

N58

Firmware Upgrade Guide (Windows)

Issue 1.0 Date 2019-12-20



Copyright © Neoway Technology Co., Ltd 2019. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Neoway Technology Co., Ltd.

neowoy is the trademark of Neoway Technology Co., Ltd.

All other trademarks and trade names mentioned in this document are the property of their respective holders.

Notice

This document provides a guide for users to use N58 modules.

This document is intended for system engineers (SEs), development engineers, and test engineers.

THIS GUIDE PROVIDES INSTRUCTIONS FOR CUSTOMERS TO DESIGN THEIR APPLICATIONS. PLEASE FOLLOW THE RULES AND PARAMETERS IN THIS GUIDE TO DESIGN AND COMMISSION. NEOWAY WILL NOT TAKE ANY RESPONSIBILITY OF BODILY HURT OR ASSET LOSS CAUSED BY IMPROPER OPERATIONS.

THE INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE DUE TO PRODUCT VERSION UPDATE OR OTHER REASONS.

EVERY EFFORT HAS BEEN MADE IN PREPARATION OF THIS DOCUMENT TO ENSURE ACCURACY OF THE CONTENTS, BUT ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS DOCUMENT DO NOT CONSTITUTE A WARRANTY OF ANY KIND, EXPRESS OR IMPLIED.

Neoway provides customers complete technical support. If you have any question, please contact your account manager or email to the following email addresses:

Sales@neoway.com

Support@neoway.com

Website: http://www.neoway.com



Contents

1 Overview	1
2 Upgrading Firmware	2
2.1 Installing USB Drivers	2
2.2 Downloading Firmware	5

About This Document

Scope

This document is applicable to Neoway N58 modules.

Audience

This document is intended for system engineers (SEs), development engineers, and test engineers.

Change History

Issue	Date	Change	Changed By
1.0	2019-11	Initial draft	Wu Guoqing

Conventions

Symbol	Indication
	This warning symbol means danger. You are in a situation that could cause fatal device damage or even bodily damage.
	This means the reader be careful. In this situation, you might perform an action that could result in module or product damages.
	Means note or tips for readers to use the module

1 Overview

N58 is an industrial LTC Cat1 module that is developed on Spectrum chipset. During the development, you can upgrade its firmware through the USB port.

This document describes how to upgrade the firmware of N58 on Windows OS.

Before the upgrade process, you need the following materials and tools:

- N58 module or N58 EVB
- UpgradeDownload
- USB cable
- Computer running Windows 7/8/10
- USB drivers
- Firmware package



There might be different versions of firmware for N58. Before upgrading your module, please contact Neoway FAE to obtain the correct one.

If an incorrect version of firmware is flashed, the upgrade might fail or the module might be damaged.

2 Upgrading Firmware

This chapter describes how to install the USB drivers and download the firmware.

2.1 Installing USB Drivers

Follow the steps below to install the USB drivers of N58.

Step 1: Connect the module to your computer through a USB cable and start the module.



Step 2: Decompress the N58 tool package and double-click the dpinst execution file.

Name	Date modified	Туре	Size
drivers	19/12/20 15:22	File folder	
💐 dpinst.exe	16/5/13 12:47	Application	540 KB
🛅 dpinst.xml	19/4/12 15:03	XML Document	1 KB

Step 3: In the installation wizard, click Next.



Step 4: (Optional) If the computer displays the following Windows Security, click Install this driver software anyway.



Wait several minutes, and the USB drivers will be installed automatically.





The installation is completed.

Device Driver Installation Wizar	d	
	Completing the De Installation Wizard	vice Driver I
	The drivers we successfully ins device came with your software, computer. If your device came w first.	stalled on this computer! If a you can now connect it to this ith instructions, please read them
	Driver Name	Status
	 Spreadtrum Communicati Spreadtrum Communicati Unisoc Inc Unisoc modu 	Ready to use Ready to use Device Updated
	< <u>B</u> ack	Finish Cancel

Step 5: Right-click This PC and choose Properties from the shortcut menu. Then click Device Manager.

The module is displayed as shown in the following figure before the drivers are installed.

V Other devices
 Ports (COM & LPT)
 Unisoc Usb Serial Port 0 (COM4)
 Unisoc Usb Serial Port 1 (COM5)
 Unisoc Usb Serial Port 2 (COM6)
 Unisoc Usb Serial Port 3 (COM7)
 Print queues

2.2 Downloading Firmware

This section describes the download process of N58 firmware.

Step 1: Connect the module to the computer via USB and set the module to download mode through the following methods.

- Hardware
 - Module

Short connect the USB_BOOT pin to the VDDIO_1P8 pin and pull the PWRKEY pin down to enter the download mode. Disconnect the USB_BOOT from VDDIO_1P8 after the download port is displayed.

Model	FORCE_USB_BOOT (USB_BOOT)	VDDIO_1P8 (VDD_1P8)
N58	PIN_48	PIN_45

– EVB

Model	Method to Enable Download Mode of EVB
N58_Mini_EVB_V1.0	Short connect the USB_BOOT pin to the 1.8V pin and restart the EVB.
N720-DEMO-V2.0	If the EVB is started already, hold on the USB_BOOT button and press the RESET button. If the EVB is shut down, hold on the USB_BOOT button and press the POWER button.



AT Command

If the module is started and identified by the computer, send **AT^FORCEDNLD** to it through the serial port tool.

[17:11:38.656]发→◇AT^FORCEDNLD □ [17:11:38.669]收←◆AT^FORCEDNLD OK

Step 2: In Device Manager, check if SPRD U2S Diag is displayed.



Step 3: Decompress the UpgradeDownload package and start the UpgradeDownload tool.

SprdMesApp.dll	16/7/15 16:13	Application exten	1,841 KB	- 1
🖾 udl bkmark.bmp	15/4/24 20:06	BMP File	118 KB	
🐳 UpgradeDownload.exe	19/4/30 16:16	Application	1,777 KB	
🔄 UpgradeDownload.ını	19/4/30 15:36	Configuration sett	3 KB	~



¥ U	JpgradeDownload - R22.19	9.1701			- 🗆	\times
¢	» 😔 🕞		b			
Port	Step	Status	Progress		Time(s)	
	💺 Open			×		
	← → * ↑ <mark> </mark> «	version > perf_version	✓ ♂ Search perf_version	Q		
	Organize 🔻 New	folder	== -			
	Documents ^	Name	Date modified	Туре		
	🖊 Downloads	8915DM_cat1_BB_RF-cat1	_64X128_UIS891 19/12/20 16:40	PAC File		
	b Music					
	Pictures					
	Videos					
	LENOVO (C:)					
	🔜 LENOVO (D:) 🗸	<		>		
	F	ile <u>n</u> ame: 8915DM_cat1_BB_RF-ca	at1_64X128_ V Packet Files (*.pac)	~	釵活	ļ
<			<u>O</u> pen	Cancel		>
Ready				.:		_ /

Step 5: Click the Setting button and set the COM port and baudrate in the Download settings dialog box.

💱 UpgradeDownload - R22.19.1701						- 🗆	×
0 0 0 0	ownload settings	×.				×	<
Part Step	Main Page Options M	fulti Languages LCD Config	ure Customization				1.0
		Port: COM8	Baudrate:	921600		_	
	8910 MODULE		Product:	PAC_UIX891	0_MODEM	_	
	FileID	FileName		Base1	Size1	Base	
	HOST_FDL FDL2 BOOTLDADER AP PS FLASH PhaseCheck NV	D:\tools\UPGRADED0\v D:\tools\UPGRADED0\v D:\tools\UPGRADED0\v D:\tools\UPGRADED0\v D:\tools\UPGRADED0\v D:\tools\UPGRADED0\v	NLOAD_R22.19.1701 NLOAD_R22.19.1701 NLOAD_R22.19.1701 NLOAD_R22.19.1701 NLOAD_R22.19.1701 NLOAD_R22.19.1701 NLOAD_R22.19.1701	0x810000 0x810000 0x60000000 0x60040000 0x60440000 0xFE000001 0xFE000002 0xFE000002 0xFE000003	0x3220 0x8800 0x8F40 0x26CD58 0x340000 0x100 0x20000		
	<					>	
				 	Simeanus Simeanna anna		. !
< Ready				OK	Cancel	Apply	j_`

Step 6: Click the Start Loading button.

😽 Upg	radeDownload - R22.19	9.1701			—		×
Image: Second system Image: Second system Second system							
Port	Step	Status	Progress	Time(s)		MCP Ty	уре

The firmware is downloaded.

😽 Upg	radeDownload - R22.19	9.1701			—		×
Image: Second system Image: Second system Second system							
Port	Step	Status	Progress	Time(s)		МСР Ту	/ре
8	NV	Finish	Passed	42s		_	

Step 7: Restart the module to exit from the download mode.

Step 8: On the serial port tool, send AT+CGMR to query the firmware version.

