

N58

EVK User Guide

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Notice

This document provides a guide for users to use N58.

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

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About This Document

Scope

This document is applicable to the N58 series.




Audience

This document is intended for [system engineers \(SEs\)](#), [development engineers](#), and [test engineers](#).

Change History

Issue	Date	Change	Changed By
1.0	2019-12	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

Related Documents

Neoway_N58_Datasheet

Neoway_N58_Product_Specifications

Neoway_N58_HW_User_Guide

Neoway_N58_AT_Command_Manual

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1 Overview

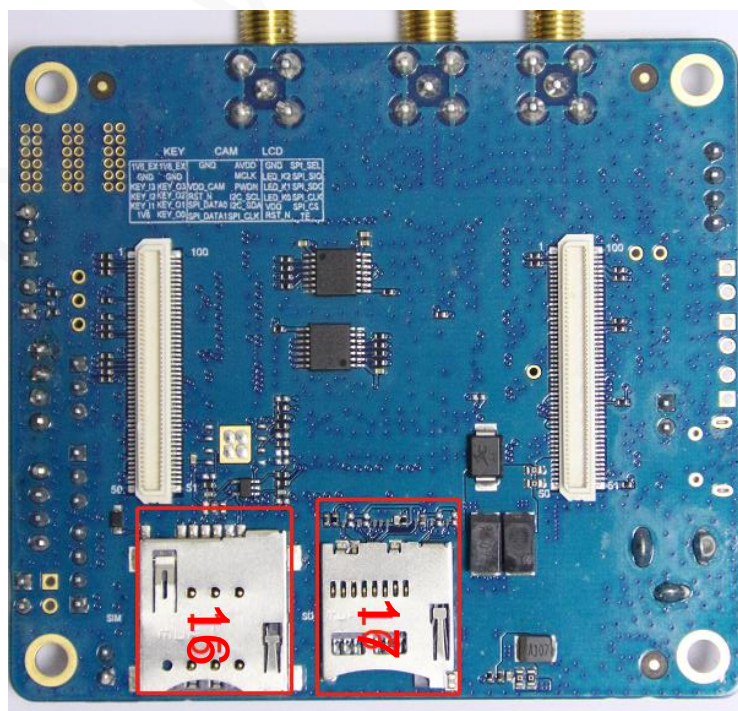
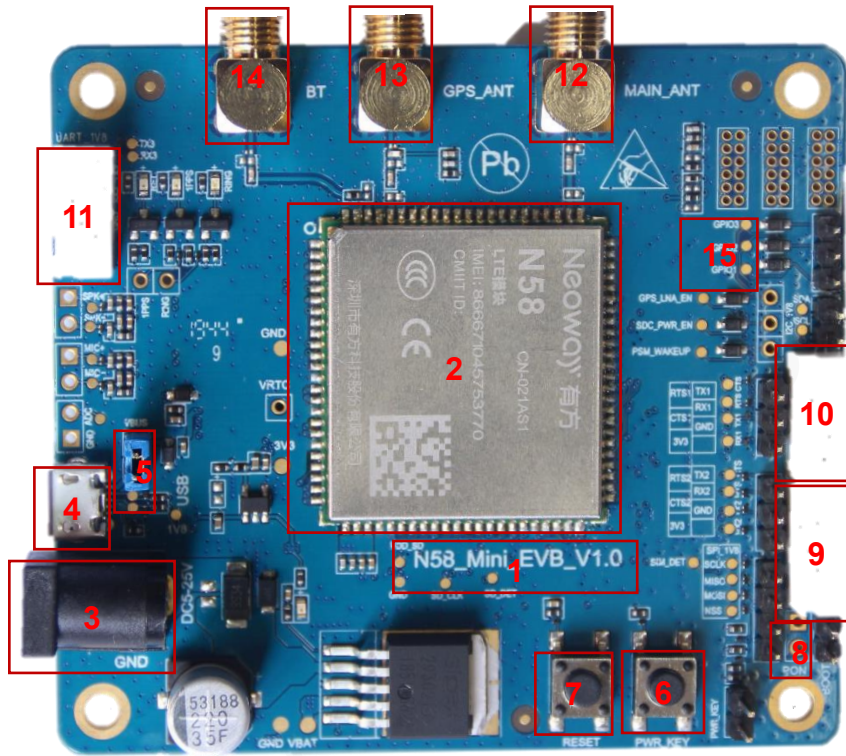
N58 EVB is designed to commission and test the N58 module. It provides one power interface, three UART interfaces, one USB interface, one SIM card interface, antenna interfaces, and one PWRKEY button. You can connect it to a power supply and a computer through the USB cable or serial-to-USB cable to commission the functions of the module.

N58 EVK provides the following items:

- N58_Mini_EVB_V1.0 (including N58 module)
- M5X0-PWR power cable
- Micro-USB cable
- Others (5V/2A power adapter, BT/GPS antennas)

2 About N58 EVB

Figure 2-1 Top view of N58 EVB



This chapter describes the hardware layout of the N58 EVB.

In Figure 2-1, each interface and keys of N58 is marked in red rectangles. Read this user guide carefully before using N58 EVB. If necessary, please refer to the schematic diagram and PCB file of the board.

Table 2-1 lists each interface or button and their functions.

Table 2-1 Interfaces and button of N58 EVB

No.	Interface/Button	Description
1	N58_Mini_EVB_V1.0	EVB model
2	N58	Cellular module
3	5V DC power port	Main power supply, ranging from 3.6V to 4.5V
4	USB port	To download firmware or send AT commands
5	VBUS pins	Jump the pins before using the USB port for communication
6	PWR_KEY button	After supplying power to the module, hold this button for more than 1 second to start the module
7	RESET button	Hold this button for more than 1 second to reset the module
8	High-level download pins	Jump the pins with a jumper, and the module is forced to enter download mode after it is powered up.
9	UART1	4-pin UART, used to send AT commands CANNOT be used to supply power
10	UART2	Used to send data and commission the module Leave it floating if you do not use this port.
11	UART3	Used to send data and debug AP Leave it floating if you do not use this port.
12	MAIN_ANT	2G/3G/4G antenna connector
13	GPS_ANT	GPS antenna connector
14	BT	BT antenna connector
15	Enable pins	GPS_LNA_EN, SDC_PWR_EN, PSM_WAKEUP
16	SIM connector	Micro-SIM card
17	SD connector	SD card

3 Power and Connection

Power is supplied for the N58 EVB only through a 5V DC adapter or external power cables. The N58 EVK provides one M5X0-PWR cable and one Micro-USB cable for data communication.

3.1 Power Supply

N58 EVB supports different types of power supply:

- 5V/2A DC adapter
Insert the DC output end into the DC port of the EVB.
- Soldering external power cable

3.1.1 5V/2A Adapter

Figure 3-1 shows the recommended power adapter for N58 EVB.

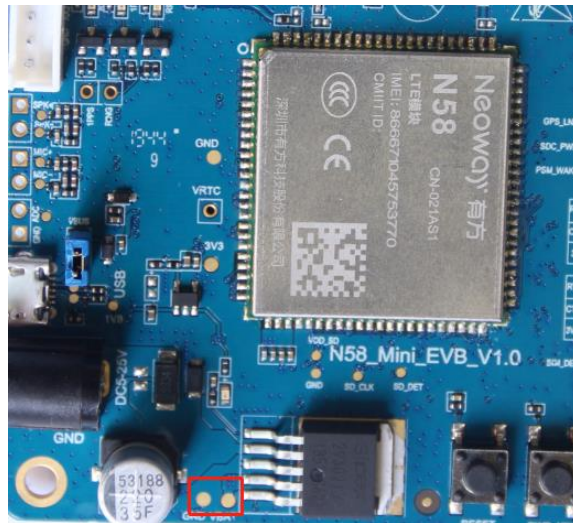
Figure 3-1 Power adapter



3.1.2 Soldering Power Cable

The N58 EVB provides solder pads for external power cables, as shown in Figure 3-2. The input voltage ranges from 3.4V to 4.2V and a 3.8V regulated power source is recommended.

Figure 3-2 Soldering pads



The power source supplies voltage to the module directly in this manner. Do NOT connect the pads reversely. Otherwise, the module will be burned and cannot be repaired.

3.2 Communication Connection

3.2.1 M5X0-PWR Board

M5X0-PWR board is developed on PL2303 chipset by Neoway and used to convert USB to UART. You can also choose another USB-to UART cable/board based on FT2232, CP210X, and other chipsets.

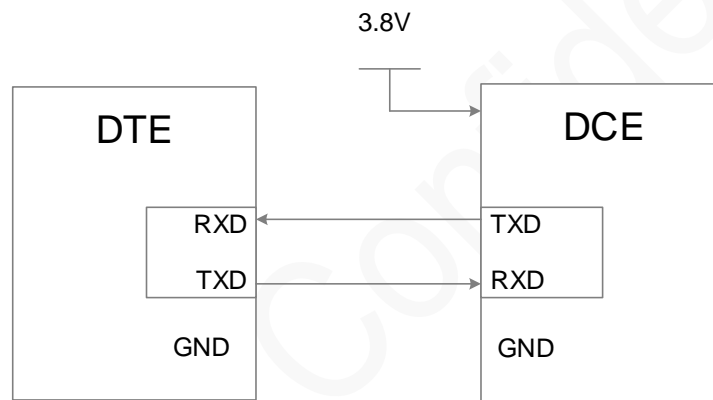


M5X0-PWR is connected to the N58 EVB through 4-pin cables, which have been soldered to the power board in a sequence of red, black, yellow, and green at one end and should be inserted into the plug

of the EVB at the other end. Among the 4-pin cables:

- Green
Module TXD, outputs 2.85V CMOS level
- Yellow
Module RXD, inputs maximum 3.3 V CMOS level
- Black
Ground
- Red
VBAT, main power input, 3.6V to 4.5V, 3.8 V recommended

To use the UART function, install the USB-to-UART driver (PL2303) first. If an MCU is used to control the module, connect the as shown in the following figure:



3.3 Micro-USB Cable

A micro-USB cable is used to connect N58 to a computer for USB or UART communication. The USB interface of N58 EVB is used for communication only.

Figure 3-3 USB cable



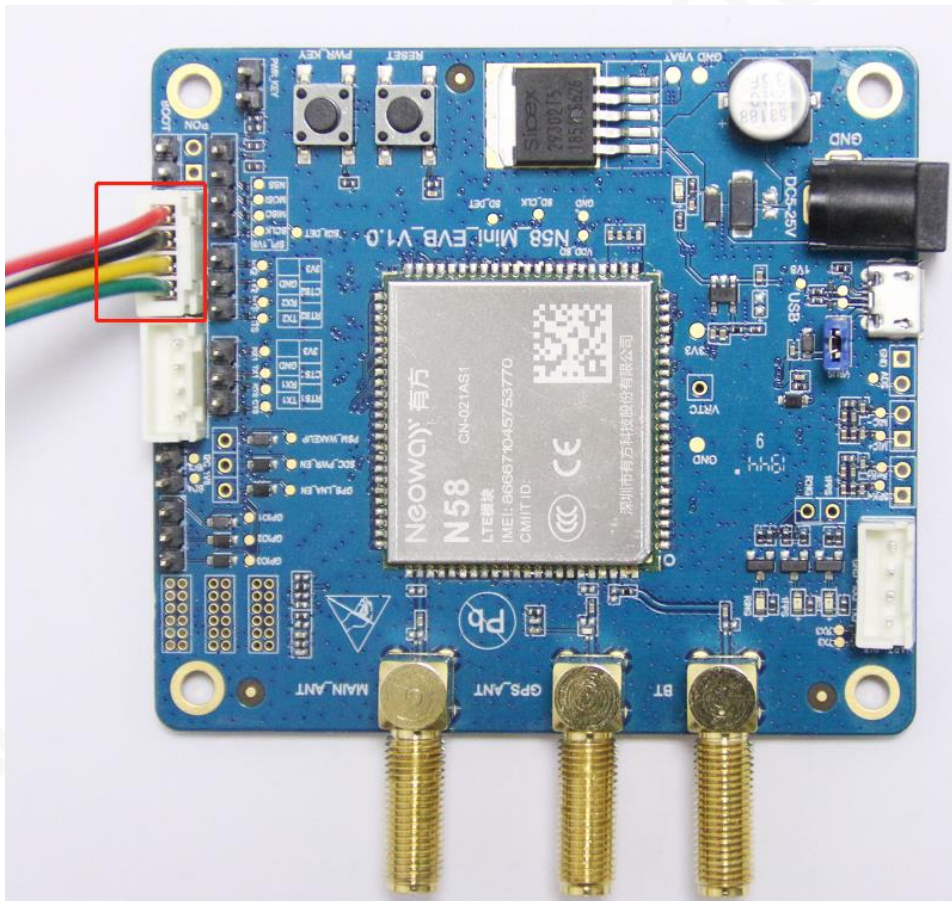
4 Commissioning

N58 can be commissioned either through a serial port or a USB port. This chapter describes how to connect the module and how to implement commissioning through either port.

4.1 Through Serial Port

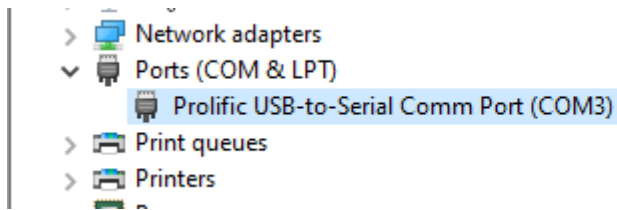
Step 1: Use the 5V adapter to supply power, power up the N58 EVB and connect it to the computer through the M5X0-PWR board.

Hold the PWR_KEY button for 1 second, and the module starts up.

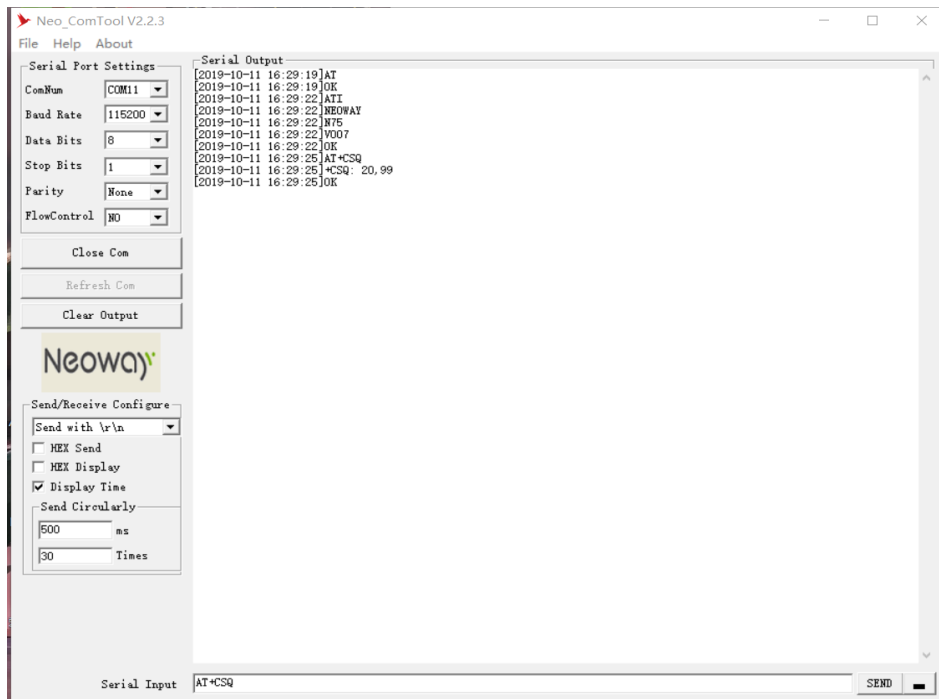


Step 2: Install the PL2303 driver.

Obtain the driver package from Neoway FAE or download it from the Internet if you use the serial-to-USB cable Neoway provided.



Step 3: Start the Neo_ComTool and send AT commands.



4.2 Through USB Port

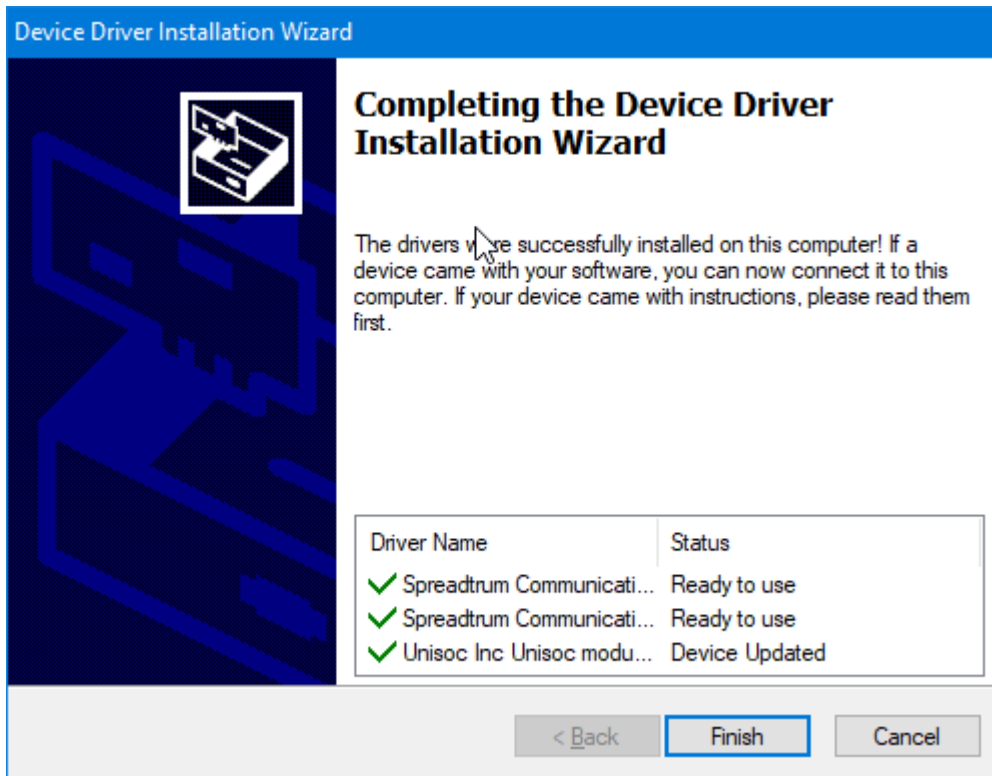
Perform the following steps to commission N58 through USB port:

Step 1: Use the 5V adapter to supply power, power up the N58 EVB and connect it to the computer through USB.

Hold the PWR_KEY button for 1 second, and the module starts up.

Step 2: Install the N58 USB drivers on your computer.

1. Decompress the N58 tool package that Neoway provides.
2. Open the folder of the driver for your OS.
3. Double-click the DPInst execution file and install the drivers by following the installation Wizard.



Step 3: Start the Neo_ComTool and send AT commands.

