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 though AT commands after connecting a power supply and Micro USB.

2 Board Interfaces

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	

The following table lists the interfaces of N20 demo board.

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*.

ile SSCOM V5.13.1 Serial/Net data debugger,Author:Tintin,2618058@qq.com	x
PORT COM_Settings Display Send_Data Multi_Strings Tools Help	
at DE	*
Information print area	
Baud rate selection, no special	-
Canking COM3 Prolife HSR-ta-Serie T HEVELaw Country Laboratoria Saveloning HA	
CloseCom & More Setti Show Tine and Packs OverTime 20 ms No1 BytesTo VerifyNone	* *
www.daxia.com S:100 R:192 COM3 Opened area,enter to send	

3.4.3 Commissioning Via USB

Step 1 Connect the module to a computer though 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.

2017/10/23 15:13 Application 23,428 KB	Name	^	Date modified	Туре	Size
	📳 Setup		2017/10/23 15:13	Application	23,428 KB

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

Qualcomm USB Drivers For Windows - InstallSh	hield Wizard
Select the setup type that best suits your need	is.
Plese choose between WWAN(NDIS6.20) and ETHERNET(NDIS 5.1) Drivers.	
WWAN-DHCP is not used to get IPAddress	
ETHERNET-DHCP is used to get IPAddress	
InstallShield	< Back Next > Cancel

3. Click Next.



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

😸 Qualcomm USB Drivers For Windows - InstallShield Wizard	x
License Agreement Please read the following license agreement carefully.	5
QUALCOMM Incorporated Software License	* III
IMPORTANT: PLEASE READ CAREFULLY The QUALCOMM Incorporated software product, which you are about to install, including any online or electronic documentation (collectively, the "Software"), is subject to the terms and conditions of the existing License	Ŧ
I accept the terms in the license agreement I do not accept the terms in the license agreement InstallShield	
< Back Next > Cancel	

5. Click Install.

🖞 Qualcomm USB Drivers For Windows - InstallShield Wizard
Ready to Install the Program Image: Constallation installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield

Wait till the Status bar becomes green completely.

波 Qualcom	nm USB Drivers For Windows - InstallShield Wizard	J
Installing The prog	Qualcomm USB Drivers For Windows gram features you selected are being installed.	
17	Please wait while the InstallShield Wizard installs Qualcomm USB Drivers For Windows. This may take several minutes.	
	Status:	
InstallShield –		
	<back next=""></back>	

 In the Windows Security dialog box, select Always trust software from "Qualcomm Technologies, Inc.". and click Install.

Repeat this step for 5 times.

Windows Security	×
Would you like to install this device softwar	re?
Name: Qualcomm Incorporated Universal Ser Publisher: Qualcomm Technologies, Inc.	ial B
Always trust software from "Qualcomm Technologies, Inc.".	Install Don't Install
You should only install driver software from publish software is safe to install?	ers you trust. <u>How can I decide which device</u>

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.

Bevice Manager File Action View Help	Qualcomm HS-USB Modem 90B2 Properties
 neoway-PC Computer Display adapters Human Interface Devices IDE ATA/ATAPI controllers Keyboards Mice and other pointing devices Modems Qualcomm HS-USB Modem 90B2 Standard 33600 bps Modem Monitors Network adapters Network adapters Processors Qualcomm USB Devices System devices System devices Universal Serial Bus controllers 	Driver Details Power Management General Modem Diagnostics Advanced Port: COM4 Speaker volume Off Image: Comparison of the compariso
	OK Cancel

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*.

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	5
POKI COM_settings Display Send_Data Multi_strings Tools Help	_
at DK	-
Information print area	
Baud rate selection.	
Serial port no special	
	-
ClearBata Opa la SendFile Stop ClearSend OnTop English SaveConfig EXT -	-
ComNum COM3 Prolific USE-to-Serie VHEXShow Savelata ReceivedToFile SendHEX SendEvery 1000 ns/TimV AddCrLf	2
🛞 CloseCom 👌 More Setti 🥖 Show Tine and Packs OverTime: 20 mm Well BytesTo 🗸 Verify None 💌	
RIS DTR BaudRat 115200	-
SEND	-
AI command input	
www.daxia.com S:100 R:192 COM3 Opened area,enter to send	

4 Material List

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