

Version 1.1 – March 2019

### Abstract

Both the syn1588® PCIe NIC and the syn1588® VIP allow the connection of an external GPS receiver that provides the absolute time in IEEE1588 master operations. This application note briefly describes the requirements for selecting an appropriate GPS receiver.

### Requirements

Basically, every GPS receiver providing a 1 PPS offset and serial NMEA0183 stream (via RS232) is compatible. Fortunately, almost every GPS receiver provides exactly those two output signals.

Please note that when connecting a GPS receiver to syn1588® hardware one uses the syn1588® units as IEEE1588 masters. We generally recommend high stability OCXO option for all IEEE1588 master applications.

### Meinberg GPS Solution

If one requires a reliable and accurate solution, Oregano Systems recommends GPS receivers from Meinberg ( <http://www.meinberg.de> ). For example the GPS180 <http://www.meinbergglobal.com/english/products/3u-gps-clock-lc-display.htm> ).

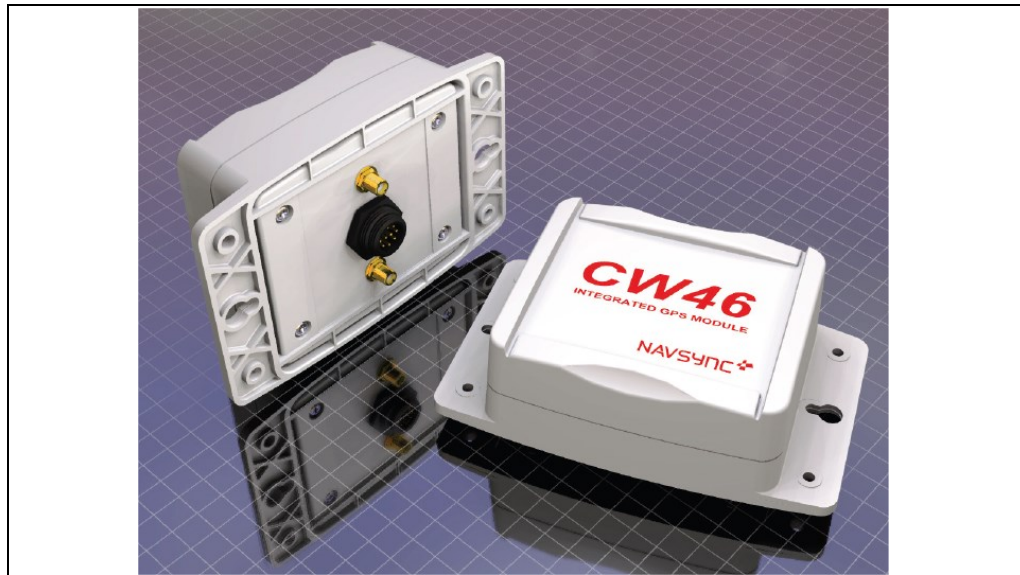


Meinberg GPS180

However, these devices are not cheap.

## Navsync


If one requires a simple device for testing, a Navsync receiver ( <http://www.navsync.com> ) will be fine as well. For example the CW46 ( [http://www.navsync.com/GPS\\_timing.html](http://www.navsync.com/GPS_timing.html) ).



Navsync CW46

One can buy these devices directly online <http://secure.conwin.com/cgi-bin/store/cp-app.cgi?usr=51H5104554&rnd=866071&rrc=N&aff=&cip=&act=&aff=&pg=prod&ref=58579&cat=navsync&catstr=HOME:navsync>

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