



# **ASTERX4**

## **GPS-RECEIVER**

016-8000-032EN Rev. B

### Update Manuel



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## 2. Beforehand

This manual is made for updating the firmware of the AsteRx4 GPS-receivers. These receivers are used in SBG/Raven Viper 4/4+ terminals. The update manuals of the AsteRx2e(H) and PolaRx2e(H) can be found on the Raven-website. The update of the firmware will take around 60 minutes.

## 3. Check version RxControl (viper 4 only)

Start the SBGuidance configurator by pressing Shift of the keyboard and SBGuidance on the screen on the same time. Then proceed to Interfaces >> GPS >> Septentrio RxControl to start the program RxControl.

Check the installed version of RxControl, press Help >> About RxControl. Check if the latest version is installed on the Viper 4 terminal. (Figure 1)

The latest version of RxControl can be downloaded on the next website.

<https://portal.ravenprecision.com/ProductDocumentation/Category?categoryId=194>. Download and install the latest version of RxTools if the newest version is not installed. The installation manual can be found on the Raven-website.

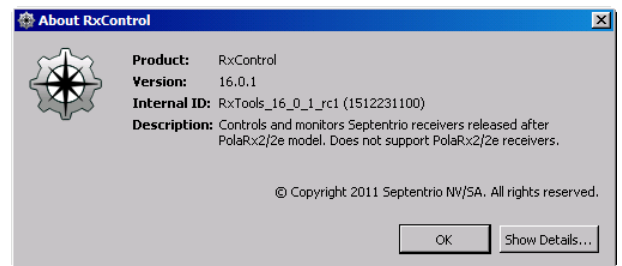


Figure 1 Version RxControl

## 4. Check firmware AsteRx4 GPS-receiver (viper 4 only)

Check which kind of GPS-receiver is installed on the terminal and which firmware is currently installed. At least the firmware version 4.2.2 must be installed, otherwise update to 4.2.2 first.

Go to Help >> Receiver identification (Figure 2). To check the GPS-receiver type go to hwplatform > platform. The firmware version can be found at firmware > version

The newest AsteRx4 GPS-receiver firmware can be found at:

<https://portal.ravenprecision.com/ProductDocumentation/Category?categoryId=194>. Download the ZIP-file with the required firmware and transfer it to a USB. Unzip the ZIP-file in the USB folder and insert the USB into the terminal.

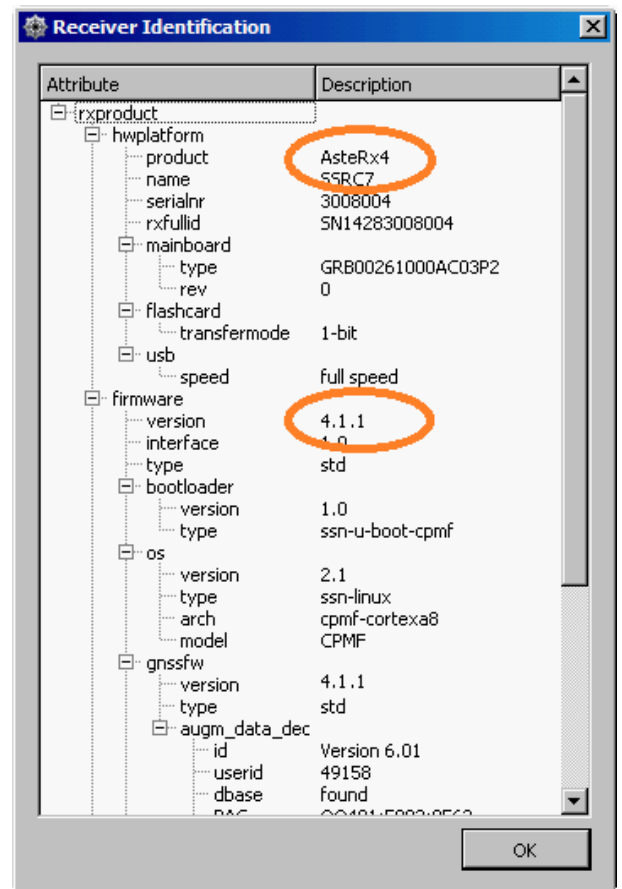


Figure 2 Receiver Identification

## 5. Updaten firmware GPS-Receiver RXtools

To update the firmware go to Tools >> RxUpgrade inside the RxControl menu. A pop-up will show up 'Upgrade Receiver' (Figure 3). RxControl needs to be closed on the background while leaving the 'Upgrade Receiver' window open. Press next to continue.

Select Serial Port and Beyond Electronics Communications Port (COM1). Press next (Figure 4).

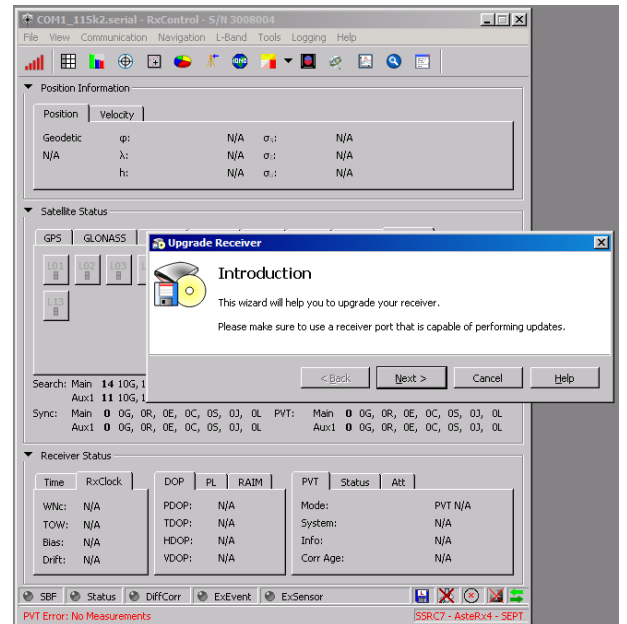


Figure 3 Upgrade Receiver

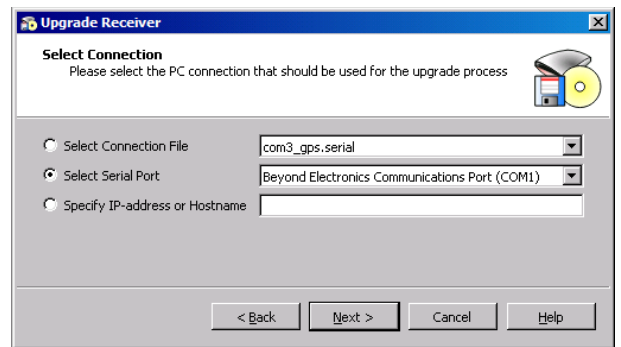


Figure 4 Select connection

Go to Browse to select the latest firmware located at the USB-stick. For example: AsteRx4-firmware-4.10.0.fail-safe.suf (Figure 5)

Press Next and Upgrade to install the new firmware.

The installation process shall take around 60 minutes. Press finish as soon as the installation process is done. (Figure 6)

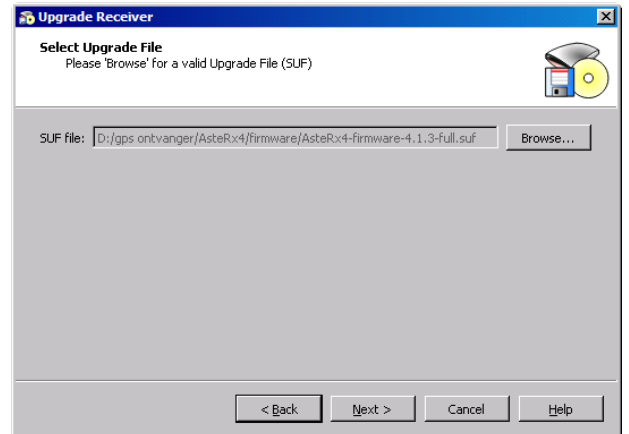


Figure 5 Selecteer upgrade file

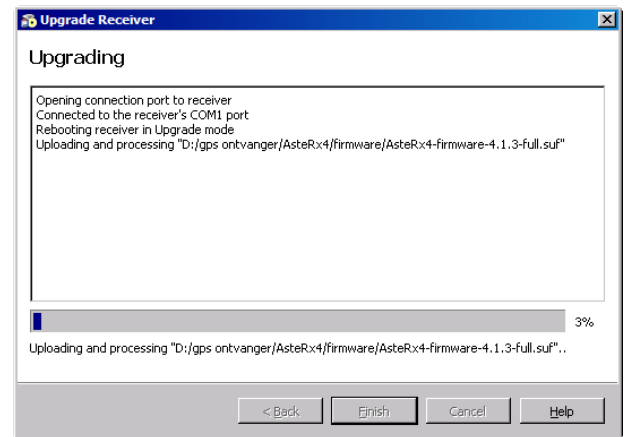


Figure 6 Upgrading in progress

## 6. Check firmware upgrade

The new firmware is now installed. Open RxControl, this can be done on the terminal by going to the SBGuidance Configurator, GPS >> Septentrio RxControl.

Check Help >> Receiver Identification if the correct version is installed (Figure 7).

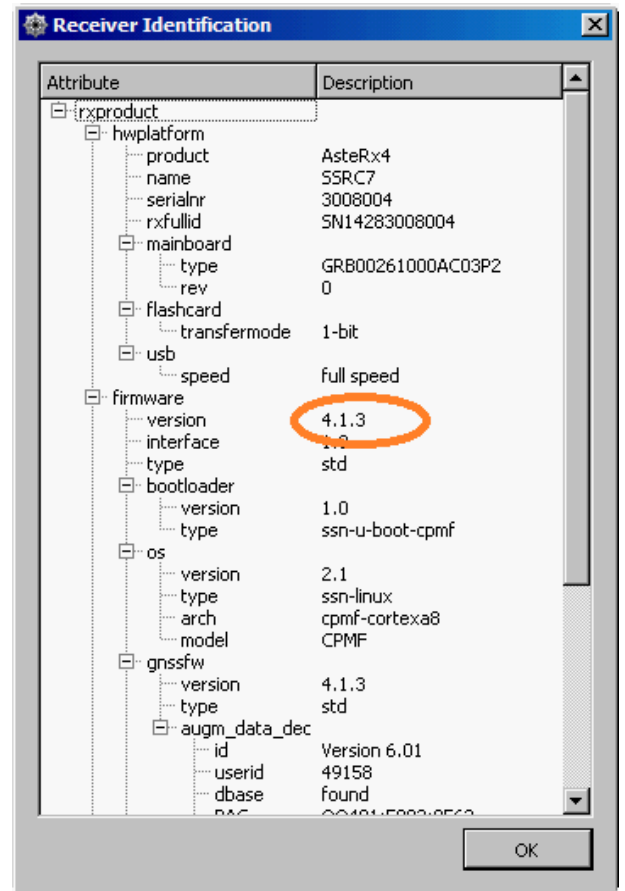


Figure 7 Controle firmware upgrade

## 7. Setup GPS-receiver

Check if the GPS-receiver is activated for one or 2 antennas. Go to RxControl, Help >> Receiver Permissions and check the permission of the number of antennas (Figure 8).

Close RxControl.

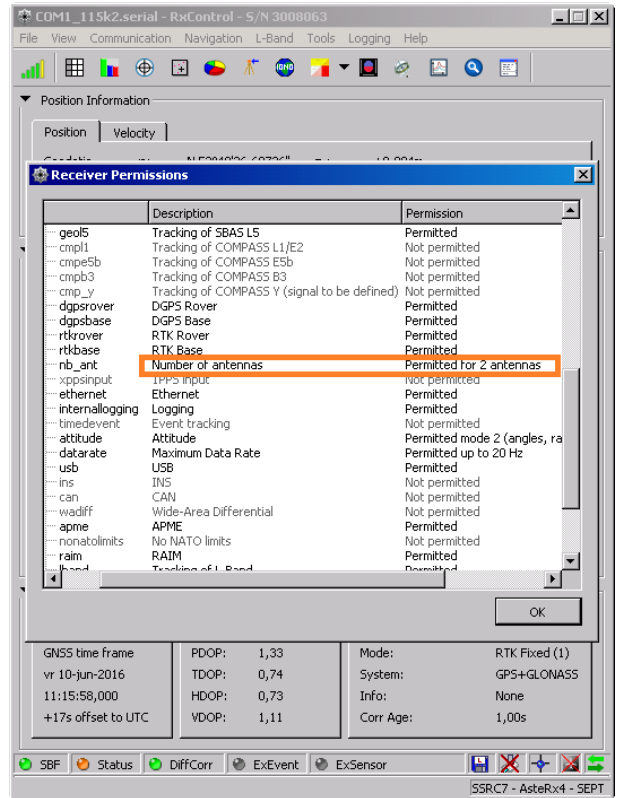


Figure 8 Receiver Permissions: Number of antennas



In the SBGuidance Configurator go to GPS >> Septentrio receivers to set up the GPS-receiver again (Figure 9).

Select Septentrio AstRx4 (Viper4) and press Connect.

Select Single-Antenna for a receiver with permission for 1 antenna and Multi-Antenna for a receiver with permission for multiple antennas (Figure 10).

Check the settings below:

- Diff. Corrections: depends on the to be used corrections type.
- DiCo IN poort: COM2
- Max. diff. Age: 20 sec
- Network RTK: Auto

Check if GLO and SBAS are enabled. Press Setup As Rover and wait until the command Queue counts down to 0.

Choose between SBF (Single and multi) antenna on the right side of the screen (Figure 10).

The GPS-receiver should now be able to connect to the satellites (Figure 11). Close the SBGuidance Configurator and start the SBGuidance user software. Check if the GPS-receiver gets a RTK-Fixed signal ( Press INFO >> GPS)

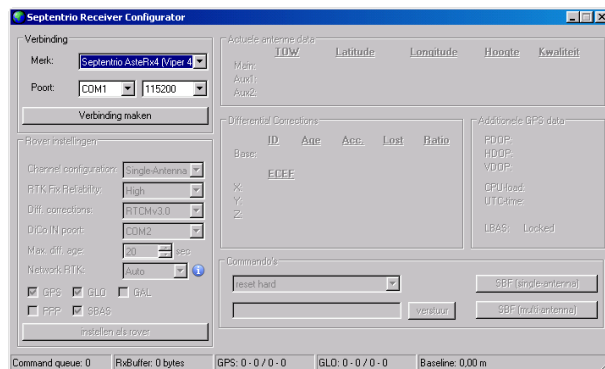


Figure 9 Setup GPS-receiver

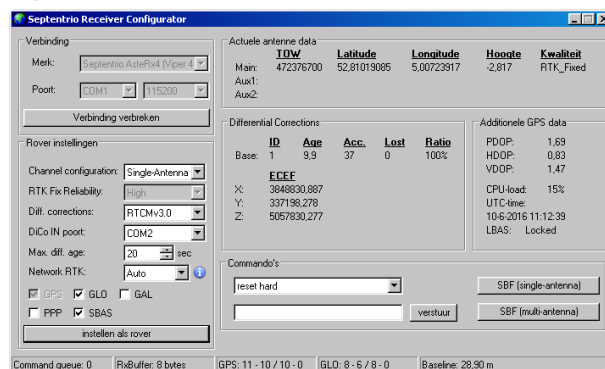


Figure 10 Setup GPS-receiver

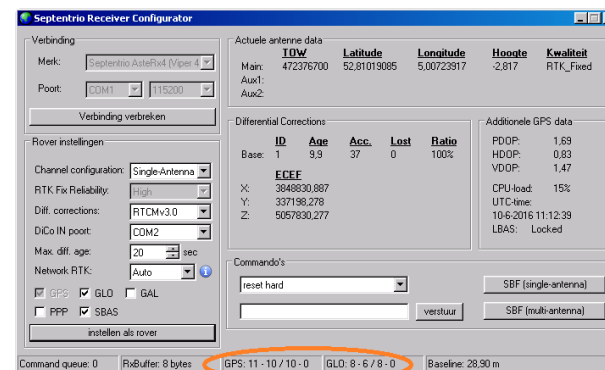


Figure 11 reception satellites

## 8. Check version AsteRx Upgrade Tool (Viper4/4+)

Open the SBGuidance Configurator on the terminal by pressing Shift on the keyboard and SBGuidance on the screen in the startup screen on the same time. In the SBGuidance Configurator, go to GPS >> AsteRx Upgrade Tool to start the AsteRx Upgrade Tool program. (Figure 12)

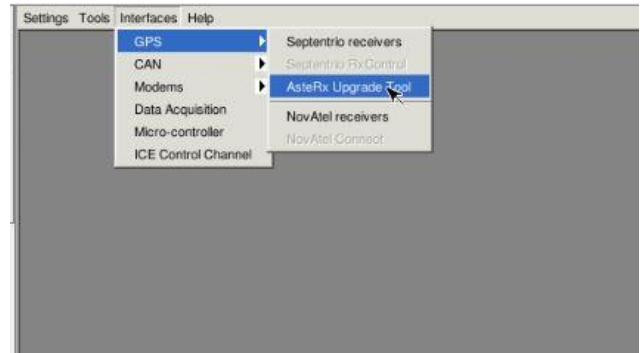


Figure 12 open AsteRx Update Tool

Check which receiver type and firmware version is installed.

Connect to COM1, 115200 and enter the following command: LIF, IDENTIFICATION. Firmware must have at least 4.2.2 to update to latest firmware, otherwise update to 4.4.2 first. (Figure 13)

The newest AsterRx4 GPS-receiver firmware can be found at <https://portal.ravenprecision.com/ProductDocumentation/Category?categoryId=194>. Download the ZIP-file with the required firmware and transfer it to a USB. Unzip the ZIP-file in the USB folder and insert the USB into the terminal.

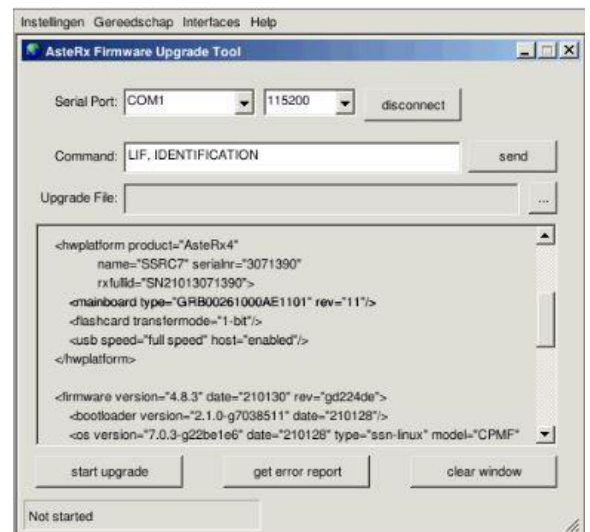


Figure 13 receiver type en firmware version

## 9. Updaten firmware GPS-receiver AsteRx Upgrade Tool

To update the firmware, press on the button with the 3 dots (Figure 14) to load the file. The USB flashdrive is standing under my computer. First open the failsafe file (Figure 15) and press start upgrade (Figure 16). Repeat this step for the full.suf file.

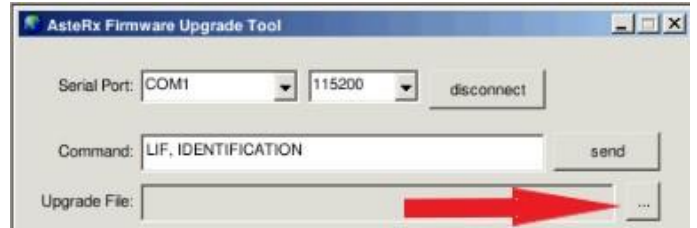


Figure 14 search file

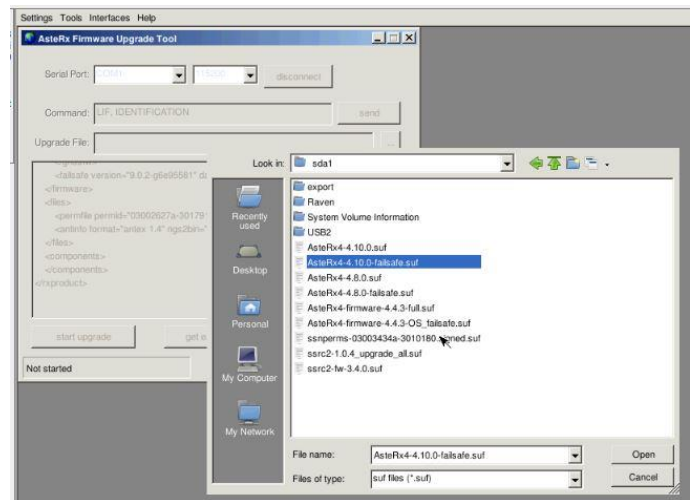


Figure 15 open file

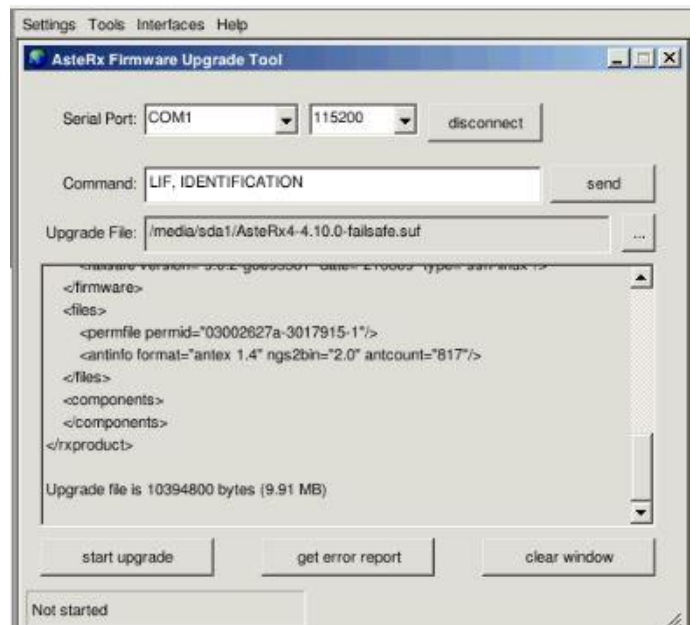


Figure 16 start upgrade

## 10. Setup GPS receiver

When the second update is completed repeat chapter 7, to find out how many antennas a Viper 4(+) is unlocked for you can fill in commands: LIF, PERMISSIONS (Figure 17)

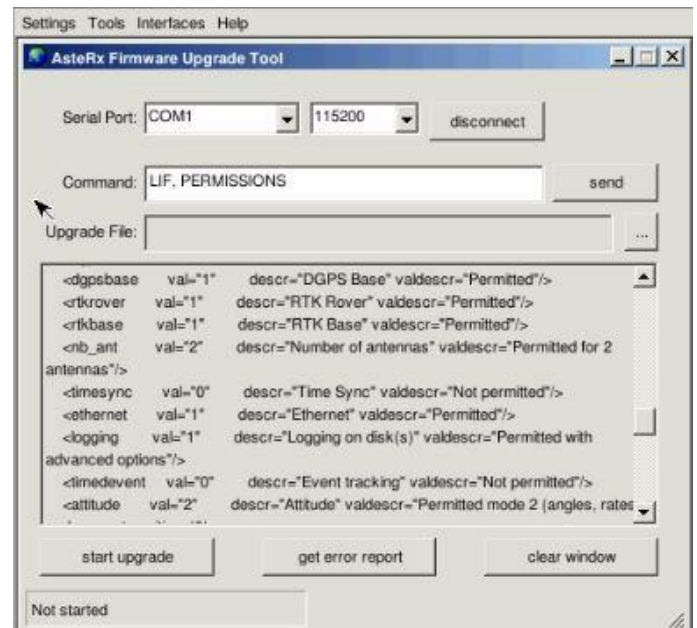


Figure 17 control receiver activation