

# **BC95 Firmware Upgrade via Universal Code Loader User Guide**

**NB-IoT Module Series**

Rev. BC95\_Firmware\_Upgrade\_via\_Universal\_Code\_Loader\_User\_  
Guide\_V1.0

Date: 2017-02-17



**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

Email: [info@quectel.com](mailto:info@quectel.com)

**Or our local office. For more information, please visit:**

<http://www.quectel.com/support/salesupport.aspx>

**For technical support, or to report documentation errors, please visit:**

<http://www.quectel.com/support/techsupport.aspx>

Or email to: [Support@quectel.com](mailto:Support@quectel.com)

**GENERAL NOTES**

QUECTEL OFFERS THE INFORMATION AS A SERVICE TO ITS CUSTOMERS. THE INFORMATION PROVIDED IS BASED UPON CUSTOMERS' REQUIREMENTS. QUECTEL MAKES EVERY EFFORT TO ENSURE THE QUALITY OF THE INFORMATION IT MAKES AVAILABLE. QUECTEL DOES NOT MAKE ANY WARRANTY AS TO THE INFORMATION CONTAINED HEREIN, AND DOES NOT ACCEPT ANY LIABILITY FOR ANY INJURY, LOSS OR DAMAGE OF ANY KIND INCURRED BY USE OF OR RELIANCE UPON THE INFORMATION. ALL INFORMATION SUPPLIED HEREIN IS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

**COPYRIGHT**

THE INFORMATION CONTAINED HERE IS PROPRIETARY TECHNICAL INFORMATION OF QUECTEL CO., LTD. TRANSMITTING, REPRODUCTION, DISSEMINATION AND EDITING OF THIS DOCUMENT AS WELL AS UTILIZATION OF THE CONTENT ARE FORBIDDEN WITHOUT PERMISSION. OFFENDERS WILL BE HELD LIABLE FOR PAYMENT OF DAMAGES. ALL RIGHTS ARE RESERVED IN THE EVENT OF A PATENT GRANT OR REGISTRATION OF A UTILITY MODEL OR DESIGN.

***Copyright © Quectel Wireless Solutions Co., Ltd. 2017. All rights reserved.***

# About the Document

## History

| Revision | Date       | Author      | Description   |
|----------|------------|-------------|---|
| 1.0      | 2016-12-15 | Bryant CHEN | Initial   |
| 1.1      | 2017-2-17  | Donald TANG | <ol style="list-style-type: none"><li>1. Changed the document name from “BC95 Firmware Upgrade User Guide” to “BC95 Firmware Upgrade via Universal Code Loader User Guide”.</li><li>2. Added information about applicable firmware version in Chapter 1.</li><li>3. Deleted information about Microsoft Visual C++ 2015 Redistributable (x86) installation.</li></ol> |

## Contents

|  |           |
|--|-----------|
| About the Document .....                         | 2         |
| Contents .....                                   | 3         |
| Figure Index .....                               | 4         |
| <b>1 Introduction .....</b>                      | <b>5</b>  |
| <b>2 Tools Installation .....</b>                | <b>6</b>  |
| 2.1. Microsoft .NET Framework Installation ..... | 6         |
| 2.2. Universal Code Loader Installation .....    | 8         |
| <b>3 Firmware Upgrade .....</b>                  | <b>11</b> |
| 3.1. Circuit Connection .....                    | 11        |
| 3.2. Firmware Upgrade .....                      | 12        |

Quectel  
Confidential

## Figure Index

|   |    |
|---|----|
| FIGURE 1: MICROSOFT .NET FRAMEWORK INSTALLATION PACKAGE .....               | 6  |
| FIGURE 2: LICENSE AGREEMENT FOR MICROSOFT .NET FRAMEWORK INSTALLATION ..... | 6  |
| FIGURE 3: MICROSOFT .NET FRAMEWORK IS INSTALLING .....                      | 7  |
| FIGURE 4: MICROSOFT .NET FRAMEWORK SUCCESSFULLY INSTALLED .....             | 7  |
| FIGURE 5: UNIVERSAL CODE LOADER INSTALLATION PACKAGE .....                  | 8  |
| FIGURE 6: UNIVERSAL CODE LOADER SETUP WIZARD .....                          | 8  |
| FIGURE 7: SELECT INSTALLATION FOLDER FOR UNIVERSAL CODE LOADER.....         | 9  |
| FIGURE 8: CONFIRM INSTALLATION FOR UNIVERSAL CODE LOADER.....               | 9  |
| FIGURE 9: UNIVERSAL CODE LOADER IS INSTALLING .....                         | 10 |
| FIGURE 10: UNIVERSAL CODE LOADER SUCCESSFULLY INSTALLED.....                | 10 |
| FIGURE 11: REFERENCE DESIGN FOR CONNECTION BETWEEN BC95 AND PC.....         | 11 |
| FIGURE 12: UNIVERSAL CODE LOADER TOOL.....                                  | 12 |
| FIGURE 13: CONFIGURATION FOR FIRMWARE UPGRADE .....                         | 12 |
| FIGURE 14: BIN FILES .....  | 13 |
| FIGURE 15: START FIRMWARE UPGRADE .....                                     | 13 |
| FIGURE 16: INSTRUCTION FOR FIRMWARE UPGRADE .....                           | 14 |
| FIGURE 17: REFERENCE DESIGN FOR TURNING ON BC95 MODULE .....                | 14 |
| FIGURE 18: UPGRADING FIRMWARE.....  | 15 |
| FIGURE 19: FIRMWARE SUCCESSFULLY UPGRADED.....                              | 16 |

# 1 Introduction

This document mainly introduces how to use Universal Code Loader tool to upgrade firmware for Quectel BC95 module with firmware version prior to V100R100C10B650SP11 on Window 7 system.

Quectel  
Confidential

## 2 Tools Installation

Customers need to install “Microsoft .NET Framework” on PC before installing Universal Code Loader.

### 2.1. Microsoft .NET Framework Installation

1. Double-click *microsoft.net framework 4.5.exe* to install Microsoft .NET Framework.

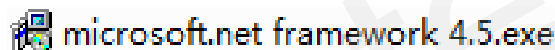


Figure 1: Microsoft .NET Framework Installation Package

2. Wait until the following window comes up, and then click “I have read and accept the license terms” and “Install” as shown below.

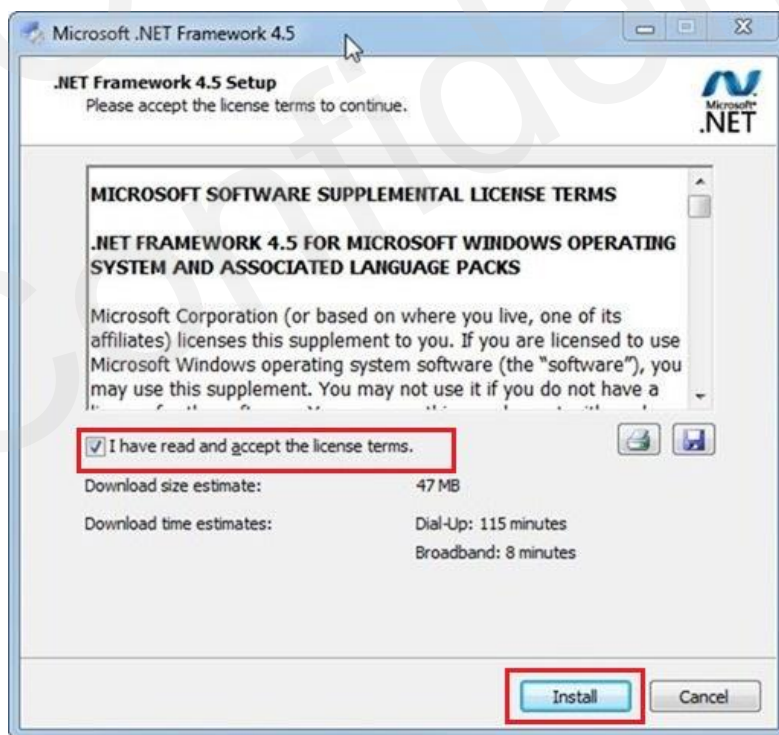


Figure 2: License Agreement for Microsoft .NET Framework Installation

- Please wait for the program to install.

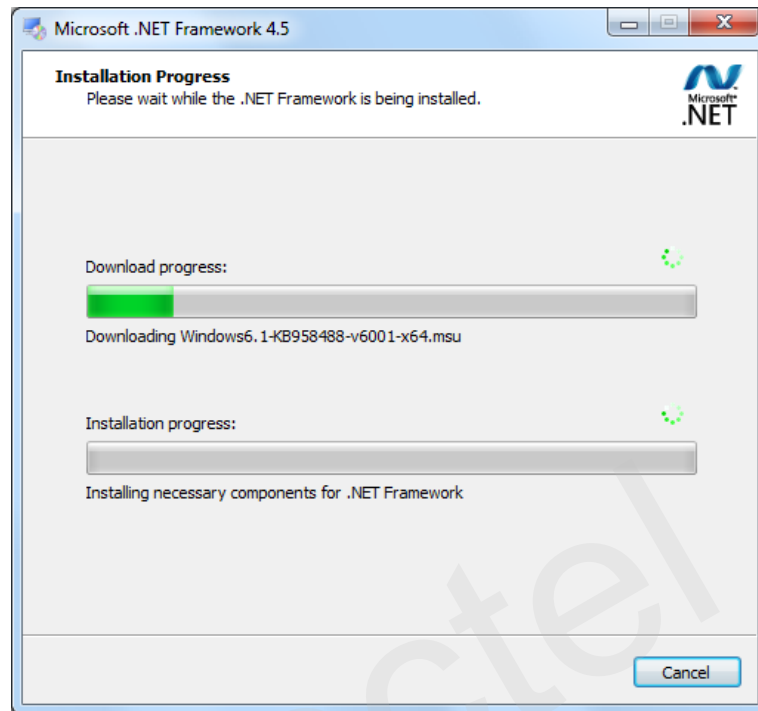


Figure 3: Microsoft .NET Framework is Installing

- Click "**Finish**" to accomplish installation.

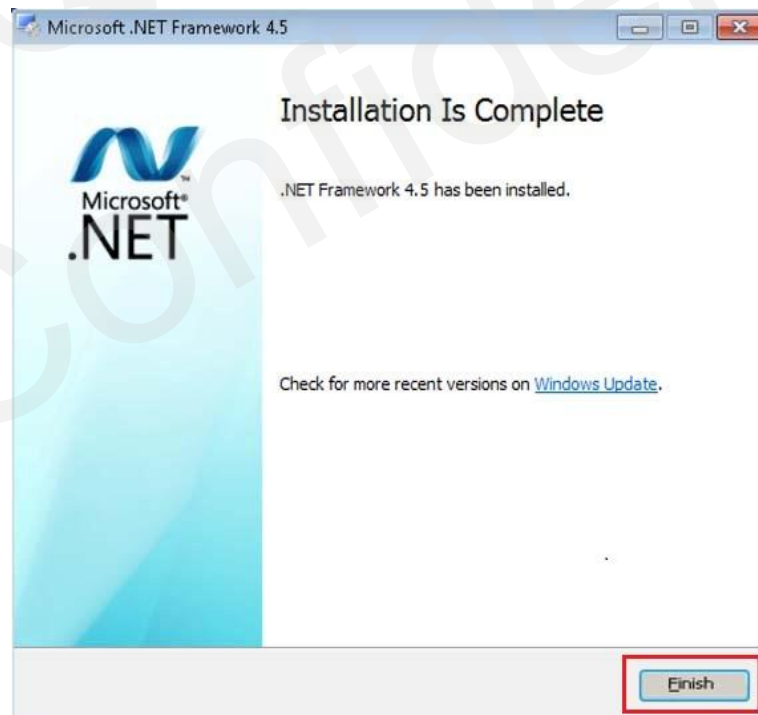


Figure 4: Microsoft .NET Framework Successfully Installed



## 2.2. Universal Code Loader Installation

1. Double-click *Setup* to install Universal Code Loader.

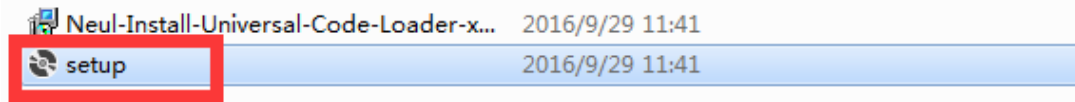


Figure 5: Universal Code Loader Installation Package

2. When the following window comes up, please click “**Next**”.

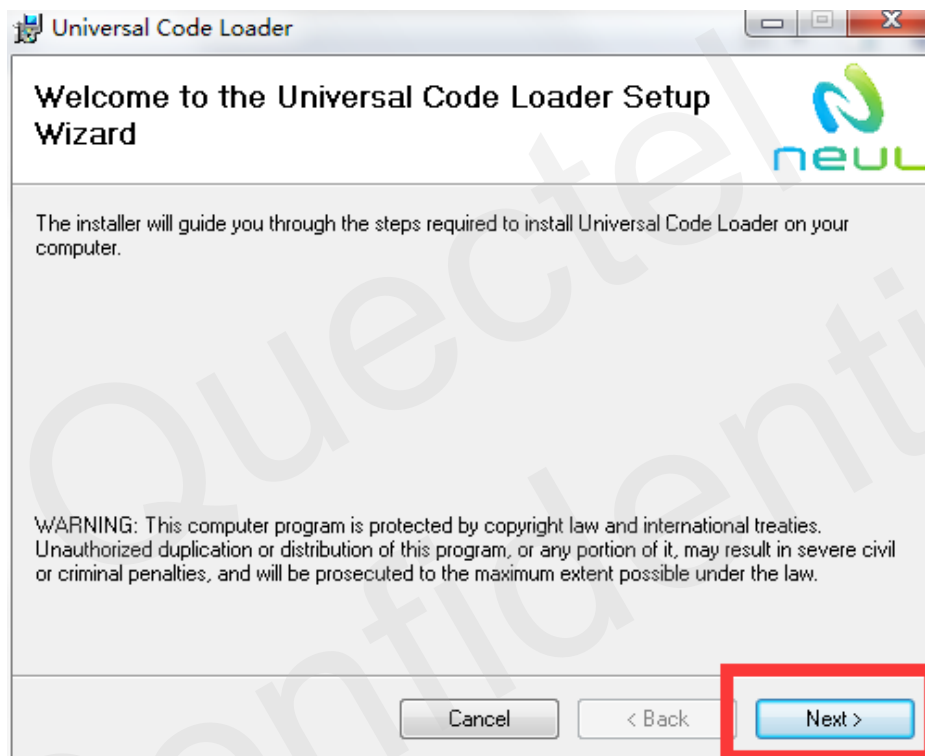
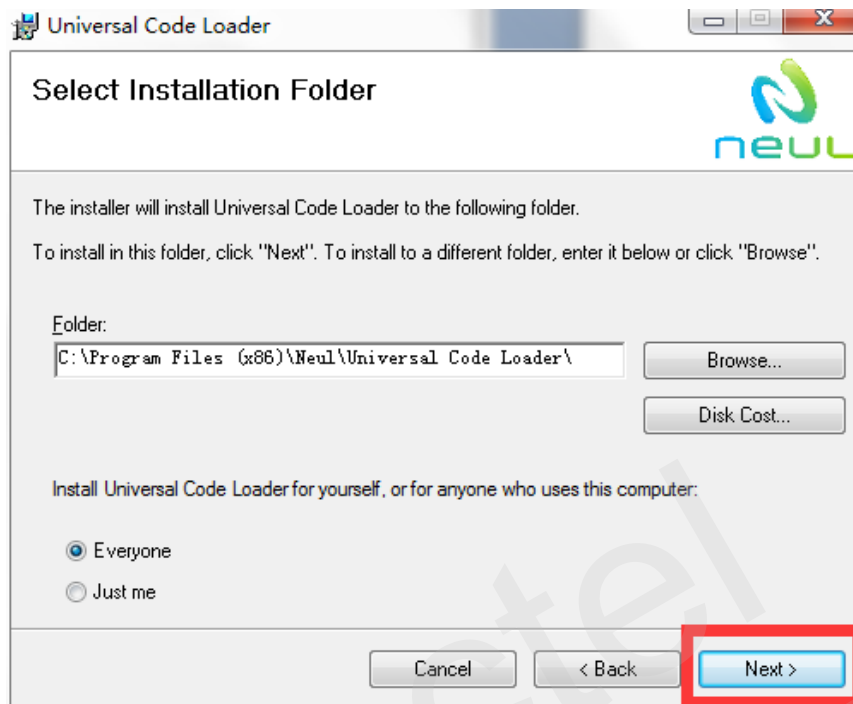


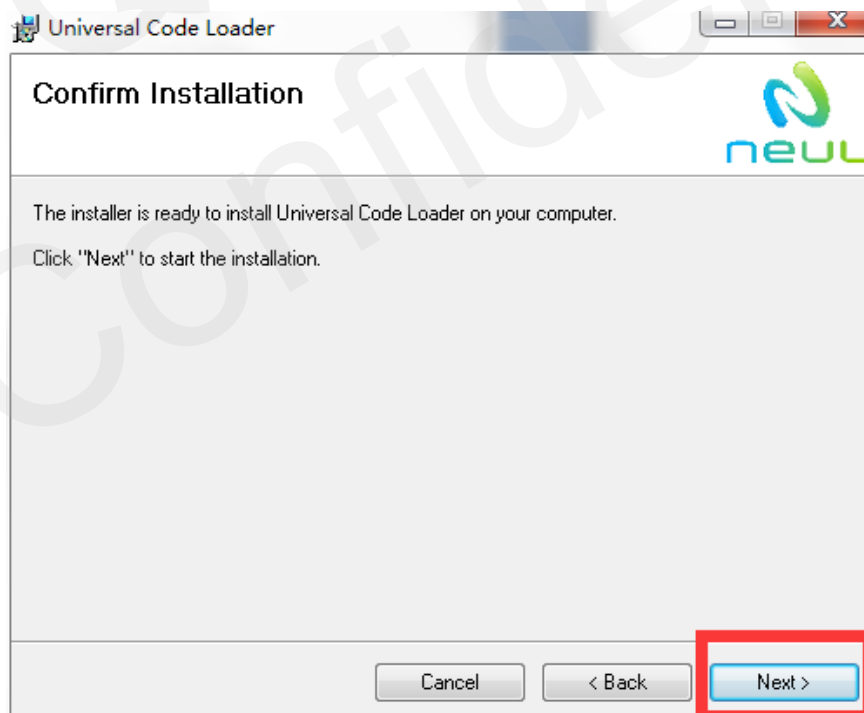
Figure 6: Universal Code Loader Setup Wizard

3. Select installation folder to install the Universal Code Loader.



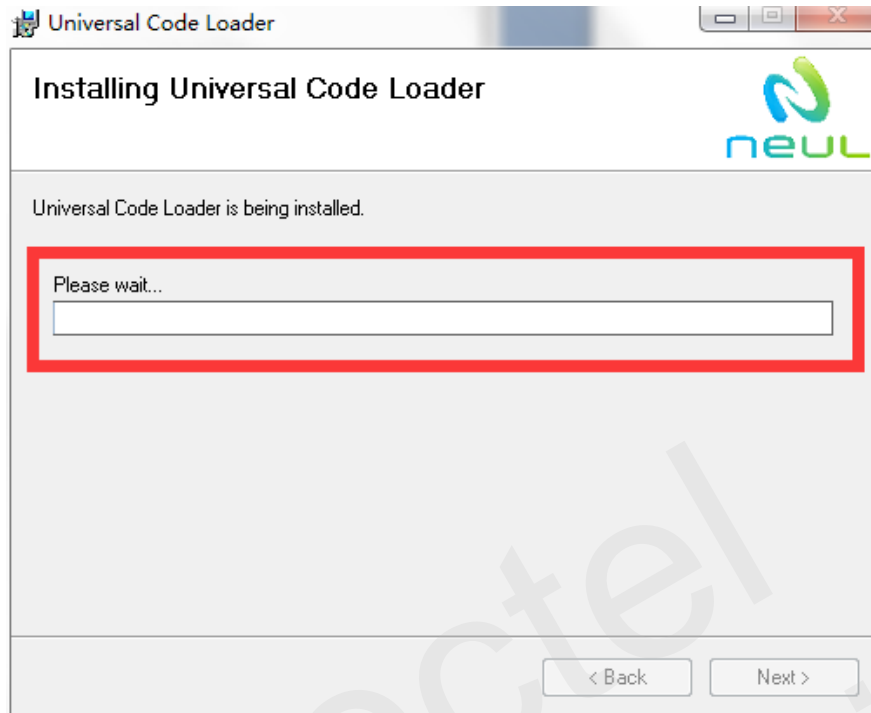
**Figure 7: Select Installation Folder for Universal Code Loader**

4. Click "Next" to start installing Universal Code Loader.



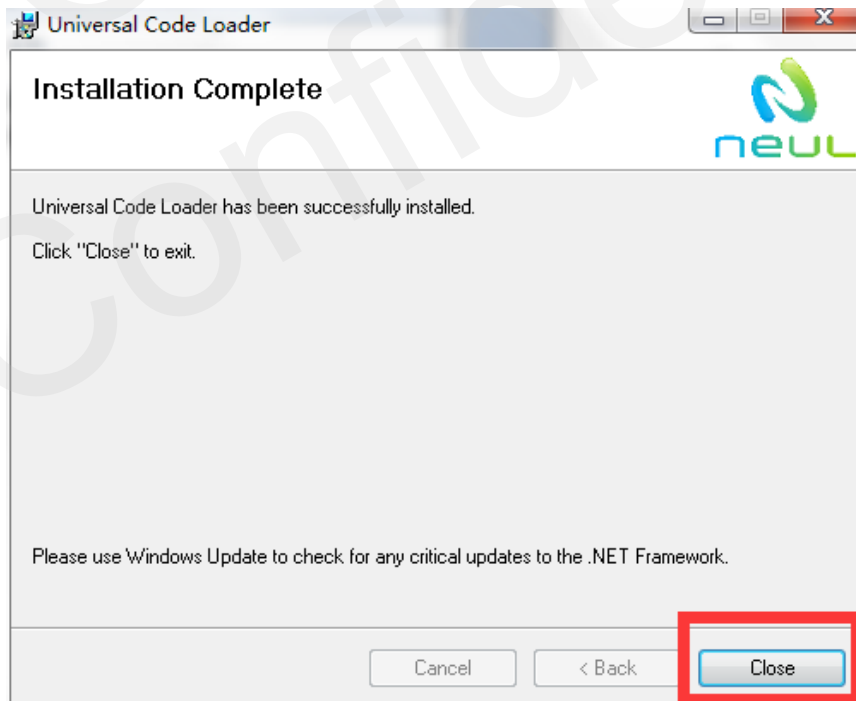
**Figure 8: Confirm Installation for Universal Code Loader**

- Please wait for the program to install.



**Figure 9: Universal Code Loader is Installing**

- Click "**Close**" to accomplish Universal Code Loader installation.



**Figure 10: Universal Code Loader Successfully Installed**

# 3 Firmware Upgrade

## 3.1. Circuit Connection

BC95 module should be turned off before upgrading the firmware. The following is a reference design for the connection between BC95 and PC.

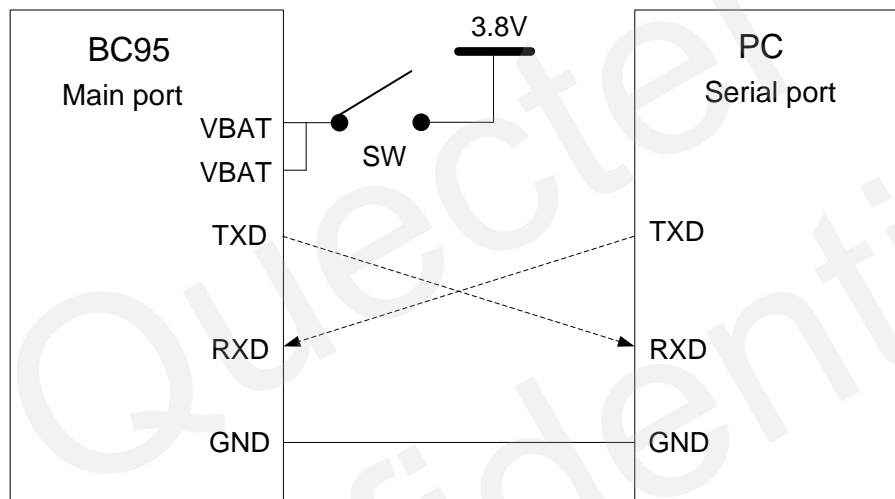


Figure 11: Reference Design for Connection between BC95 and PC

## 3.2. Firmware Upgrade

1. Double-click *Universal Code Loader* that has been installed on you PC to start the upgrade tool.

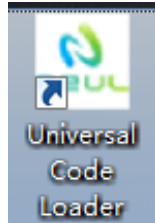


Figure 12: Universal Code Loader Tool

2. When the following window comes up, please click the buttons in green box to select the proper COM port and bin files in the following red boxes for configuration. *security.bin*, *protocol.bin* and *application.bin* files can be found in *NB-IOT-B350SP12\_Evk* folder, and *protocol.bin* file exists in the *evk* folder, as shown below.

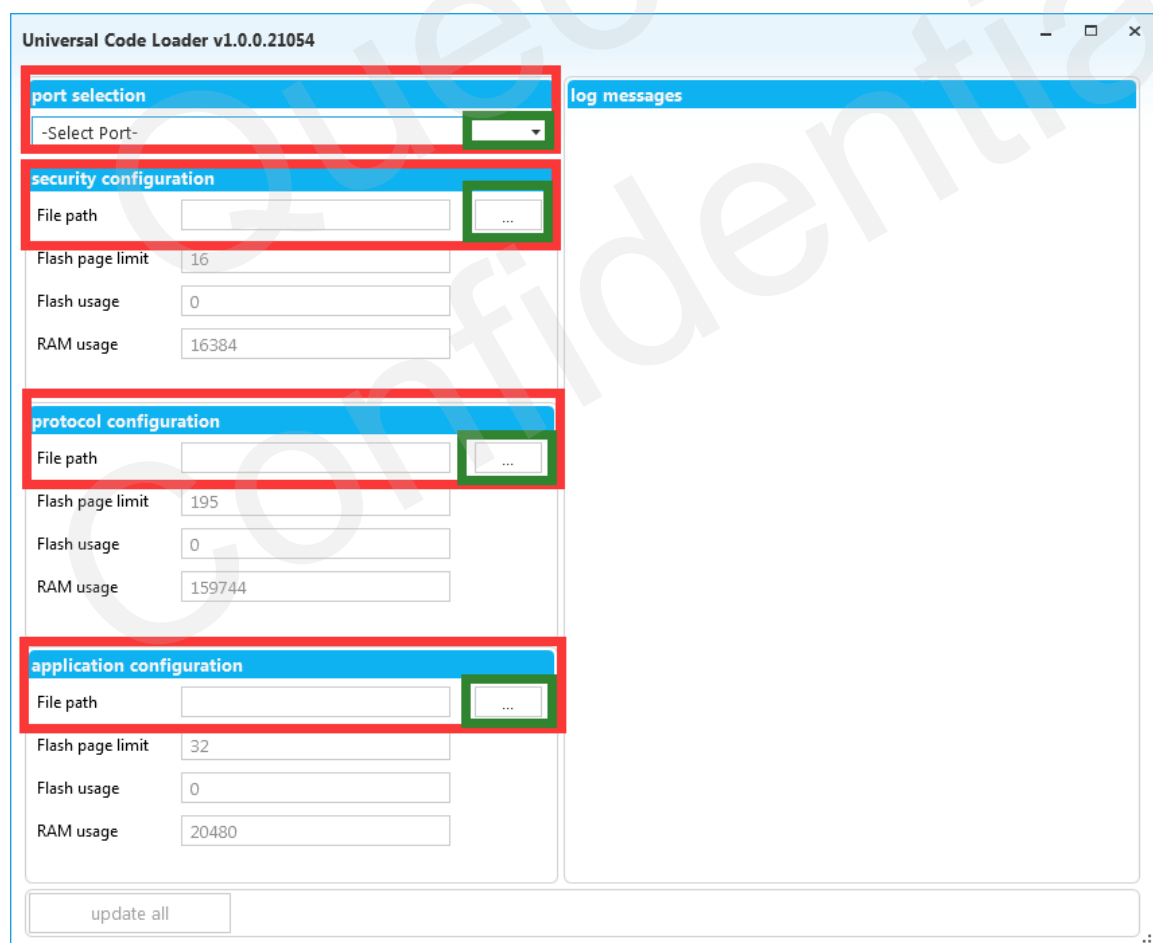


Figure 13: Configuration for Firmware Upgrade

|                 |                  |
|-----------------|------------------|
| evk             | 2016/10/14 16:33 |
| FlashErase      | 2016/10/14 16:32 |
| application.bin | 2016/10/14 13:02 |
| LoadEVK         | 2016/9/16 9:55   |
| README-IMEI     | 2016/10/7 15:50  |
| security.bin    | 2016/10/14 13:02 |

Figure 14: Bin Files

- Please click “**update all**” to start firmware upgrade.

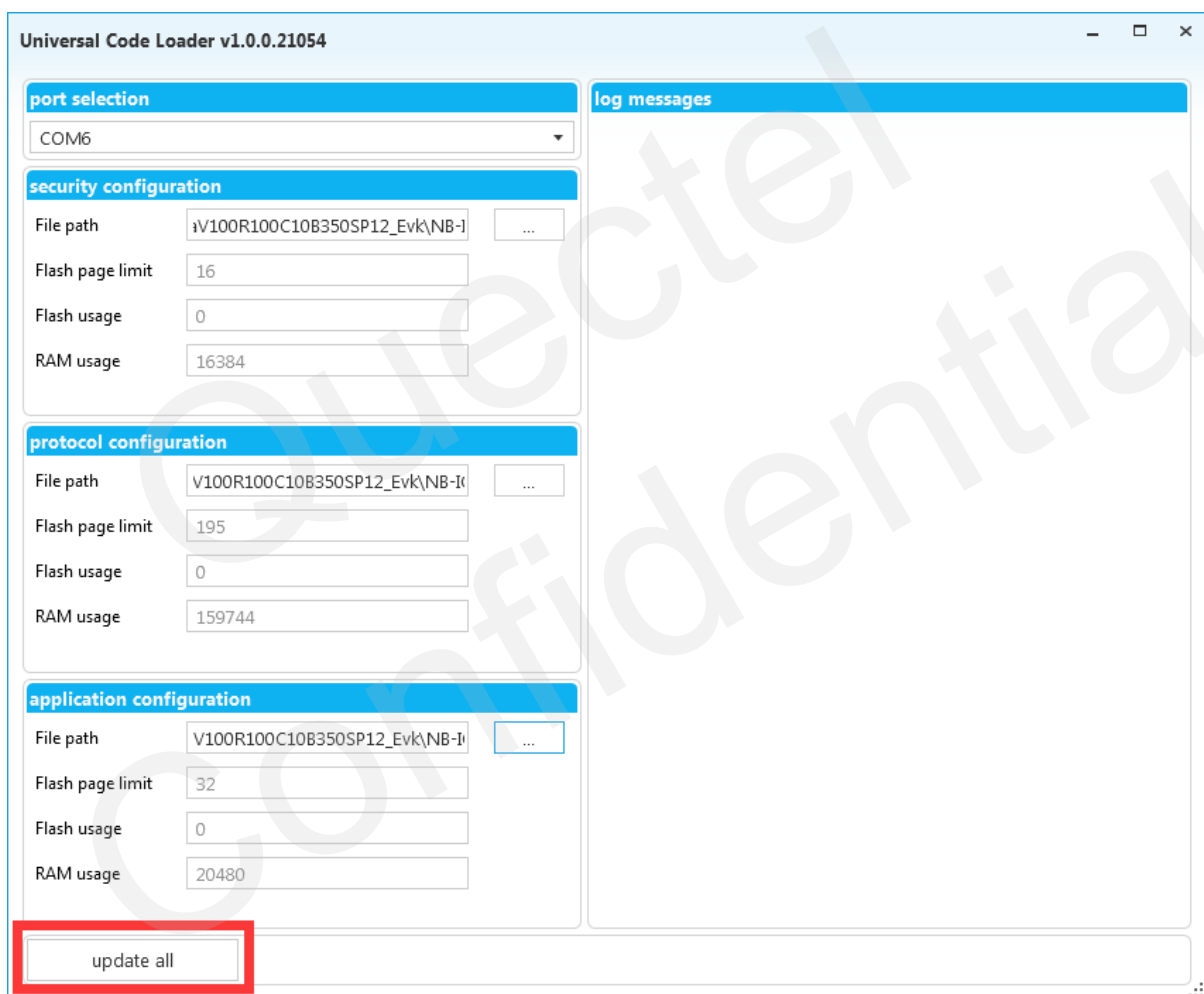
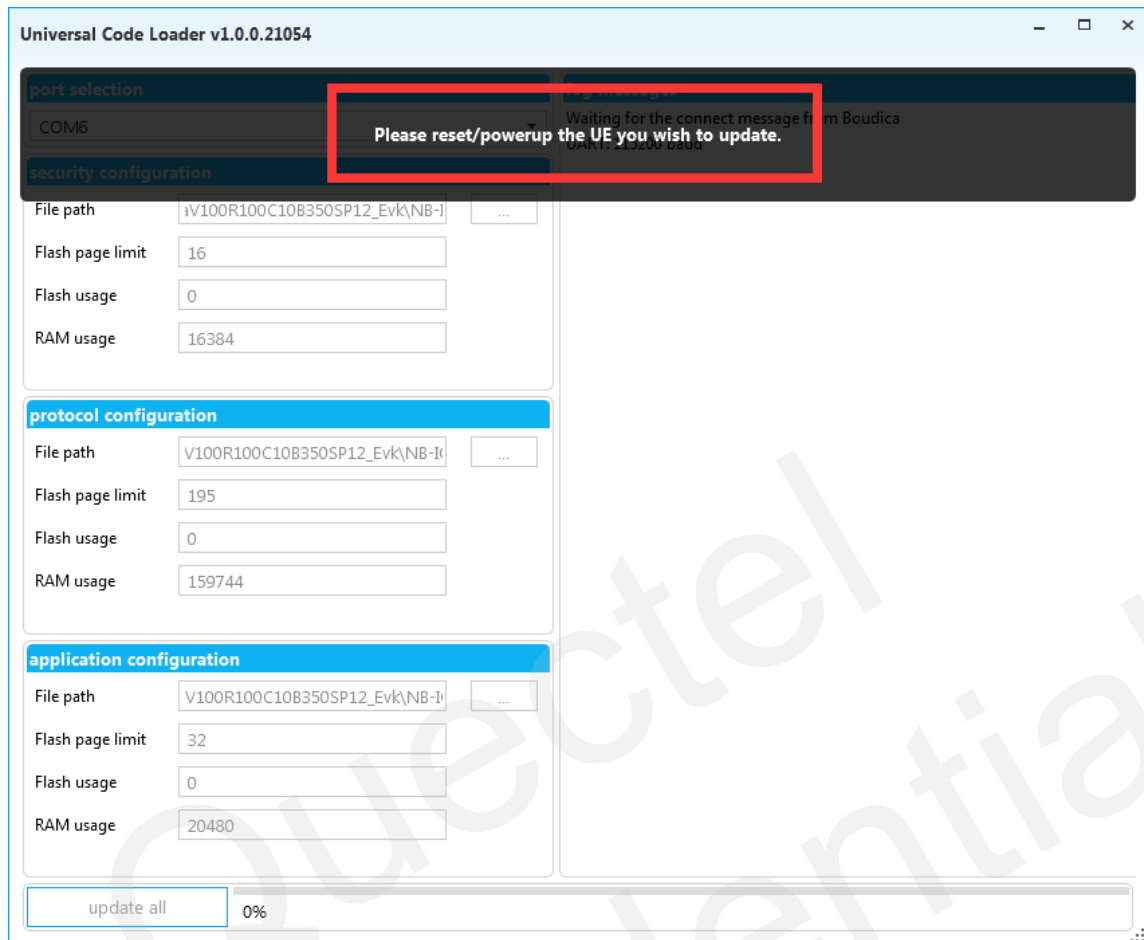
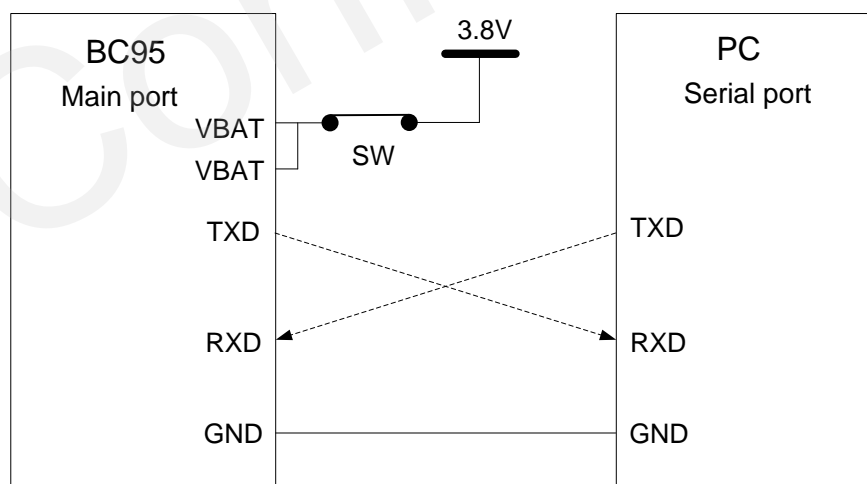


Figure 15: Start Firmware Upgrade

- When the information in the red box appears, please turn on the BC95 module.

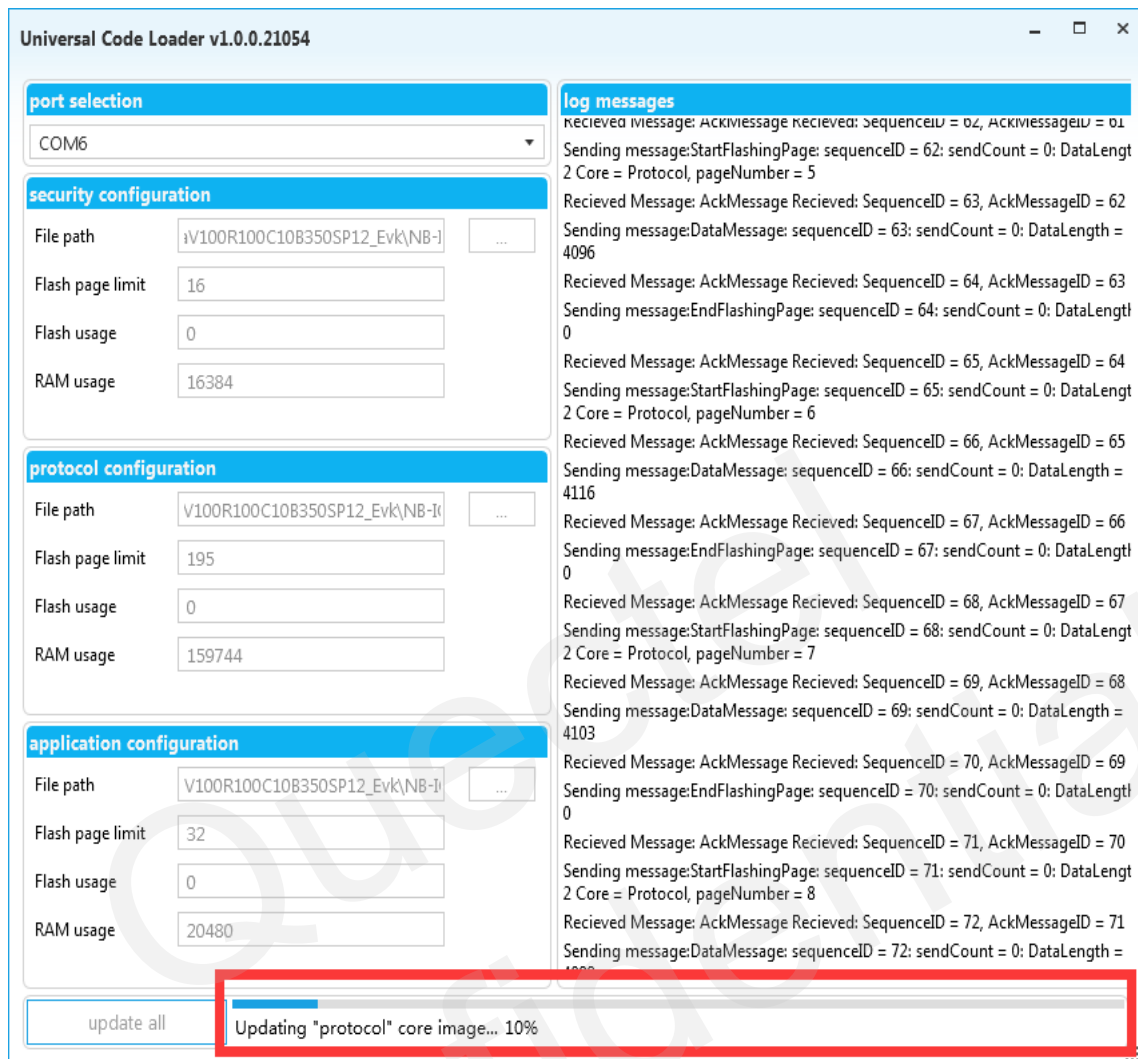


**Figure 16: Instruction for Firmware Upgrade**



**Figure 17: Reference Design for Turning on BC95 Module**

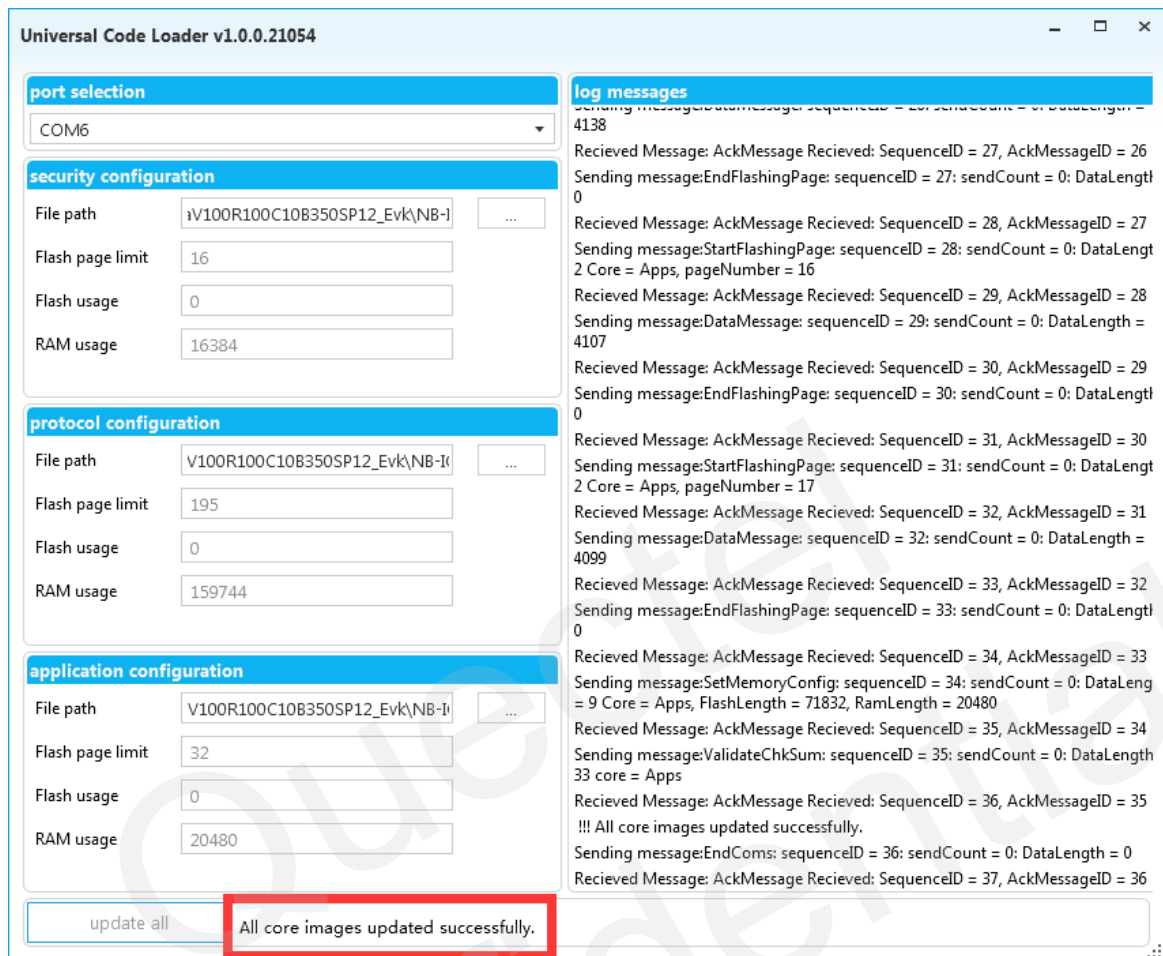
- After turning on the module, it starts upgrading firmware. Please wait during the process.



**Figure 18: Upgrading Firmware**



6. When the information in the following red boxes shows up, it means that firmware downloading process has been finished.



**Figure 19: Firmware Successfully Upgraded**