



SIM7500_SIM7600 Series_FOTA_Application Note

LTE Module

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About Document

Version History

Version	Date	Chapter	What is new
V2.00	2020.8.6		Update the format
V3.00	2021.11.19		Update the format

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Contents

About Document	1
Version History.....	1
Contents	2
1 Introduction	3
1.1 Overview.....	3
1.2 Terms and Abbreviations.....	3
2 Software Version management	4
3 Use Delta Package Update	5
3.1 step by step.....	5
3.1.1 Activate the network of the AP module and check again.....	5
3.1.2 Download the delta package by FTP GET method.....	5
3.1.3 Using AT+CDELTA to update software version.....	6
4 Query Software version	7
5 Test LOG	8

1 Introduction

1.1 Overview

The purpose of this document is to describe the usage of Delta package update with SIM7500/SIM7600 module.

1.2 Terms and Abbreviations

For the purpose of this document, following abbreviations apply:

AT (Attention); the first two-character abbreviation are used to start a command line to be sent from TE/DTE to TA/DCE.

2 Software Version management

The commands AT+CGMR and AT+CSUB can be used to get the current software version information:

```
AT+CGMR //query software version
+CGMR: LE11B02SIM7600CE-A_161220 //CP version
OK

AT+CSUB
+CSUB: B02V04 //CP branch version
+CSUB: MDM9x07_AP_S_V1.22_161219 //AP version
OK
```

In order to update software version by delta method, user must select the correct delta file according to:

- 1) Current software version and target software version provided by command AT+CGMR and AT+CSUB.
- 2) For example:

```
V1: LE11B02SIM7600CE-A_161220
    B02V04
    MDM9X07_AP_S_V1.22_161219
V2: LE11B02SIM7600CE-A_161128
    B02V04
    MDM9X07_AP_S_V1.22_161125
```

Suppose V1 is the current version, and V2 is the target version, the delta file should be B02V04_161220_B02V04_161128_SIM7600CE-A.zip

3 Use Delta Package Update

3.1 step by step

The FOTA process can be divided into 4 steps

- 1) Activate the network of the AP module
- 2) Download the delta package
- 3) Write the Delta package into module flash

User can see Download schedule bar, if it has not been completed ,then delta package need to be download it again.

- 4) Using AT+CDELTA to update software version

Download the delta package into the “cache” of the module by FTP method, the “cache” is the dedicated flash resource for the delta package.

3.1.1 Activate the network of the AP module and check again

Commands:

at+netact=1 (Activate the network,this process need 2-10S ,please check the network again. If the AP version above 20170801,the command uses the sixth apn setting.If not,uses the first apn setting.)

at+netact? (Check the network)

For example:

```
AT+NETACT=1
```

```
OK
```

```
AT+ NETACT?
```

```
+NETACT: 1
```

```
OK
```

3.1.2 Download the delta package by FTP GET method

- 1) Put current delta package file to FTP server site;
- 2) Download the delta package into the cache using FTP commands:

```
at+cota="filename","ip",port,"user","password"
```

or

```
at+cota="filename","ip",port,"user","password",cont // Continue the last unfinished download
```

For example:

```
AT+COTA="/update_ota_test.zip","112.74.93.163",21,"ftp","ftp123"
```

```
Download start: 0.00 %
```

```
Download: 26.78 %
```

```
Download: 53.55 %
```

```
Download: 80.32 %
```

```
Download: Complete
```

```
OK
```

Or

```
AT+COTA="/update_ota_test.zip","112.74.93.163",21,"ftp","ftp123",cont
```

```
Download start: 53.73 %
```

```
Download: 75.93 %
```

```
Download: 98.87 %
```

```
Download: Complete
```

```
OK
```

Or (some ftp server do not support SIZE,like this)

```
AT+COTA="/update_ota_test.zip","112.74.93.163",21,"ftp","ftp123"
```

```
Download start
```

```
Downloading
```

```
Downloading
```

```
Downloading
```

```
Download: Complete
```

```
OK
```

3.1.3 Using AT+CDELTA to update software version

```
AT+CDELTA="/cache/update_ota_test.zip"
```

```
OK
```

4 Query Software version

```
AT+CGMR //query software version
+CGMR: LE11B02SIM7600CE-A_161128 //CP version
OK

AT+CSUB //CP branch version
+CSUB: B02V04 //AP version
+CSUB: MDM9X07_AP_S_V1.22_161125 //AP version
OK
```

From the two points as above can judge software version upgrade is successful.

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5 Test LOG

```
//power on
AT
OK
AT+CGMR                                     //query software version
+CGMR: LE11B02SIM7600CE-A_161101           //CP version

OK
AT+CSUB
+CSUB: B02V03                               //CP branch version
+CSUB: MDM9X07_AP_S_V1.22_161101         //AP version

OK
AT+CPSI?                                     //Inquiring UE system information
+CPSI: LTE,Online,460-00,0x1816,27551531,245,EUTRAN-BAND40,39148,5,5,-36,-718,-481,25

OK
AT+CGDCONT=6,"IPV4V6","APN"                 //Define 6'th PDP context
OK
AT+NETACT=1                                 //Activate the network
OK
AT+NETACT?                                  //check value
+NETACT: 1

OK
AT+COTA="/update_ota_test.zip","112.74.93.163",21,"ftp","ftp123"
Download start: 0.00 %
Download: 26.78 %
Download: 53.55 %
Download: 80.32 %
Download: Complete

OK                                           //download success
AT+CDELTA
OK

// the VBAT power supply of the module must be kept in the restart process, and the power should not
be cut off suddenly. If the upgrade package is incorrect, the module will not upgrade.

//Upgrade completed, module boot up
```

+CPIN: READY

SMS DONE

AT+CGMR

//query software version

+CGMR: LE11B02SIM7600CE-A_161128

//CP version

OK

AT+CSUB

+CSUB: B02V04

//CP branch version

+CSUB: MDM9X07_AP_S_V1.22_161125

//AP version

OK

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