WCDMA UGxx DownloadTool Linux User Guide

UMTS/HSPA Module Series

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Our aim is to provide customers with timely and comprehensive service. For any assistance, please contact our company headquarters:

Quectel Wireless Solutions Co., Ltd.
Office 501, Building 13, No.99, Tianzhou Road, Shanghai, China, 200233
Tel: +86 21 5108 6236
Mail: info@quectel.com

Or our local office, for more information, please visit:
http://www.quectel.com/support/salesupport.aspx

For technical support, to report documentation errors, please visit:
http://www.quectel.com/support/techsupport.aspx
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About the Document

History

Revision	Date	Author	Description
1.0	2014-08-01	Arno WANG	Initial
1.1	2015-03-04	Arno WANG	Changed the document name from “UG95” to “UGxx”.
1.2	2015-04-01	Arno WANG	Updated applicable modules.

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1 Introduction

This document mainly introduces how to use “DownloadTool” tool to upgrade the module’s firmware in Linux system.

This document is applicable to UGxx modules.

2 Tool Package

The tool package includes an executable file and a dynamic-link library file.

2.1. File List

The files in tool package are shown as below:

- DownloadTool
- libDownloadTool.so

NOTE

The “DownloadTool” will run as soon as it finds the required libraries. For example, if the libraries and the executable file “./DownloadTool –library=./libDownloadTool.so” are located in the same folder, the tool will run.

3 Parameters of DownloadTool

DownloadTool program can specify the operating parameters in the command line, and the detailed parameters are illustrated as below:

Table 1: Description of Command Parameters

Number	Parameter	Optional/ Non-optional	Description
1	--trace-file <arg>	Optional	When a downloading goes wrong and you need help from an Intel Mobile Communications (IMC) supporter, please provide this option and an argument. This will save a trace log for IMC team to examine. The default value is trace.log.
2	--library <arg>	Optional	An alternative library used to download, and it can be specified in this argument. If the application is not located in the library, this option might be useful.
3	-- baudrate <arg>	Optional	This argument determines the baudrate to be used during the downloading process. The maximum baudrate is 921600.
4	--sys-version	Optional	In most “fls” files, the code section has a structure telling which versions to be used to regenerate the entire system.

4 How to Use the Tool

This chapter mainly introduces the procedure of upgrading the module firmware by DownloadTool through the USB port.

Before using DownloadTool, please ensure that USB driver of the module has been installed successfully in your system first.

NOTE

You must get the permission from Quectel technical support to run DownloadTool.

4.1. Run DownloadTool

If you don't provide the right arguments to the DownloadTool application, you will see the following information:

```
Usage:DownloadTool [options] <file to download>
```

This means that you must provide file(s) to download.

4.2. Uninstall cdc-acm Driver

Each time when you run the DownloadTool, you have to uninstall cdc-acm driver first, otherwise downloading will be failed.

You can uninstall the driver by the following command:

```
sudo rmmod cdc-acm
```

4.3. Operating Procedure

Put the DownloadTool and files need to be upgraded into a directory of the HOST. For example, the current directory is “workplace”, and files include “psi.fls”, “slb.fls”, “AENEAS_FW.fls” and “MOD_6255.fls”, you should move them to the “workplace” directory first, and then run “DownloadTool” tool.

```
cd workspace
./DownloadTool --library=./libDownloadTool.so AENEAS_FW.fls MOD_6255.fls psi.fls slb.fls
```

The following figures show the entire upgrading process:

```
root@ubuntu:/home/arno/release/UGxx_Update# sudo rmmod cdc-acm
root@ubuntu:/home/arno/release/UGxx_Update# ./DownloadTool --library=./libDownloadTool
.so AENEAS_FW.fls MOD_6255.fls psi.fls slb.fls

Intel Command Line FlashTool v.1.34 (Download Library v.4.136)

  AENEAS_FW.fls                    (Code) (NAND)
  MOD_6255.fls                     (Code) (NAND)
  psi.fls                          (PSI) (NAND)
  slb.fls                          (SLB) (NAND)
Booting '/home/arno/release/UGxx_Update/psi.fls', memclass: PSI
  -> Please reboot your phone device <-
```

Figure 1: Run Program

NOTE

When the DownloadTool has run, please reboot your module.

```
> Device synchronized.
Details> Injecting RPSI
Details> Injecting EBL
Details> Boot-loader is active
Details> EBL version: XMM6260_1408.100_M1S1 1408..100
Details> Boot mode is: BB
> Using: Faster CRC, Writing all blocks , Skip data CRC , Skip protocol CRC
Details> Package length is 16384 - protocol: 3.32
Details> Baud rate set to 921600
Details> Get flash id.
Details> Flash ID is: 00B100C8
Details> Boot process finished
```

Figure 2: Synchronize Device

```
Downloading files (4)...
Downloading PSI...

> Start downloading item 'BOOT CORE PSI:../HW/XMM6260_V3_REV_8.1_LARGEBLOCK_NAND_DATAC
ARD_/MODEM_DEBUG/psi.fls'' from file '/home/arno/release/UGxx_Update/psi.fls''.
Details> Sending sec-pack.
Details>   Load region 0
Details>   - Erasing. (Pre-erase, Used-length)
  Progress: 100%
Details>   - Sending data. (USB RAW mode)
  Progress: 100%
Details> Sending end-pack.
> Checksum OK (0xC957)
Details> Verify OK
> Process time was 178 msec.
```

Figure 3: Download “psi.fls” Files

```
Downloading SLB...

> Start downloading item 'BOOT CORE SLB:../HW/XMM6260_V3_REV_8.1_LARGEBLOCK_NAND_DATAC
ARD_/MODEM_DEBUG/slb.fls'' from file '/home/arno/release/UGxx_Update/slb.fls''.
Details> Sending sec-pack.
Details>   Load region 0
Details>   - Erasing. (Pre-erase, Used-length)
  Progress: 100%
Details>   - Sending data. (USB RAW mode)
  Progress: 100%
Details> Sending end-pack.
> Checksum OK (0xEF74)
Details> Verify OK
> Process time was 579 msec.
```

Figure 4: Download “slb.fls” Files

```
Downloading Code...

> Start downloading item 'CODE:../HW/XMM6260_V3_REV_8.1_LARGEBLOCK_NAND_DATACARD_/MODE
M_DEBUG/AENEAS_FW.fls'' from file '/home/arno/release/UGxx_Update/AENEAS_FW.fls''.
Details> Sending sec-pack.
Details>   Load region 0
Details>   - Erasing. (Pre-erase, Used-length)
  Progress: 100%
Details>   - Sending data. (USB RAW mode)
  Progress: 100%(9.3 Mb/s)\
Details> Sending end-pack.
> Checksum OK (0x3FD7)
Details> Verify OK
> Process time was 720 msec.
```

Figure 5: Download “AENEAS.fls” Files

```
Downloading Code...

> Start downloading item 'CODE:../HW/XMM6260_V3_REV_8.1_LARGEBLOCK_NAND_DATACARD_/MODE
M_DEBUG/MOD_6255.fls'' from file '/home/arno/release/UGxx_Update/MOD_6255.fls''.
Details> Sending sec-pack.
Details>   Load region 0
Details>   - Erasing. (Pre-erase, Used-length)
  Progress: 100%
Details>   - Sending data. (USB RAW mode)
  Progress: 100%(9.1 Mb/s)-
Details> Sending end-pack.
> Checksum OK (0x4BD5)
Details> Verify OK
> Process time was 8.9 sec.
```

Figure 6: Download “MOD_6255.fls” FIles

```
Success!

Force Target Reset!
> Total time was 11.0 sec.
/
```

Figure 7: Download Successfully