

Radar Firmware Upgrade User Manual



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History Version

Date	Version	Version Description
2017-06-23	1.0.8	Instruction on installation and operation of update

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1 Software Installation

In order to upgrade the radars in different operation systems, we offer two software tools for the upgrade: Setup.exe Version and Quick-to-use Version. Both versions can not be installed in C (O/S) Disk. Quick-to-use Version do not contain .NET 4.0 package, need the user to download.

1.1 Setup.exe Version

Open the software pack, double click the .exe file, and install the software to PC, meanwhile create a desktop shortcut. Then click “Next” for installation.

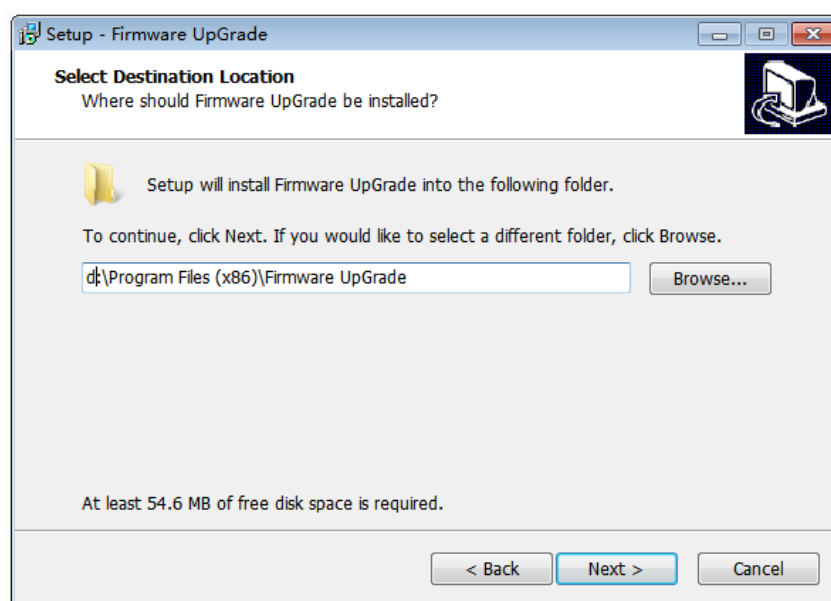


Figure 1 Software Installation-Step1

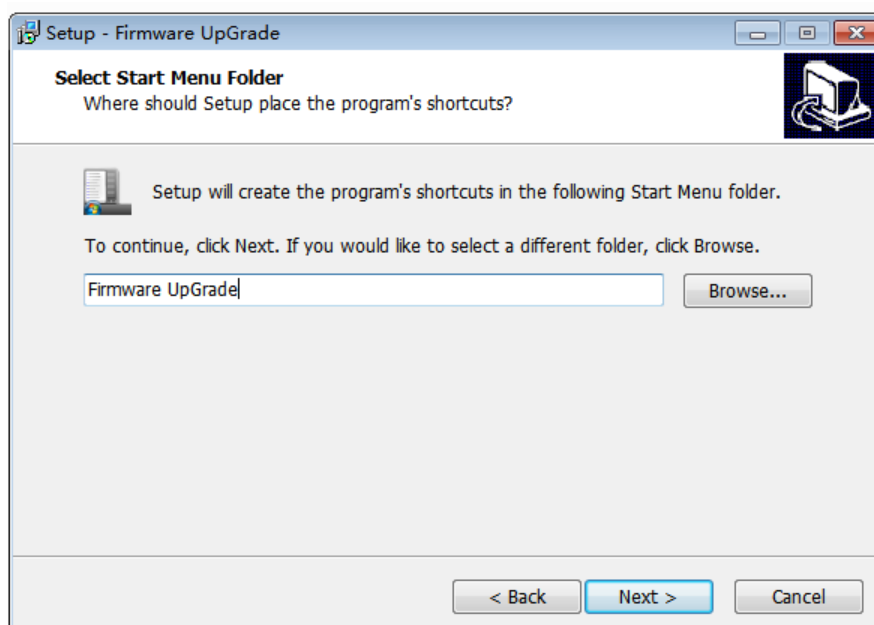


Figure 2 Software installation-Step2

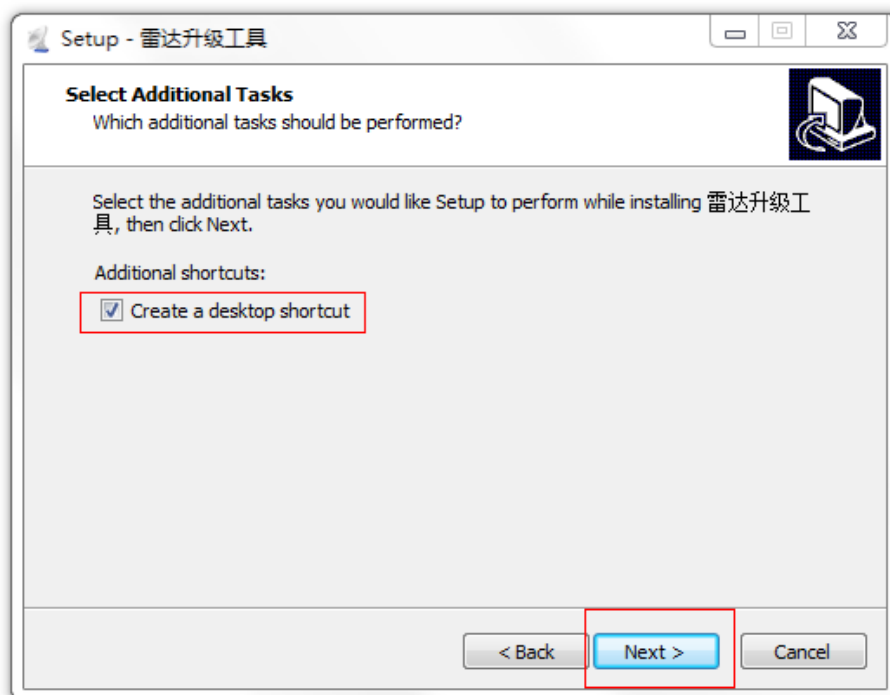


Figure 3 Software installation-Step3

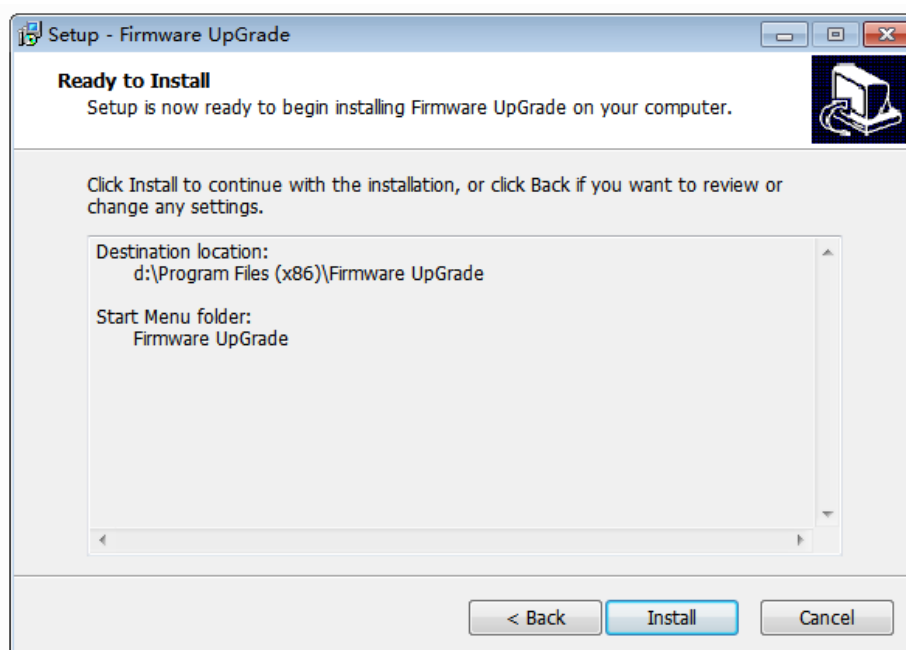


Figure 4 Software Installation-Step4

1.2 Quick-to-use Version

Release the software pack and store to the disk (except C Disk). The following is the upgrade tool program.

Config	2017/6/23 10:52	文件夹	
kerneldlls	2017/6/23 10:52	文件夹	
logs	2017/6/23 10:53	文件夹	
CKFA-Coder.bin	2017/6/5 14:34	BIN 文件	11 KB
ControlCAN.dll	2017/6/5 14:34	应用程序扩展	52 KB
dotNetFx40_Full_x86_x64_en	2017/6/5 14:35	应用程序	49,268 KB
DSP28335_Upgrade_Online.dll	2017/6/5 14:34	应用程序扩展	608 KB
Ginkgo_Driver.dll	2017/6/5 14:34	应用程序扩展	181 KB
HCNetSDK.dll	2017/6/5 14:34	应用程序扩展	2,553 KB
lancher-log4net	2017/6/5 14:34	XML 文档	2 KB
log4net.dll	2017/6/5 14:34	应用程序扩展	248 KB
NPlot.dll	2017/6/5 14:34	应用程序扩展	165 KB
RadarUpdateTools	2017/6/22 17:11	应用程序	76 KB
RadarUpdateTools.pdb	2017/6/22 17:11	PDB 文件	164 KB
RadarUpdateTools.vshost	2017/6/22 11:47	应用程序	24 KB
RadarUpdateTools.vshost.exe.manifest	2010/3/17 22:39	MANIFEST 文件	1 KB
STM32F3XX_Upgrded_Online.dll	2017/6/5 14:34	应用程序扩展	607 KB
STM32F3XX_Upgrded_Online.lib	2017/6/5 14:34	LIB 文件	5 KB
unins000.dat	2017/6/23 10:52	DAT 文件	6 KB
unins000	2017/6/23 10:52	应用程序	714 KB

Figure 5 Open the file and double click the tool

2 Application

This tool is for the upgrade of 3 communication devices: CAN communication like CAR25T、CAR70、CAR150、BSD series radars, COM communication likeNRA24、SP25、SP25T、SP70C series radars and WLAN communication like CAR150、NSR100、NSR100W、NSR300Wseries radars. The upgrade shall be supported on existing hardware version and early versions shall be pre-checked before operation. Following versions are able to upgrade.

Table 1Upgrade application range

Radar Type	Hardware Version Supported	Communication Port
CAR25T	V1.0.1 & above	CAN
CAR70	V1.0.1 & above	CAN
CAR150	V1.0.3 & above	WAN
NRA24	V1.0.2 & above	COM
SP25	V1.0.2 & above	COM
SP25T	V1.0.1 & above	COM
SP70C	V1.0.1 & above	COM
NSR100	V3.0.1 & above	WAN NSR-Series radar type
NSR100W	V1.0.3 & above	WAN NSR-Series radar type
NSR300W	V1.0.0 & above	WAN NSR-Series radar type

3 Hardware Connection

3.1 COM port upgrade connection

COM port is used to upgrade SP25、SP70、NRA24 and so on. The connection is to connect radar COM port to PC via USB port converter.

When R134、R135 is soldered, Micro USB is used for COM port upgrade. Hardware connection is as following:

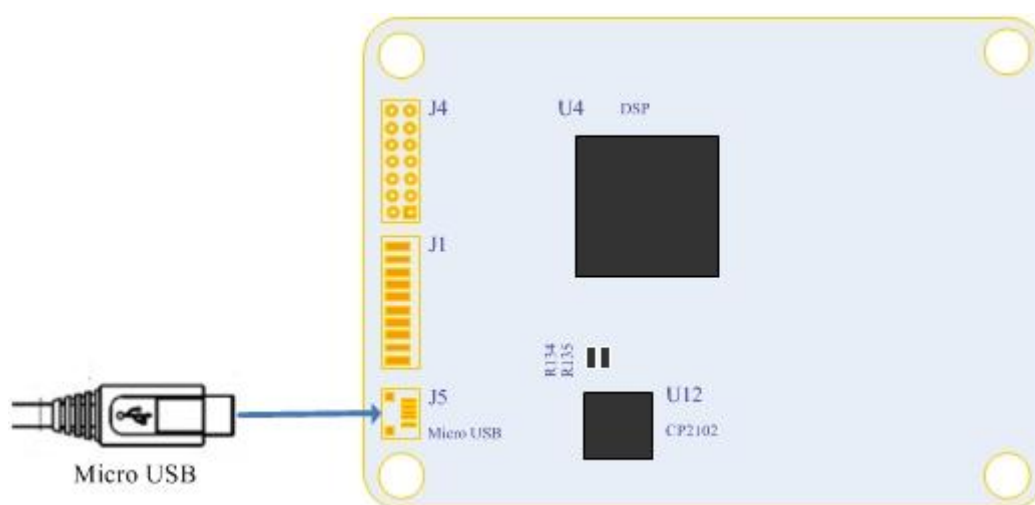


Figure 6 Micro USB Firmware Upgrade

When R134、R135 is not soldered, J1 cable is used for upgrade, hardware connection is as following:

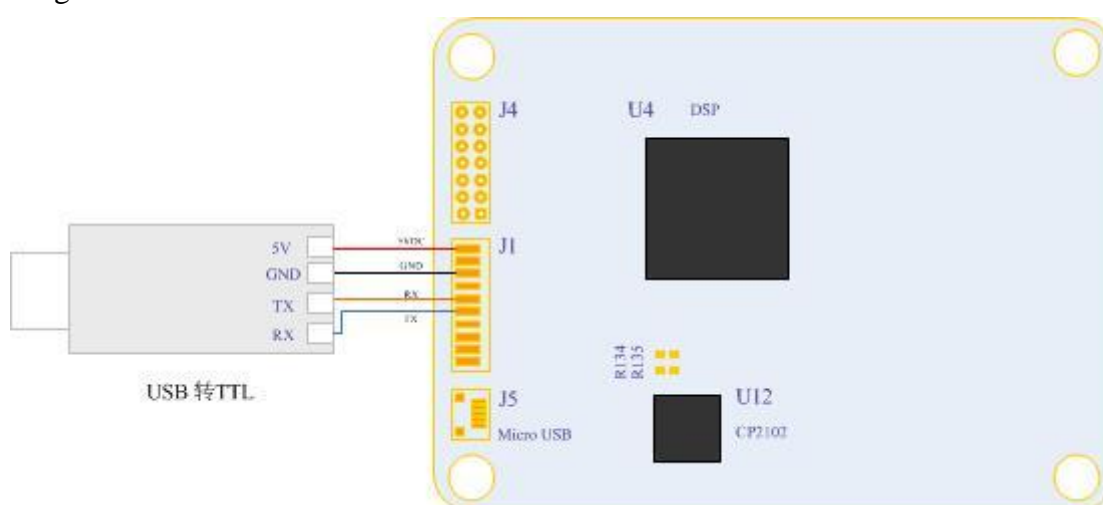


Figure 7 J1 Cable Firmware Upgrade

3.2 CAN Port Upgrade Connection

CAN port is used to upgrade CAR25T, CAR70, BSD and CAR150 etc radars. The hardware

connection is to connect CAN port to PC via USB/CAN adapter.

CAR70、BSD radars upgrade connection diagram is as following:

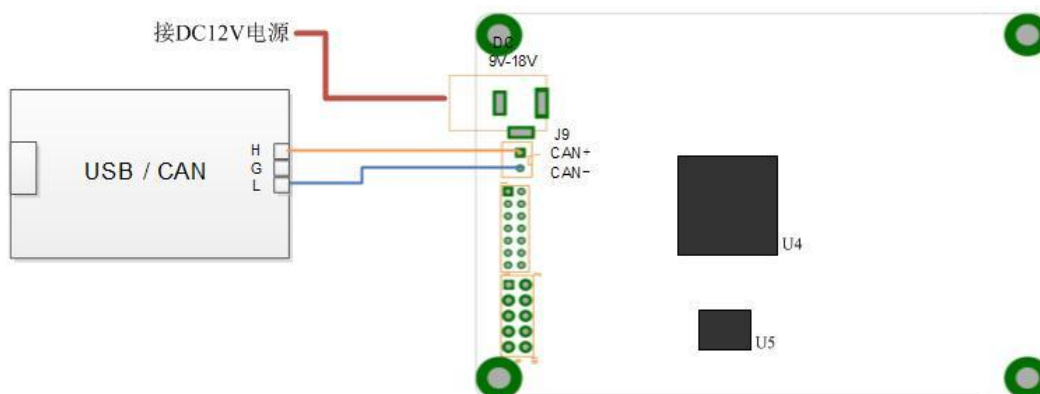


Figure 8 CAN Port Firmware Upgrade connection

CAR150 radar uses 8 PIN connector (TYCO: 1-1534229-1), the port is as following:

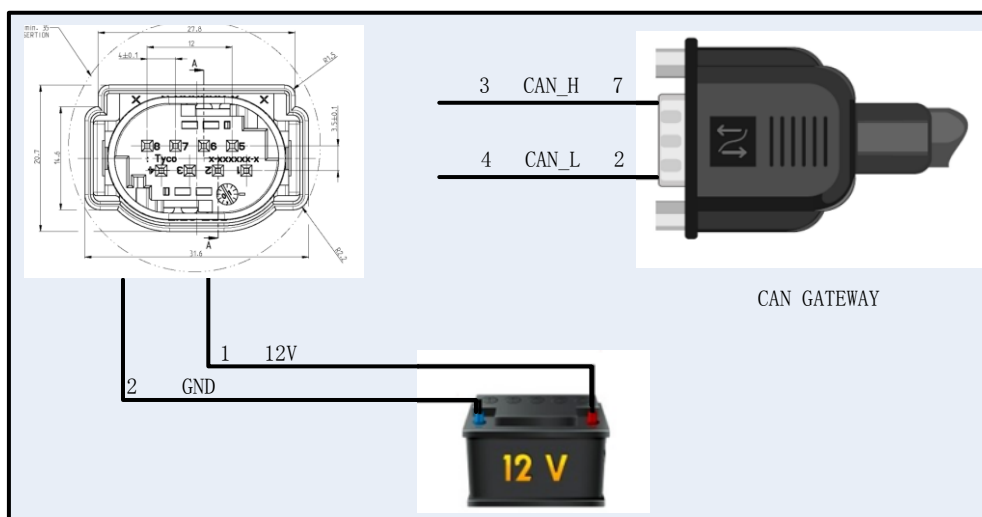


Figure 9 CAR150 Connection Diagram

Detailed port specification as following:

Table 2 CAR150 Port Details

No.	Definition	Range	Cable Color
1	POWER IN	6~36V DC	Brown
2	GND	/	Black
3	CAN_H	-58~58V DC	Yellow
4	CAN_L	-58~58V DC	Blue
5	/	/	
6	/	/	
7	/	/	
8	/	/	

For vehicle application, matching female jacket shall be used for connection. (TYCO: 1-967658-1) .

3.3 WAN Port Upgrade Connection

Method 1 : Radar connects to PC directly via Ethernet Port;

Method 2 : Radar connects to PC indirectly via Router.

4 Radar Firmware Upgrade

4.1 Choose Radar

Choose the radar type for upgrade as photo below.

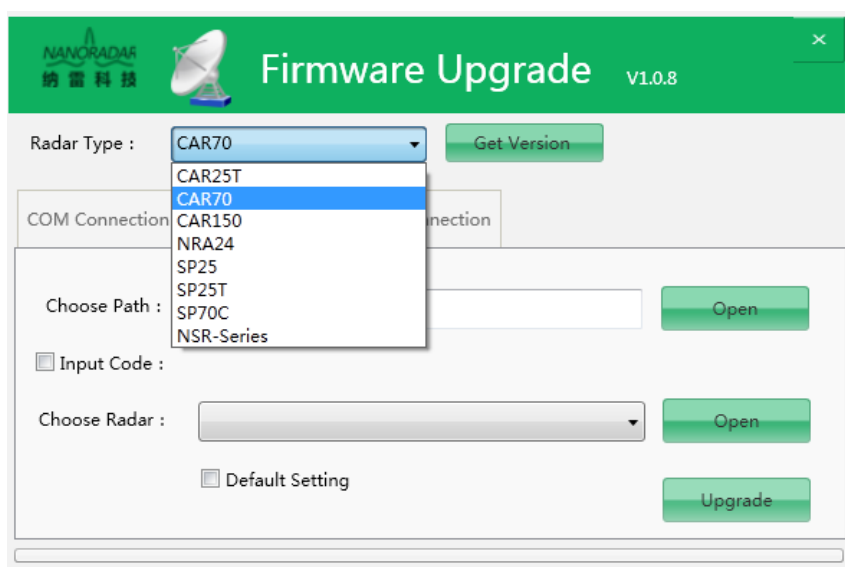


Figure 10 Choose Radar Type

4.2 Upgrade Radar

If SP70C is chosen, the upgrade default is via COM port as Photo 11. If NSR100W is chosen, then the Radar Type will be NSR-Series , the port will be WAN as Photo 12.

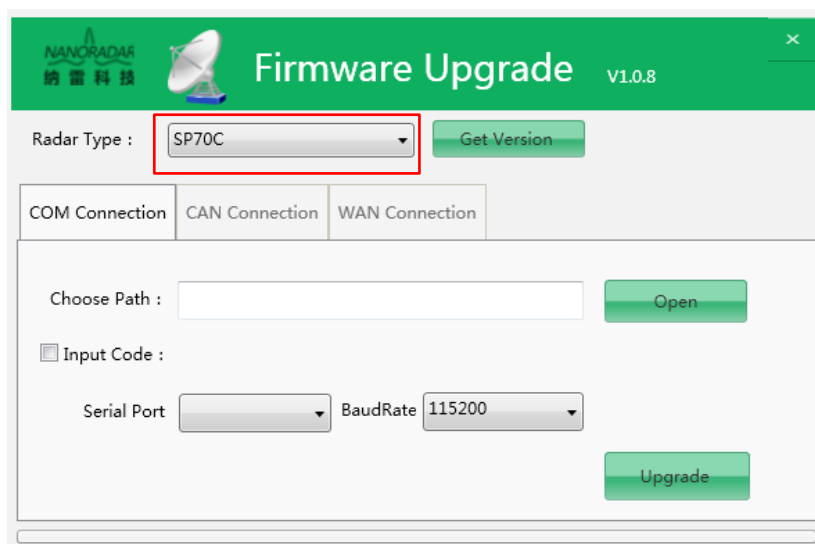


Figure 11 Upgrade radar via COM connection

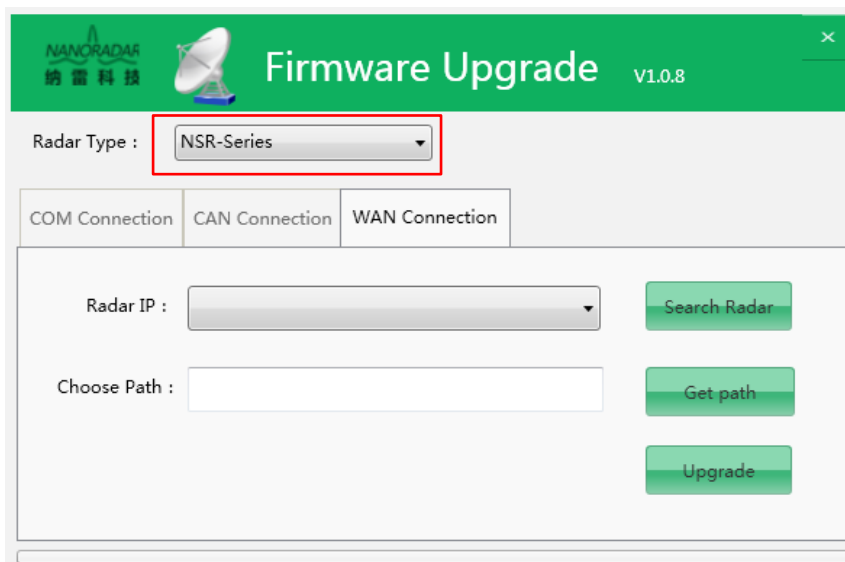


Figure 12 Upgrade radar via CAN connection

4.2.1 Upgrade radar via COM connection

a) Firstly, select the upgrade radar which use COM port ,for example NRA24,as shown in figure 13.

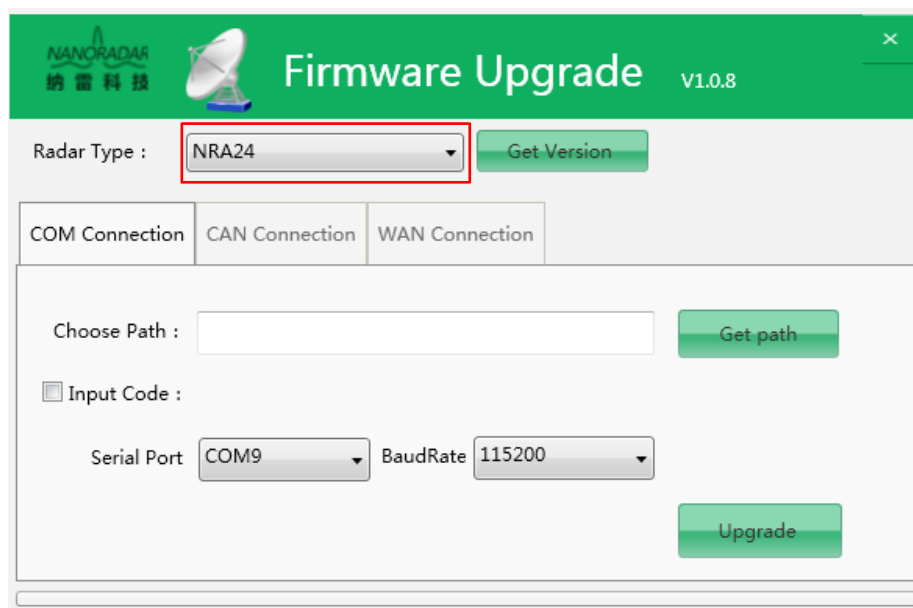


Figure 13 Select COM radar

b) Click on the "Get Version" button, and will get version of current radar , as figure 14.

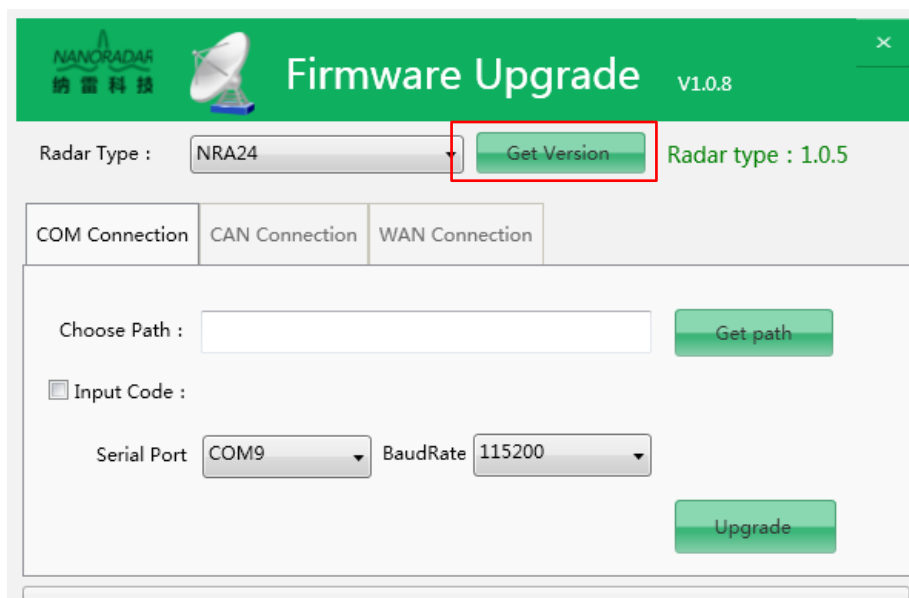


Figure 14 Get Version

c) Click on the "Get path" button, and select the firmware to be upgraded, with the format "*.Hex", as figure 15.

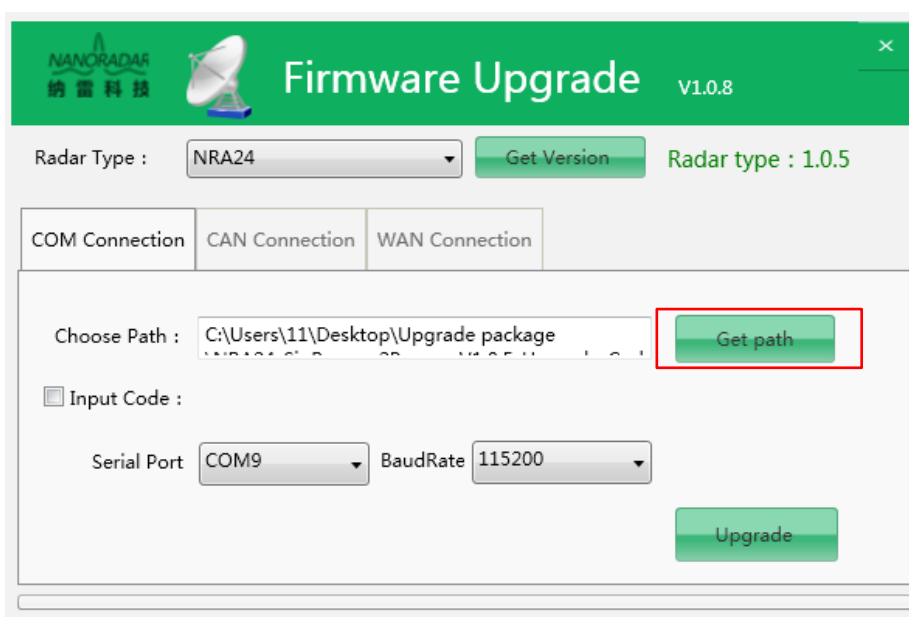


Figure 15 Get path

Then enter the upgrade password as shown in Figure 15. Generally there is no need to check this option. In case that the upgrade fails during the upgrading, check the "Enter Password" option and enter the correct password and re-upgrade.

d) Click on the "Upgrade" button, as figure 16. Serial Port and BaudRate is generally as default.

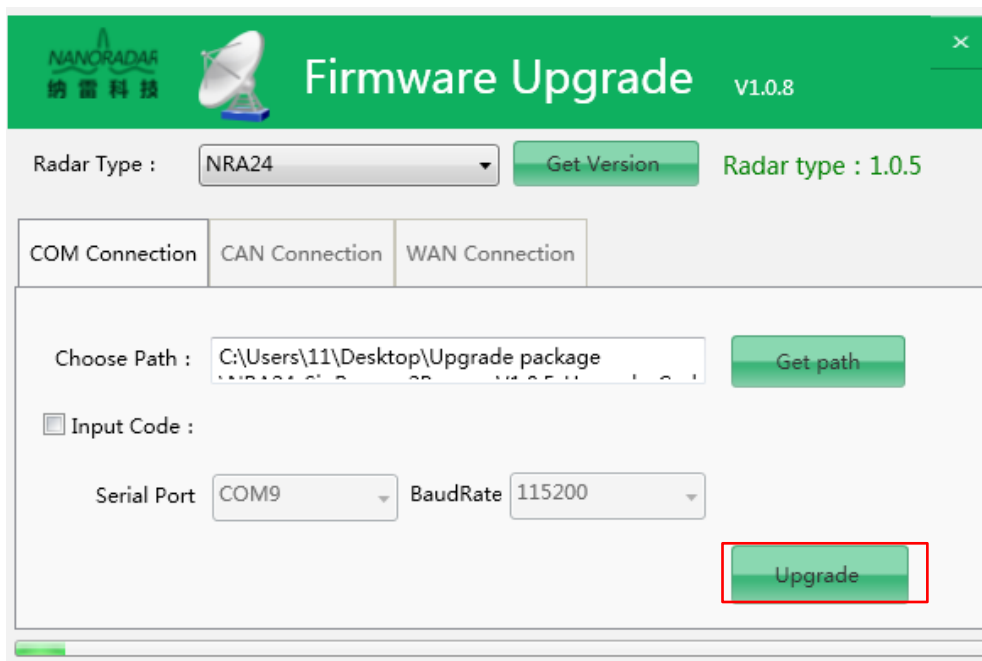


Figure 16 Upgrading

e) After dozens of seconds, it will pop up "Radar upgrade successful" window, click "ensure" button, upgrade work is completed, as figure 17.

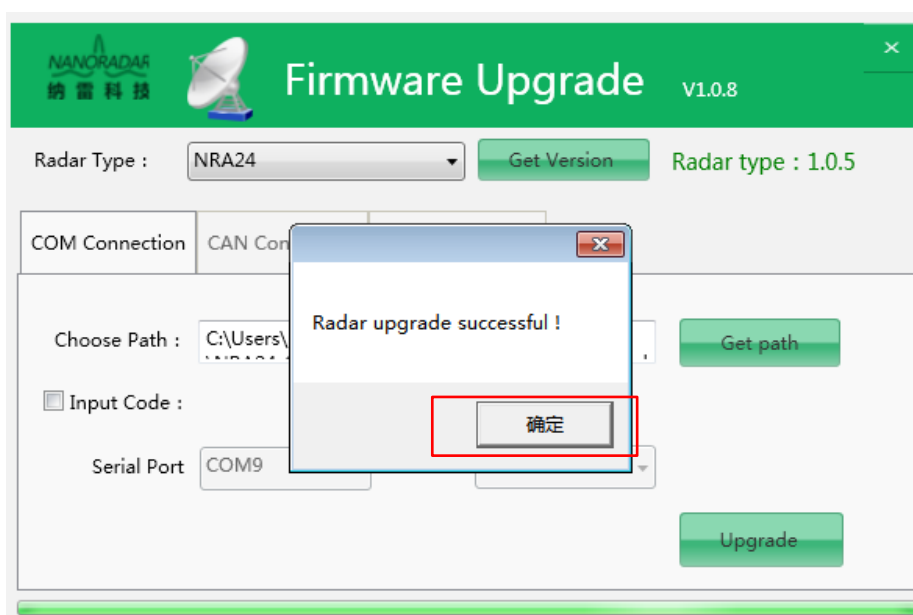


Figure 17 Upgrade successful

Note:

Select the corresponding serial number. If no manually modifying the serial port name, the serial name is generally "Silicon Labs CP210x USB to UART Bridge (COMx)". As shown in Figure 18, correspondingly select COM9. The default baud rate is "115200".

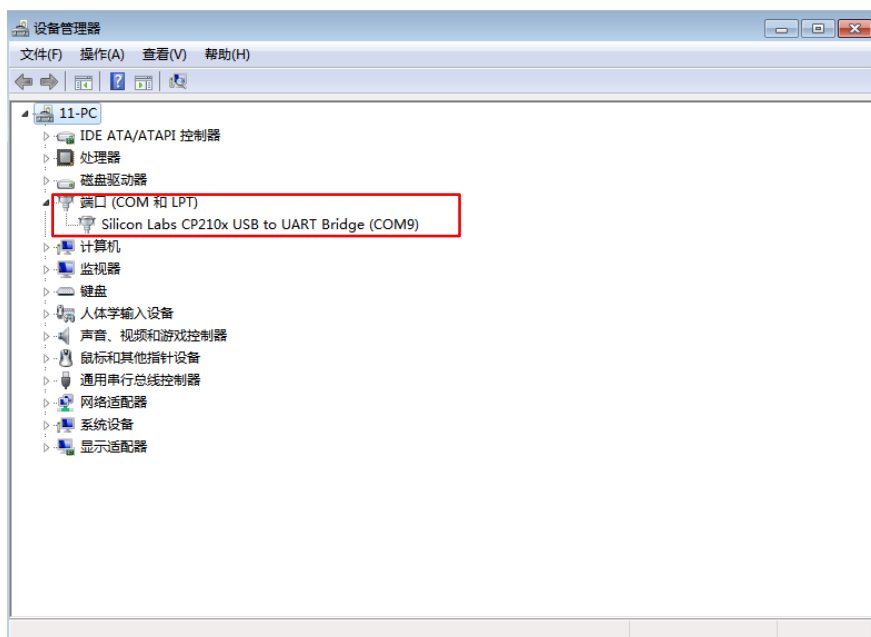


Figure 18 Select serial port number and baud rate

4.2.2 Upgrade radar via CAN connection

a) Select the upgrade radar for example CAR150, as figure 19. The radar is upgraded via CAN connection mode.

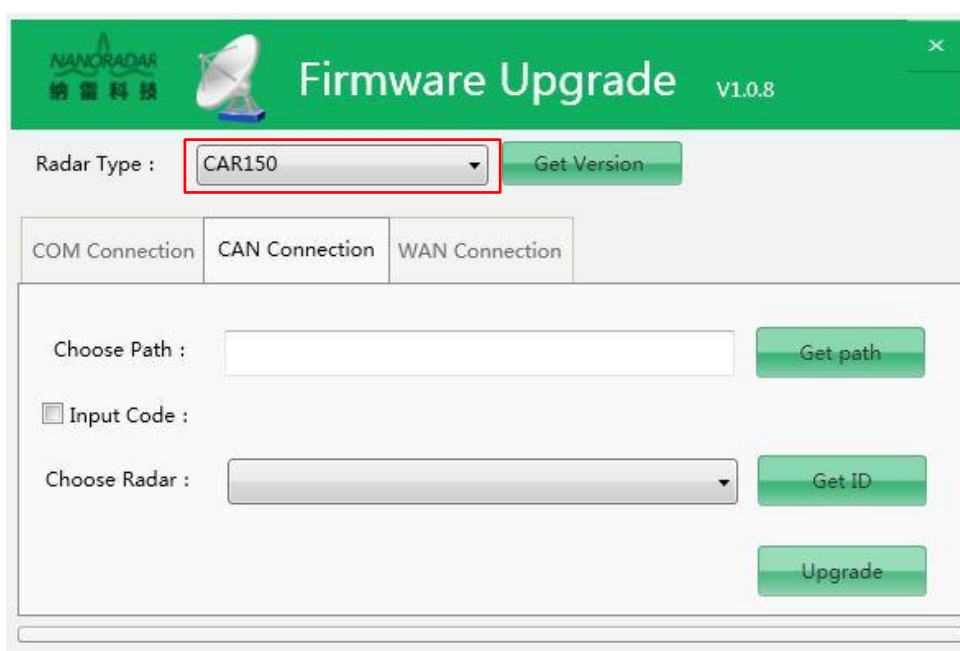


Figure 19 CAN upgrade

b) Click on the "Get Version" button, and will get version of current radar, as figure 20.

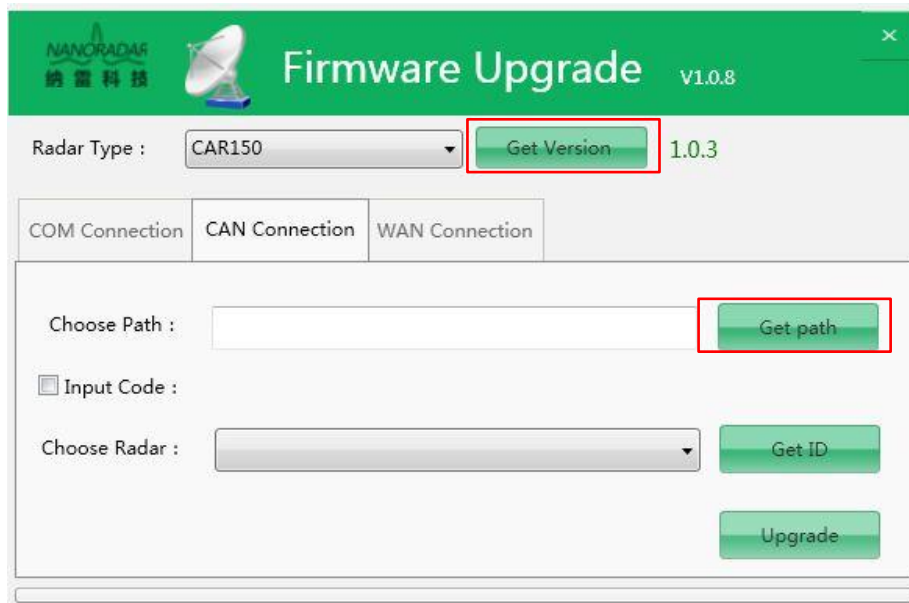


Figure 20 Get Version

c) Click on the "Get path" button, and select the firmware to be upgraded, Click on the "Get path" button, and select the firmware to be upgraded. For CAR25T, CAR70, BSD series, the firmware format is "*.hex", while for CAR150 model, the firmware format is "*.tgz".

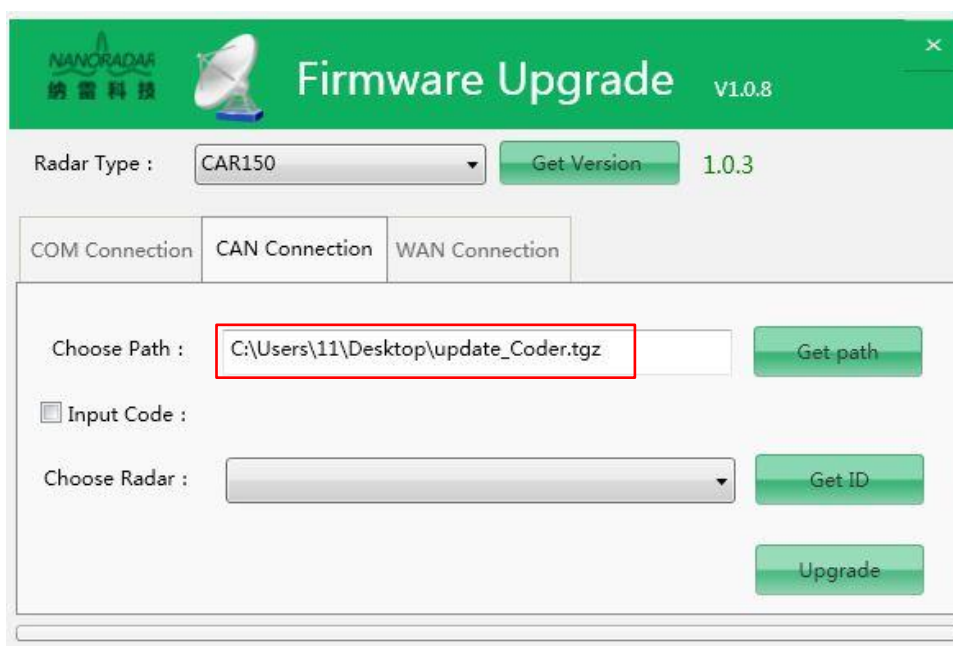


Figure 21 Get upgrade file path

d) Click on the "Get ID" button, select the ID which radar need to upgrade, because one CAN Bus can mount multiple radars , as figure22,select ID 0 radar to upgrade.

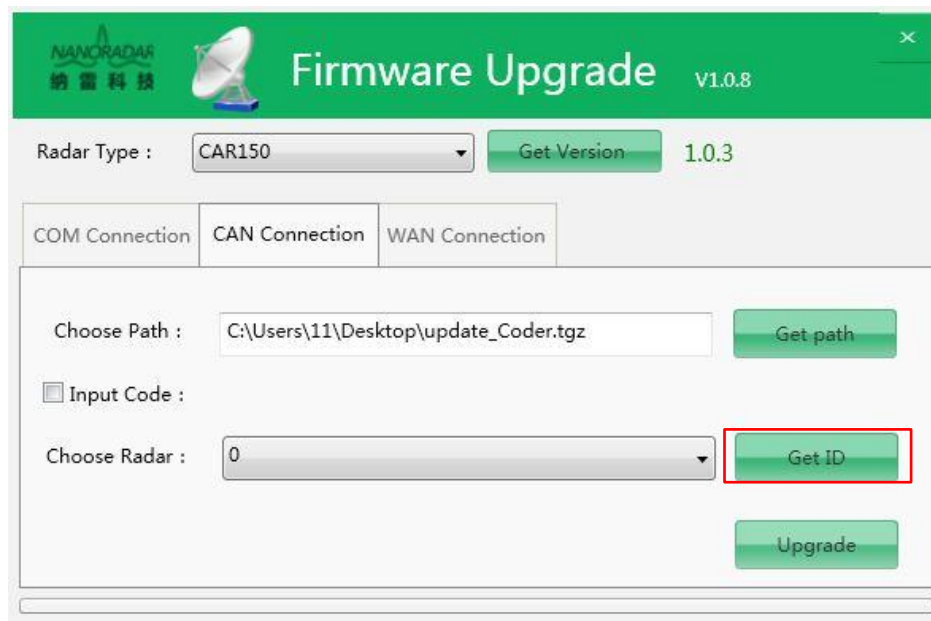


Figure 22 Get ID need to upgrade

e) Click on the "Upgrade" button, as figure 23.

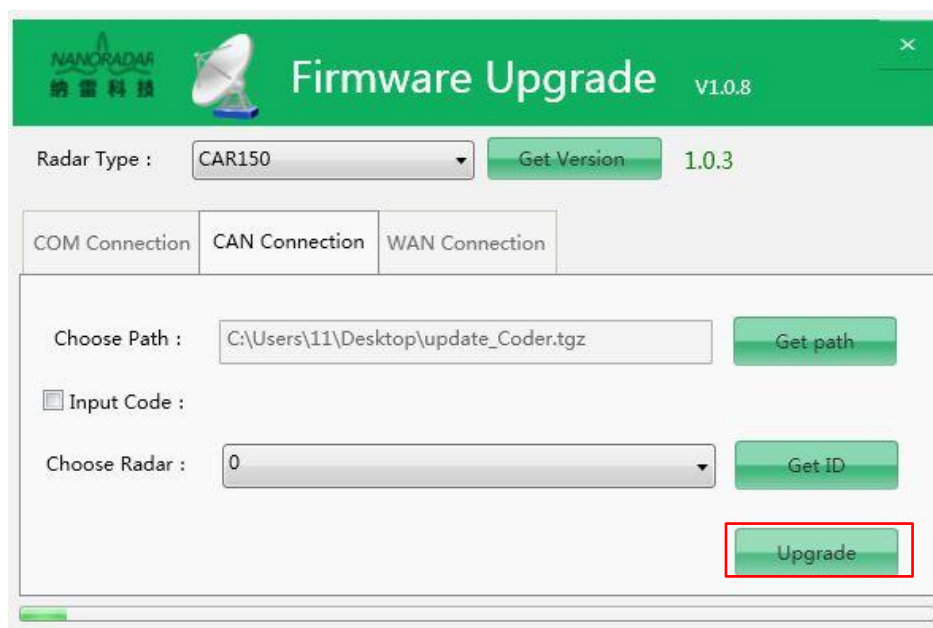


Figure 23 Upgrading

f) After dozens of seconds, it will pop up "Radar upgrade successful" window, click "Ensure " button, upgrade work is completed, as figure 24.

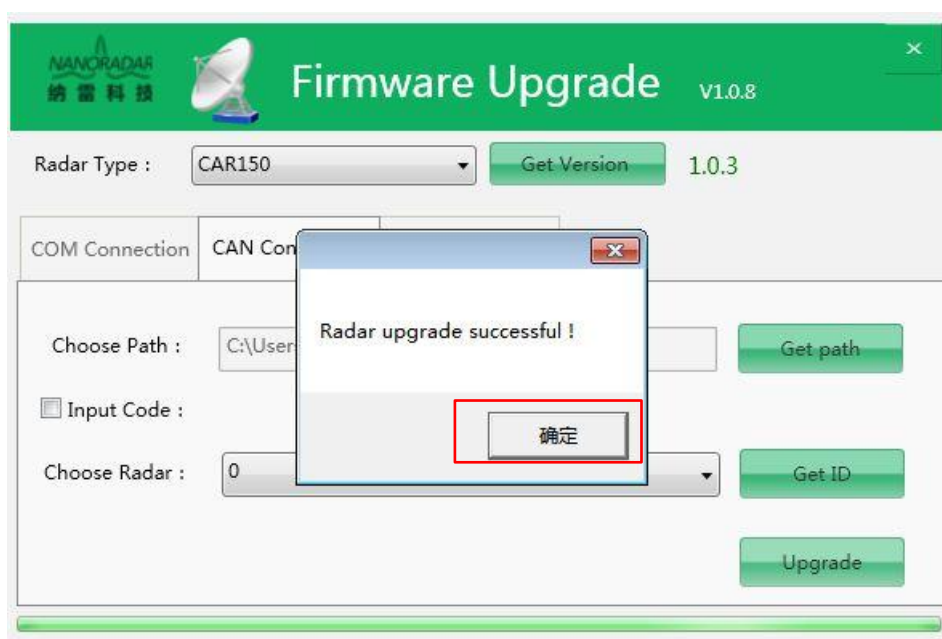


Figure 24 Upgrade successful

Note: There is no need to input the code, so do not check the box "Input Code".

4.2.3 Upgrade radar via WAN connection

a) Select the upgrade radar for example NSR100W, as figure 25. The radar is upgraded via WAN connection mode, click "Search Radar" button.

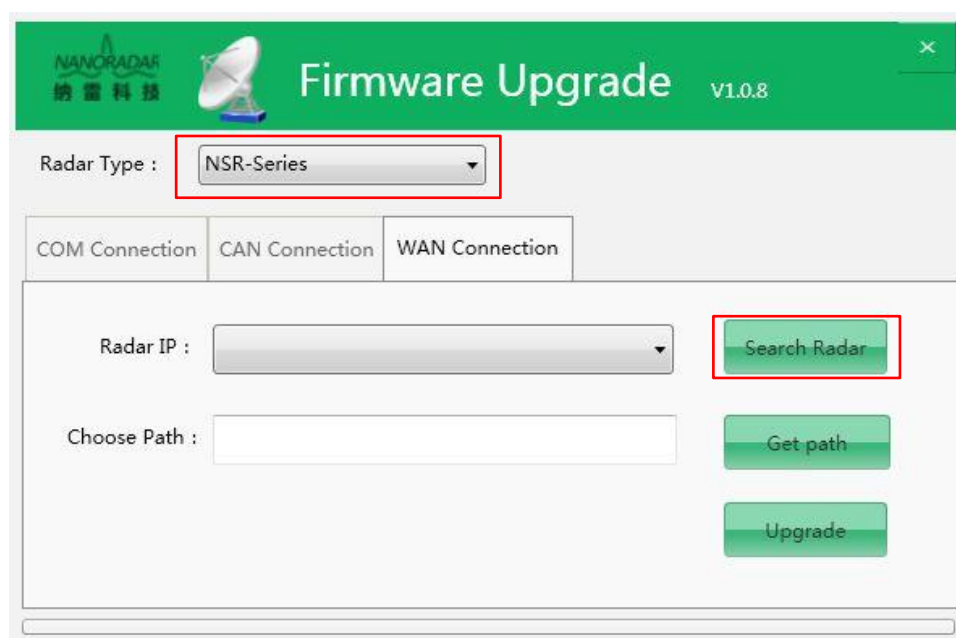


Figure 25 Select radar type

b) Select radar IP which need to upgrade. It may appear multiple IP if there have multiple radars in the same network segment as the current PC. The later of IP will appear the version of radar. The version of current radar is 4.0.2.

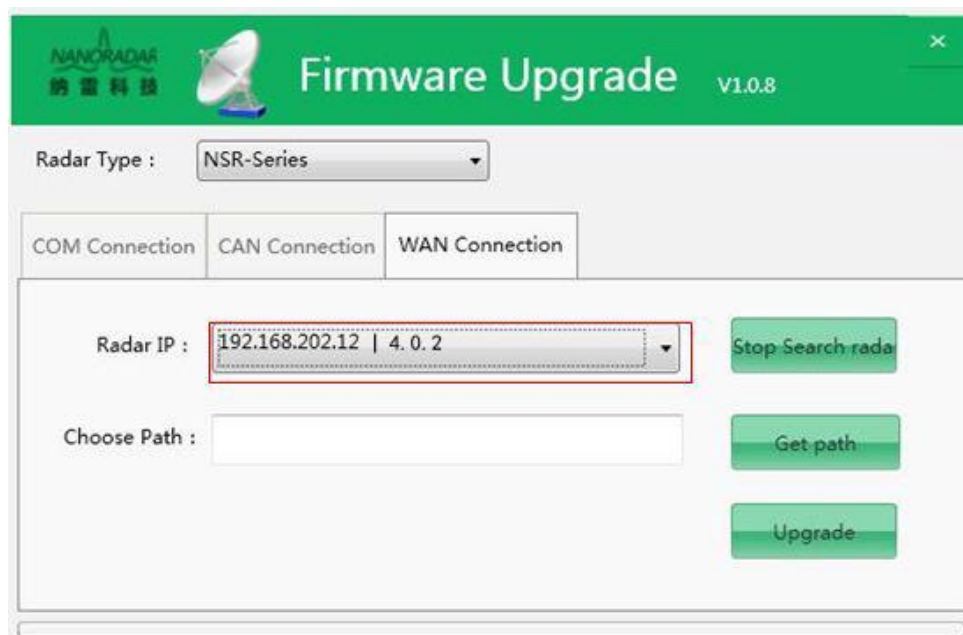


Figure 26 Select radar IP

Set the network, to ensure radar and PC are in the same network segment. As shown in figure 27, the radar IP is "192.168.202.12". Like in Figure 26, the PC and radar are set on the same network segment.

It also can modify radar IP though the tool of NSM Tools of NanoRadar as any network segment provided it is legal which you need.

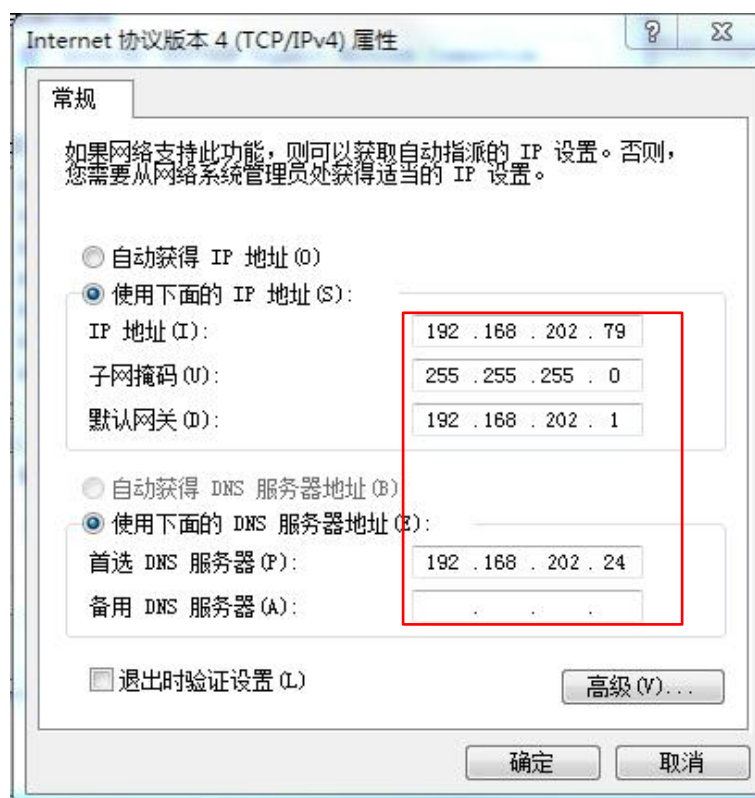


Figure 27 Set PC and radar in the same network segment

c) Click on the "Get path" button, and select the firmware to be upgraded. For CAR25T, CAR70, BSD series, the firmware format is "*.hex", while for CAR150,NSR100, NSR100-3D,NSR100W,and NSR300W model, the firmware format is "*.tgz".

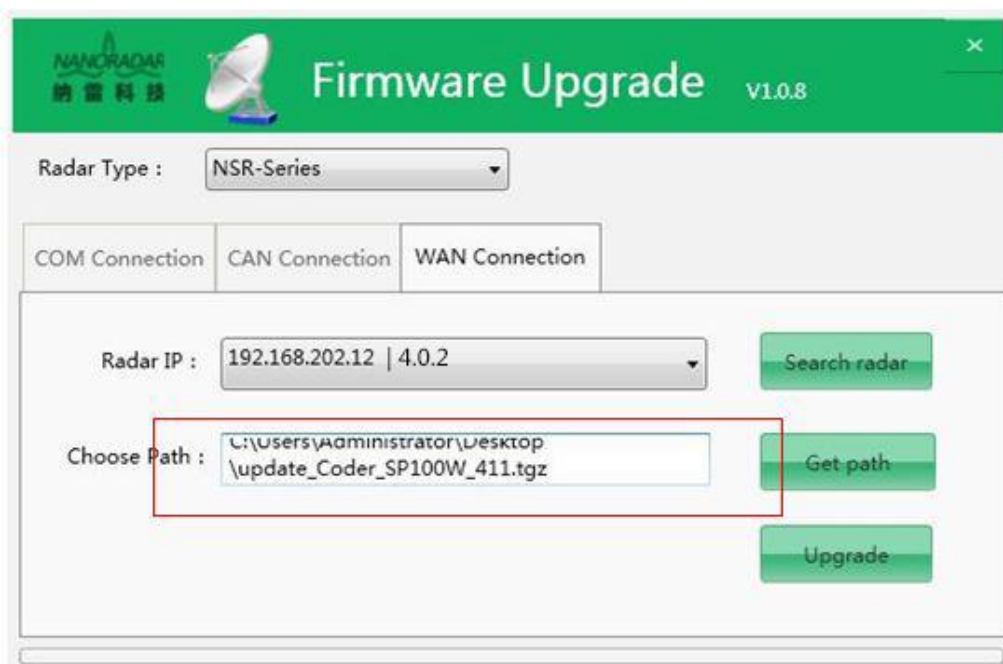


Figure 28 Obtain the radar firmware

d) Upgrade the firmware.

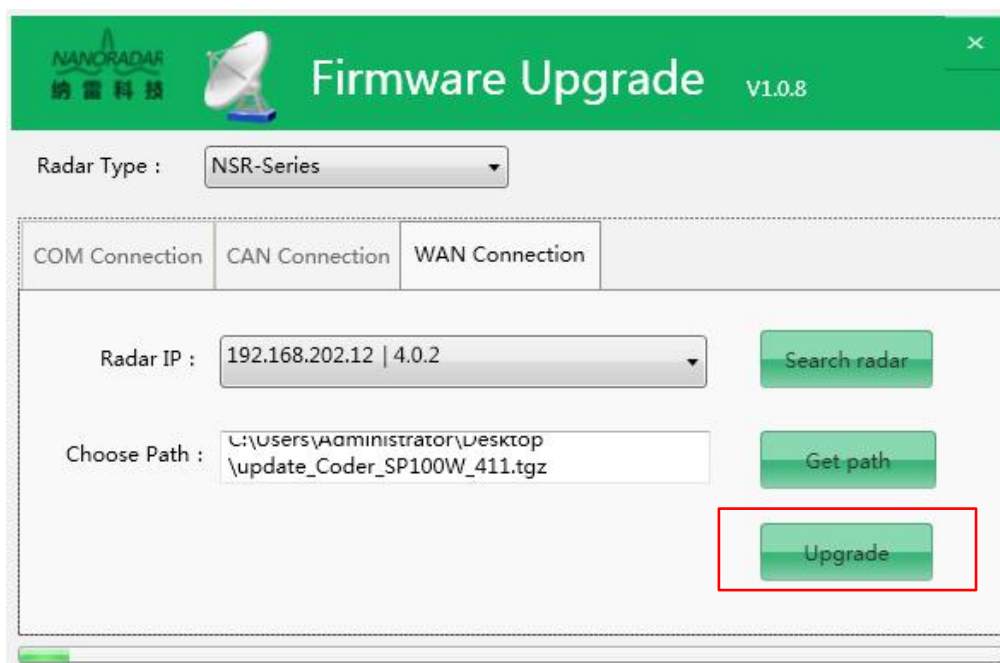


Figure 29 Upgrade the firmware

e) After dozens of seconds, it will pop up "Radar upgrade successful" window, click "ensure " button, upgrade work is completed, as figure 29.

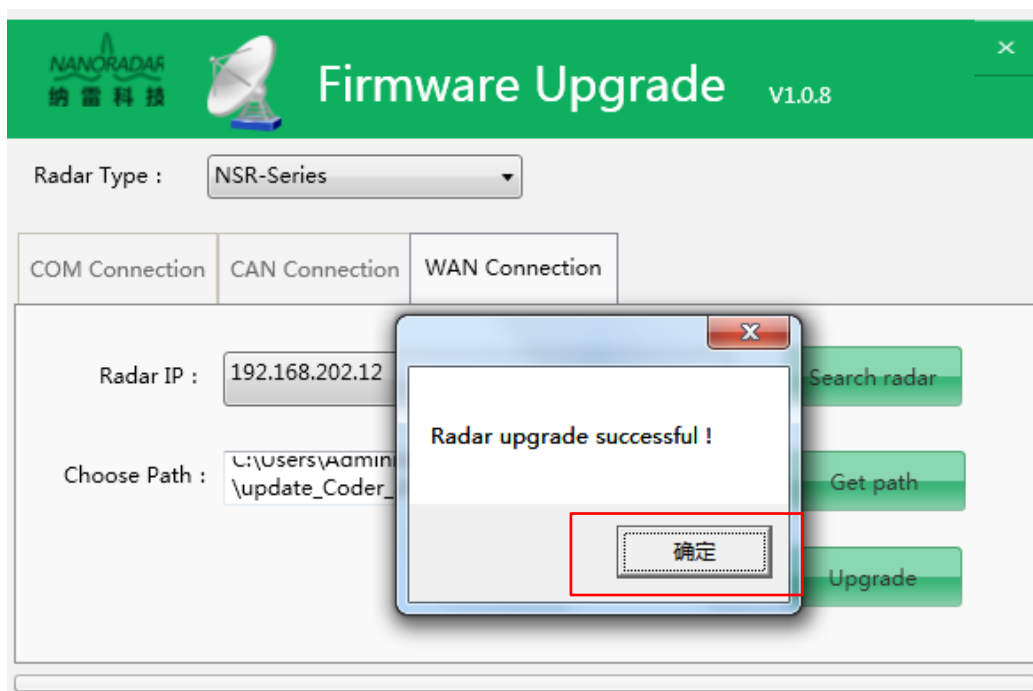


Figure 30 Radar upgrade successful

Note:

Guarantee that the radar is not be occupied by other link, otherwise it will pop up "Radar upgrade failure".

5 Exit the software

As in figure 31, click on the right side of the software "X" button, to exit the software.

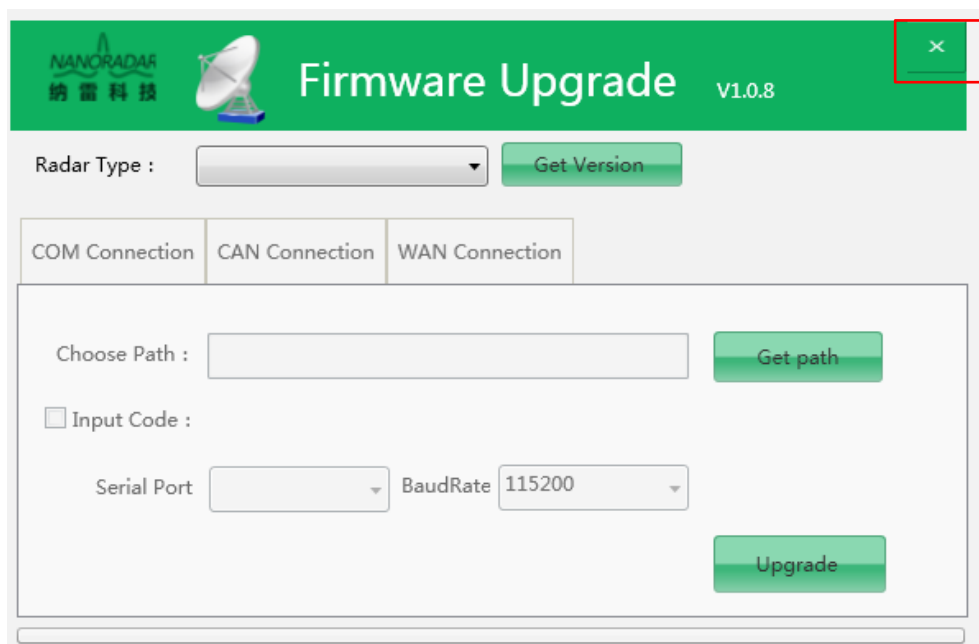


Figure 31 Exit the software

6 Troubleshooting

Unlock failed: check if the upgrade password is correct. And re-plug the USB cable, enter the correct upgrade password (In case of no password, uncheck the "Input code" option), and re-upgrade the program.

Erase failed: plug the USB cable and re-upgrade the program.

Write failed: plug the USB cable and re-upgrade the program.

Connecting device failed: (1) check if the line is connected. (2) check whether the driver is installed. (3) check if the serial port and baud rate are selected correctly. After confirming the check, plug the USB cable and re-upgrade the program.

Upgrading file failed: re-select the upgrade file, plug the USB cable, and re-upgrade the program.

Other errors: plug the USB cable, and re-upgrade the program.