

N20 Demo Board User Guide

Version 1.0



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Remarks

This document provides guide for users to use the N20 demo board.

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

The information in this document is subject to change without notice due to product version update or other reasons.

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1 Overview

N20 demo board is used for developers to evaluate the hardware and software functions. It provides various peripheral interfaces, including power interface, USB, SIM card, antenna, PWRKEY, RESET, and UART. Developers can commission the module through AT commands after connecting a power supply and Micro USB.

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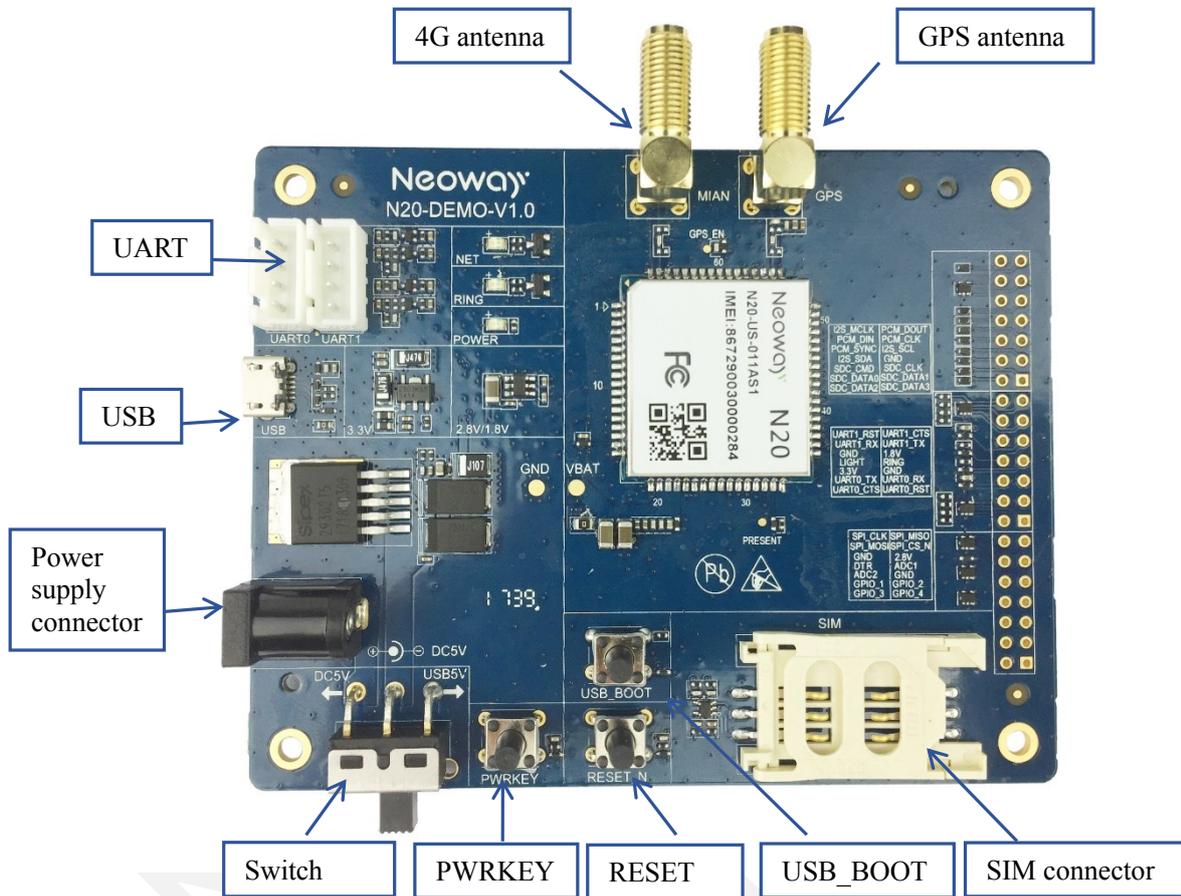
2 Board Interfaces

The following table lists the interfaces of N20 demo board.

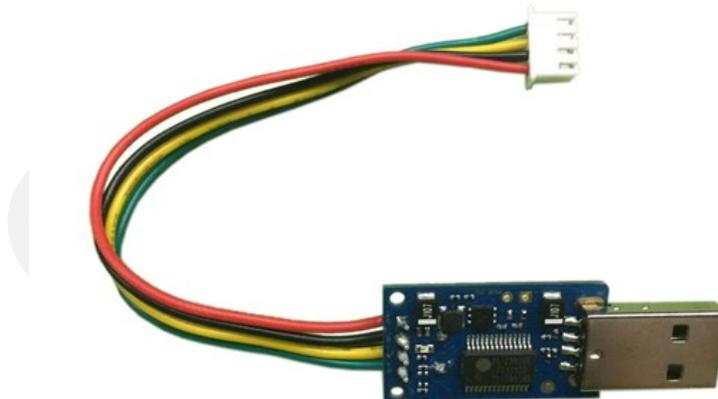
Interface	Function
5 V power supply	Main power supply input, 3.3 V to 4.2 V
5 V power supply switch	Pull it to DC5V side to supply power if a DC adapter is used; pull it to USB5V side to supply power if the board is supplied power through USB.
SIM	Normal SIM card connector
UART0	Used to commission AT commands
UART1	Not supported
Antenna	Main antenna and GPS antenna
PWRKEY button	After supplying power to the module, hold this button for 1 second to power up the module
RESET button	Hardware reset
USB	Used to supply power and transmit data & firmware upgrade
USB_BOOT	Force the module to enter download mode

3 Connections

3.1 Demo Board



3.2 M5X0-PWR Board



3.3 Power Supply

N20 demo board supports two ways of power supply:

- 5V/2A DC power supply adapter
- USB

3.3.1 5 V/2A Adapter

The demo board uses 5 V power supply. Plug the output end of the adapter to the DC connector on the demo board. Pull the power supply switch to the DC5V side.

The following figure shows the recommended connection between 5 V/2A adapter and the demo board.



3.3.2 USB Cable

The following figure shows the Micro-USB cable used to connect the board to a computer for power supply and data communication.



3.4 Commissioning

The module can be commissioned through UART or USB.

Before commissioning, perform the following operations to get ready:

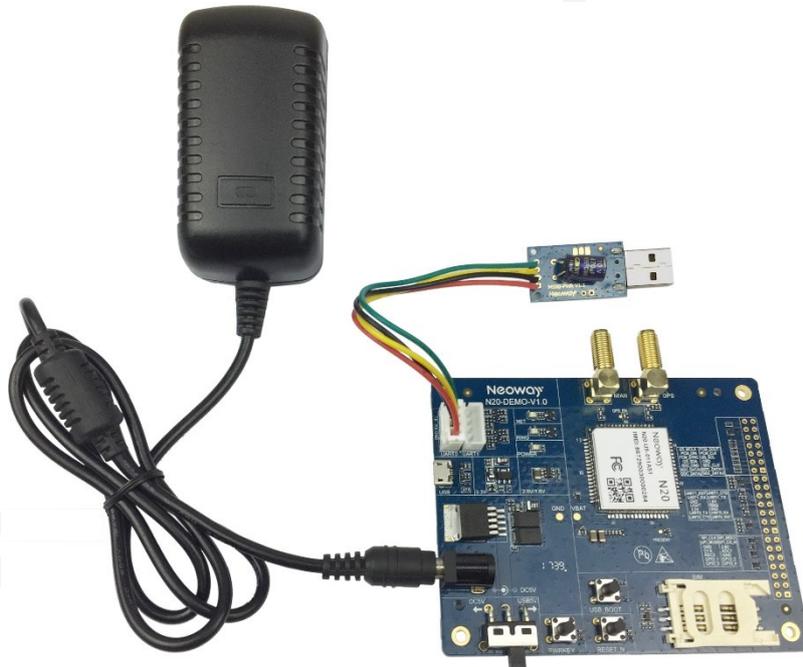
1. Connect antennas, including 4G antenna and GPS antenna.
2. Insert a SIM card.
3. Connect to the power supply and switch it on. Turn on the module.

The following sections describe the operations after the module is started.

3.4.2 Commissioning Via UART

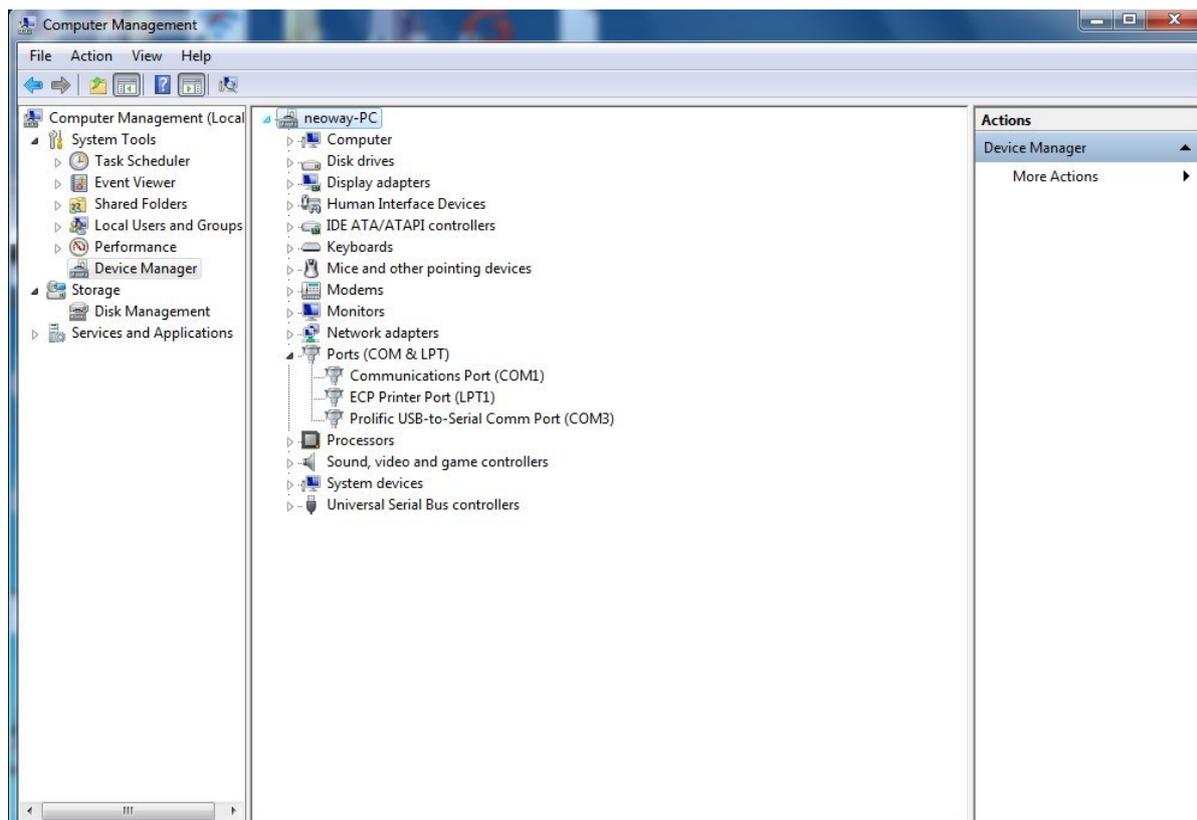
Step 1 Insert the USB end of the M5X0-PWR cable to a computer.

The following figure shows how the board is connected to a computer via UART.



Step 2 Install the PL2303 USB-to-Serial driver.

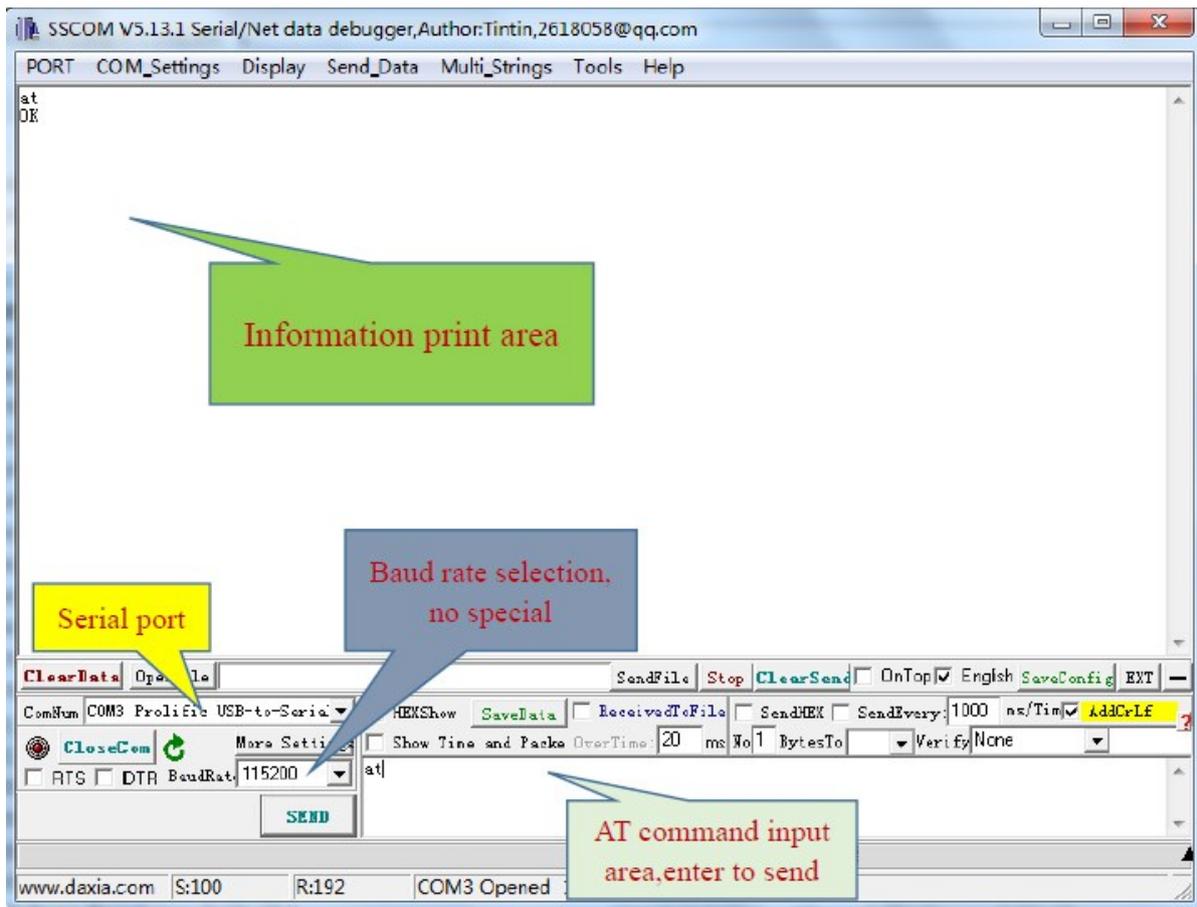
Step 3 In Device Manager, check if Prolific USB-to-Serial Comm Port is displayed.



Step 4 Start the UART commissioning tool.

Select the desired UART port and perform AT command commissioning.

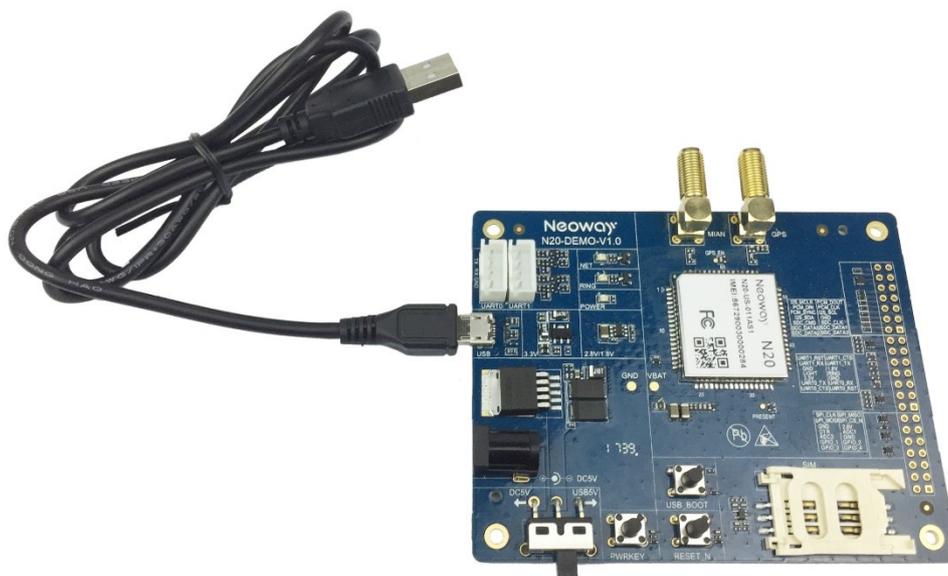
For details about AT commands, see *Neoway_N720_AT_Command_Mannual*.



3.4.3 Commissioning Via USB

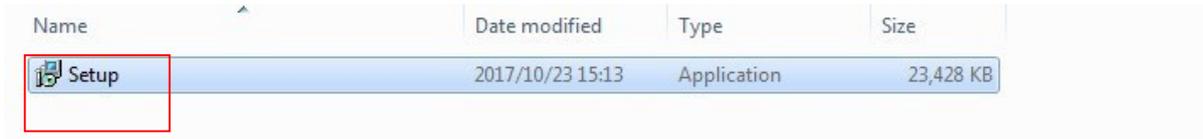
Step 1 Connect the module to a computer through the USB and power on the module.

The following figure shows how the board is connected to a computer via USB.

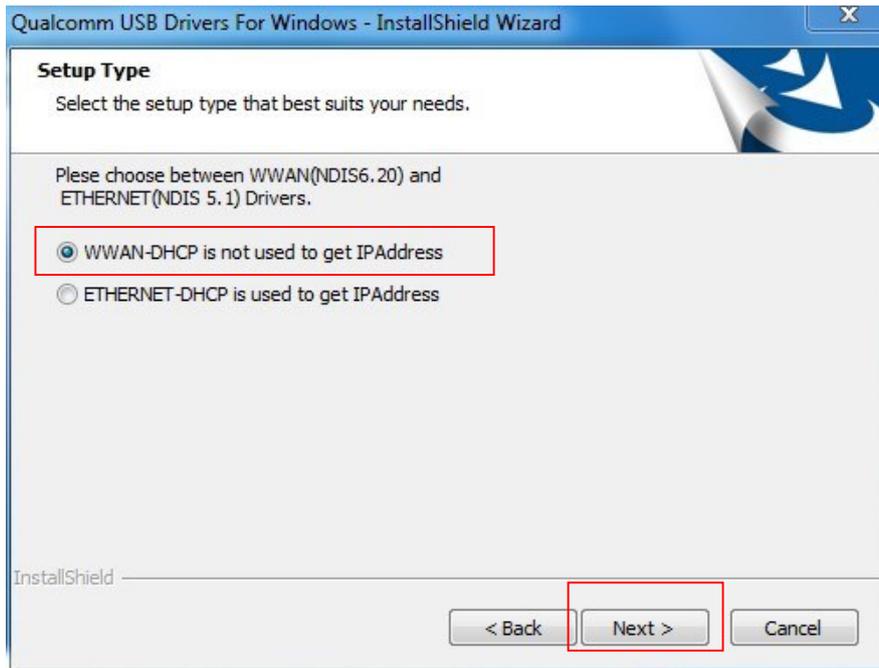


Step 2 Install the USB driver

1. Double-click the USB driver installation file **Setup**.



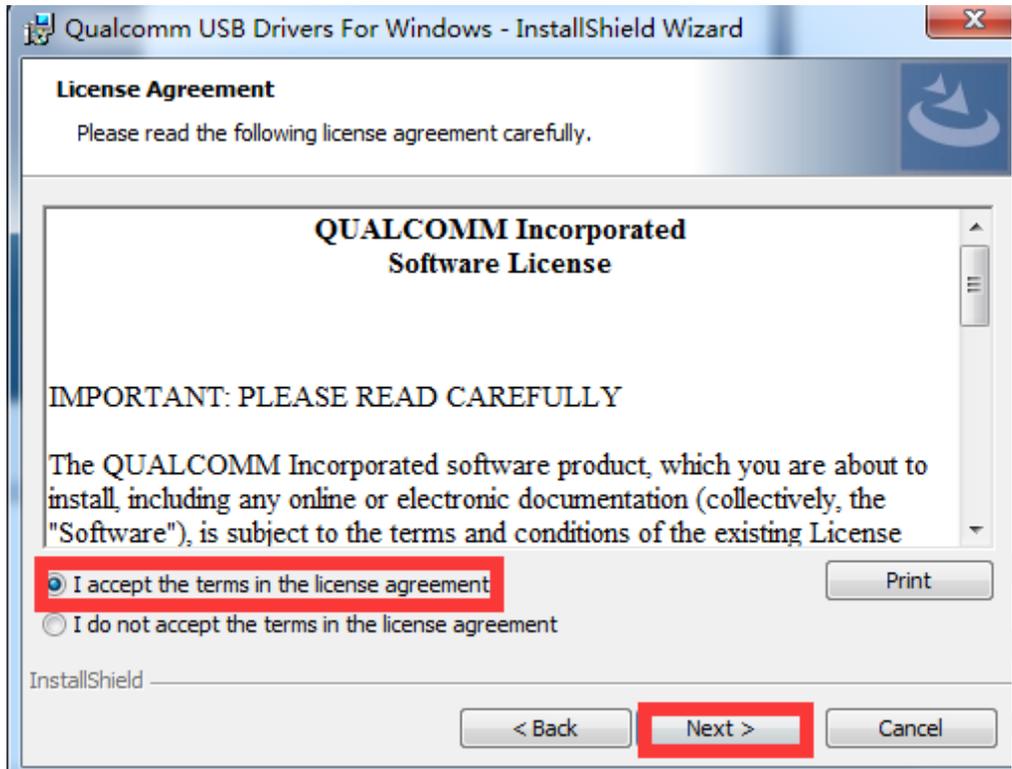
2. In InstallShield Wizard, click **WWAN-DHCP is not used to get IP Address** and **Next**.



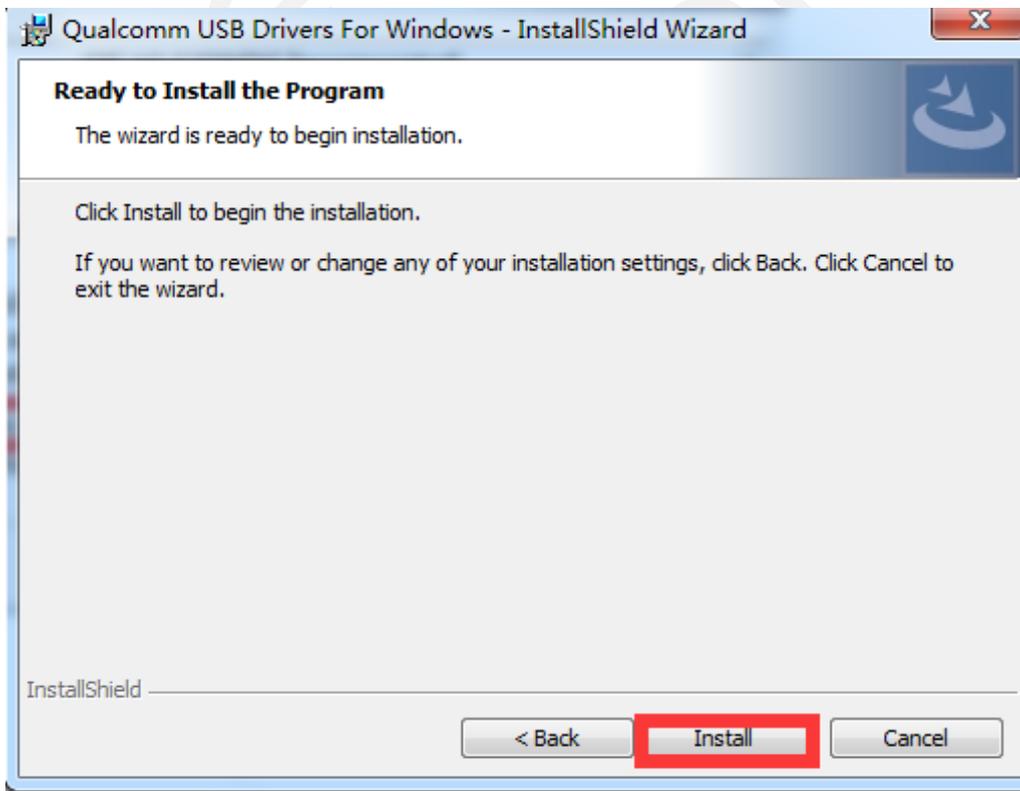
3. Click **Next**.



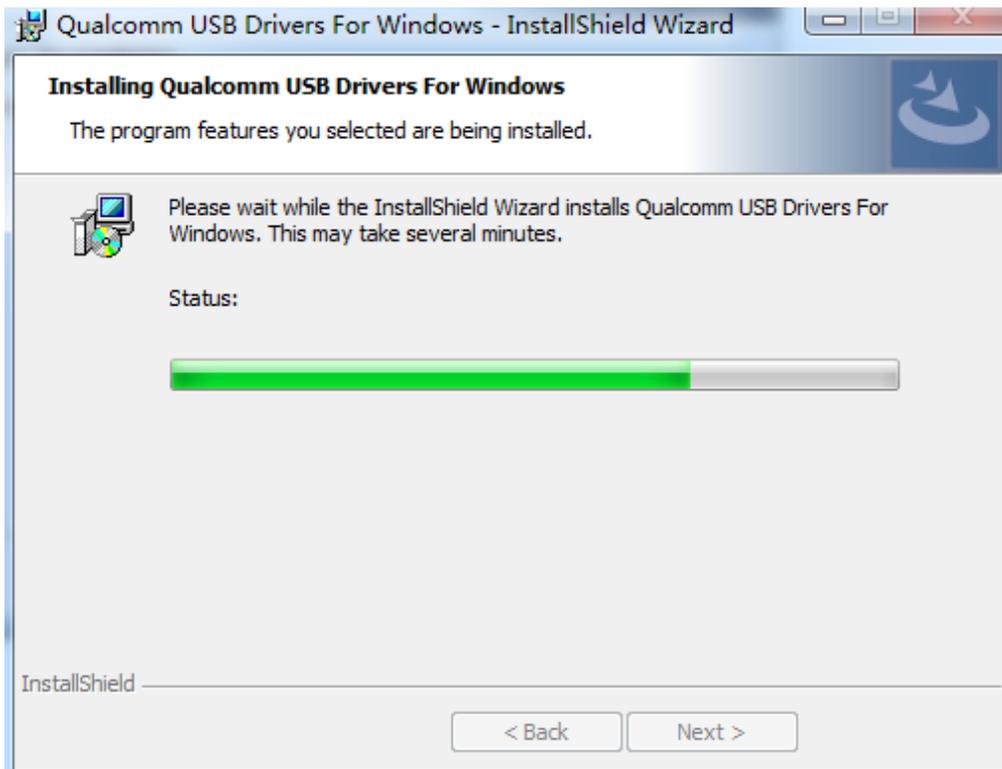
- 4. Click **I accept the terms in the license agreement** and **Next**.



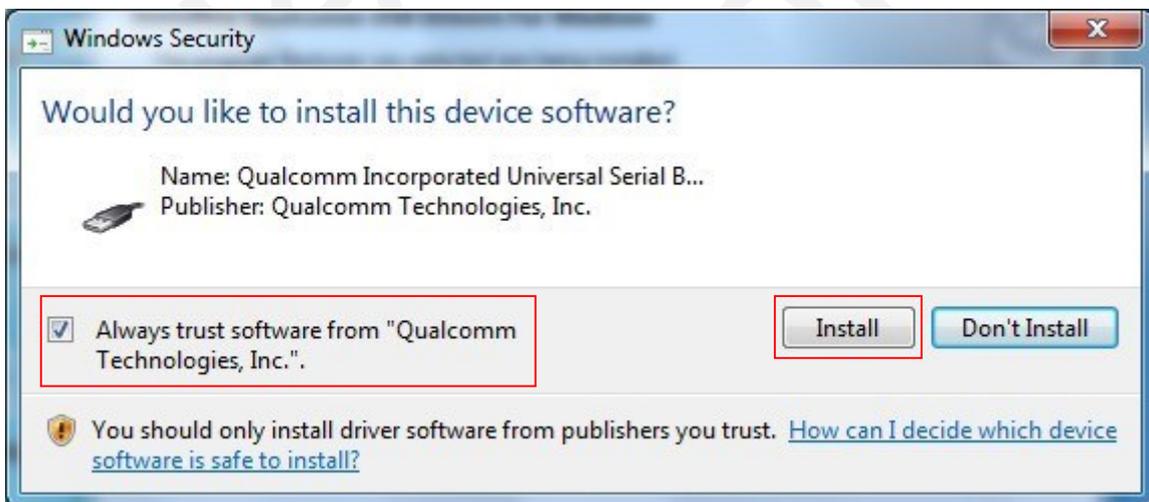
- 5. Click **Install**.



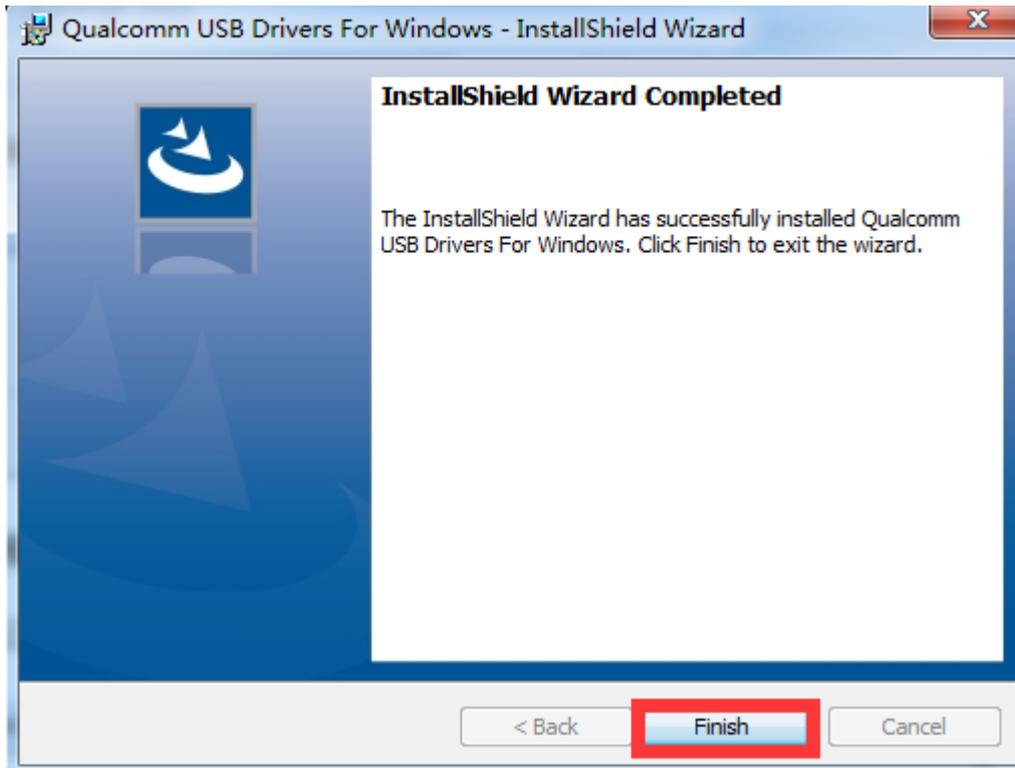
Wait till the Status bar becomes green completely.



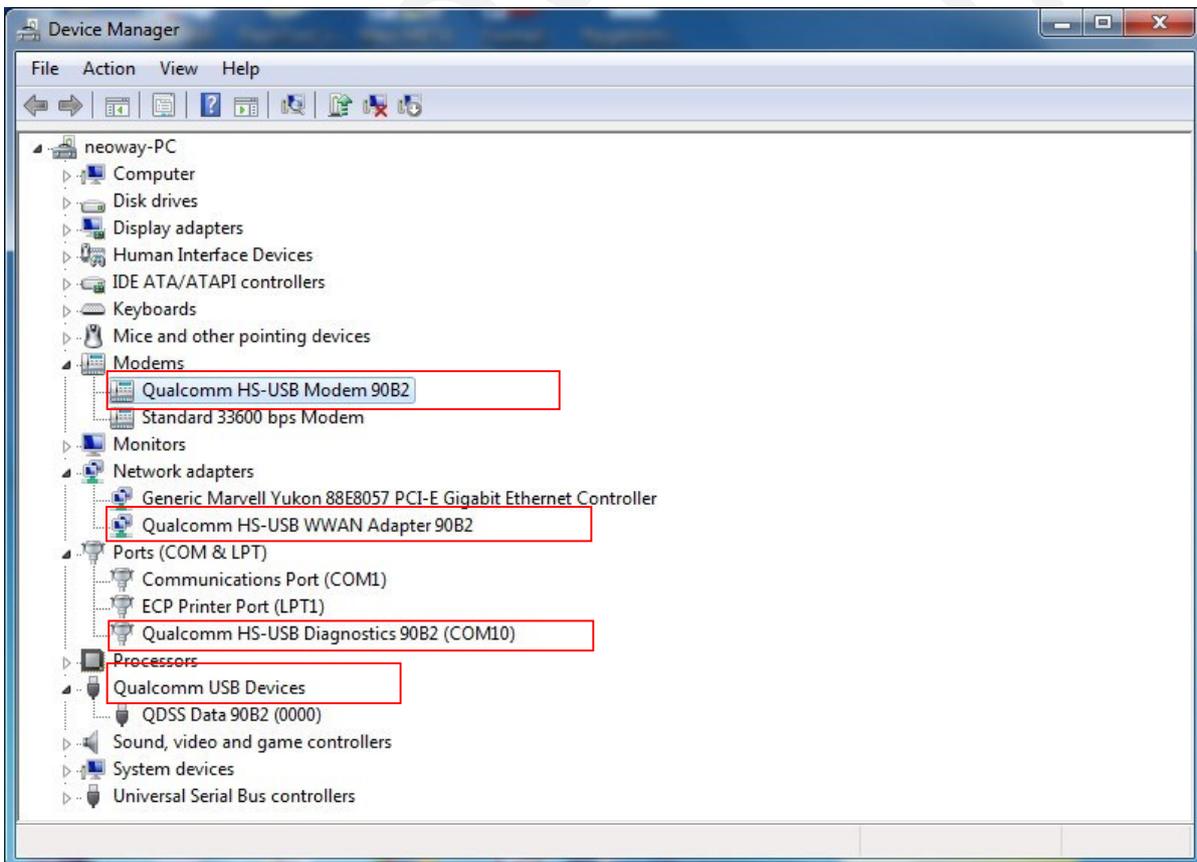
6. In the **Windows Security** dialog box, select **Always trust software from "Qualcomm Technologies,Inc."**. and click **Install**. Repeat this step for 5 times.



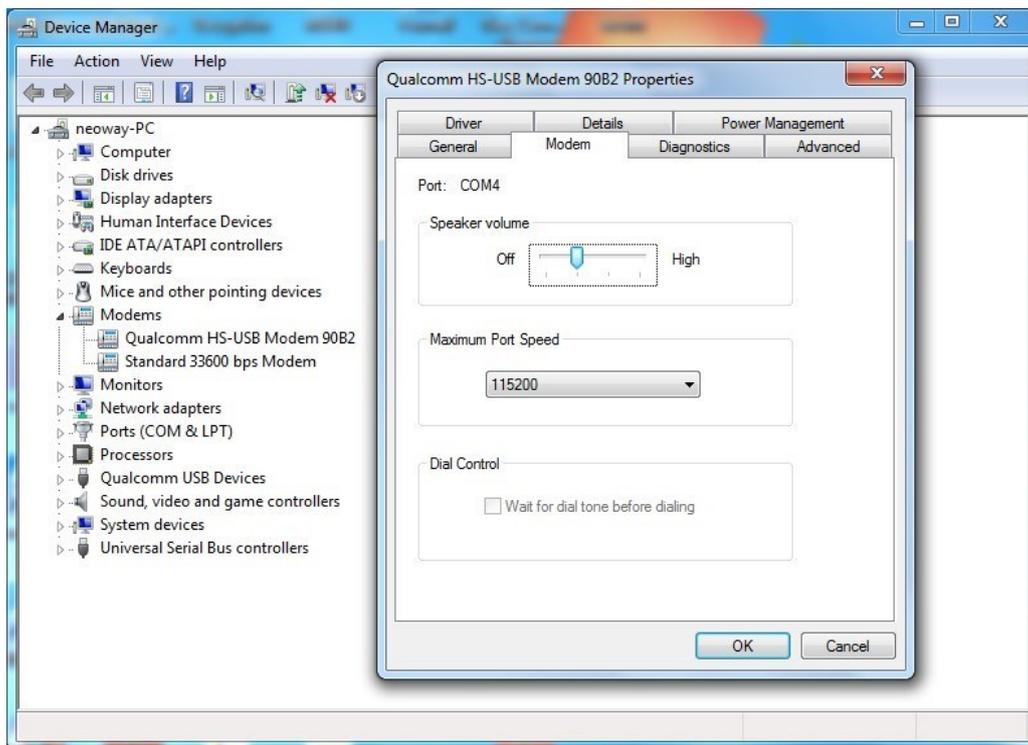
7. Click **Finish**.
The USB driver is installed completely.



8. In Device Manager, check if the four ports are displayed.



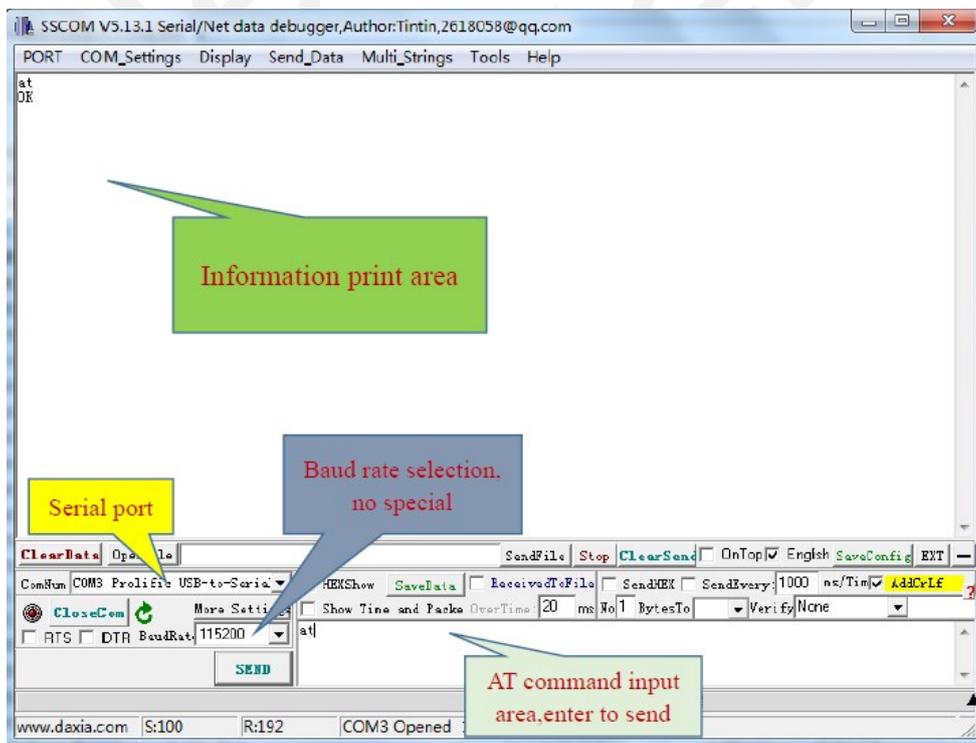
After the USB driver is installed, multiple serial ports are displayed. Modem 90B2 is the one used to send AT commands.



Step 3 Start the UART commissioning tool.

Select the desired UART port and perform AT command commissioning.

For details about AT commands, see *Neoway_N20_AT_Command_Mannual*.



4 Material List

- N20 demo board (with/without module)
- M5X0-PWR board
- 5 V power supply, 4G antenna, etc (Optional)

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