories consumed (kcal)  
*/  
@property (nonatomic, assign) NSInteger currentCalories;  
@end
```

➤ OTA 工具 API (FBBluetoothOTA)

1. 生成自定义表盘 bin 文件数据 (FBCustomDataTools)

– (NSData

```
*)fbGenerateCustomDialBinFileDataWithDialModel:(FBCustomDialModel *  
_Nonnull)dialModel;
```

2. 生成多项目自定义表盘 bin 文件数据 (FBCustomDataTools)

– (NSData

```
*)fbGenerateMultiProjectCustomDialBinFileDataWithDialsModel:(FBMultiple  
CustomDialsModel * _Nonnull)dialsModel;
```

~~// NOTE: 由于表盘内存空间有限，自定义内容最多不能超过 16 个控件，不同样式所占用的控件个数都有所不同。添加自定义内容前需要检查表盘空间是否足够~~

```
+ (BOOL)checkForOverflow:(NSArray <FBCustomDialItem *> *)items;
```

3. 生成自定义运动类型 bin 文件数据 (多个运动类型 Bin 文件压缩合并成一个 Bin 文件)

(FBCustomDataTools)

```
– (NSData *)fbGenerateCustomMultipleMotionBinFileDataWithItems:(NSArray  
<NSData *> * _Nonnull)items;
```

4. 传入不同的 OTAType 进行 OTA 数据同步，为避免变砖，请先确认项目是否支持

```
– (void)fbStartCheckingOTAWithBinFileData:(NSData * _Nonnull)binFile  
withOTAType:(FB_OTANOTIFICATION)OTAType  
withBlock:(FBSetOtaUpgradeManagerBlock _Nonnull)fbBlock;
```

typedef enum {

FB_OTANotification_Firmware	= 0,	//升级固件 Update Firmware
FB_OTANotification_ClockDial	= 1,	//升级默认动态表盘 Upgrade default dynamic dial
FB_OTANotification_SmallFont	= 2,	//升级小字库 Upgrade small font
FB_OTANotification_BigFont	= 3,	//升级大字库 Upgrade big font
FB_OTANotification_UIPictureResources	= 4,	//升级 UI 图片资源 Upgrade UI image resources
FB_OTANotification_2_3_4AtTheSameTime	= 5,	//同时升级 2,3,4 Upgrade 2, 3, 4 at the same time
FB_OTANotification_Motion	= 6,	//推送运动模式 Push motion mode

```

    FB_OTANotification_UI                = 7,    //增量升级 UI 图片 | Incrementally upgrade UI images
    FB_OTANotification_Multi_Dial        = 8,    //多表盘压缩数据包 | Multi-dial compressed data package
    FB_OTANotification_Multi_Sport       = 9,    //多运动类型压缩数据包 | Multi-sport type compressed data
package
    FB_OTANotification_DynamicClockDial  = 10,   //+n, 升级动态表盘 n | +n. Upgrade dynamic dial n
    FB_OTANotification_CustomClockDial   = 20,   //+n, 升级自定义表盘 n | +n. Upgrade custom dial n
    FB_OTANotification_AGPS_Package      = 30,   //推送 AGPS 定位数据包 | Push AGPS positioning data package
    FB_OTANotification_Multi_Dial_Built_in = 200, //厂线推送内置表盘压缩数据包 | The factory line pushes the
built-in dial compressed data package
    FB_OTANotification_Multi_Sport_Built_in = 201, //厂线推送内置多运动类型压缩数据包 | The factory line
pushes the built-in multi-sport type compressed data package
    FB_OTANotification_Busy              = 254,  //设备处于禁止 OTA 状态, 稍后再试 | The device is in OTA
prohibited state, please try again later
    FB_OTANotification_Cancel            = 255,  //放弃当前升级 | Discard current upgrade
}FB_OTANOTIFICATION;

```

// 更多类型请查看 SDK 内 FBMacro.h 文件

```

/*
    OTA 完成信息 | OTA completion information
*/
@interface FBOTADoneModel : NSObject
/**
    ota 类型 | OTA type
*/
@property (nonatomic, assign) FB_OTANOTIFICATION type;
/**
    bin 二进制文件 | Bin binary
*/
@property (nonatomic, retain) NSData *binFile;
/**
    ota 升级总时长 (单位秒) | Total OTA upgrade time (in seconds)
*/
@property (nonatomic, assign) NSInteger totalInterval;
/**
    平均速率 (单位 KB/s) | Average velocity (in KB / s)
*/
@property (nonatomic) float velocity;
@end

```

➤ 错误码枚举定义 FB_RET_CMD

```

typedef enum {
    //协议定义的通讯错误 | Protocol defined communication error
    RET_EXEC_ER          = 3,    //执行失败 | Execution failed

```

```

RET_DATA_INVA      = 4,    //数据无效（格式错误）| Invalid data (format error)
RET_COMM_BUSY     = 5,    //通信中（系统忙）| Communication (system busy)
RET_COMD_INVA     = 6,    //无效指令 | Invalid instruction
RET_PVER_ER       = 7,    //协议版本不符 | Protocol version does not match
RET_DATA_OK       = 8,    //数据正确 | The data is correct
RET_DATA_ER       = 9,    //数据错误 | Data error
RET_DATA_TO       = 10,   //接收超时 | Receive timeout
RET_RAM_OF        = 11,   //内存溢出 | Out of memory
RET_CHKS_ER       = 12,   //校验和错误 | Check sum error
RET_PARA_ER       = 13,   //参数错误 | Parameter error
RET LENG_ER       = 14,   //数据长度错误 | Data length error

//自定义蓝牙通信错误 | Custom Bluetooth communication error
RET_FB_ERR_OTA     = 15,   //OTA 失败，不支持 OTA | OTA failed, OTA not supported
RET_FB_ERR_OFF     = 16,   //蓝牙未打开或不支持 | Bluetooth is not on or not supported
RET_FB_ERR_NOT     = 17,   //尚未连接到设备 | Not yet connected to the device
RET_FB_ERR_NOTREADY = 18,  //设备尚未初始化完成 | The device has not been initialized
RET_FB_ERR_NET     = 19,   //写指令失败，或缺少连接参数 | Write instruction failed, or connection
parameters are missing
RET_FB_ERR_AT      = 20,   //AT 指令异常，无效指令/无效参数 | At instruction exception, invalid
instruction / invalid parameter
RET_FB_ERR_DATA    = 21,   //失败，数据校验未通过 | Failed, data verification failed
RET_FB_ERR_TIMEROUT = 22,  //应答超时 | Response timeout

//自定义数据传输状态 | Data transmission status
FB_INDATATRANSMISSION = 101, //数据传输中 | In data transmission
FB_DATATRANSMISSIONDONE = 200, //数据传输完成 | Data transmission complete
FB_DATATRANSMISSIONFAILED = 500, //数据传输失败 | Data transfer failed

//GPS 运动状态执行错误 | GPS motion status execution error
FB_GPS_MOTION_STATE_LOWPRESSUREERROR = 200012, //执行失败，低压无法执行 | Execution failed, low
voltage cannot be executed
FB_GPS_MOTION_STATE_COMMANDSTATUSERROR = 200013, //指令状态错误 | Command status error
FB_GPS_MOTION_STATE_INREGULARMOTIONERROR = 200014, //常规运动中，请先停止当前运动 | In normal motion,
please stop the current motion first
FB_GPS_MOTION_STATE_INCALLERROR = 200015, //正在通话中，无法执行此指令 | This command cannot be
executed while a call is in progress
FB_GPS_MOTION_STATE_CANCELSELS = 200017, //手表取消开启运动 | The watch cancels the movement
FB_GPS_MOTION_STATE_NONE = 200019, //本地无此运动信息 | There is no local sports
information
}FB_RET_CMD;

```

➤ 运动模式枚举定义 FB_MOTIONMODE

```

typedef enum {
    FBNotUsed           = 0,    //不使用 | Not used
    FBRunning           = 1,    //跑步 | Running
    FBMountaineering    = 2,    //登山 | Mountaineering
    FBCycling           = 3,    //骑行 | Cycling
    FBFootball          = 4,    //足球 | Football
    FBSwimming          = 5,    //游泳 | Swimming
    FBBasketball        = 6,    //篮球 | Basketball
    FBNo_designation     = 7,    //无指定 | No designation
    FBOutdoor_running   = 8,    //户外跑步 | Outdoor running
    FBIndoor_running     = 9,    //室内跑步 | Indoor running
    FBFat_reduction_running = 10, //减脂跑步 | Fat reduction running

    FBOutdoor_walking    = 11,   //户外健走 | Outdoor walking
    FBIndoor_walking     = 12,   //室内健走 | Indoor walking
    FBOutdoor_cycling    = 13,   //户外骑行 | Outdoor cycling
    FBIndoor_cycling     = 14,   //室内骑行 | Indoor cycling
    FBFree_training      = 15,   //自由训练 | Free training
    FBFitness_training   = 16,   //健身训练 | Fitness training
    FBBadminton          = 17,   //羽毛球 | Badminton
    FBVolleyball         = 18,   //排球 | Volleyball
    FBTable_Tennis       = 19,   //乒乓球 | Table Tennis
    FBElliptical_machine = 20,   //椭圆机 | Elliptical machine

    FBRowing_machine     = 21,   //划船机 | Rowing machine
    FBYoga_training      = 22,   //瑜伽 | Yoga
    FBStrength_training   = 23,   //力量训练 (举重) | Strength training (weightlifting)
    FBCricket            = 24,   //板球 | Cricket
    FBRope_skipping      = 25,   //跳绳 | Rope skipping
    FBAerobic_exercise    = 26,   //有氧运动 | Aerobic exercise
    FBAerobic_dancing     = 27,   //健身舞 | Aerobic dancing
    FBTaiji_boxing       = 28,   //太极 | Tai Chi
    FBAuto_running       = 29,   //自动识别跑步运动 | Automatically recognize running
    FBAuto_walking       = 30,   //自动识别健走运动 | Automatic recognition of walking movement

    FBWALK               = 31,   //室内步行 | Indoor walking
    FBSTEP_TRAINING      = 32,   //踏步 | Step training
    FBHORSE RIDING       = 33,   //骑马 | Ride a horse
    FBHOCKEY             = 34,   //曲棍球 | Hockey
    FBINDOOR_CYCLE       = 35,   //室内单车 | Aerodyne bike
    FBSHUTTLECOCK        = 36,   //毽球 | Shuttlecock
    FBBOXING             = 37,   //拳击 | Boxing
    FBOUTDOOR_WALK       = 38,   //户外走 | Outdoor walk
    FBTRAIL_RUNNING      = 39,   //越野跑 | Cross country running

```


FBSKIING	= 40, //滑雪 Skiing
FBGYMNASTICS	= 41, //体操 Artistic Gymnastics
FBICE_HOCKEY	= 42, //冰球 Ice hockey
FBTAEKWONDO	= 43, //跆拳道 Taekwondo
FBV02MAX_TEST	= 44, //有氧运动 Aerobic exercise
FBAIR_WALKER	= 45, //漫步机 Walking machine
FBHIKING	= 46, //徒步 On foot
FBTENNIS	= 47, //网球 Tennis
FBDANCE	= 48, //跳舞 Dance
FBTRACK_FIELD	= 49, //田径 Athletics
FBABDOMINAL_TRAINING	= 50, //腰腹运动 Lumbar abdominal movement
FBKARATE	= 51, //空手道 Karate
FBCOOLDOWN	= 52, //整理放松 Organize and relax
FB CROSS_TRAINING	= 53, //交叉训练 Cross training
FBPILATES	= 54, //普拉提 Pilates
FBCROSS_FIT	= 55, //交叉配合 Cross fit
FBFUNCTIONAL_TRAINING	= 56, //功能性训练 Functional training
FBPHYSICAL_TRAINING	= 57, //体能训练 Physical training
FBARCHERY	= 58, //射箭 Archery
FBFLEXIBILITY	= 59, //柔韧度 Flexibility
FBMIXED_CARDIO	= 60, //混合有氧 Mixed aerobic
FBLATIN_DANCE	= 61, //拉丁舞 Latin dance
FBSTREET_DANCE	= 62, //街舞 Hip hop
FBKICKBOXING	= 63, //自由搏击 Free fight
FBBARRE	= 64, //芭蕾舞 Ballet
FBAUSTRALIAN_FOOTBALL	= 65, //澳式足球 Australian football
FBMARTIAL_ARTS	= 66, //武术 Australian football
FBSTAIRS	= 67, //爬楼 Climb a building
FBHANDBALL	= 68, //手球 Handball
FBBASEBALL	= 69, //棒球 Baseball
FBBOWLING	= 70, //保龄球 Bowling
FB RACQUETBALL	= 71, //壁球 Squash
FBCURLING	= 72, //冰壶 Curling
FBHUNTING	= 73, //打猎 Go hunting
FBSNOWBOARDING	= 74, //单板滑雪 Snowboarding
FBPLAY	= 75, //休闲运动 Leisure sports
FBAMERICAN_FOOTBALL	= 76, //美式橄榄球 American football
FBHAND_CYCLING	= 77, //手摇车 Handcart
FBFISHING	= 78, //钓鱼 Go fishing
FBDISC_SPORTS	= 79, //飞盘 Frisbee

FBRUGBY	= 80, //橄榄球 Rugby
FBGOLF	= 81, //高尔夫 Golf
FBFOLK_DANCE	= 82, //民族舞 Folk dance
FBDOWNHILL_SKIING	= 83, //高山滑雪 Alpine skiing
FBSNOW_SPORTS	= 84, //雪上运动 Snow Sports
FBMIND_BODY	= 85, //舒缓冥想类运动 Soothing meditation exercise
FBCORE_TRAINING	= 86, //核心训练 Core training
FBSKATING	= 87, //滑冰 Core training
FBFITNESS_GAMING	= 88, //健身游戏 Fitness games
FBAEROBICS	= 89, //健身操 Aerobics
FBGROUP_TRAINING	= 90, //团体操 Group Gymnastics
FBKENDO	= 91, //搏击操 Kickboxing
FBLACROSSE	= 92, //长曲棍球 Lacrosse
FBROLLING	= 93, //泡沫轴筋膜放松 Foam shaft fascia relax
FBWRESTLING	= 94, //摔跤 Wrestling
FBFENCING	= 95, //击剑 Fencing
FBSOFTBALL	= 96, //垒球 Softball
FBSINGLE_BAR	= 97, //单杠 Horizontal bar
FBPARALLEL_BARS	= 98, //双杠 Parallel bars
FBROLLER_SKATING	= 99, //轮滑 Roller-skating
FBHULA_HOOP	= 100, //呼啦圈 Hu la hoop
FBDARTS	= 101, //飞镖 Darts
FBPICKLEBALL	= 102, //匹克球 Pickleball
FBSIT_UP	= 103, //仰卧起坐 Abdominal curl
FBHIIT	= 104, //HIIT HIIT
FBWAIST_TRAINING	= 105, //腰腹训练 Waist and abdomen training
FBTREADMILL	= 106, //跑步机 Treadmill
FBBOATING	= 107, //划船 Rowing
FBJUDO	= 108, //柔道 rowing
FBTRAMPOLINE	= 109, //蹦床 Trampoline
FBKATEBOARDING	= 110, //滑板 Skate
FBHOVERBOARD	= 111, //平衡车 Balance car
FBBLADING	= 112, //溜旱冰 Roller skating
FBPARKOUR	= 113, //跑酷 Parkour
FBDIVING	= 114, //跳水 Diving
FBSURFING	= 115, //冲浪 Surfing
FBSNORKELING	= 116, //浮潜 Snorkeling
FBPULL_UP	= 117, //引体向上 Pull up
FBPUSH_UP	= 118, //俯卧撑 Push up
FBPLANKING	= 119, //平板支撑 Plate support

```

FBROCK_CLIMBING      = 120, //攀岩 | Rock Climbing

FBHIGHTJUMP          = 121, //跳高 | High jump
FBBUNGEE_JUMPING     = 122, //蹦极 | Bungee jumping
FBLONGJUMP            = 123, //跳远 | Long jump
FBSHOOTING           = 124, //射击 | Shooting
FBMARATHON           = 125, //马拉松 | Marathon
FBV02MAXTEST         = 126, //最大摄氧量测试 | V02max test
FBKITE_FLYING        = 127, //放风筝 | Kite Flying
FBBILLIARDS          = 128, //台球 | Billiards
FBCARDIO_CRUISER     = 129, //有氧运动巡洋舰 | Cardio Cruiser
FBTUGOFWAR           = 130, //拔河比赛 | Tug of war

FBFREESPARRING       = 131, //免费的陪练 | Free Sparring
FBRAFTING            = 132, //漂流 | Rafting
FBSPINNING           = 133, //动感单车 | Spinning
FBBMX                = 134, //BMX | BMX
FBATV                = 135, //ATV | ATV
FBDUMBBELL           = 136, //哑铃 | Dumbbell
FBBEACHFOOTBALL      = 137, //沙滩足球 | Beach Football
FBKAYAKING           = 138, //皮划艇 | Kayaking
FBSAVATE             = 139, //法国式拳击 | Savate
FBBEACHVOLLEYBALL    = 140, //沙滩排球 | Beach Volleyball

FB0ther_reservation  = 255, //其他预留 | Other reservation
}FB_MOTIONMODE;
// 更多类型请查看 SDK 内 FBMacro.h 文件

```