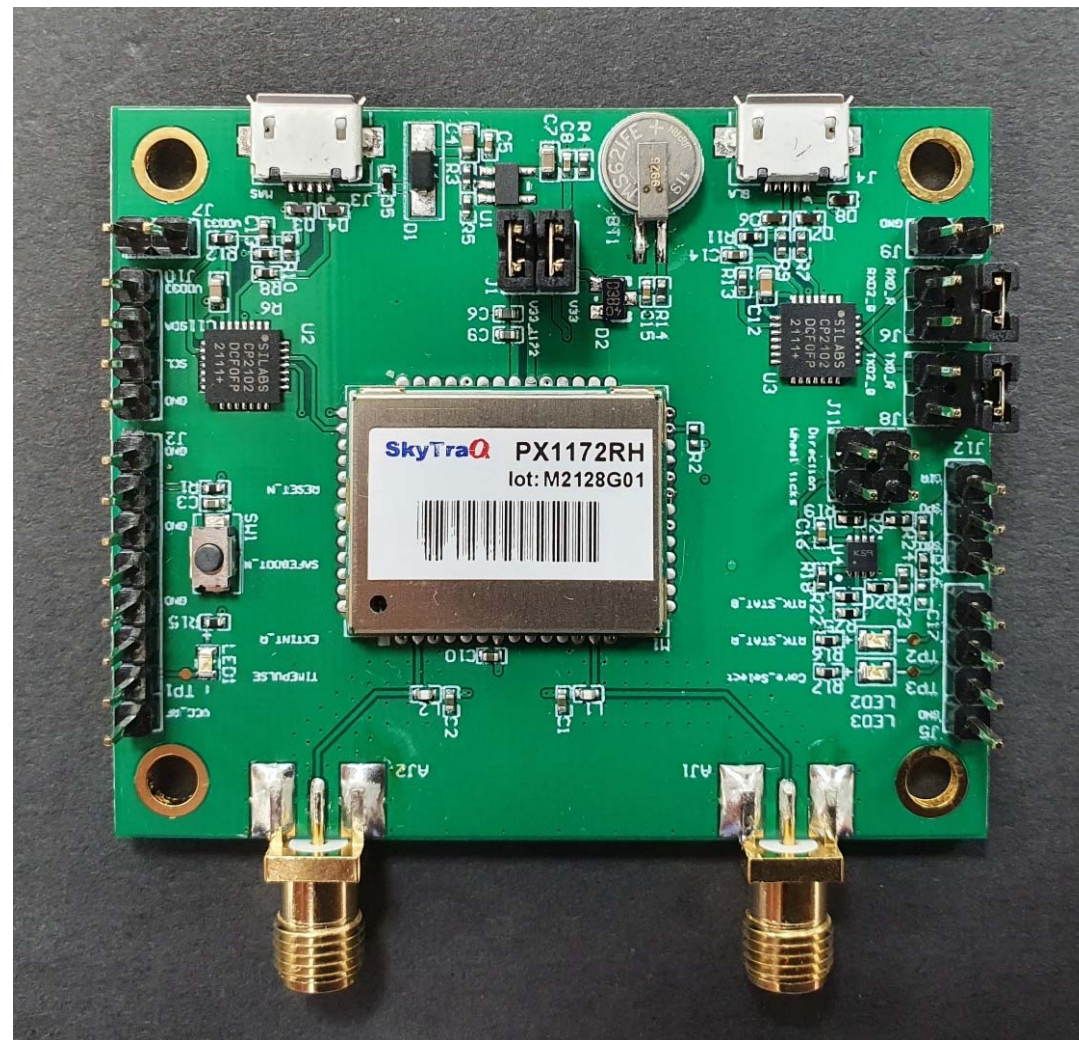


Getting Started with PX1172RH Evaluation Board

Top View of RTK EVB

USB 1

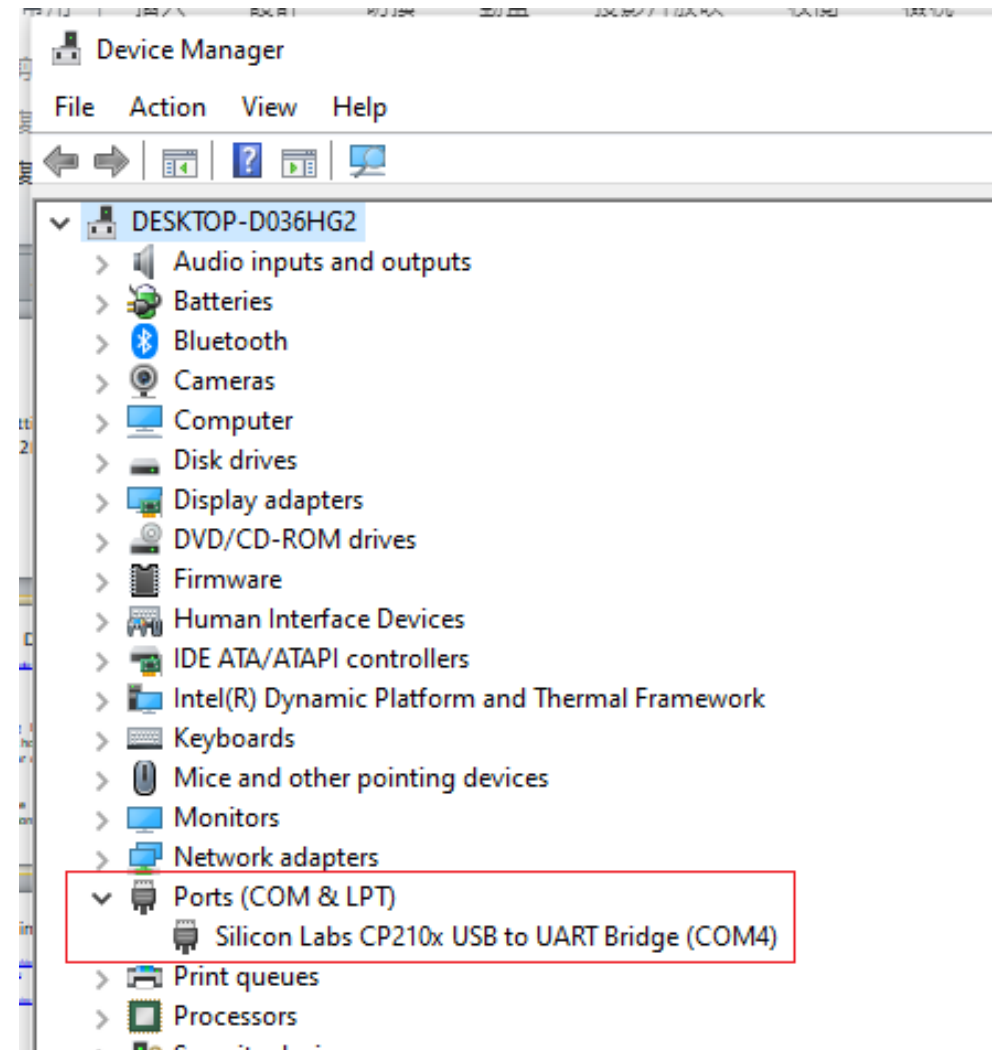
USB 2



Install USB Driver from Silicon Lab Site

<https://www.silabs.com/developers/usb-to-uart-bridge-vcp-drivers>

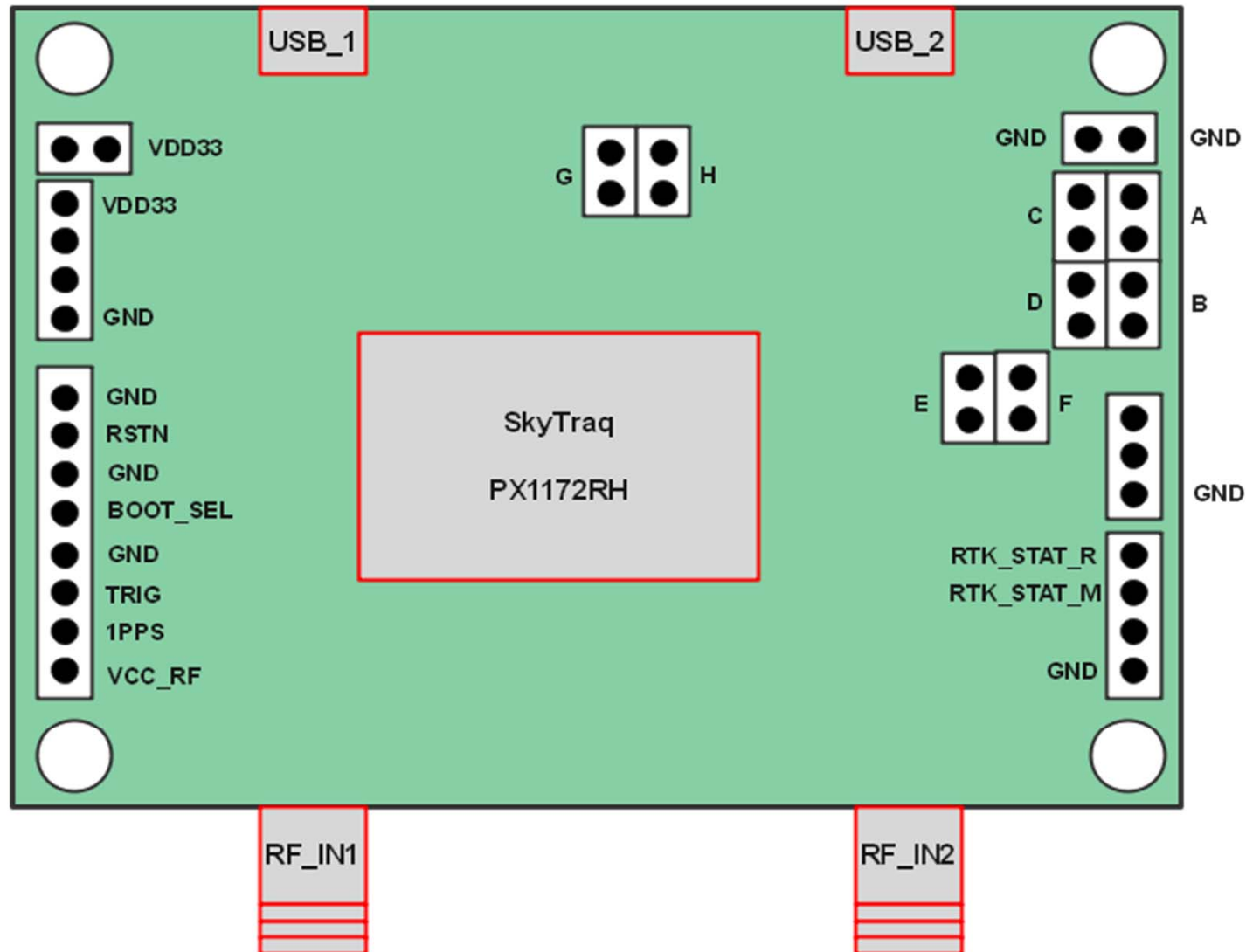
After connecting USB cable to USB1 port, user should see a COM port appear on Device Manager.



Get Windows GNSS Viewer

- https://navspark.mybigcommerce.com/content/GNSS_Viewer-CustomerRelease.zip
- <http://navspark.mybigcommerce.com/content/GNSSViewerUserGuide.pdf>

Interface of RTK EVB (1/3)



Interface of RTK EVB (2/3)

NAME	DESCRIPTION
USB_1	USB port for NMEA out, RTK correction & binary command in, 115200
USB_2	USB port for updating firmware to R-chip, jumper A/B must be short and C/D must be open, 460800
RTK_STAT_R	Status signal Low : RTK Fix for Heading Blink : RTK Float for Heading High : otherwise
RTK_STAT_B	Status signal Low : RTK Fix for Positioning Blink : RTK Float for Positioning High : otherwise
1PPS	One-pulse-per-second (1PPS) time mark output, 3.3V LV-TTL. The rising edge synchronized to UTC second when getting 3D position fix. The pulse duration is about 100msec at rate of 1 Hz.
VDD33	3.3V power input
GND	Ground

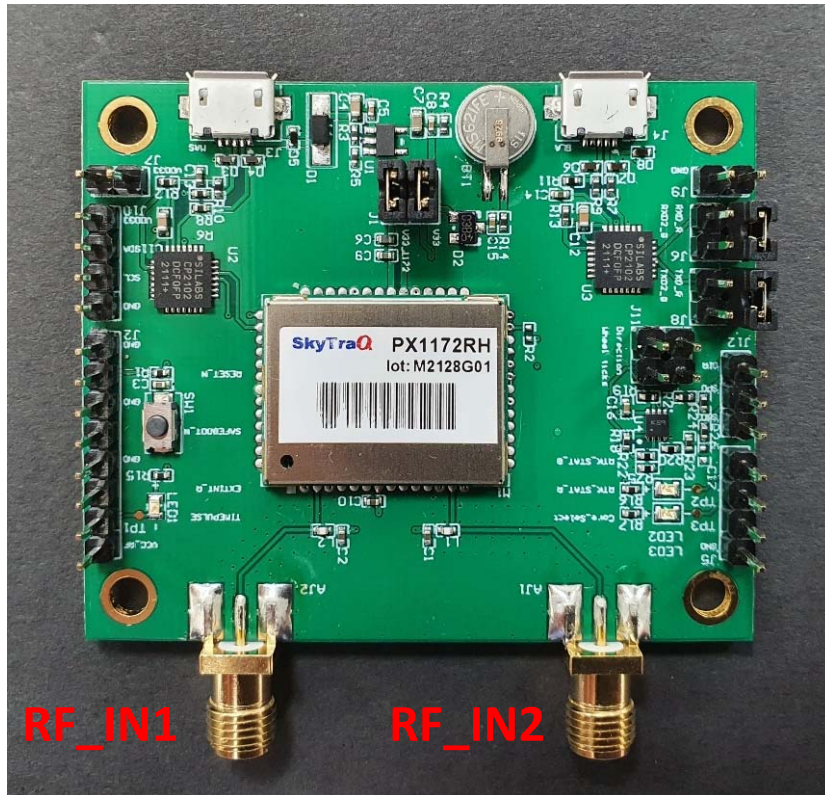
Interface of RTK EVB (3/3)

NAME	DESCRIPTION
VCC_RF	Power for antenna or external LNA
RF_IN1	RF input #1 RTK Heading: directional vector from RF_IN1 antenna to RF_IN2 antenna RTK Position: RF_IN1 antenna position
RF_IN2	RF input #2
RSTN	External active-low reset input. Only needed when power supply rise time is very slow or software controlled reset is desired.
BOOT_SEL	Leave unconnected for normal use. Pull-low for loading firmware into empty or corrupted flash memory from ROM mode.
TRIG	External interrupt trig input.
G/H	Jumper G/H must be short for normal use.

EVB Usage (1/3)

USB 1

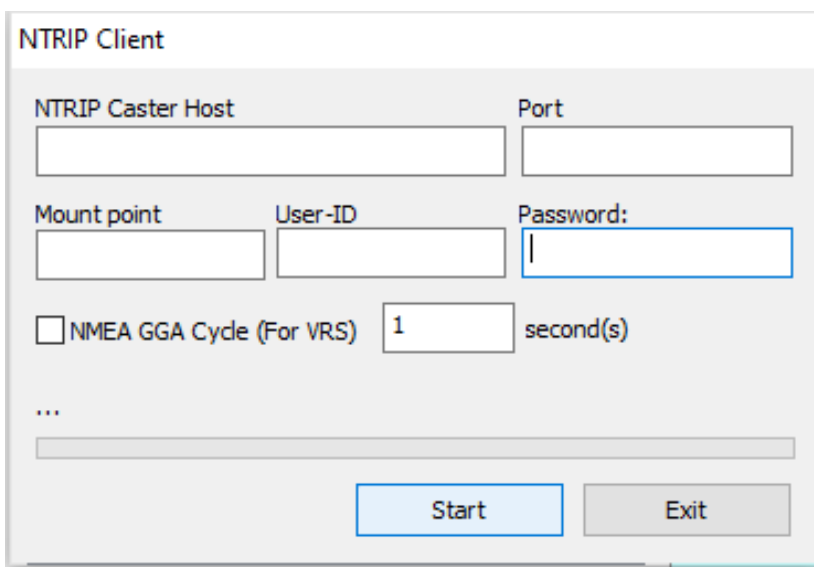
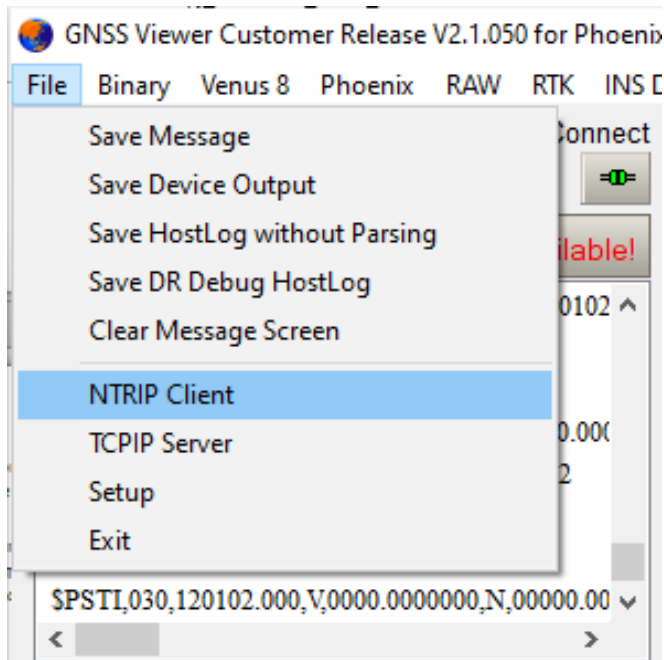
USB 2



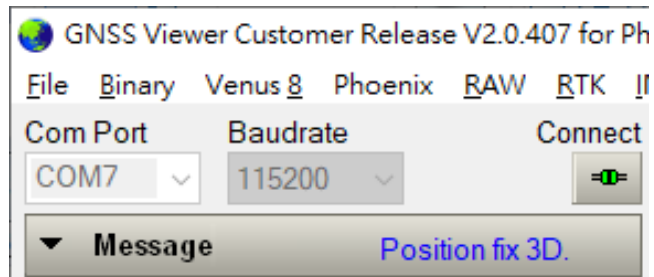
1. Connect two RTK antennas to RF_IN1 and RF_IN2
2. Run GNSS Viewer on Windows laptop
3. Connect USB cable to USB1 and Windows laptop
4. Connect GNSS Viewer to EVB at 115200 baud rate

EVB Usage (2/3)

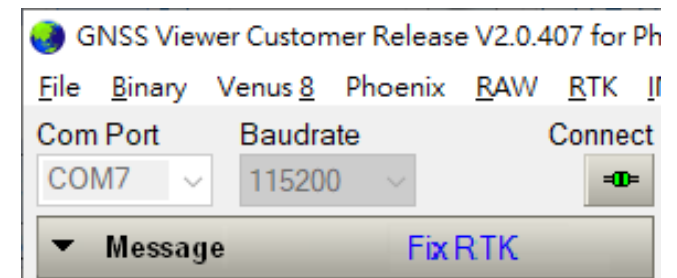
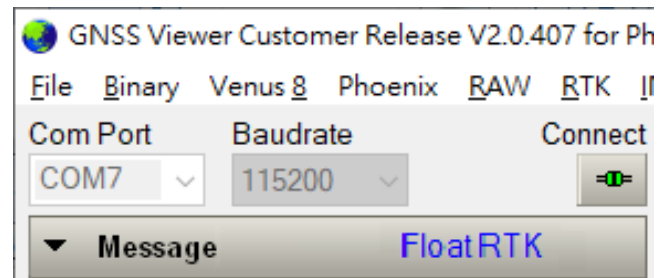
Configure NTRIP Connection Setting

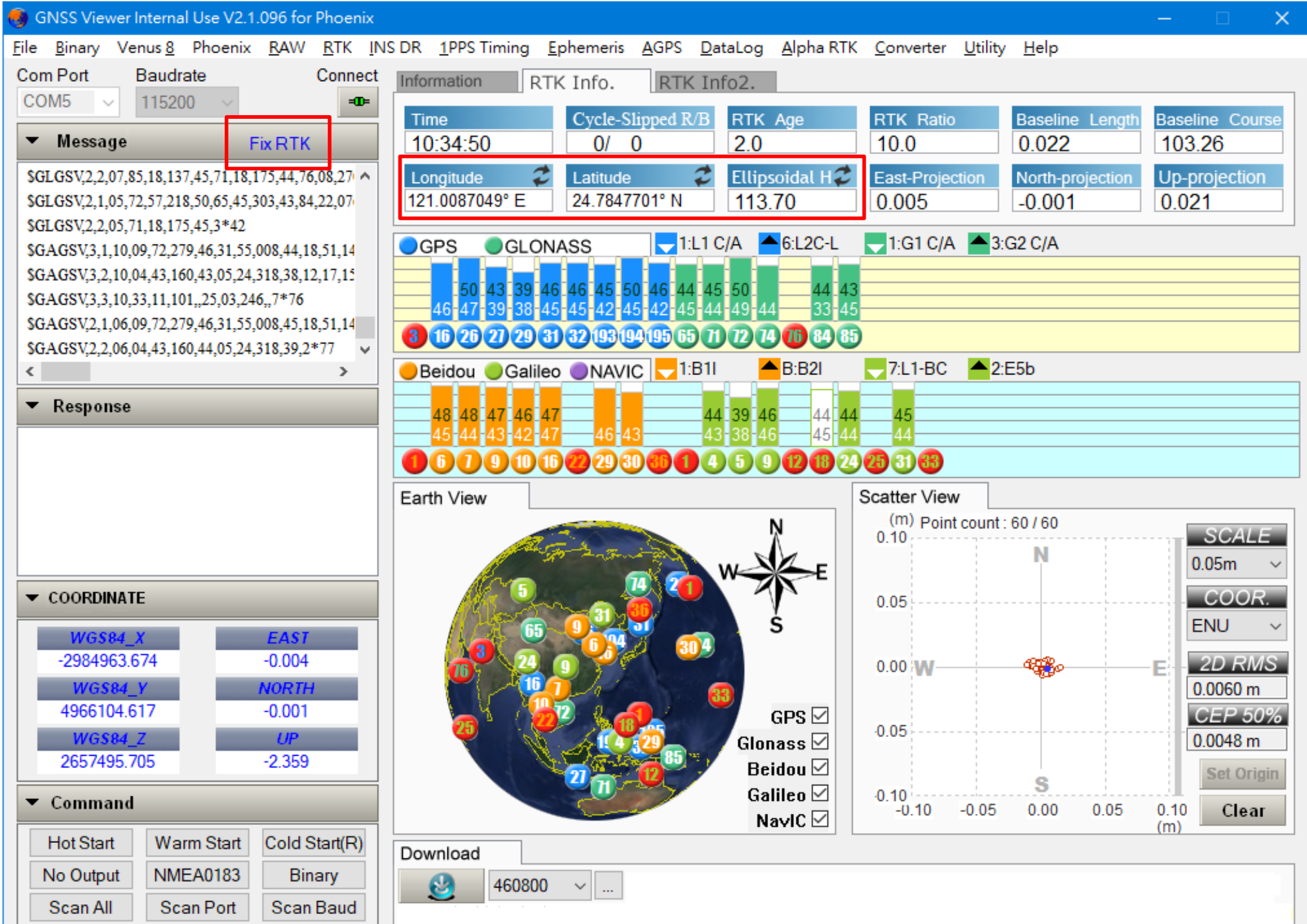


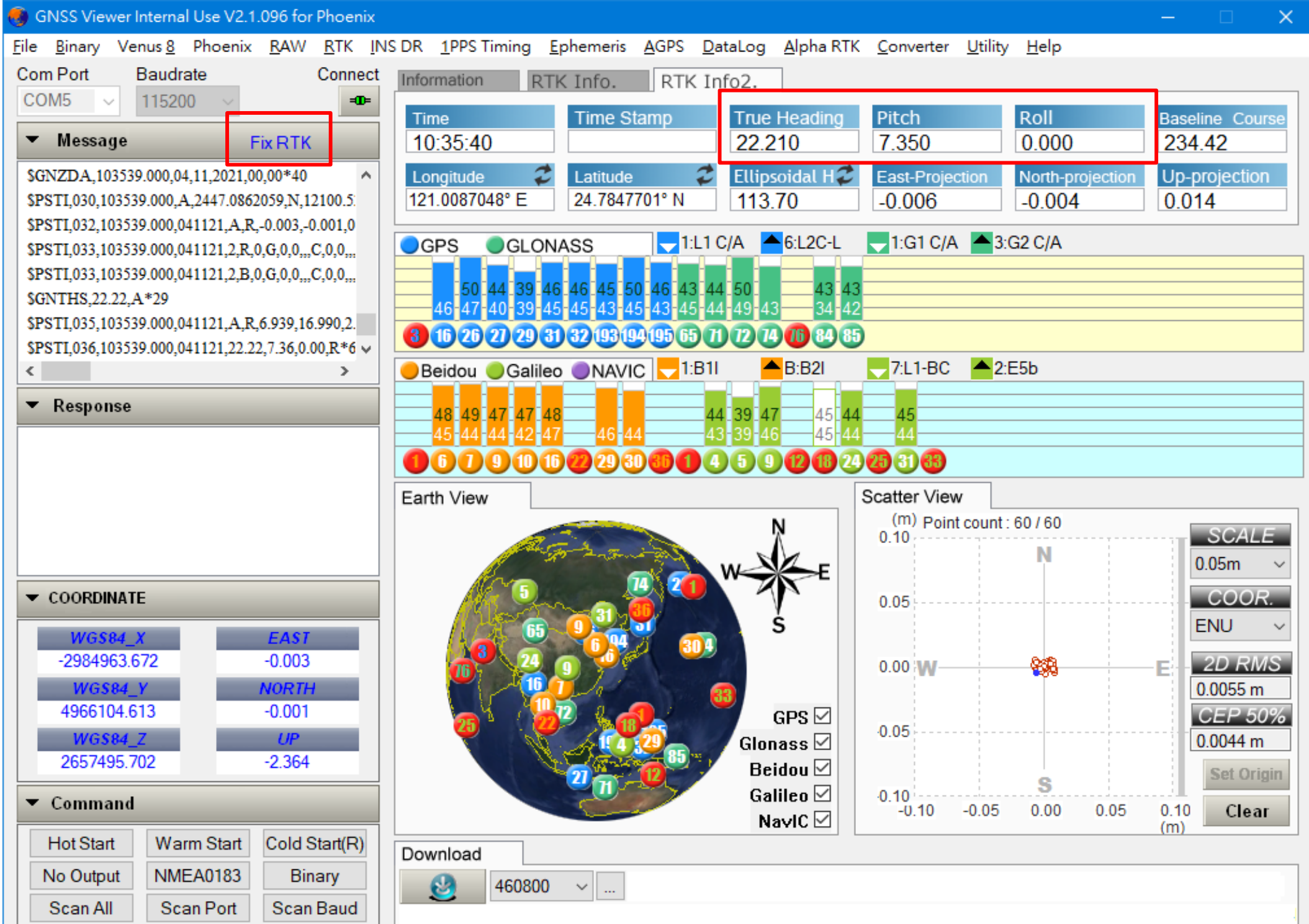
Result on GNSS Viewer



After NTRIP Client getting RTK correction data and EVB receiving signal testing outdoors under open sky, the receiver will go from 3D Fix to RTK Float to RTK Fix state.



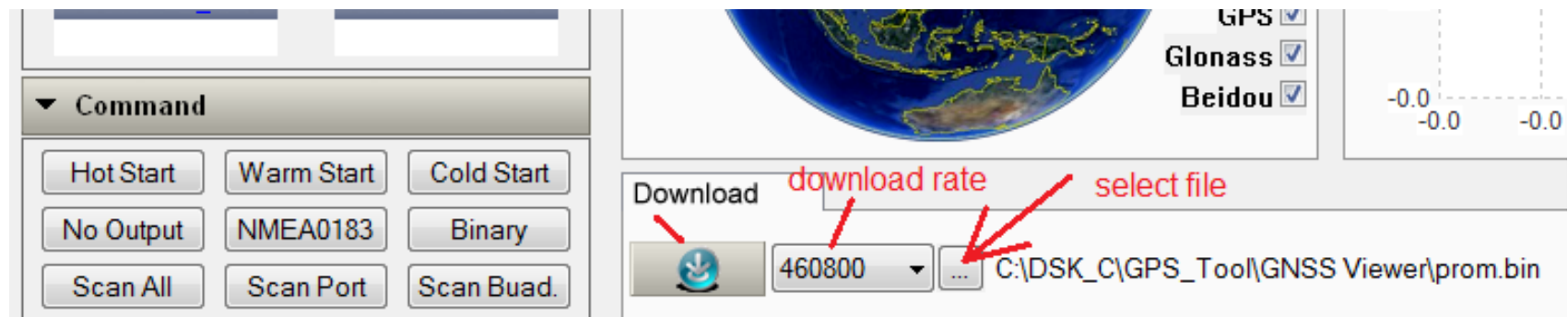




Firmware Update (1/2)

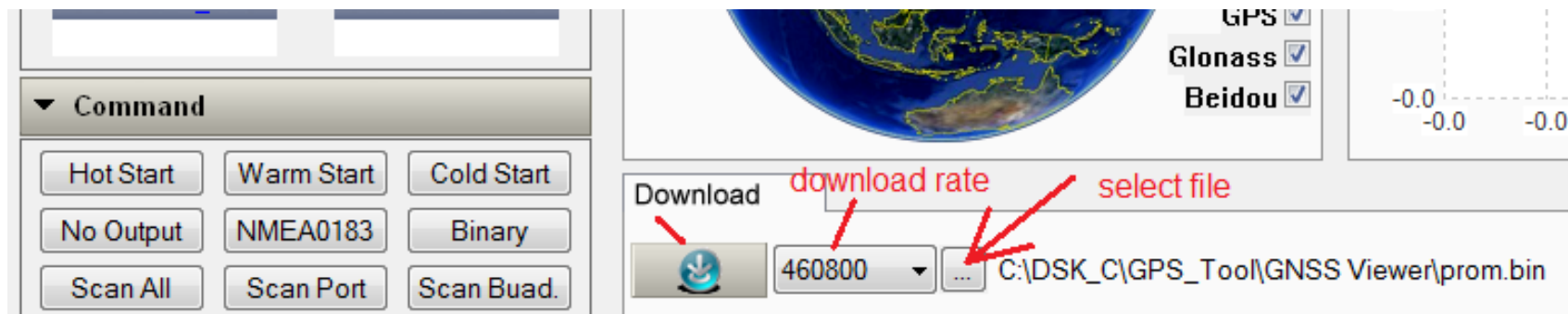
To update firmware to PX1172RH EVB:

- 1. Unzip the firmware file
- 2. Connect EVB USB1 to a Windows PC running GNSS Viewer. Connect GNSS Viewer to the EVB.
- 3. Select the unzipped .bin file with “PreciselyKB” in filename using the small button on right of the Download button.
- 4. Click the Download button, first boot-loader will be downloaded, and then main firmware will be downloaded. After downloading is done, the pop-up window will close and module will reboot.

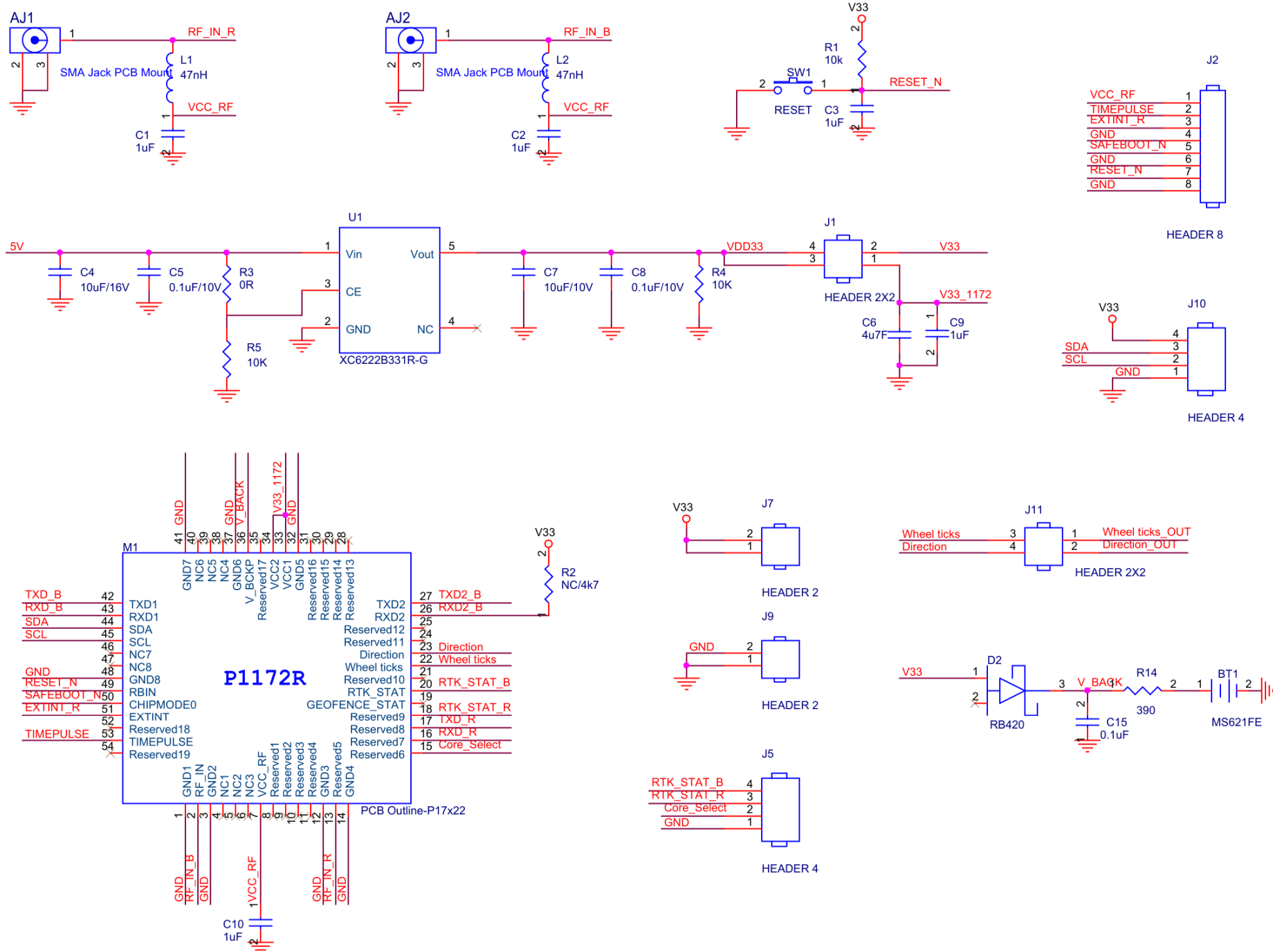


Firmware Update (2/2)

- 5. Connect EVB USB2 to a Windows PC running GNSS Viewer using a 2nd USB cable. Connect GNSS Viewer to the EVB.
- 6. Select the unzipped .bin file with “RoverMB” in filename using the small button on right of the Download button.
- 7. Click the Download button, first boot-loader will be downloaded, and then main firmware will be downloaded. After downloading is done, the pop-up window will close and module will reboot.



EVB Schematic 1/3



1



EVB Schematic 3/3

