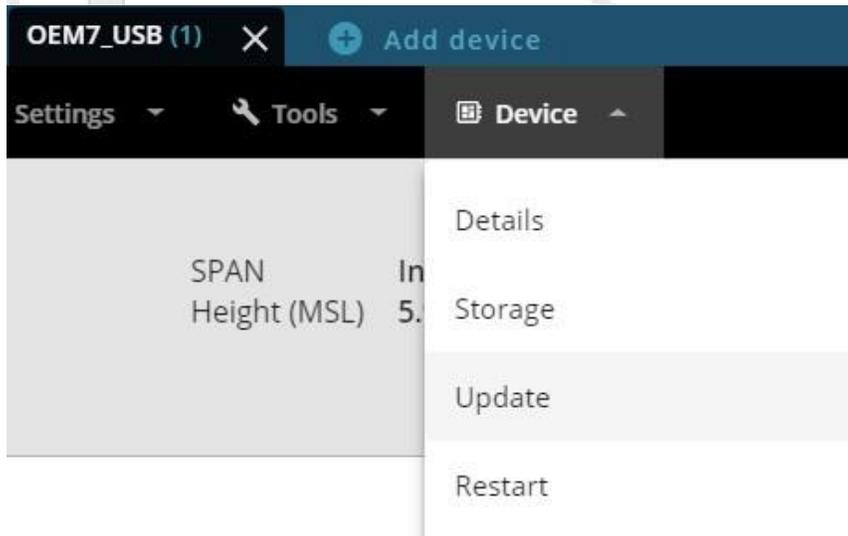


Firmware Upgrade Instructions

OEM7 Series

Using NovAtel Application Suite

1. Run NovAtel Application Suite and connect receiver.
2. Click on Device under the main top menu. Click on Update.



3. Click on Browse to select the OEM7/PwrPak7 firmware or Web UI file.

Device / Update

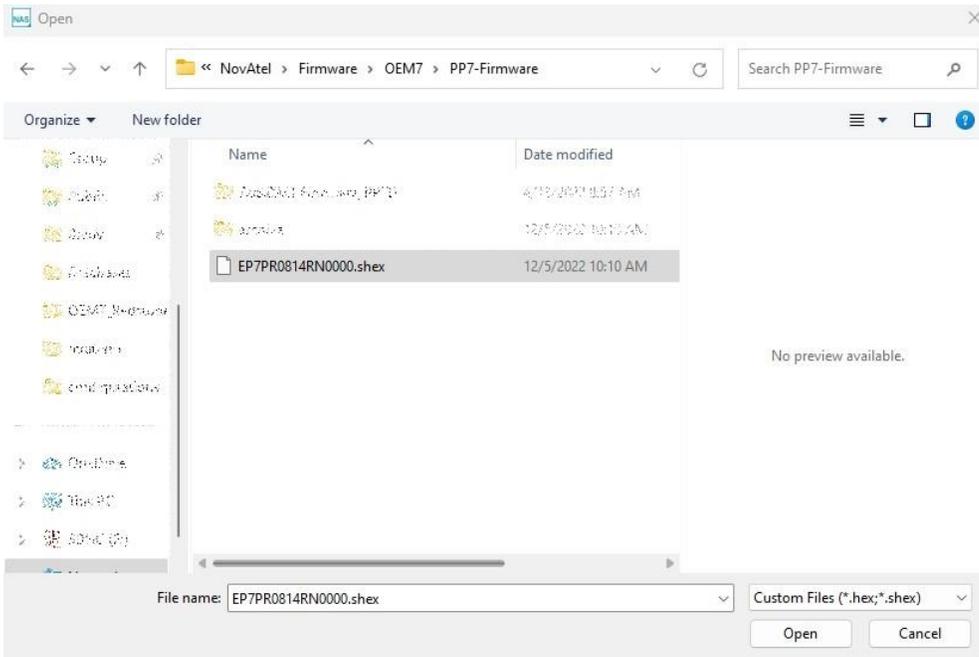
Update Firmware or Software

Current Firmware Version	OM7CR0810RN0000
Current Setup and Monitor (Web) Version	1.9.0

Select File

Update files have a ".hex" or ".shex" file extension.

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4. After selecting the file, click on Apply.

5. Firmware or Web UI will be installed. Wait for the process to complete and restart.



Updating



Restarting

6. If no errors occur, your receiver should be updated.

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Using OEM7 WebUI (Setup and Monitor, 1.x.0)

Using this method assumes that you already have a connection either through an ethernet cable or WiFi (PwrPak7). Depending on the receiver type, you may need to enable ethernet connectivity using the command.

```
ETHCONFIG ETHA AUTO AUTO AUTO AUTO.
```

This will need to be done via serial cable connection or USB connection. Once this command is completed, you can get the assigned IP address with the command

```
[USB1]log ipstatus
<OK
[USB1]<IPSTATUS USB1 0 95.5 UNKNOWN 0 167.000 02444020 7fe2 15341
< 2
< ETHA "192.1.1.10" "255.255.255.0" "192.168.128.1"
< WIFI "192.168.19.1" "255.255.255.0" ""
< 1
< "8.8.8.8"
```

Enter the IP address into a web browser.

If using WiFi, connect to the NovAtel WiFi connection and then use the WIFI IP address. The password for WIFI is on a label printed on the bottom of the PwrPak7 receiver.

1. After starting the Web UI, click on Device on the main menu



2. You will be prompted for a password. The password will be the receiver enclosure serial number (PwrPak7) or card serial number (board level receiver or CPT7).

A screenshot of a 'Login' dialog box. The dialog has a title bar with 'Login' and a close button. Below the title bar is a 'Password' label and a text input field with a password icon. At the bottom of the dialog are two buttons: 'Cancel' and 'Log In'.

3. After providing the password, click on Update under the Device menu.

- Details
- Storage
- Update
- Restart

4. Click on Browse to select the OEM7/PwrPak7 firmware or Web UI file.

Device / Update

Update Firmware or Software

Current Firmware Version **OM7CR0810RN0000**

Current Setup and Monitor (Web) Version **1.9.0**

Select File

Update files have a ".hex" or ".shex" file extension.

Browse

Help **Apply**

Open

NovAtel > Firmware > OEM7 > PP7-Firmware

Search PP7-Firmware

Name	Date modified
NovAtel_Firmware_PP7	8/15/2021 10:17 AM
XP7-UI	12/5/2022 10:10 AM
EP7PR0814RN0000.shex	12/5/2022 10:10 AM

No preview available.

File name: EP7PR0814RN0000.shex Custom Files (*.hex;*.shex)

Open **Cancel**

5. After selecting the file, click on Apply.

Apply

6. Firmware or Web UI will be installed. Wait for the process to complete and restart.



7. If no errors occur, your receiver should be updated.

Using OEM7 WebUI (older 2.x, WMC010205RN0000)

Using this method assumes that you already have a connection either through an ethernet cable or WiFi (PwrPak7). Depending on the receiver type, you may need to enable ethernet connectivity using the command.

```
ETHCONFIG ETHA AUTO AUTO AUTO AUTO.
```

This will need to be done via serial cable connection or USB connection. Once this command is completed, you can get the assigned IP address with the command

```
[USB1]log ipstatus
<OK
[USB1]<IPSTATUS USB1 0 95.5 UNKNOWN 0 167.000 02444020 7fe2 15341
< 2
< ETHA "192.1.1.10" "255.255.255.0" "192.168.128.1"
< WIFI "192.168.19.1" "255.255.255.0" ""
< 1
< "8.8.8.8"
```

Enter the IP address into a web browser.

If using WiFi, connect to the NovAtel WiFi connection and then use the WIFI IP address. The password for WIFI is on a label printed on the bottom of the PwrPak7 receiver.

1. Click on the gear/cog in the upper right corner



2. Click on the update button on the right menu



3. Click on the Expand link to open the Firmware section.

UPDATE

Firmware
Expand ▼

4. Click on Choose File to select the firmware file downloaded from NovAtel (<https://www.novatel.com/support>)
NOTE: The PwrPak7 will have a different file prefix than the board level units
PwrPak7: EP7PR####RN####.shex, Other: OM7MR####RN####.shex
5. Once the file is selected, click on the UPLOAD button
6. After the firmware install is completed the receiver will reboot
7. You can verify using the terminal and requesting a VERSION log with the command LOG VERSION

```
[USB1]log version
<OK
[USB1]<VERSION USB1 0 89.0 UNKNOWN 0 27.519 02444020 3681 15824
< 10
< GPSCARD "GSNNNNNNN" "BMHR00000000G" "OEM7700-1.01" "OM7CR0703RN0000" "OM7BR0100RB0000"
"2019/Aug/12" "10:25:47"
< OEM7FPGA "" "" "" "OMV070001RN0000" "" "" ""
< WHEELSENSOR "" "" "" "SWS000201RN0000" "" "2019/Aug/12" "10:26:15"
< APPLICATION "" "" "" "EP7AR0703RN0000" "" "2019/Aug/12" "10:26:00"
< DEFAULT_CONFIG "" "" "" "EP7CR0703RN0000" "" "2019/Aug/12" "10:26:10"
< PACKAGE "" "" "" "EP7PR0703RN0000" "" "2019/Aug/12" "10:26:05"
< DB_WWWISO "WWWISO" "0" "" "WMC010205RN0001" "" "2019/Mar/27" "14:09:05"
< ENCLOSURE "PWRPAK7" "NMND19210028T" "" "" "" "" ""
< REGULATORY "US" "" "" "" "" "" ""
< WIFI "RS9113" "" "" "1.6.8" "" "2019/Aug/12" "10:26:20"
```

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Using NovAtel WinLoad

1. Download and unpack the zipped firmware file
2. Locate the unzipped folder and go into the Firmware folder
3. Run Winload.exe
4. Under the Settings – Com Settings
 1. Make sure the com port matches your computer com port
 2. The download baud rate should typically be set at 115200
 3. Connect baud rate is typically set to 9600 (*requires power cycle*) or BREAK (*receiver powered up*)

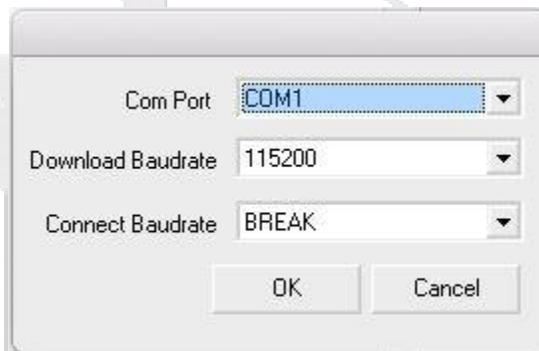


Figure 1

5. OPTIONAL – To force a firmware reinstallation
 1. Under Settings – Options, make sure Optimized Loading is NOT checked
This will force the firmware to be reinstalled if the same version is already installed on the receiver.

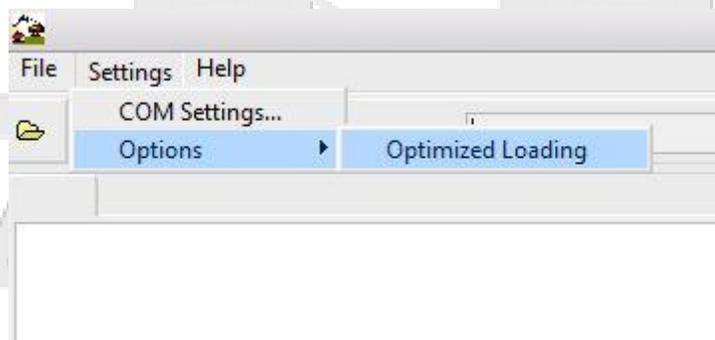


Figure 2

6. On the File Menu, select Open File

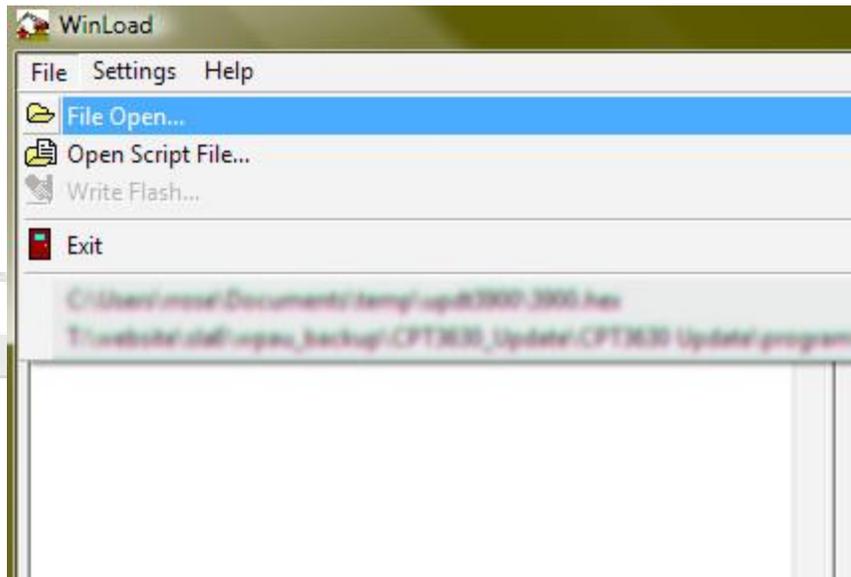


Figure 3

7. Navigate to the firmware .shex file, select the correct shex file, and Click Open (or double-click on the shex file)

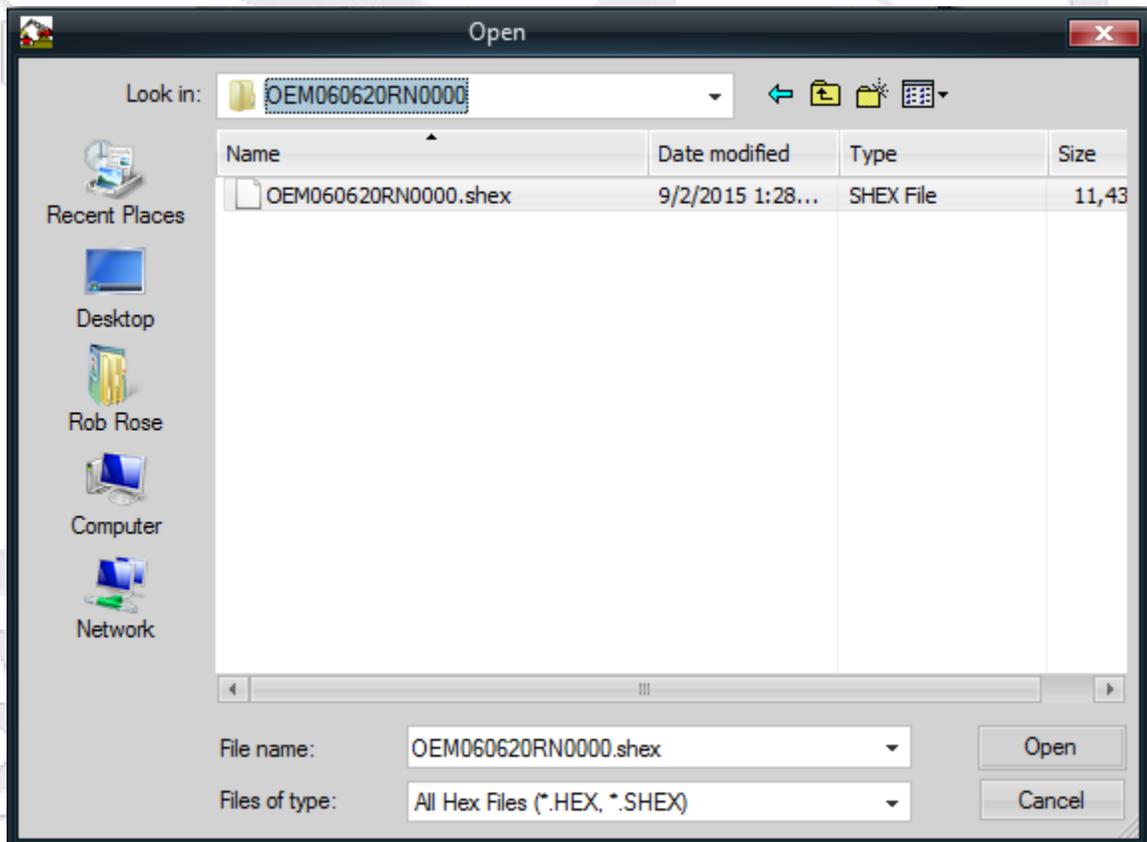


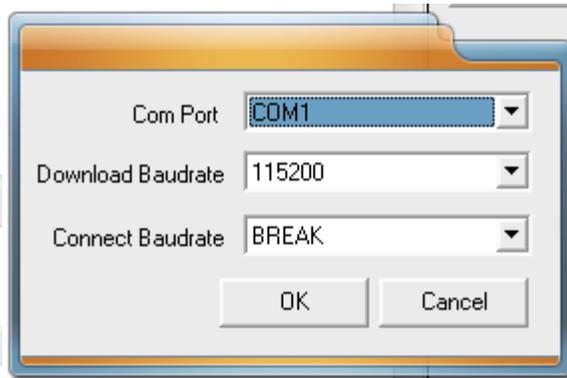
Figure 4

8. Make sure power is NOT connected to GPS receiver, but have power ready to connect



Optional:

If you want to leave power applied to the receiver, change the Settings -> Com Settings... -> Connect Baud Rate to BREAK. This will allow you to leave power applied and Winload will issue a break to the unit to initiate the firmware installation process.



9. Click on Write Flash button in the Winload program

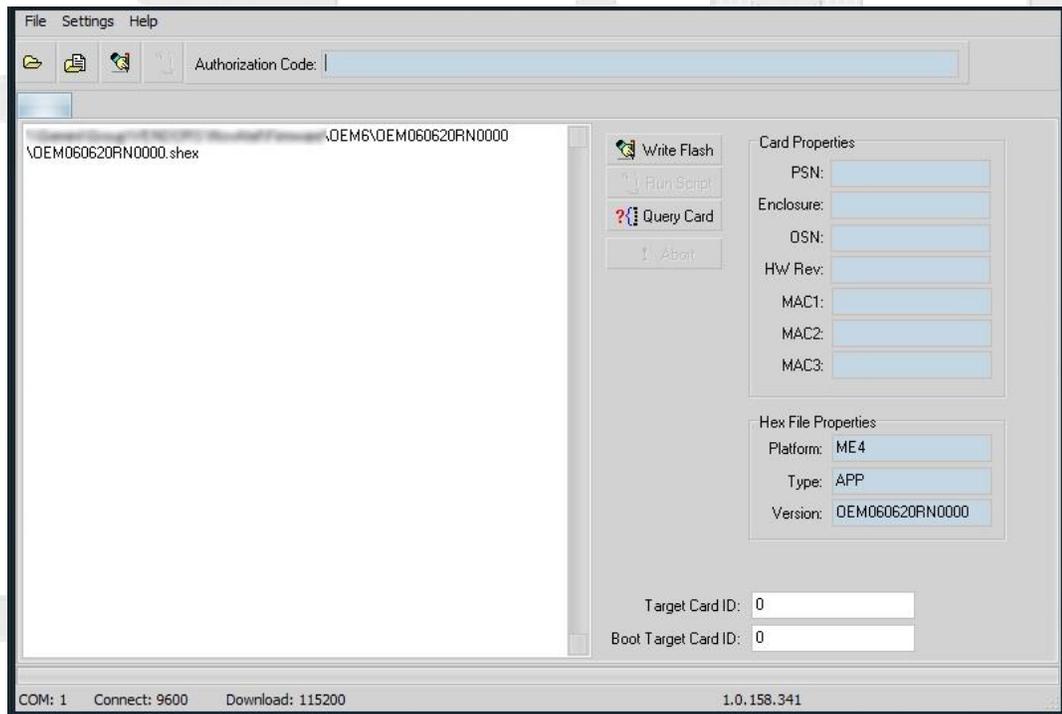


Figure 5

10. When the countdown starts - Apply power to receiver

(leave power applied if using the BREAK setting mentioned in Step 8)

11. The Winload program should use the SIGNATURE auth already installed in the receiver.

1. If you get prompted for an auth code --> Cancel the firmware upgrade and contact SLAinc
2. Firmware update could take several minutes to complete

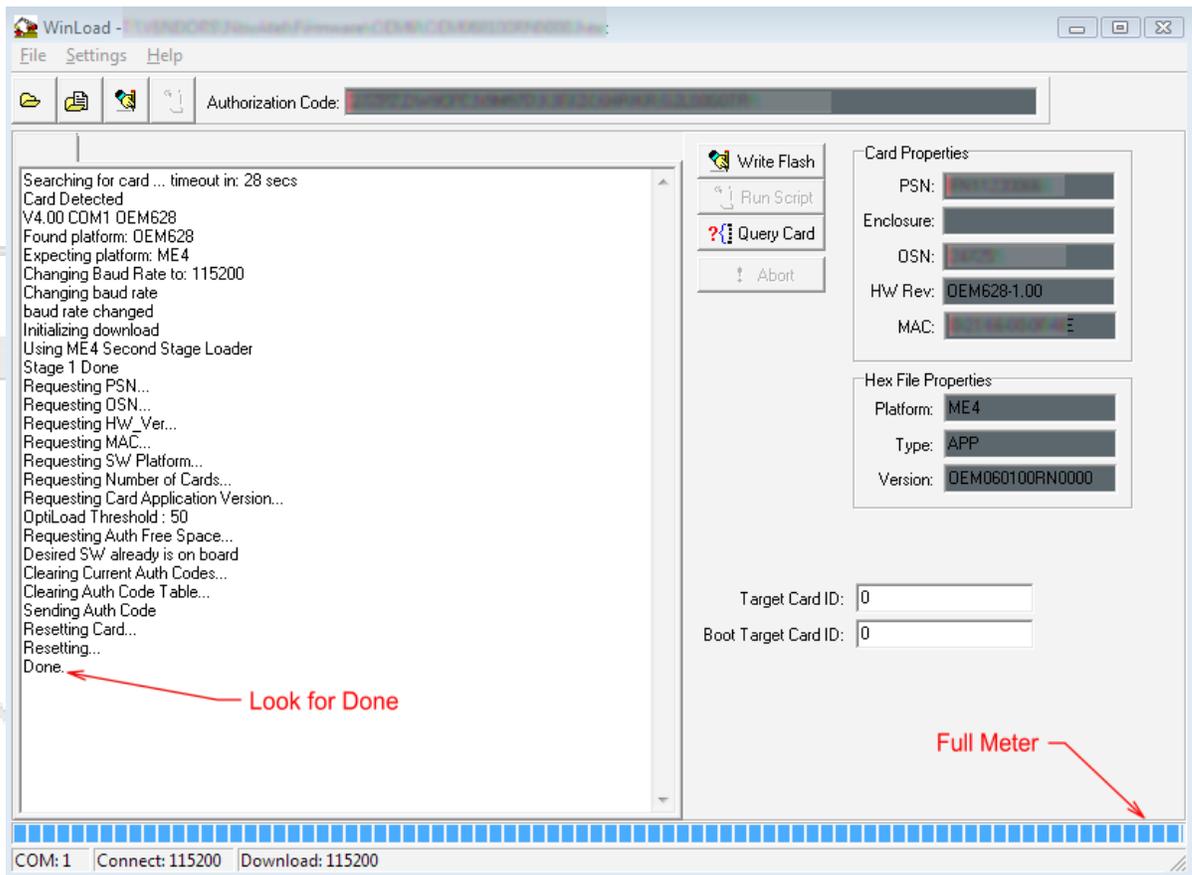


Figure 6

12. Once the firmware update has completed, it is highly recommended (*but not required*) to perform a factory reset on the unit to clear out any potential issues.
 - a. Connect to the unit through NovAtel Connect or a terminal program (ex. HyperTerminal, Terra Term, Procomm, etc) and issue the following command:
 - i. FRESET [Enter]
 - b. The unit will reset to factory defaults. If connected at a baud rate other than 9600, you will have to reconnect at 9600

13. Configure your receiver as needed

14. Verify the firmware version using the command LOG VERSION or LOG VERSIONA

```
<VERSION USB1 0 89.0 UNKNOWN 0 27.519 02444020 3681 15824
< 10
< GPSCARD "GSNNNNNN" "BMHR0000000G" "OEM7700-1.01" "OM7CR0703RN0000" "OM7BR0100RB0000"
"2019/Aug/12" "10:25:47"
```