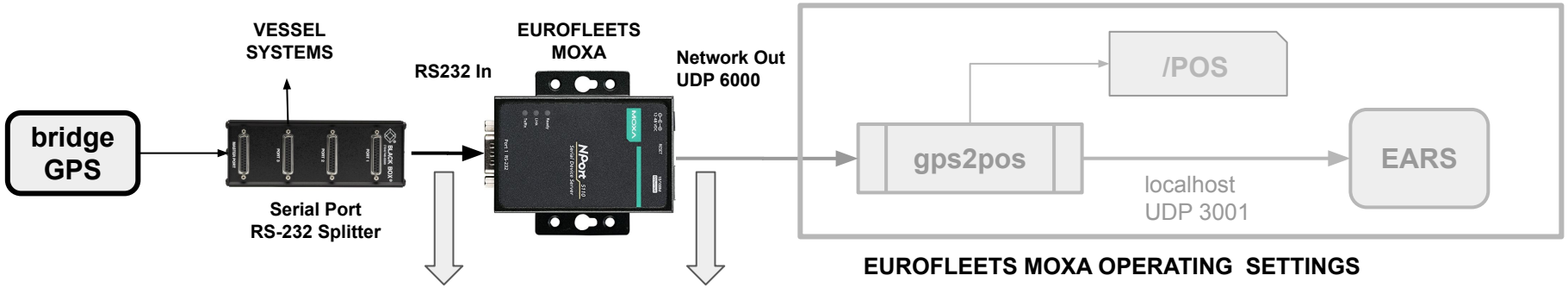
POSITION DATAGRAM GENERATION

ON-BOARD VM LINUX PC/SERVER




```
$GPGLL,4214.46,N,00843.79,W
$GPGGA,112007,4214.463,N,00843.795,W,1,8,01,+0002,M,,M,,
$GPAPB,A,,,,N,,,,,,,,,
$GPBWC,112007,,,,,,T,,M,,N,
$GPVTG,197,T,,,199,M,00.0,N,,
$GPRMC,112007,A,4214.46,N,00843.79,W,00.0,197,261020,02,W*79
$GPRMB,A,,,,,,,,,,,,*27
$GPGLL,4214.46,N,00843.79,W
$GPGGA,112009,4214.464,N,00843.795,W,1,8,01,+0002,M,,M,,
$GPAPB,A,,,,N,,,,,,,,,
$GPBWC,112009,,,,,,T,,M,,N,
$GPVTG,197,T,,,199,M,00.0,N,,
$GPRMC,112009,A,4214.46,N,00843.79,W,00.0,197,261020,02,W*77
$GPRMB,A,,,,,,,,,,,,*27
```

MARINE GPS OUTPUT NMEA 0183

RMC - Recommended Minimum Specific GPS/Transit Data

EUROFLEETS MOXA OPERATING SETTINGS

Operating Settings

Port 1			
Operation mode	UDP Mode		
Data Packing			
Packing length	0	(0 - 1024)	
Delimiter 1	d	(Hex) ☑ Enable	
Delimiter 2	0	(Hex) ☐ Enable	
Delimiter process	Delimiter+1	(Processed only when Packing length is 0)	
Force transmit	0	(0 - 65535 ms)	
UDP Mode			
	Begin	End	Port
Destination IP address 1	192.168.3.255		: 6000

LAN BROADCAST

OUTPUT UDP PORT

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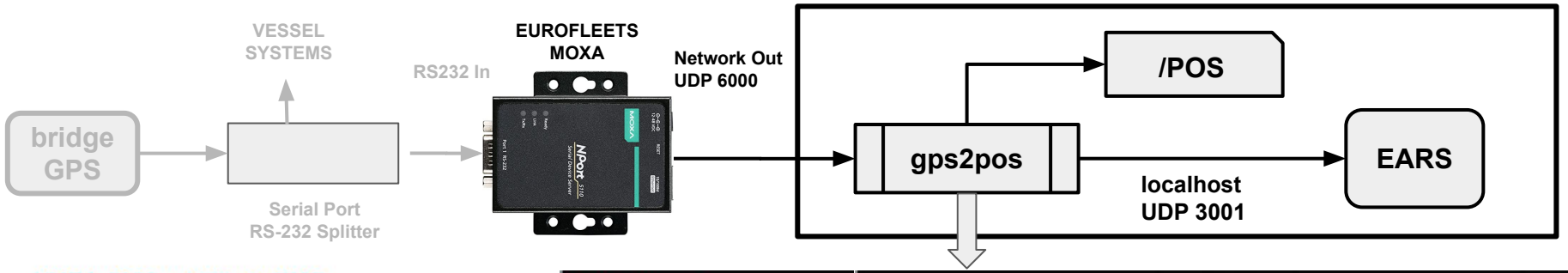
POSITION DATAGRAM GENERATION



NMEA-0183 message: RMC

Related Topics

- NMEA-0183 messages: Overview

Position, velocity, and time

The RMC string is:

$GPRMC,123519,A,4807.038,N,01131.000,E,022.4,084.4,230394,003.1,W*6A

GPRMC message fields

Field	Meaning
0	Message ID $GPRMC
1	UTC of position fix
2	Status A=active or V=void
3	Latitude
4	Longitude
5	Speed over the ground in knots
6	Track angle in degrees (True)
7	Date
8	Magnetic variation in degrees
9	The checksum data, always begins with *

```
#!/bin/bash
# Dependencies
# ncat, socat

vessel=SDG
gpspath=./track
listen=6000
send=3001

while true
do

 IFS=',' read -a rmc

yy=20${rmc[9]:4:2}
mm=${rmc[9]:2:2}
dd=${rmc[9]:0:2}
time=${rmc[1]:0:6}
```

```
if [[ ${rmc[4]} == "S" ]]
   then latsign=-1
   else latsign=1
fi
lat=$(echo "scale=4;$latsign*(${rmc[3]:0:2}+${rmc[3]:2:5}/60)"|bc)

if [[ ${rmc[6]} == "W" ]]
   then lonsign=-1
   else lonsign=1
fi
lon=$(echo "scale=4;$lonsign*(${rmc[5]:0:3}+${rmc[5]:3:5}/60)"|bc)

sog=$(echo "scale=2;${rmc[7]}"|bc)
cog=$(echo "scale=2;${rmc[8]}"|bc)

IFS='';gpsdata=${vessel}POS,$yy$mm$dd,$time,$lon,$lat,,,$sog,$cog

socat - udp:localhost:$send,broadcast < <(echo $gps)
echo $gpsdata >> $gpspath/$yy/$yy$mm$dd

done < <(nc -ul $listen|grep --line-buffered RMC)
```

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