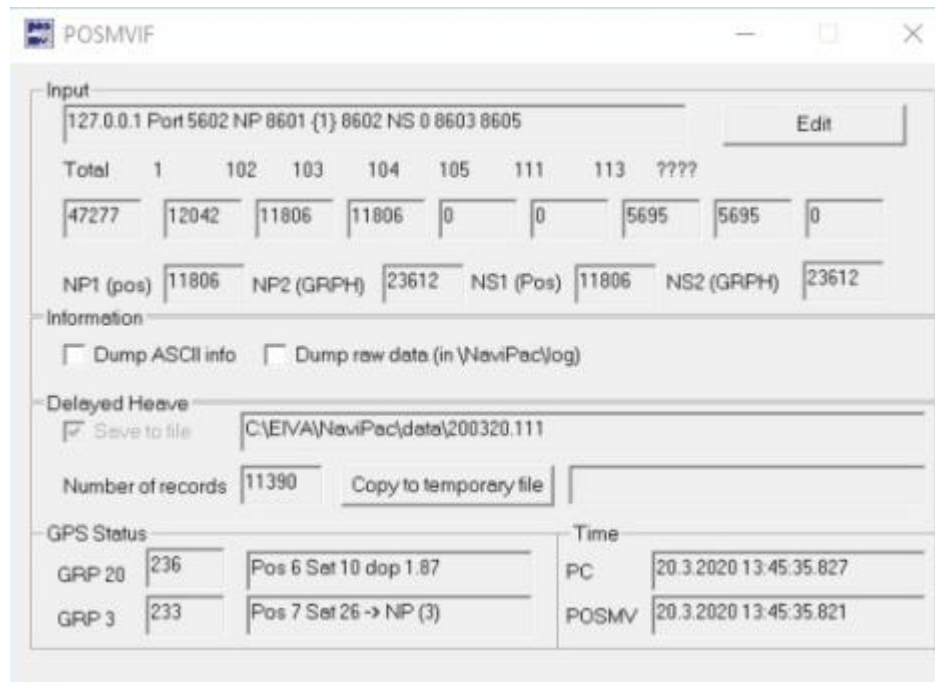




POSMV IF MODULE



POSMV IF



The screenshot shows the POSMV IF software window. It contains several sections for data entry and status monitoring.

Input Section:

- Input field: 127.0.0.1 Port 5602 NP 8601 {1} 8602 NS 0 8603 8605
- Total: 1, 102, 103, 104, 105, 111, 113, ????
- Fields: 47277, 12042, 11806, 11806, 0, 0, 5695, 5695, 0
- NP1 (pos): 11806, NP2 (GRPH): 23612, NS1 (Pos): 11806, NS2 (GRPH): 23612

Information Section:

- ☐ Dump ASCII info
- ☐ Dump raw data (in \NaviPac\log)

Delayed Heave Section:

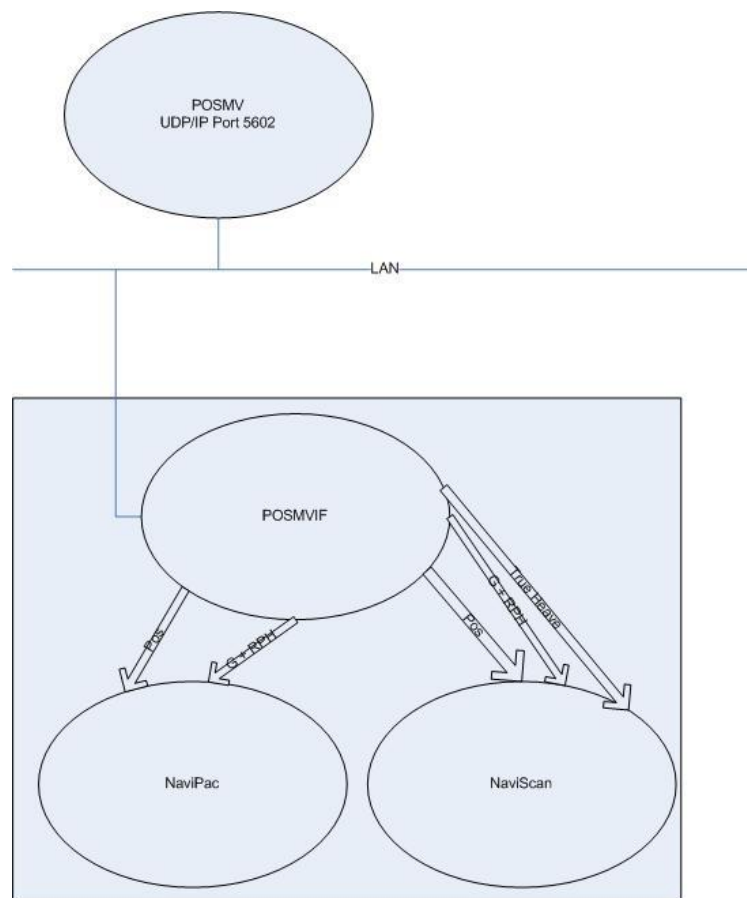
- ☒ Save to file: C:\EIVA\NaviPac\data\200320.111
- Number of records: 11390
- ☐ Copy to temporary file

GPS Status Section:

GPS Status		Time	
GRP 20	236	Pos 6 Set 10 dop 1.87	PC 20.3.2020 13:45:35.827
GRP 3	233	Pos 7 Set 26 -> NP (3)	POSMV 20.3.2020 13:45:35.821

If you are going to use NaviPac and/or NaviScan with a LAN based POSMV unit (position, gyro and motion data), then you need a special module between the POSMV and the various EIVA SW readers. This is due to the structure in NaviPac and NaviScan where each part accesses the LAN UDP/IP port individually.

The display part (a bit nerdy perhaps) shows various status information. Please pay special attention to the time at lower right corner – it shows time at the computer and the time stamp from POSMV – both UTC based. They should be fairly close



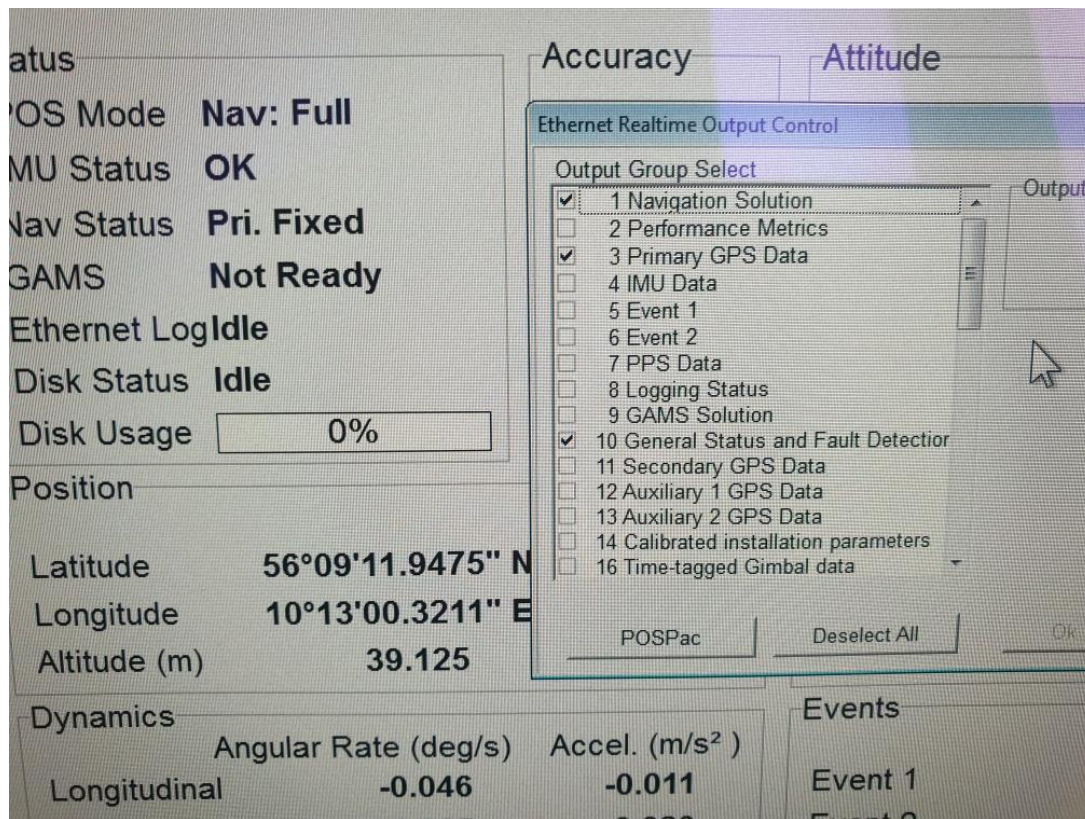
The POSMV IF module reads the data from POSMV on UDP/IP port 5602 (fixed number on POSMV ?) and may distribute it locally (127.0.0.1) on up to 5 ports

- Position to NaviPac – Group 1
- Attitude (gyro, roll, pitch and heave) to NaviPac – Group 102 and 103
- Position to NaviScan – Group 1
- Attitude (gyro, roll, pitch and heave) to NaviScan – Group 102 to 105 (102/103 required)
- True Heave to NaviScan – Group 111 and 113
Not needed from January 2007

The system may furthermore record the delayed heave packets (group 111 and 113) in daily files. This is enabled in the “save delayed heave” box.

The files will be named ddmmyy.111 – location specified in the INI file.

Please note to enable the various groups in the POSMV setting – minimum 1,3,20 and the motion groups 102 and 103:



The system may store position and attitude from 102 and 103 packets in temporary file by selecting "Dump ASCII Info". The data will then be stored in comma separated file \\EIVA\\NaviPac\\Log\\posmvif.log:

```
GRP,Time,      Lat,      Long,      Height,  Roll,  Pitch, Heave, Gyro

102,150626.715,55.331892679158,11.131020352511,35.8599,-0.5352,-0.3706,0.0089,244.6684

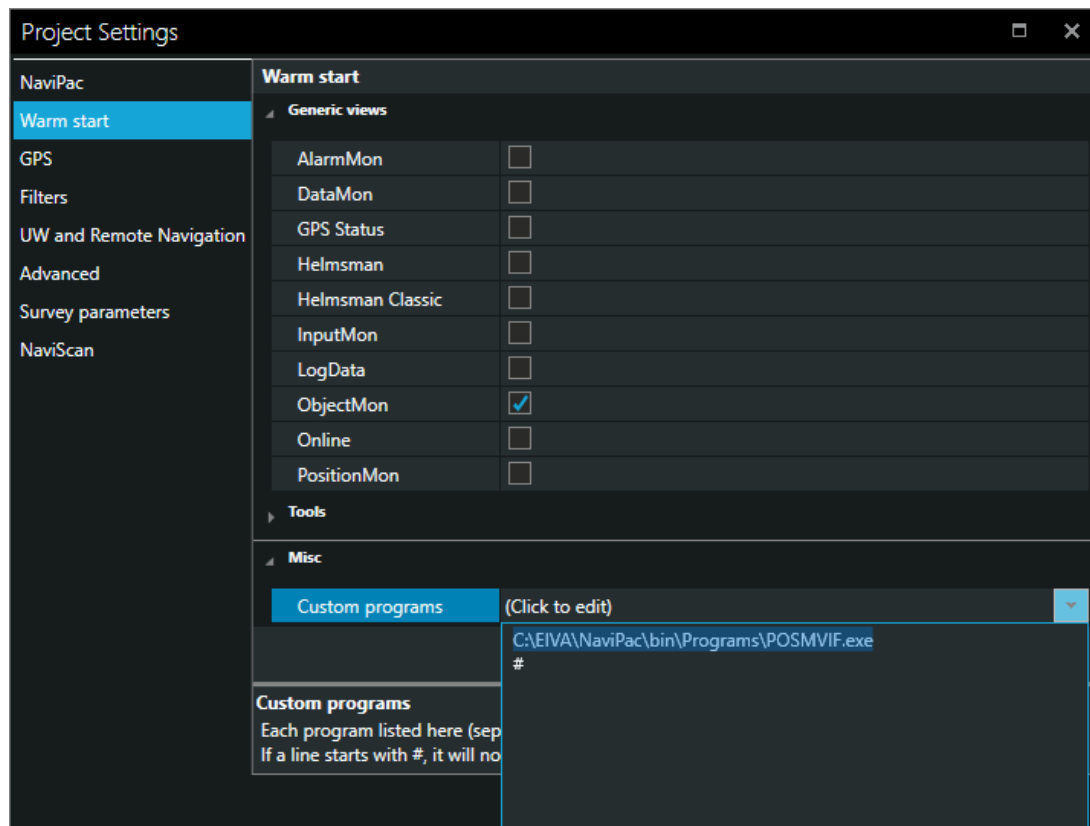
103,150626.715,55.331897584457,11.131040960982,36.5115,-0.5352,-0.3706,0.0003,244.6684

102,150626.735,55.331892675590,11.131020351677,35.8599,-0.5349,-0.3706,0.0089,244.6684

103,150626.735,55.331897580894,11.131040960133,36.5115,-0.5349,-0.3706,0.0003,244.6684

102,150626.755,55.331892672045,11.131020350875,35.8600,-0.5349,-0.3705,0.0090,244.6685
```

The module must be started up automatically either via Windows Start or from NaviPac Warm Start:



The module is to be configured in an INI file called POSMV.INI. Can be opened manually on \eiva\navipac or via the edit button:

```
[ POSMV ]
```

```
Port=5602
```

```
A1=192
```

```
A2=128
```

```
A3=1
```

```
A4=13
```

```
Port NP1=8601
```

```
Port NP2=8602
```

```
Port NS1=8888
```

Port NS2=8603

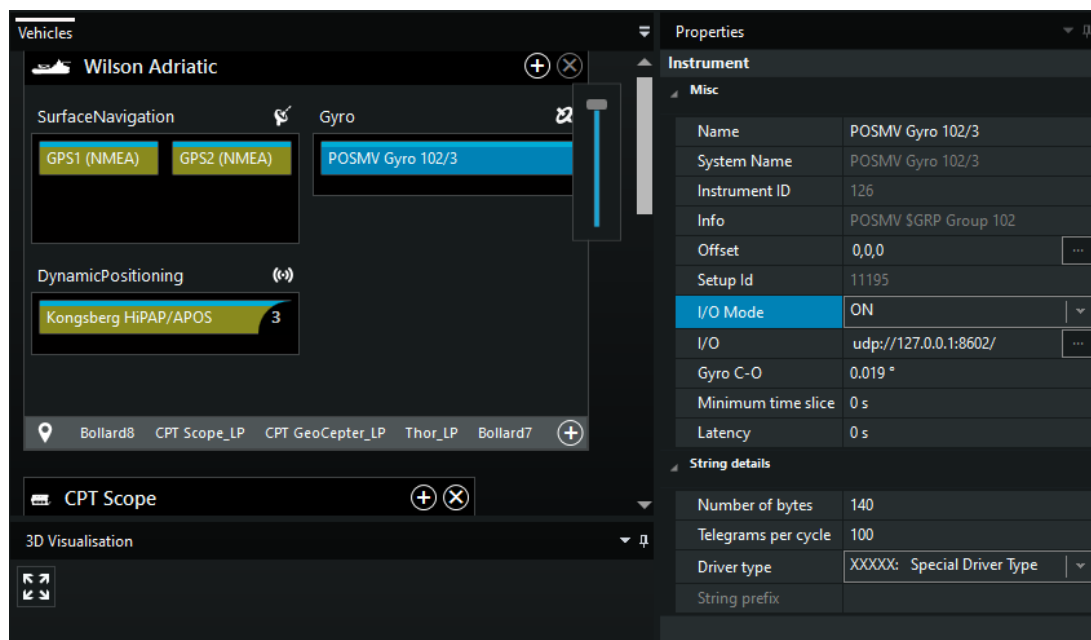
Port NS3=8605
NAVIPACPOSGROUP=1

storeDelayedHeave=1

DH_PATH=C:\EIVA\data

A1-A4 must be the TCP/IP address of the receiving computer NOT the POSMV.

Port NP1 etc. identifies the various ports used by NaviPac and NaviScan:



During online you may view information about incoming data, as each group is counted up when arriving.

GPS status

GPS status information is very tricky encapsulated in the POSMV data structure, and to get the full status we are taking the information from

- Global GPS status: Stand alone, differential, RTK
Mapped from GRP 3 Navigation Solution Status

- DOP
PDOP (and HDOP) is taken from GRP 20 PDOP. In NaviPac 4.2 and previous this was never set
- Number of satellites
Taken from GRP packet

The navigation status is mapped between POSMV and NaviPac using the following switch:

Stand alone:	1, 2, 8
Differential:	3-6, 9-13, 15
RTK:	7
Unknown:	Other

TIME SYNC

It is very important that the POSMV computer and the EIVA computer is synchronized to a common time source – preferably GPS time.

The POSMV must be configured to output UTC time in Time1.

If you for some reasons can't use the time information (test purposes?) then you may disable the use of global time:

NaviPac:

Open NAVIPAC.INI from \eiva\navipac\setup and set (or insert)

[CApplanixPosmvIPPort]

m_bUsePacketTime=0

NaviScan:

Defined in registry settings:

[HKEY_CURRENT_USER\Software\EIVA\NaviScan\Dataproc]

"ApplanixPosmvUsePacketTime"=dword:00000001

Set value to 0 to ignore timestamp in packet

SENSOR 1 or 2

The POSMV utilizes two sensors in the attitude output (102 is 1 and 103 is two). As default NaviPac and NaviScan uses sensor 1.

If you for some reason need to use sensor two instead, then this must be configured in both modules

NaviPac:

Open NAVIPAC.INI (found in \EIVA\NaviPac\Setup) and set (or insert)

[POSMV]

Gyro =103

NaviScan:

Defined in registry settings:

[HKEY_CURRENT_USER\Software\EIVA\NaviScan\NaviScan]

"UseApplanixPosmvRPH2"=dword:00000000

Set to 1 to use sensor 2