



# SIM7600

# Series\_SFOTA\_Application

# Note

LTE Module

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# About Document

## Version History

Version	Date	Owner	What is new
V2.00	2020.8.6	Yuanzhi.Sun	Update document format

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# 1.Introduction

## 1.1 Purpose of the document

Based on module AT command manual, this document will introduce SFOAT application process. Developers could understand and develop application quickly and efficiently based on this document.

## 1.2 Related documents

[1] SIM7600 Series\_AT Command Manual

## 1.3 Conventions and abbreviations

In this document, the GSM engines are referred to as following term:

ME (Mobile Equipment);

MS (Mobile Station);

TA (Terminal Adapter);

DCE (Data Communication Equipment) or facsimile DCE (FAX modem, FAX board);

In application, controlling device controls the GSM engine by sending AT Command via its serial interface.

The controlling device at the other end of the serial line is referred to as following term:

TE (Terminal Equipment);

DTE (Data Terminal Equipment) or plainly "the application" which is running on an embedded system;

## 2.SFOAT Introduction

The process of Using SFOTA AT Commands

Step 1: Ensure network is available before performing FOTA related operations.

Step 2: Configure the parameter of PDP context by AT+CGDCONT.

Step 3: Activate FOTA program by AT+CAPFOTA=1.

Step 4: Configure the parameter of FOTA service by AT+CSCFOTA which are using for connect server and download upgrade package.

Step 5: Close FOTA program that disconnect server by AT+CAPFOTA=0.

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## 3.AT Commands for SFOAT

Command	Description
<b>AT+CAPFOTA</b>	Start/Close FOTA Service
<b>AT+CSCFOTA</b>	Configure parameters and download upgrade package
<b>AT+CDELTA</b>	Upgrade Firmware

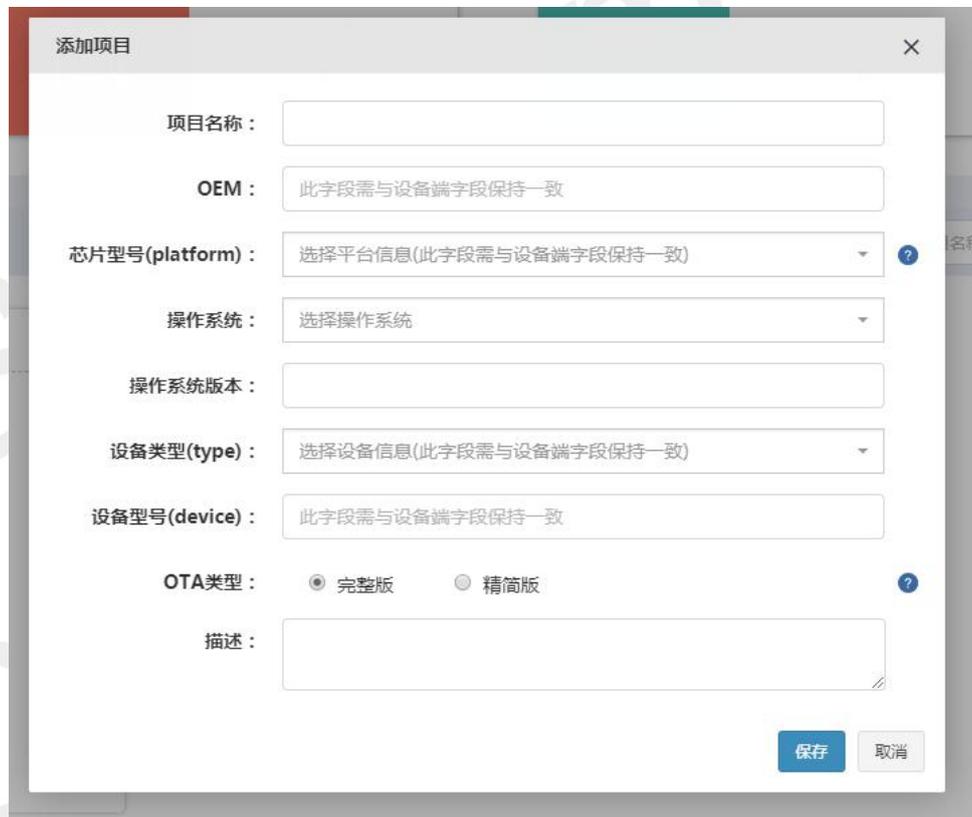
For detail information, please refer to “SIM7600 Series AT Command Manual “.

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## 4.SFOAT Samples

### 4.1 Create the item on cloud platform

Before all FOTA related operations, we should ensure the following:  
Firstly, contact with SIMCom company for creating an item on cloud platform.



The screenshot shows a web form titled "添加项目" (Add Item) with a close button (X) in the top right corner. The form contains the following fields and options:

- 项目名称 (Item Name): Text input field.
- OEM: Text input field with the placeholder text "此字段需与设备端字段保持一致" (This field must be consistent with the device end field).
- 芯片型号(platform) (Chip Model): Dropdown menu with the placeholder text "选择平台信息(此字段需与设备端字段保持一致)" (Select platform information (this field must be consistent with the device end field)).
- 操作系统 (Operating System): Dropdown menu with the placeholder text "选择操作系统" (Select operating system).
- 操作系统版本 (Operating System Version): Text input field.
- 设备类型(type) (Device Type): Dropdown menu with the placeholder text "选择设备信息(此字段需与设备端字段保持一致)" (Select device information (this field must be consistent with the device end field)).
- 设备型号(device) (Device Model): Text input field with the placeholder text "此字段需与设备端字段保持一致" (This field must be consistent with the device end field).
- OTA类型 (OTA Type): Radio buttons for "完整版" (Full Version) and "精简版" (Lite Version).
- 描述 (Description): Text area.

At the bottom right of the form, there are two buttons: "保存" (Save) and "取消" (Cancel).

When finished creating item, the item information can be checked on cloud platform. The product ID and Secret will be generated after creating item.

首页 | test1 | 设备型号: 7600M21 | 累计设备: 1 | 升级成功数: 0

**项目信息**

**OTA升级**

版本管理

测试设备管理

设备升级详情

**升级统计**

按日期统计

**设备统计**

设备数量统计

设备版本统计

### 项目信息

项目名称: test1

OEM: SIMCOM

设备型号: 7600M21

平台: MDM9x07

设备类型: module

操作系统: Linux

系统版本: 12.04

Product ID: 1540530836

Product Secret: de79e31c53a64d9787cd430dbb566e82

下载SDK: 下载SDK包

创建时间: 2018-10-26 13:13:55

更新时间: 2018-10-26 13:13:55

OTA类型:  完整版  精简版

描述:

Secondly, go to version management to add new version. The initial version has no source version, so no difference relationship is configurable. If you need to upload a differential package and configure an upgrade policy, etc., you must add at least two versions.

首页 | test1 | 设备型号: 7600M21 | 累计设备: 1 | 升级成功数: 0

**项目信息**

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按日期统计

**设备统计**

设备数量统计

设备版本统计

### OTA升级 / 版本管理

请输入版本号

版本号	发布时间	状态	描述	操作
SIM7600M21_B09V02_180912	2018-10-26	初始版本		<a href="#">编辑</a> <a href="#">配置差分</a> <a href="#">删除</a>
SIM7600M21_LE11_181025_V2.00	2018-10-26	已发布(1)		<a href="#">编辑</a> <a href="#">配置差分</a> <a href="#">删除</a>

显示第 1 到第 2 条记录, 总共 2 条记录

The initial version should use AT+SIMCOMATI command to ensure. Next add target version. Then upload the upgrade package. For instance, if we want to update version from SIM7600M21\_B09V02\_180912 to SIM7600M21\_LE11\_181025\_V2.00, we click configure differential package and then upload differential package. The figure of this step is shown below.

首页 test1 设备型号: 7600M21 累计设备: 0 升级成功数: 0

OTA升级 / 版本管理 / 差分管理

升级版本: SIM7600M21\_LE11\_181025\_V2.00 后置版本: 无

源版本	上传时间	发布时间	文件	大小	是否有效	升级策略	选择文件	操作状态	操作
SIM7600M21_B09V02_180912	2018-11-11 10:38:52	-	LE11B09V02_B09V05M21().zip	10521530 (10.03MB)	上线	配置	上传	测试通过 测试不通过	删除

显示第 1 到第 1 条记录, 总共 1 条记录

Pay attention, if there are more than two versions, you want to upgrade to the specified version (not the latest version), and it needs to configure the upgrade strategy on cloud platform before version published. Others, if you only need to upgrade to the latest version this step can ignore.

首页 test1 设备型号: 7600M21 累计设备: 1 升级成功数: 0

OTA升级 / 版本管理 / 差分管理

升级版本: SIM7600M21\_LE11\_181025\_V2.00 后置版本: 无

源版本	上传时间	发布时间	文件	大小	是否有效	升级策略	选择文件	操作状态	操作
SIM7600M21_B09V02_180912	2018-10-26 16:47:00	2018-10-26 16:47:07	LE11B09V02_B09V05M21().zip	10521530 (10.03MB)	上线	配置	上传	测试通过 测试不通过	删除

显示第 1 到第 1 条记录, 总共 1 条记录

The importing MID template can be downloaded that is the method of add devices into whitelist.

范围配置

按MID升级:  是  否

名单类型: 白名单

导入MID: 导入 选择文件.xls 查看 删除 导出

\*请根据模板导入文件, 支持Excel2007,2003,TXT文件,上传5分钟生效

下载导入MID模板

按地区升级:  是  否

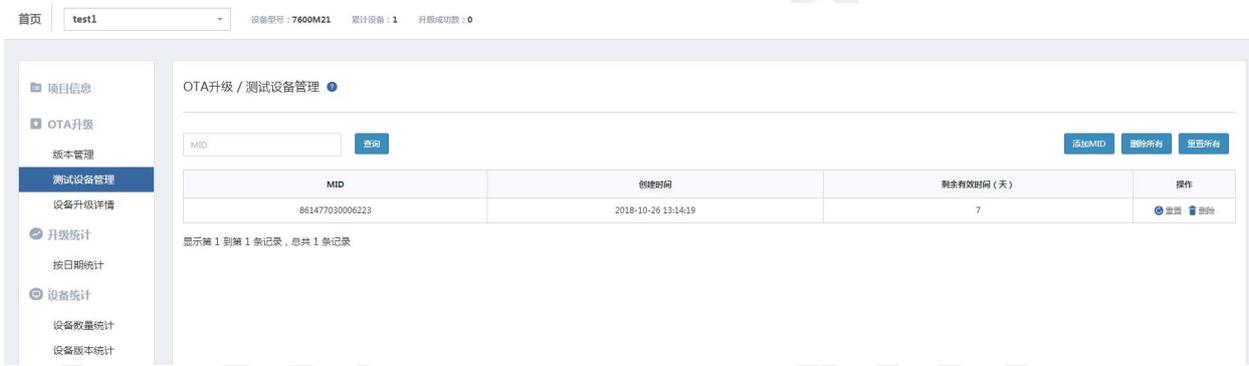
按数量升级:  是  否

保存 取消

When ensure all version information is right, next should change the status of operation to test passed and publishes the version.



Thirdly, go to test device management to add the device IMEI. If it is added for the first time, it will take effect after five minutes.



Before all SCFOTA related operations, we should ensure the following:  
Next ensure the network is available:

```
//Example of HTTP GET.
AT+CSQ
+CSQ: 23,0

OK
AT+CREG?
+CREG: 0,1

OK
AT+CGREG?
+CGREG: 0,1

OK
```

PDP context Enable:

```
AT+CGDCONT=6,"IPV4V6","CMNET" //Specify the parameter value of the PDP context
OK                               corresponding to cid.

AT+SIMCOMATI                    Check current version before start FOTA severice.
```



首页 | test1 | 设备型号: 7600M21 | 累计设备: 1 | 升级成功数: 0

项目信息

- OTA升级
- 版本管理
- 测试设备管理
- 设备升级详情
- 升级统计
  - 按日期统计
- 设备统计
  - 设备数量统计
  - 设备版本统计

OTA升级 / 设备升级详情

源版本(All) | 目标版本(All) | 状态 | 2018-10-20 | 至 | 2018-10-26 | 请输入MID | 查询 | 导出

项目名	Mid	源版本	目标版本	检测时间	下载时间	升级时间	状态	错误信息	详情
test1	861477030006223	SIM7600M21_809V02_180912	SIM7600M21_LE11_181025_V2.00	2018-10-26 17:07:52	2018-10-26 17:08:04	-	下载成功	-	升级详情

显示第 1 到第 1 条记录, 总共 1 条记录

## 4.3 Upgrade

//Example of SFOAT upgrade.

**AT+CDELTA**

Set the module go to recovery mode

OK

**AT+SIMCOMATI**

Check version after finished upgrade step.

**Manufacturer: SIMCOM INCORPORATED**

**Model: SIMCOM\_SIM7600CE**

**Revision: LE11B09SIM7600M21**

**SIM7600M21\_LE11\_181025\_V2.00**

//using this version compare with version before upgrade.

**QCN:**

**IMEI: 861477030006223**

**MEID:**

**+GCAP: +CGSM**

**DeviceInfo: 239,170**

OK