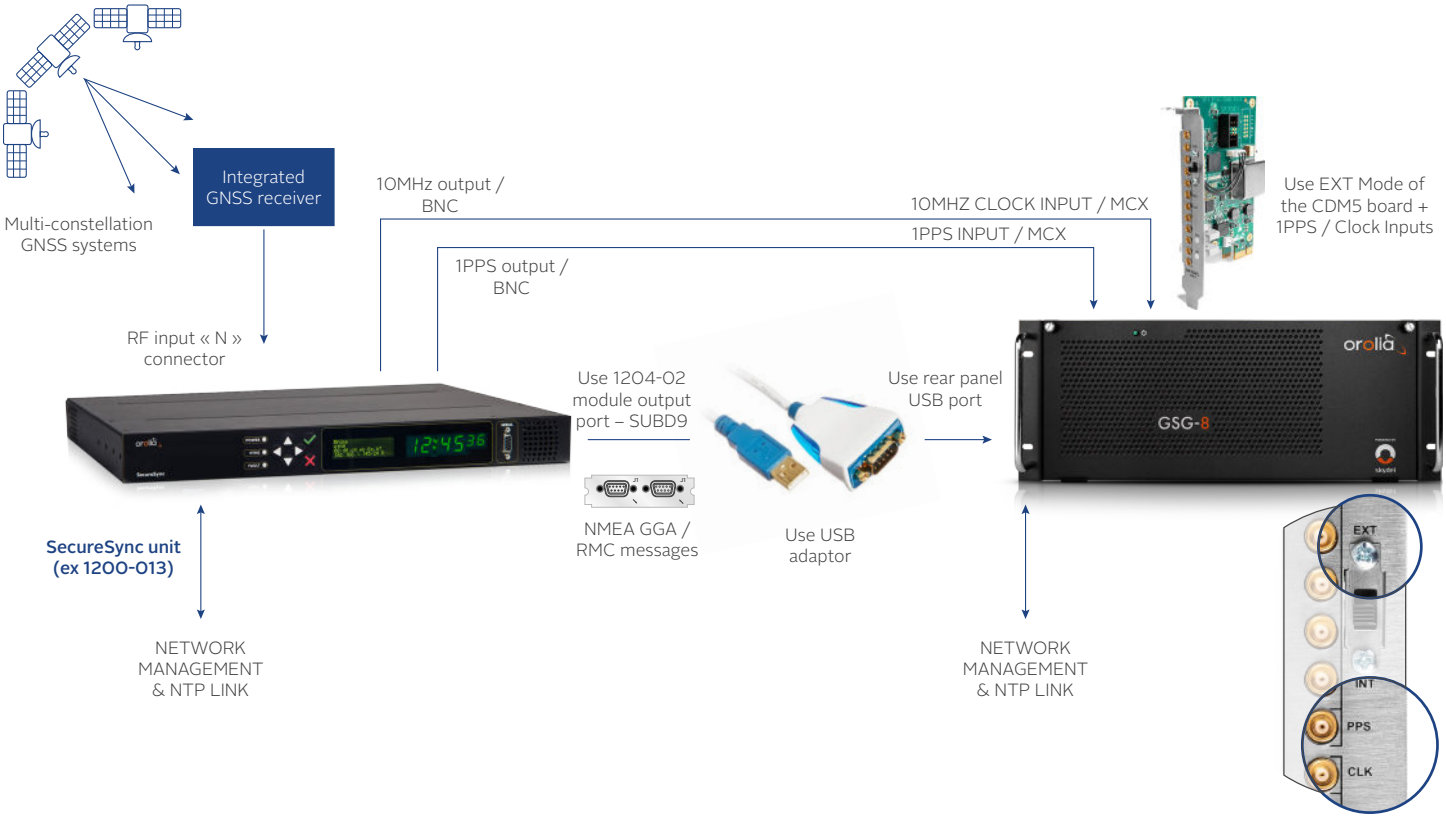
The Global Leader in Resilient **PNT**

How to Use SecureSync Unit as timing reference and distribution system to be used as a GPS timing receiver for synchronizing the GSG8.

1. Hardware connection



You need to connect 3 links from SecureSync to GSG8:

1PPS signal

10MHz signal

RS232 – NMEA GGA & RMC serial Time Code messages

For connections between units:

Use a USB to SUBD serial adaptor (for distributing NMEA GGA & RMC serial Time Code messages)

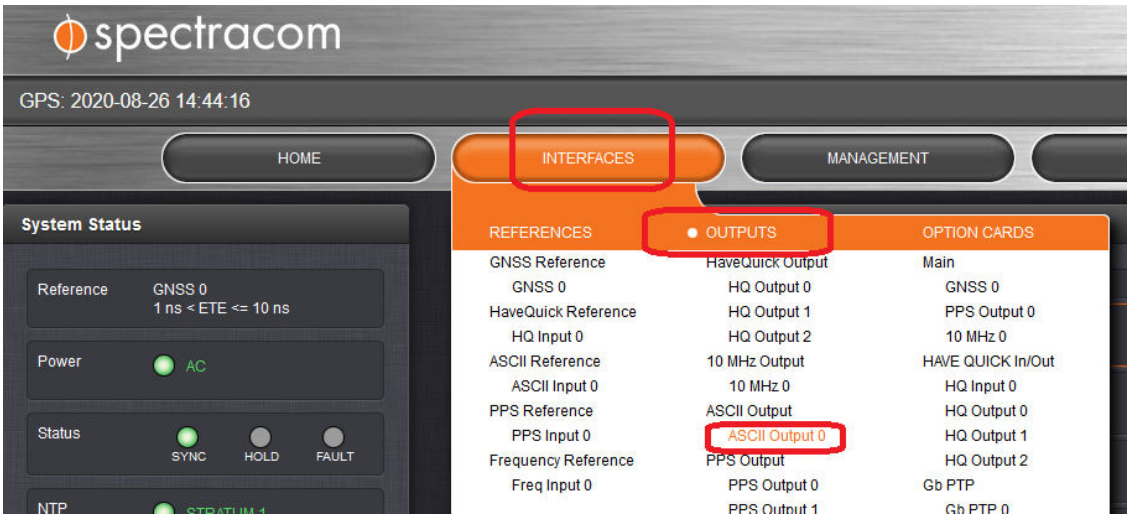
Example:

FTDI Chip US232R-100-BLK

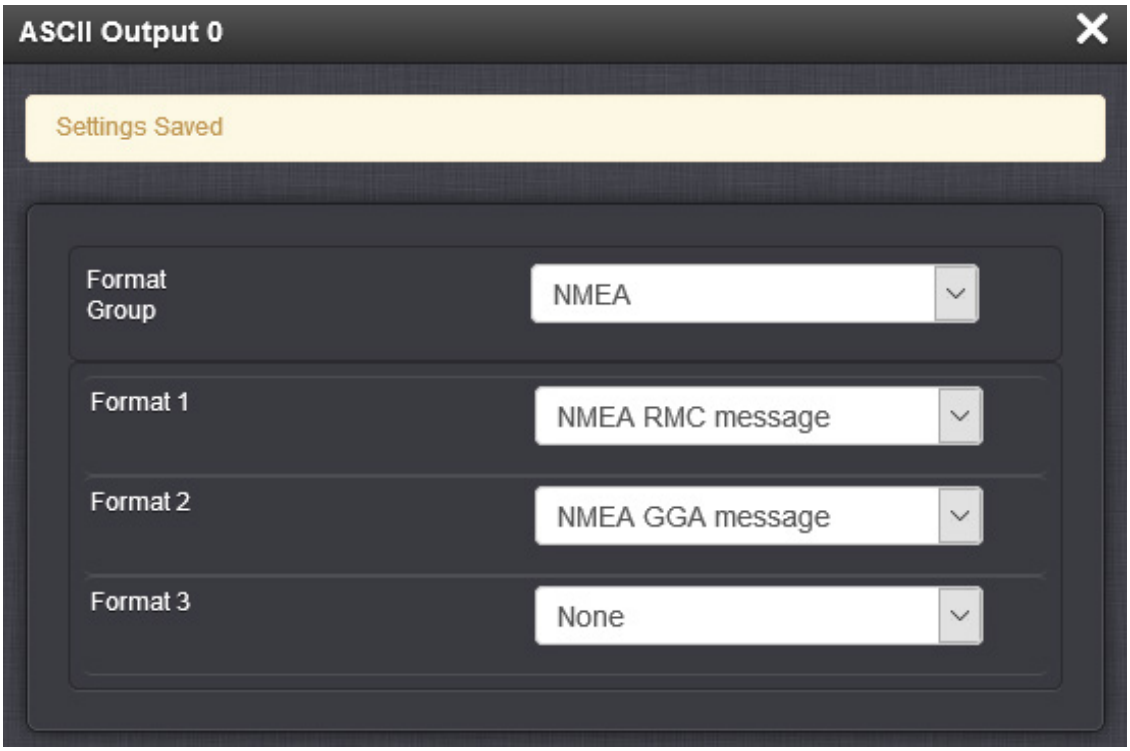
Use BNC / MCX coaxial cables (2 cables for 1PPS and 10MHz signals)

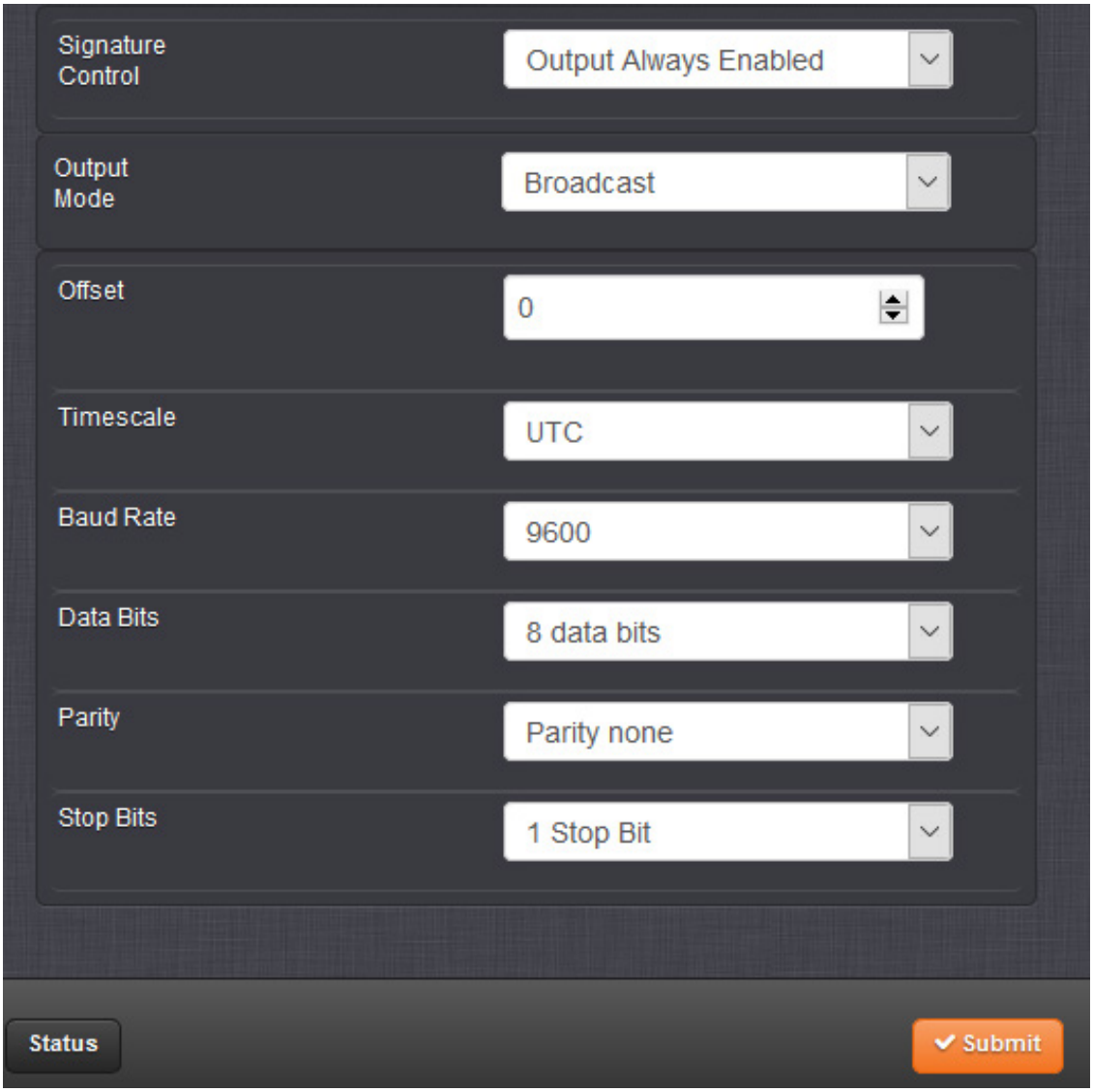
2. SecureSync Side:

Set the ASCII output PORT (J1 port of a 1204-02 module for example):



Set both RMC and GGA as mentioned in the following example



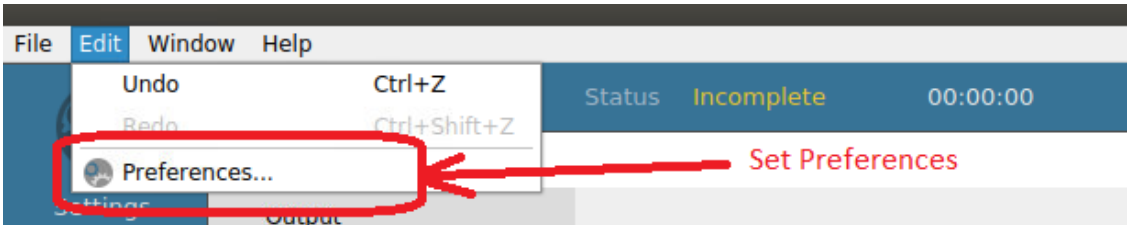


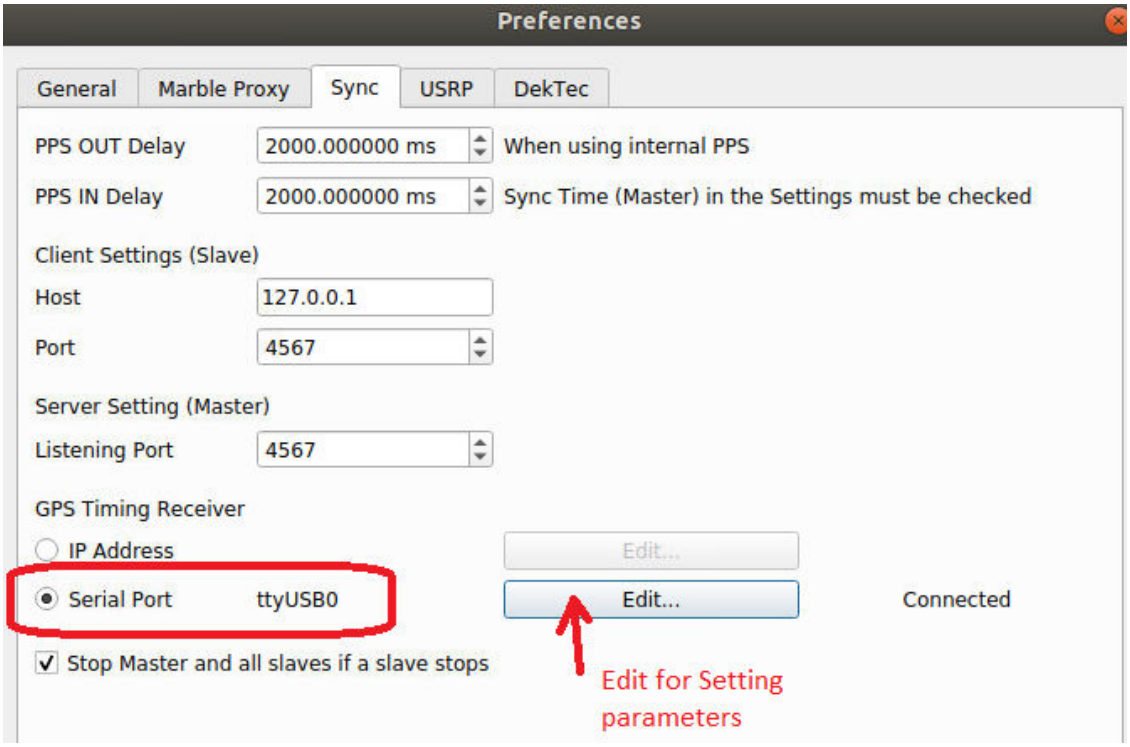
Offsets of 1PPS and RS232 signals can be adjusted if needed through GUI of SecureSync.

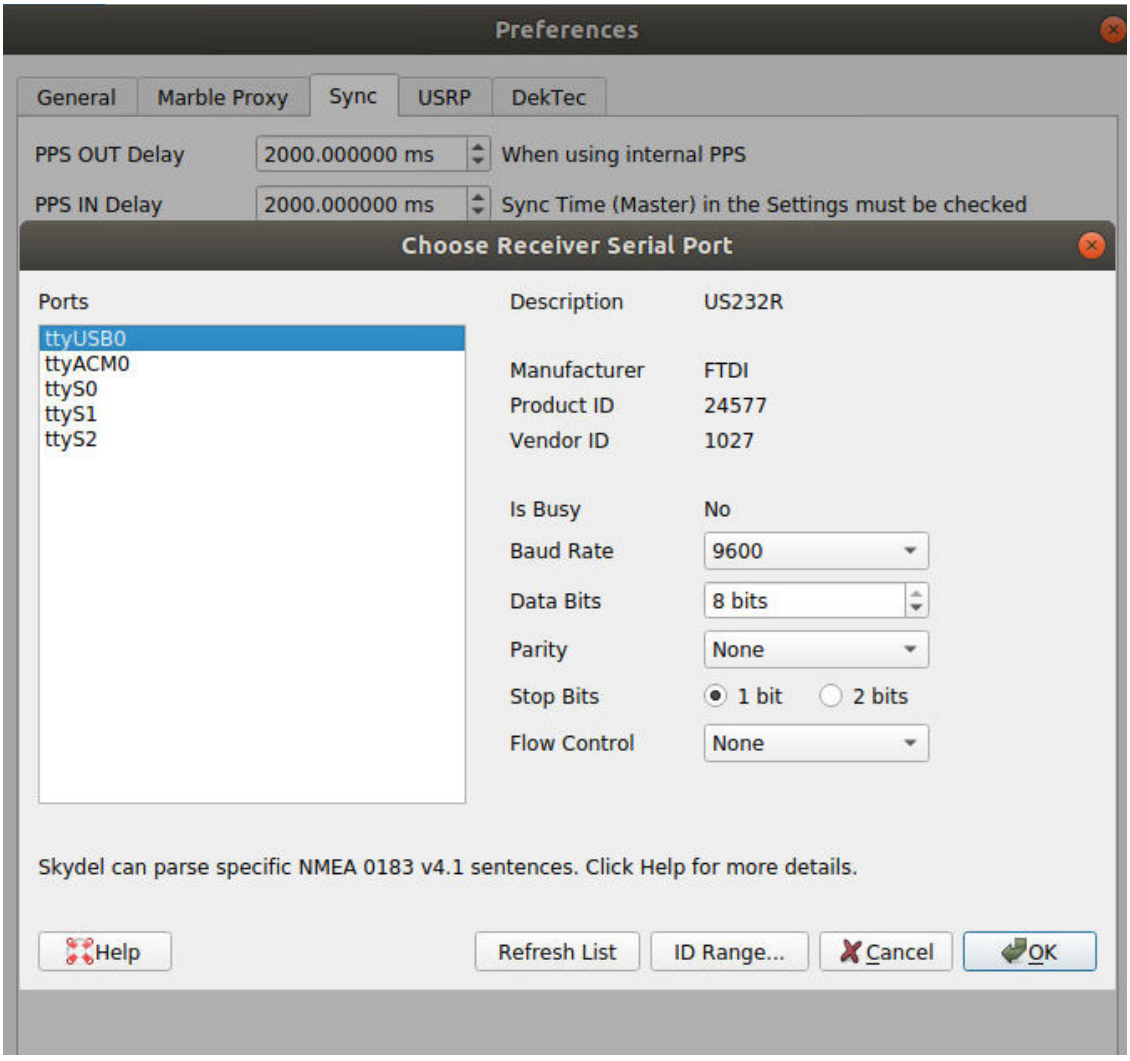
3. GSG8/Skydel Side:

Global Skydel Menu Setting:

Setting preference to get NMEA link:

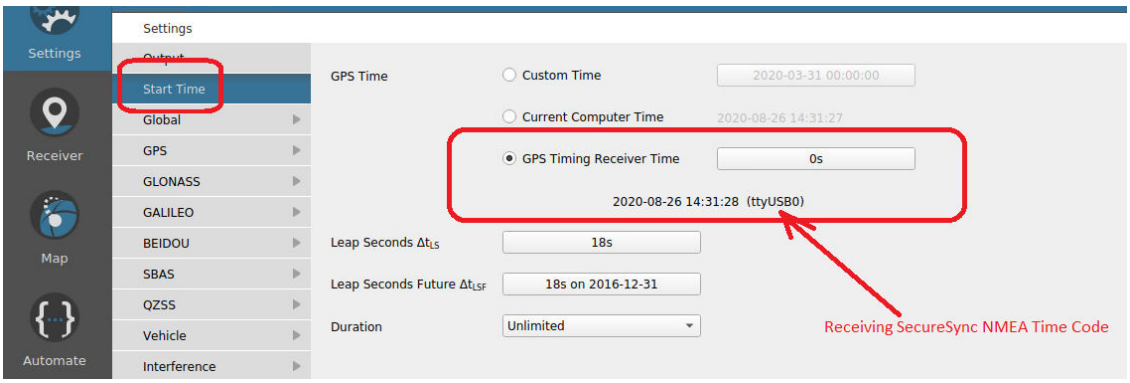






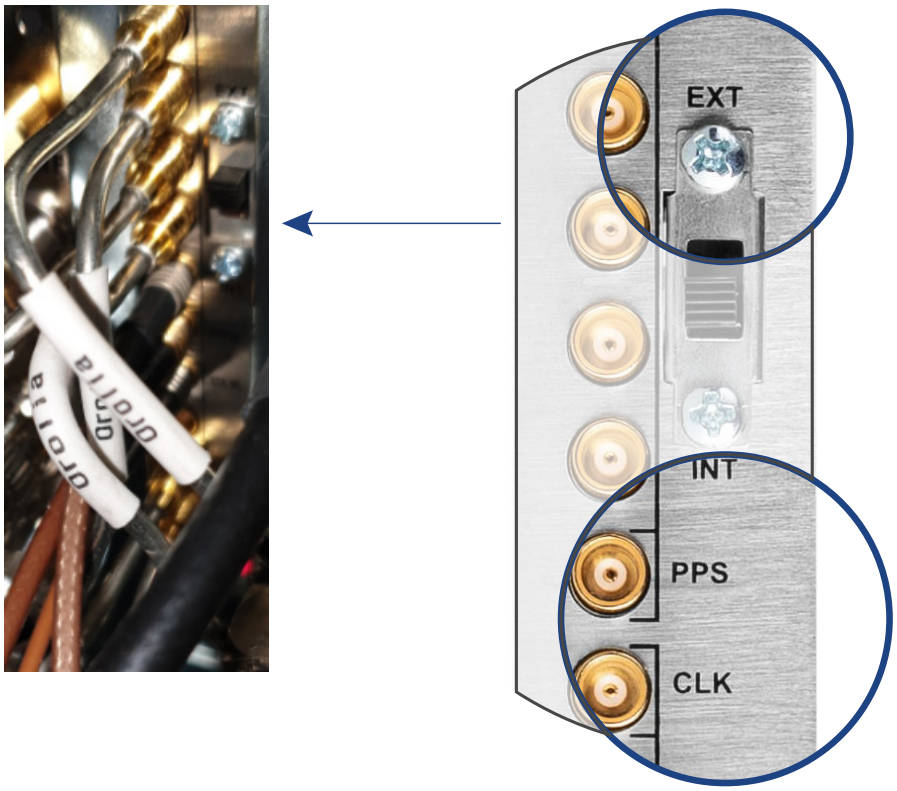
Configuration setting :

Setting Time to your scenario:

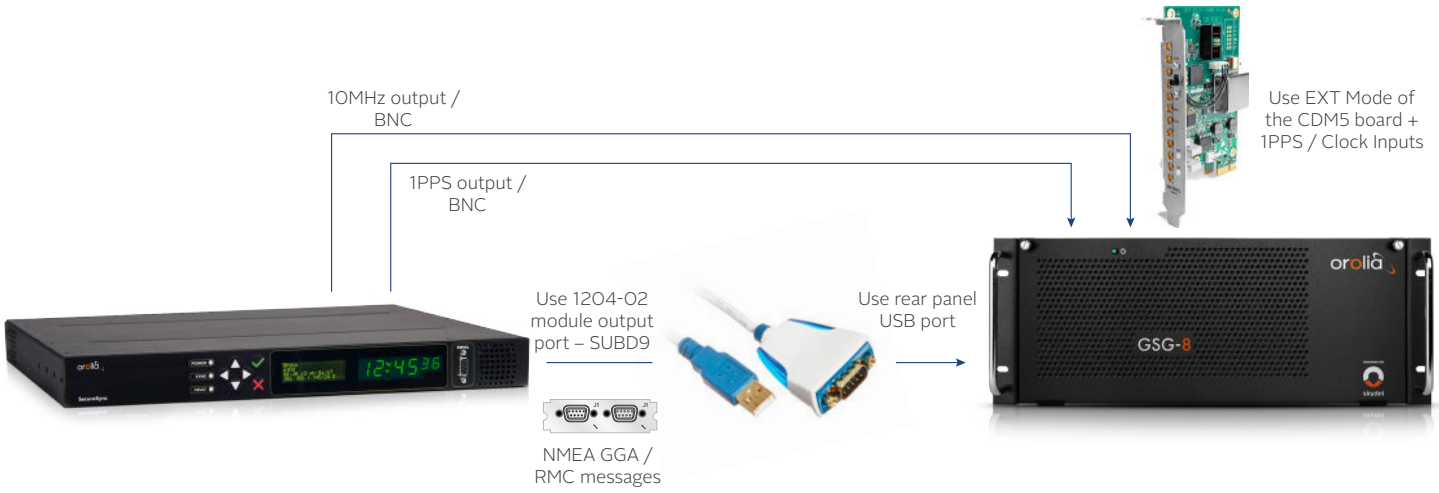


Hardware setting:

Set the CDM5 Rear panel selector to EXT for taking in account the incoming 1PPS and 10MHz clock signals.



General cabling:



4. How to test if my synchronization is consistent ?

In order to check synchronization result, please refer to our Application Note : “Timing calibration of a GNSS receiver”. This note is available on our web site under the following link : https://www.orolia.com/skydel/support/timing-calibration-gnss-receiver