

BC66&BC66-NA-OpenCPU

DFOTA Tool User Guide

LPWA Module Series

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About the Document

History

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1 Introduction

Quectel DFOTA tool is an online platform (<http://dfota.quectel.com:8081>) used to generate APP delta packages for Quectel BC66-OpenCPU and BC66-NA-OpenCPU modules.

This document introduces how to use the DFOTA tool to generate APP delta packages, so as to facilitate upgrade of customer APPs for the modules by Quectel DFOTA solution. Also it introduces some matters needing attention about APP upgrade via DFOTA.

2 Preparations

Before using Quectel DFOTA tool, the software components listed below are required.

2.1. Browser

It is recommended to use Firefox to access Quectel DFOTA tool. If Internet Explorer web browser is intended to be used, then IE9 or higher versions are required.

2.2. Account Registration

Log in to the online tool (<http://dfota.quectel.com:8081>) and register a new account by email.

The detailed account registration steps are illustrated below:

1. Open the DFOTA tool and then the home interface will be shown as below:

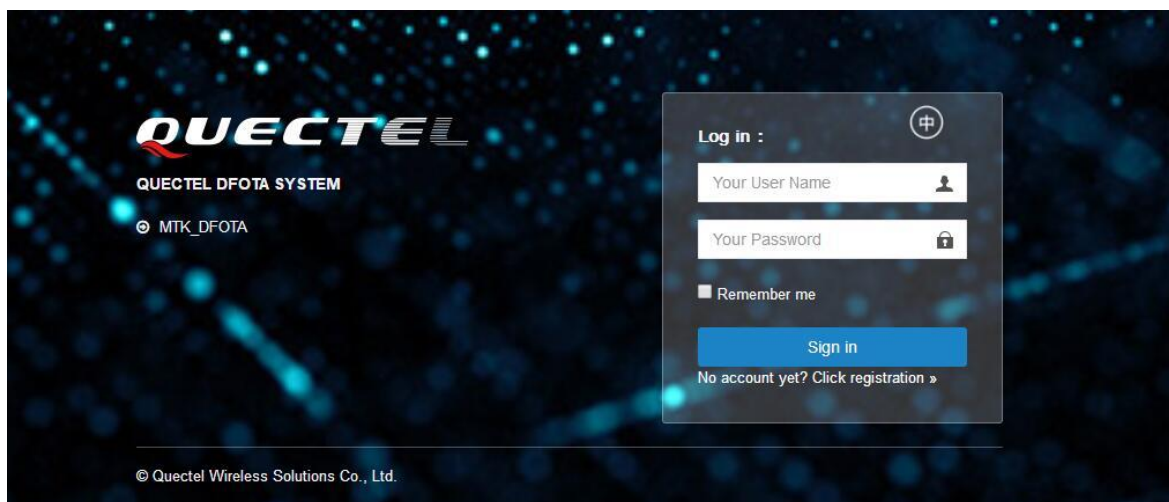
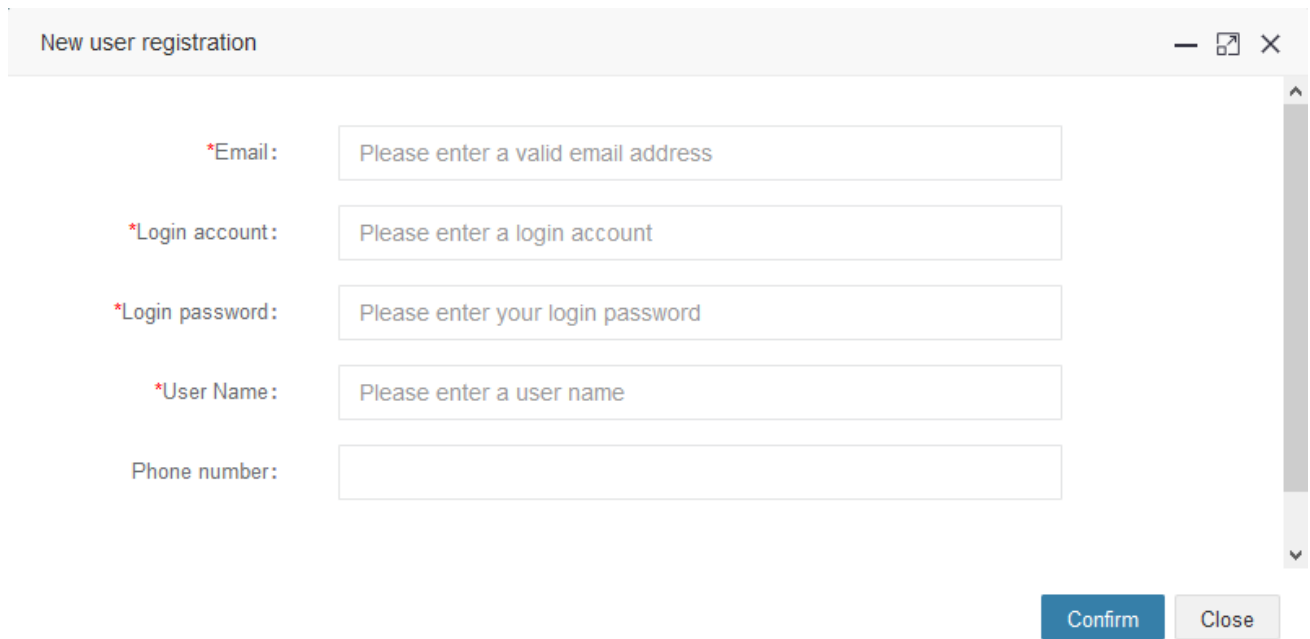


Figure 1: Home Interface of Quectel DFOTA Tool

2. Click "**No account yet? Click registration**", and then "**New user registration**" window shown as below will pop up. Fill in the account registration information according to the hint messages below.

A screenshot of a web-based 'New user registration' form. The form is titled 'New user registration' in the top left corner. It contains five input fields with placeholder text: '*Email: Please enter a valid email address', '*Login account: Please enter a login account', '*Login password: Please enter your login password', '*User Name: Please enter a user name', and 'Phone number:'. The first four fields are marked with a red asterisk. At the bottom right, there are two buttons: 'Confirm' (blue) and 'Close' (grey). The form has a standard window-like header with a minus, maximize, and close icon, and a vertical scrollbar on the right side.

New user registration

*Email: Please enter a valid email address

*Login account: Please enter a login account

*Login password: Please enter your login password

*User Name: Please enter a user name

Phone number:

Confirm Close

Figure 2: Account Registration

3. Click the "**Confirm**" button to submit the information. After the account registration information is submitted, Quectel will send an activation email to the registered email address. Please pay attention to the mail indication.
4. Click the link in the received activation email to complete the account registration process.

2.3. Upgrade Method Selection

Either of the following methods can be used to upgrade the module firmware or APP:

- Upgrade by HTTP: In such a case, users have to build an HTTP server first.
- Upgrade by LwM2M: In such a case, please connect the module to LwM2M server through which controls the module to realize APP upgrade.

3 APP Delta Package Generation

APP delta package contains only the differences between the source and the target APP versions. It can be generated via Quectel DFOTA tool.

If firmware delta package is needed, please contact Quectel Technical Supports (support@quectel.com).

3.1. Generate APP Delta Package

After logging in to Quectel DFOTA tool, the following interface will be shown:

Please upload after compression to support Zip, RAR format.

New Package:	1 file selected	 Browse
Old Package:	1 file selected	 Browse ...

 Refresh 

Figure 3: APP Delta Package Generating Interface

Please refer to the following steps to generate an APP delta package:

1. Pack the "**Old Package**" (source package) and "**New Package**" (target package) in the format of .zip or .rar.
2. Click "**Browse**" to load new and old APP packages from the local workspace.

Please upload after compression to support Zip, RAR format.

New Package:	<input type="text" value="new.rar"/>	Remove	Browse ...
Old Package:	<input type="text" value="old.rar"/>	Remove	Browse ...

Refresh

Figure 4: Start to Generate Delta Package

- Click "**Start making**" button to start the generating process.
- Click "**Complete, click Download**" button to download the delta package to the local workspace.

Please upload after compression to support Zip, RAR format.

New Package:	<input type="text" value="1 file selected"/>	Browse ...	Upload success!
Old Package:	<input type="text" value="1 file selected"/>	Browse ...	Upload success!

Refresh

Completion of production.

Current progress: 100%

Figure 5: Complete Delta Package Generation

NOTES

- The names of old and new packages cannot be the same.
- The names of old and new packages cannot contain special characters such as "-" and so on.
- Currently, only .zip or .rar format is supported. Users can pack all files under the `build\gcc` folder directly or only the generated `APPGS3MDM32A01.bin`.

3.2. Generated Delta Packages

After completing the above steps successfully, two folders will be created automatically as shown below:

 new-old	2019/3/11 16:27	Folder
 old-new	2019/3/11 16:27	Folder

Figure 6: Delta Packages

NOTES

1. The names of delta packages vary with the names of "**Old Package**" (source package) and "**New Package**" (target package) that have been uploaded.
2. The functions of the two delta packages are:
 - *old-new* delta package: The module currently runs on the old APP version (original APP), and it can be upgraded to the new APP version (target APP).
 - *new-old* delta package: The module currently runs on the new APP version, and it can be downgraded to the old APP version.

4 Matters Needing Attention

4.1. Firmware Upgrade

When module firmwares need to be upgraded, please contact Quectel Technical Supports (support@quectel.com) for delta firmware packages.

4.2. Stress Testing

If APP or firmware upgrade via DFOTA is needed for mass production projects, please make sure stress testing is performed and successfully passed for a small batch of customer devices first.

4.3. Upgrade Validation Check

By default, the validation check of the delta package is performed automatically before the start of upgrading. If validation fails, then the module will not trigger the upgrading process and keep running on the current version.

4.4. Avoid Data Services

Please do not perform any data service during the whole upgrading process.

4.5. HTTPS Not Supported

Currently, BC66-OpenCPU/BC66-NA-OpenCPU does not support DFOTA service via HTTPS.