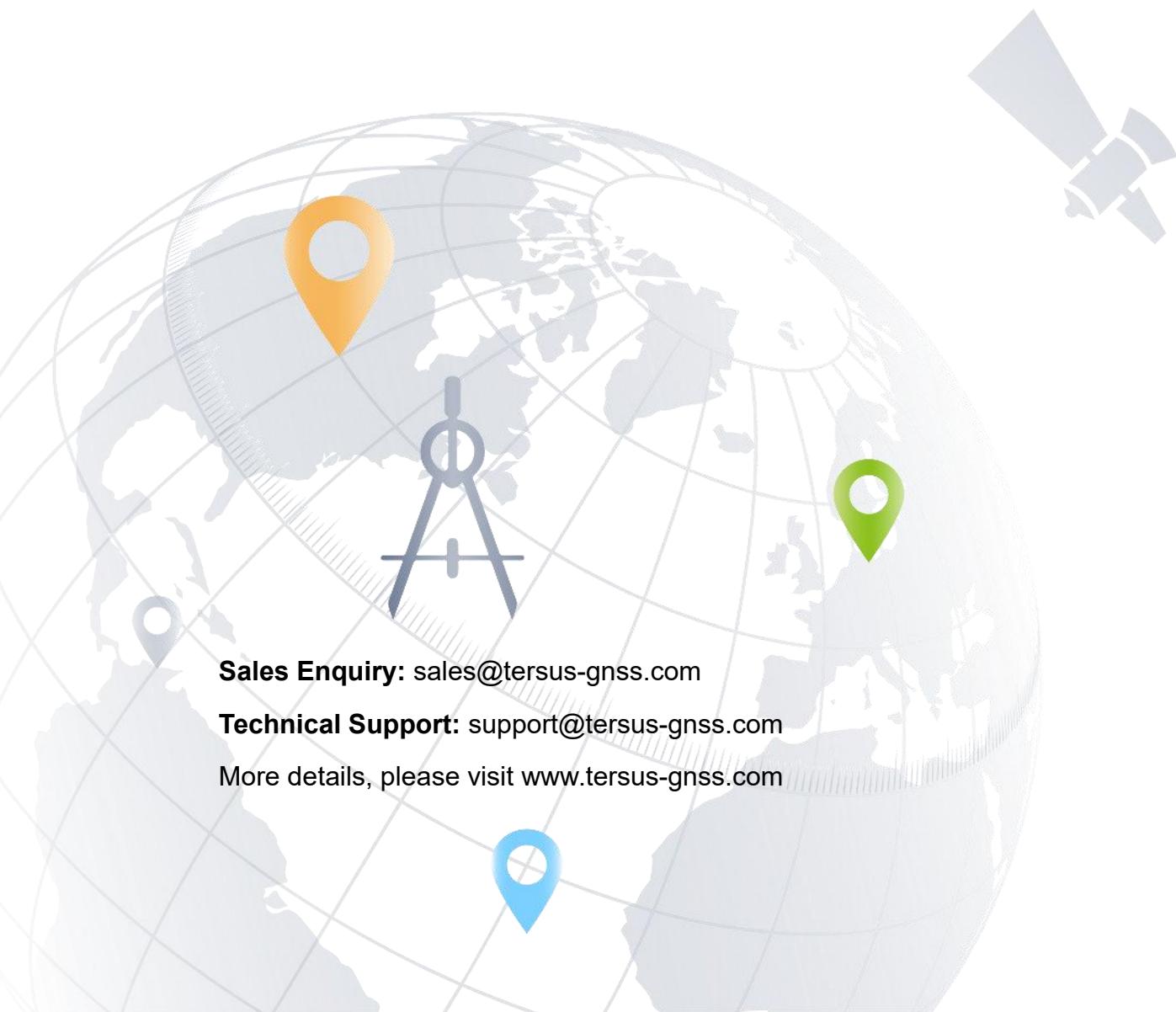


# Oscar GNSS Receiver MFGTOOLS Upgrade Guide

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## 1. Interfaces of Oscar

The bottom of Oscar receiver is shown as below.

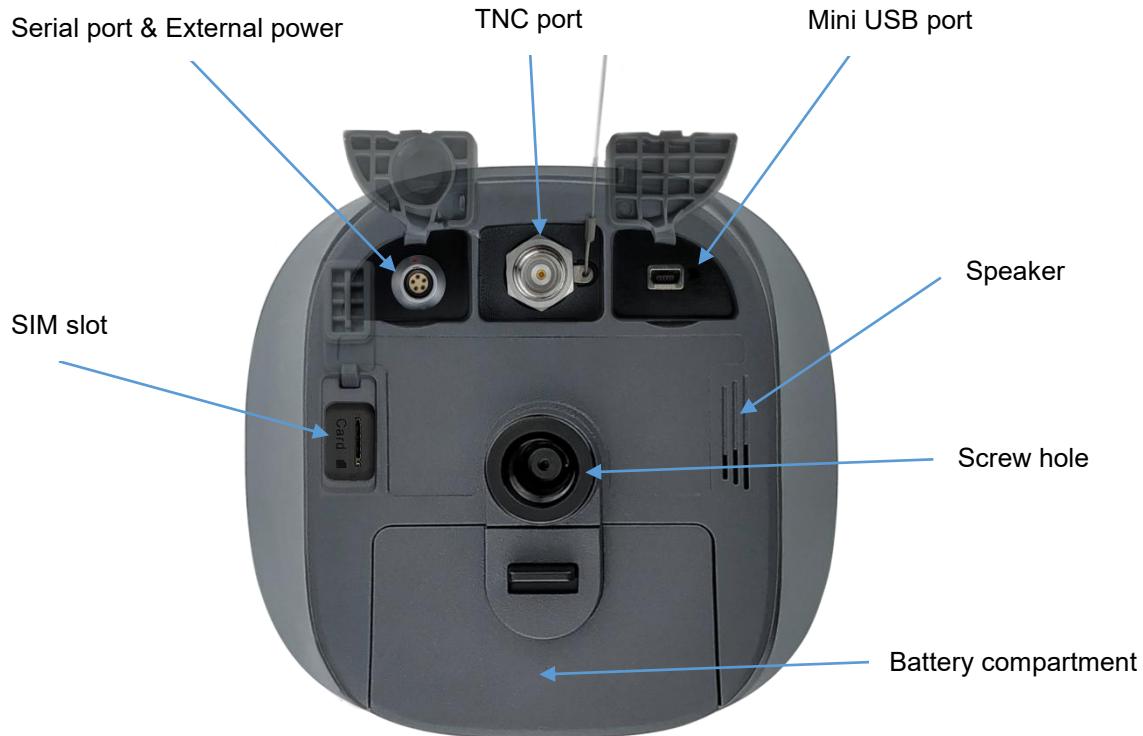
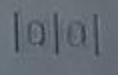


Figure 1 Bottom of Oscar

Table 1 Interfaces on the bottom side

Icon	Connector	Name	Connections
		Serial port & External power	External power, RS-232 communication, external radio
		Mini USB port	Device, computer, USB drive
		SIM slot	Nano SIM card
-		TNC port	410-470MHz Radio Antenna
		Screw hole	It is a 5/8" x 11 UNC-2B connector for corresponding connector and pole.

## 2. MFGTOOLS Upgrade

The detailed steps of MFGTOOLS upgrade are as follows.

- 1) Open the Mfgtools file folder.
- 2) Select “mfgtool2-yocto-mx-evk-qspi-nor-n25q256a.vbs”, double click to open this VBScript. A dialog box of MfgTool will appear.

mfgtools > Mfgtools\_V2.0.0.454747 > Mfgtools\_V2.0.0.454747 >

名称	修改日期	类型	大小
Document	2021/5/21 15:47	文件夹	
Drivers	2021/5/21 15:47	文件夹	
More_scripts	2021/5/21 15:47	文件夹	
Profiles	2021/5/21 15:47	文件夹	
Utils	2021/5/21 15:47	文件夹	
.gitignore	2016/9/13 11:53	GITIGNORE 文件	1 KB
cfg.ini	2016/9/13 11:53	配置设置	1 KB
libMfgToolLib.so	2016/9/13 11:53	SO 文件	6,393 KB
linux-cvbs.sh	2016/9/13 11:53	SH 文件	2 KB
linux-runvbs.sh	2016/9/13 11:53	SH 文件	1 KB
linux-ver-usage	2016/9/13 11:53	文件	1 KB
MfgTool.log	2021/6/8 16:38	文本文档	0 KB
MfgTool2.exe	2016/9/13 11:53	应用程序	1,955 KB
<b>mfgtool2-yocto-mx-evk-qspi-nor-n2...</b>	<b>2019/5/22 11:42</b>	<b>VBScript Script ...</b>	<b>1 KB</b>
mfgtoolcli	2016/9/13 11:53	文件	200 KB
MfgToolLib.dll	2016/9/13 11:53	应用程序扩展	2,192 KB
UICfg.ini	2016/9/13 11:53	配置设置	1 KB

Figure2 the Mfgtools file folder



Figure3 the dialog box of MfgTool

- 3) Connect ‘Serial-5pin to DC JACK & DB9 Male Cable’ to ‘Serial Port’ (aligning red spots on cable and port) and connect ‘DB9 Female to USB Type

A Male Converter Cable' to DB9 Male Cable and a computer. Connect 'Mini-USB Cable' to the 'Mini-USB Port' on the receiver and a computer. External power supply provides 12V voltage to the receiver. Do not turn on the receiver.



Figure4 Cable connection

4) Open the battery compartment cover, do not put the battery inside.



Figure5 the battery compartment

5) Prepare tweezers or metal cable.



Figure6 the tweezers and metal cable

- 6) Put the tweezers or metal cable into the hole in the battery compartment.



Figure7 the tweezers or metal cable touched the hole

7) Press and hold the power button for 3 seconds to turn on the receiver, the Mfgtool shows “符合 HID 标准的供应商定义设备” and then click ‘start’. If the Mfgtool shows ‘No device connected’ or no response, you should turn off the receiver and make sure the tweezers or metal cable touches the hole in the battery compartment , then turn on the receiver again.

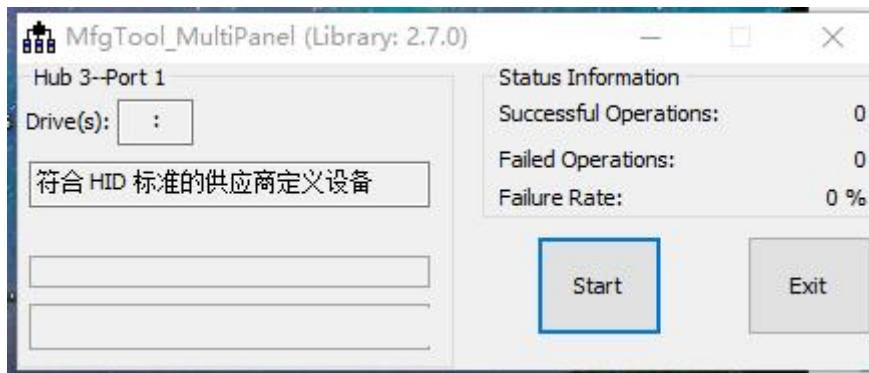


Figure8 the MfgTool interface

8) After clicking ‘start’, pull the tweezers or metal cable out of the hole in the battery compartment, don’t touch the receiver and the computer. Waiting for the upgrading, which needs a few minutes.

9) When the Mfgtool appears ‘Done’, and both progress bars turn green, click the button ‘Stop’, next click the button ‘Exit’.

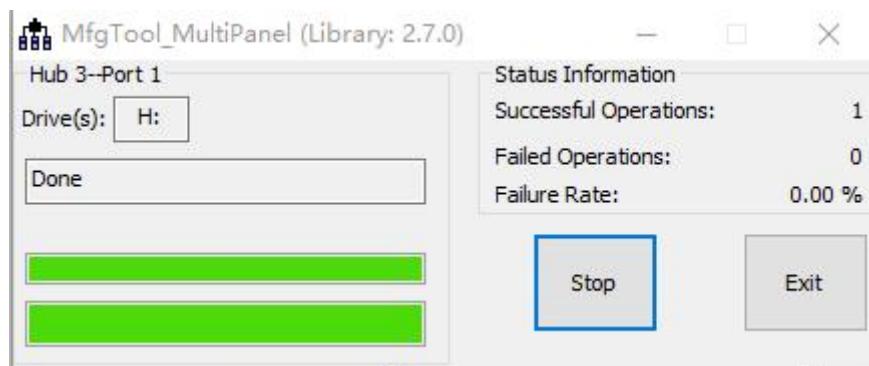


Figure9 the MfgTool interface

10) Unplug the ‘Serial-5pin to DC JACK & DB9 Male Cable’. Make sure the receiver is powered off.

11) Connect ‘Serial-5pin to DC JACK & DB9 Male Cable’ to ‘Serial Port’, and press and hold the power button for 3 seconds to turn on the receiver.

12) View Oscar firmware version.

When Oscar GNSS receiver is powered on, to connect Oscar, put controller

near the NFC logo on Oscar, the controller pair Bluetooth with Oscar automatically; or click [Device] -> [Connect] under an opened project, and select [Oscar] for the Device Type, select [Bluetooth] for the Connect Type. Click [Connect Config] to search and pair the Bluetooth address of Oscar. The antenna is selected as [Oscar] by default. Then click [Connect] to enable the communication between controller and Oscar.

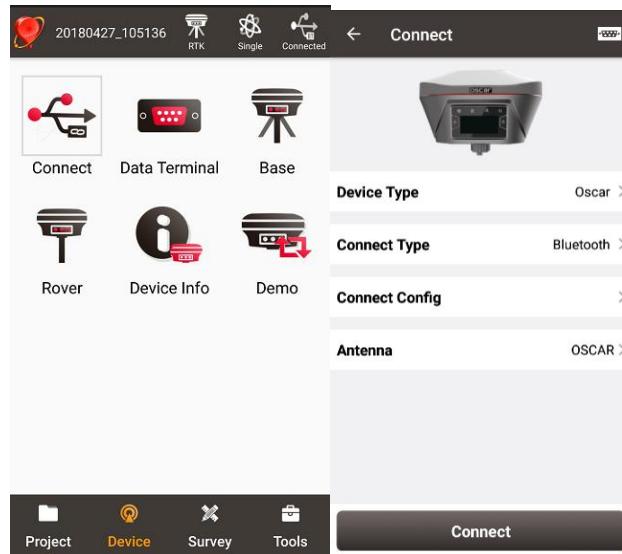


Figure 10 Connect to Oscar via Bluetooth

Click the device information icon  on the top tool bar of Nuwa, the Oscar info is shown as below. You can view Oscar firmware version.

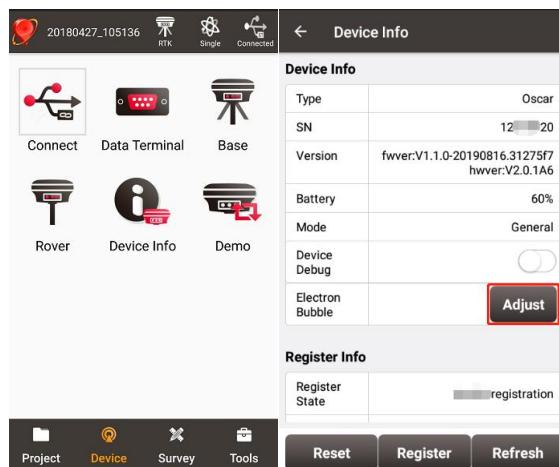


Figure 11 View Oscar firmware version

For Ultimate and Advanced versions, you can also check the firmware version by switching the button. In the [device information] -[GNSS information]-[firmware version], you can view the firmware version of the GNSS board inside Oscar. In the [device information] - [software version], you can view Oscar firmware version. If it is consistent with the firmware version in the Mfgtools, the firmware upgrade is successful.

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