

# N720

## EVK User Guide

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**Notice**

This document provides guide for users to use N720.

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 N720 series.




## Audience

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

## Change History

Issue	Date	Change	Changed By
1.0	2017-02	Initial draft	Qin Weixing
2.0	2018-03	Update the EVB to V2.0	Qin Weixing

## Conventions

Symbol	Indication
	This warning symbol means danger. You are in a situation that could cause fatal device damage or even bodily damage.
	Means 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\_N720\_Datasheet*

*Neoway\_N720\_Product\_Specifications*

*Neoway\_N720\_AT\_Command\_Mannual*

*Neoway\_N720\_Hardware\_User\_Guide*

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# 1 Overview

N720 EVB provides various peripheral interfaces, including power supply interface, USB interface, SIM card connector, antenna interface, PWRKEY button, RESET\_N button and UART interface.

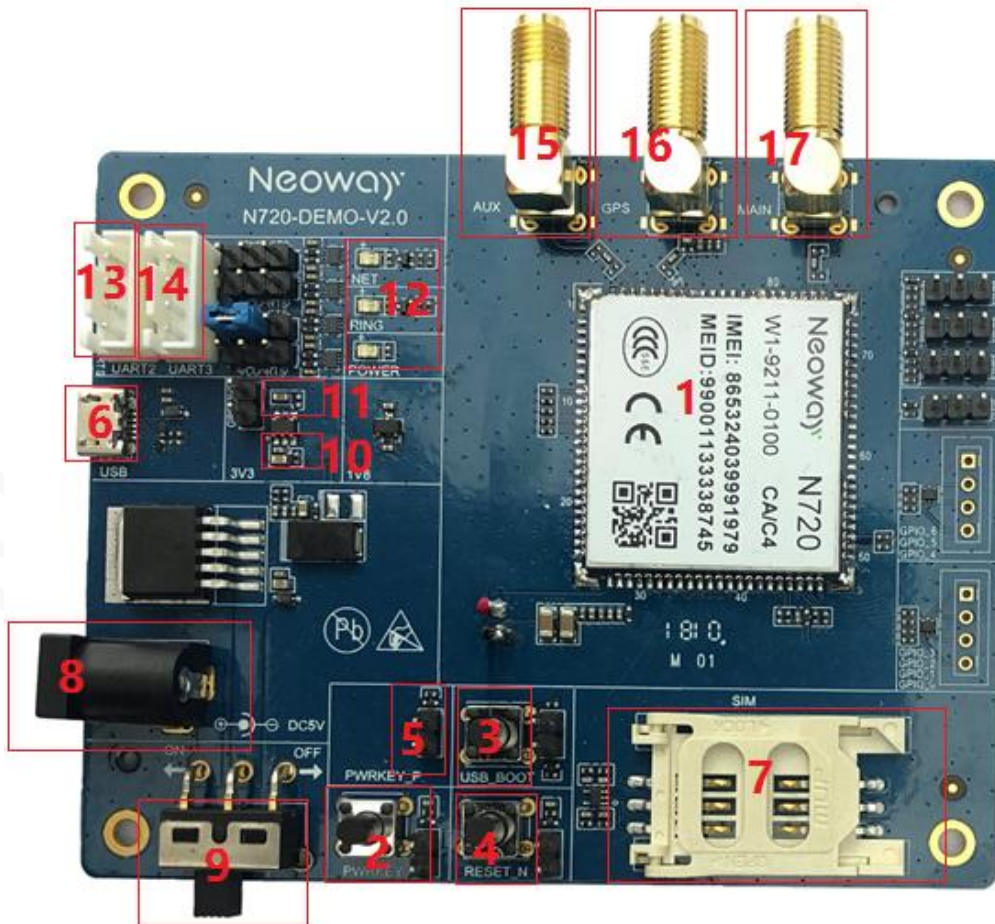
N720 EVK contains the following components:

- N720 EVB (including/excluding module)
- M5X0-PWR Board
- Others (5V power adapter, 4G antenna, etc)

You can debug the EVB after connecting it to the power source and connecting it to a computer through Micro USB cable.

## 1.1 EVB Functions

Figure 1-1 N720 EVB



N720 provides the following interfaces and buttons.

No	Interface/Button	Description
1	N720 module	/
2	PWRKEY button	Power on/off button. Low level triggers the ON/OFF state Hold this button for more than 1 second to start the module
3	USB_BOOT button	Download button, force the module to enter download mode
4	RESET_N button	Reset button, force the module to restart
5	PWRKEY_P interface	Power on/off interface. High level triggers the ON/OFF state
6	USB interface	Used for downloading firmware and sending AT commands
7	SIM card connector	/
8	5V adapter interface	5V DC power supply. Input voltage ranges from 3.6V to 4.5 V
9	Switch of power input	/
10	3.8 V LDO voltage regulator	/
11	3.3 V LDO voltage regulator	/
12	Network, Ring, Power indicator	/
13	UART 2 interface	4-pin interface, used for debugging Supply power through this interface is not supported
14	UART 3 interface	Not available
15	RF interface of diversity antenna	/
16	RF interface of GPS antenna	/
17	RF interface of 2G/3G/4G antenna	/

## 1.2 USB Cable

The EVB is connected with the computer through Micro USB cable for firmware download and data communication.



## 1.3 Power Supply

You can use only 5V/2A power adapter to supply N720 EVB with power.

Plug the output end of the adapter to the DC5V connector into the EVB.

Push the power supply switch to the ON side.

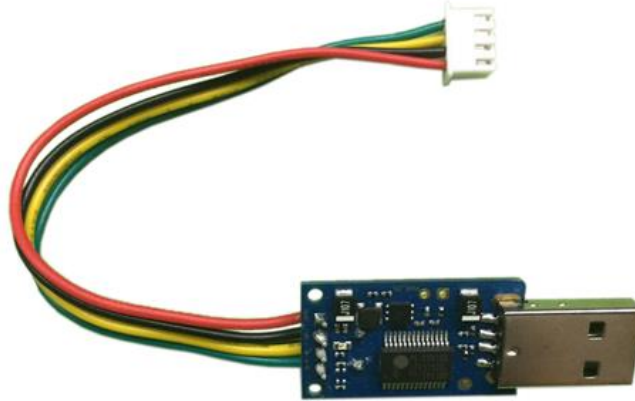
The following figure shows a 5V/2A adapter.





## 1.4 M5X0-PWR Board

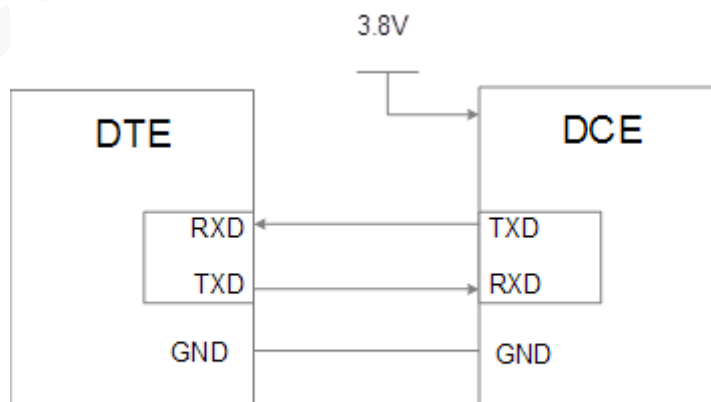
M5X0-PWR board is developed on PL2303 chipset by Neoway and used to convert USB to UART. You can also choose other USB-to-UART cable/board based on FT2232, CP210X and other chipset.



M5X0-PWR is connected to the N720 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 2.85 V CMOS level
- Yellow  
Module RXD, inputs maximum 3.3 V CMOS level
- Black  
Ground
- Red  
VBATT, 3.6 V to 4.5 V power supply, 3.8 V is 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.



## 2 Commissioning

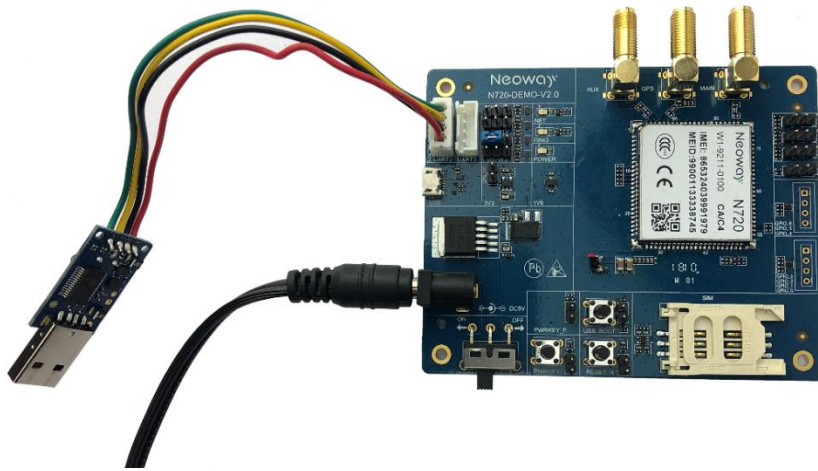
N720 EVB is commissioned through UART or USB.

### 2.1 Through UART

You need to install the USB-to-Serial driver before using UART function. Follow steps below to commission N720 EVB through UART.

**Step 1:** Connect the EVB properly, as the figure shown below.

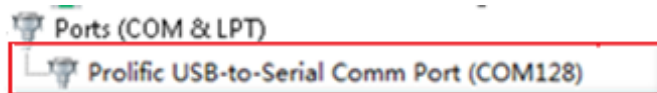
Insert the 5V/2A adapter and the M5X0-PWR cable into UART 2 interface of the board.



**Step 2:** Insert the M5X0-PWR cable into the USB port of the computer, switch on the power supply of the board, and hold the PWRKEY button for 1 second to start the module.

**Step 3:** Install USB-to-Serial port driver (**PL2303**) and ensure that the computer displays the port.

Insert the M5X0-PWR board, and the computer displays **Prolific USB-to-Serial Comm Port** under the **Ports (COM and LPT)** node in Device Manager.



**Step 4:** Use the commissioning tool **SScom3.2** to commission the EVB.



Pay attention to the placement of jumper caps.

## 2.2 Through USB

You need to install a USB driver before commissioning N720 EVB through Micro USB cable. Follow steps below to commission N720 EVB through USB.

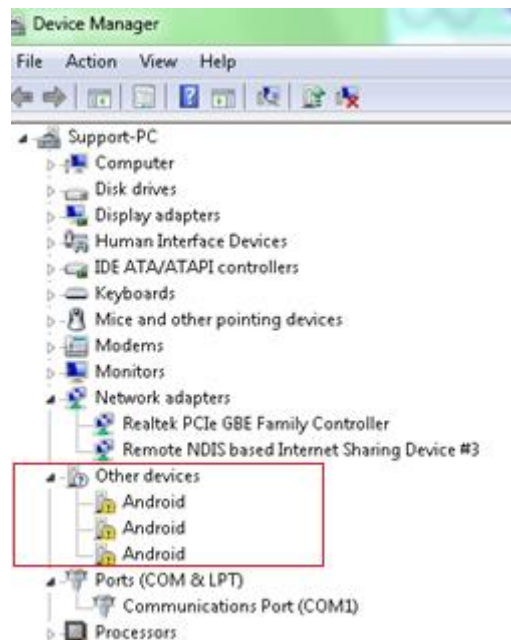
**Step 1:** Connect the EVB properly, as the figure shown below.

1. Insert the 5V/2A adapter and the Micro USB cable into the USB interface of the board.
2. Insert the Micro USB cable into the USB port of the computer, switch on the power supply of the board and hold the PWRKEY button for 1 second to start the module.



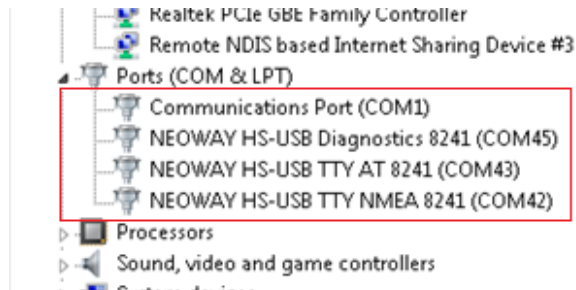
**Step 2:** Check the port in Device Manager.

If the USB driver is not installed, the computer displays the ports as shown in the figure below.



**Step 3:** Decompress **neoway\_20181212\_Signed\_drivers** and follow the installation wizard to install the driver.

After the driver is install successfully, the computer displays the port as shown in the figure below.



**Step 4:** Use the commissioning tool **SScom3.2** to commission the EVB.



Please consult Neoway FAE to obtain the the latest version of UART-to-Serial driver and USB driver.