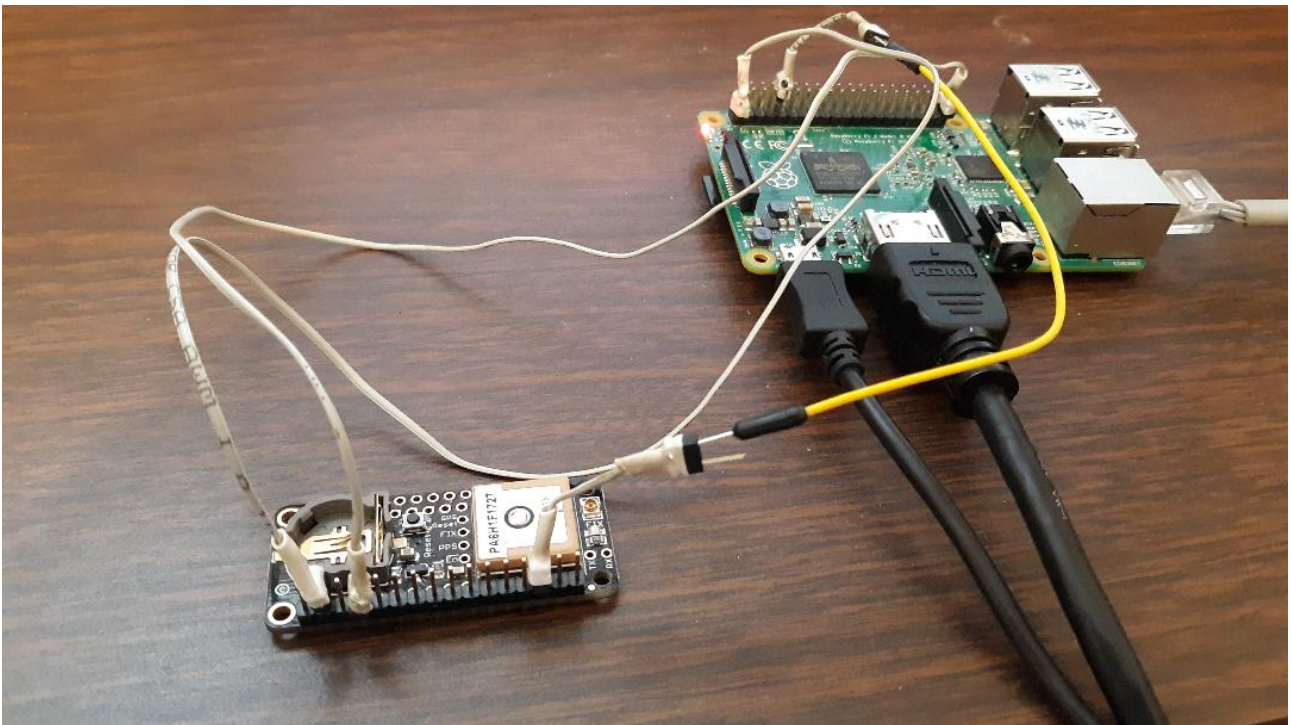


*****Draft*****

UDPServerGPS 04/27/19

*****Draft*****

The gps is connected to the Rpi2B as shown in the image below. The 3.3 V from the Rpi2B is connected to pin 2. The grd on Rpi2B is connected to pin 4. The Rx on Rpi2B pin 10 is connected to 3 pins from bottom of GPS



Using the browser to find the IP of the Ultibo System.

Device IP Address / Name	Status	Connection	Radio, Type, Name
99.184.183.104 / ws010	off	Ethernet	
192.168.1.65 / uverse_DVR_ETH_08:80:39:11:88:a2	on	Ethernet	
192.168.1.71 / vidals-iPad	on	Wi-Fi	Wi-Fi 1 bar 2.4 GHz, Home, ATT9x2x9j7
192.168.1.93 / mypi3-4	on	Ethernet	
192.168.1.143 / unknown68ee96256c06	on	Ethernet	
192.168.1.154 / unknown702559c68dbe	on	Ethernet	
192.168.1.155 / uverse_NODE_WIFI_84:8d:c7:8f:bd:a3	on	Ethernet	
192.168.1.169 / mypi3-3wifi	on	Wi-Fi	Wi-Fi 5 bars 2.4 GHz, Home, ATT9x2x9j7
192.168.1.179 / localhost	on	Ethernet	
192.168.1.185 / localhost	off	Ethernet	
192.168.1.197 / unknown702559a5077a	on	Ethernet	
192.168.1.198 / uverse_NODE_WIFI_84:8d:c7:29:73:72	on	Ethernet	
192.168.1.215 / mypi3-1	on	Ethernet	
192.168.1.220 / mypi3-7wifi	on	Wi-Fi	Wi-Fi 4 bars 2.4 GHz, Home, ATT9x2x9j7

192.168.1.224 / Galaxy-J7-V on Wi-Fi Wi-Fi 5 bars 2.4 GHz, Home, ATT9x2x9j7
192.168.1.225 / Galaxy-J7-V on Wi-Fi Wi-Fi 5 bars 2.4 GHz, Home, ATT9x2x9j7

Before compiling the kernel7.img from UDPServerGPS.lpi

```
pi@mypi3-1:~/Ultibo_Projects/gpsudpserver/RPi2 $ ./libbuild.sh WR
```

Compiling checksum_ultibo.c

Compiling with -D WR

Creating libgps.a

Sat Apr 27 10:28:14 MDT 2019

-rw-r--r-- 1 pi pi 1644 Apr 27 10:28 checksum_ultibo.o

-rw-r--r-- 1 pi pi 1884 Apr 27 10:28 libgps.a

```
pi@mypi3-1:~/Ultibo_Projects/gpsudpserver/RPi2 $ ./libbuild.sh
```

Compiling checksum_ultibo.c

./libbuild.sh: line 5: [: =: unary operator expected

Not compiling with -D WR

Creating libgps.a

Sat Apr 27 10:28:20 MDT 2019

-rw-r--r-- 1 pi pi 1332 Apr 27 10:28 checksum_ultibo.o

-rw-r--r-- 1 pi pi 1572 Apr 27 10:28 libgps.a

The program /home/pi/Ultibo_Projects/gpsudpserver/RPi2/Client_Server_Ex/

```
pi@mypi3-1:~/Ultibo_Projects/gpsudpserver/RPi2/Client_Server_Ex $ gcc -o server server.c
```

```
pi@mypi3-1:~/Ultibo_Projects/gpsudpserver/RPi2/Client_Server_Ex $ ./server
```

displays the messages from Ultibo System

These are the logging message sent from Ultibo System.

Waiting for data...Received packet from 192.168.1.179:49215

Data: <14>Apr 27 16:14:30 192.168.1.179 00000AA8 - 004699DC:0 -

\$GPVTG,68.42,T,,M,1.68,N,3.11,K,D*0C

5467,W,1.68,68.42,270419,,D*4C

000,0000*6D

These are the lines in file InitUnitGPS.pas that describe the port & IP where to send the logging messages.

```
{Set SysLog to send logs to our UDP server}
```

```
SYSLOG_SERVER_DEFAULT:='192.168.1.215';
```

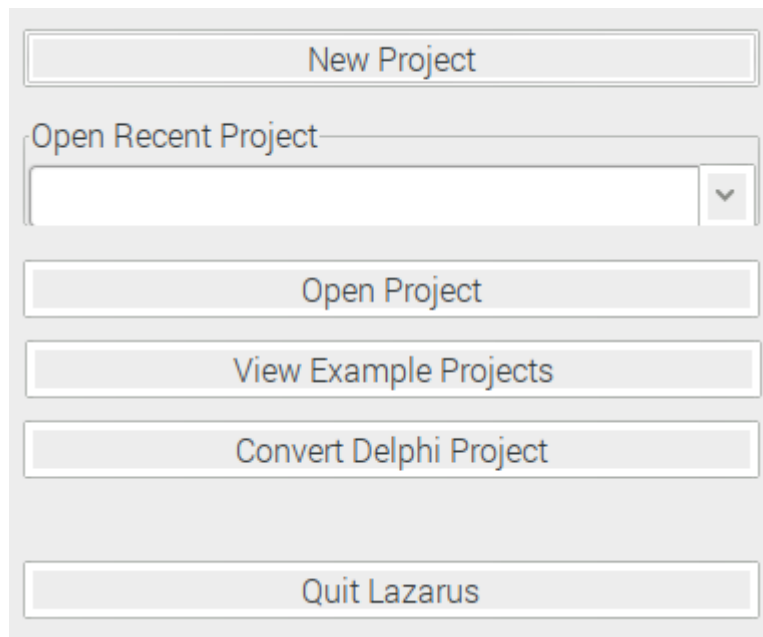
```
SYSLOG_PORT_DEFAULT:=8888;
```

```
SYSLOG_PROTOCOL_DEFAULT:=LOGGING_PROTOCOL_UDP;
```

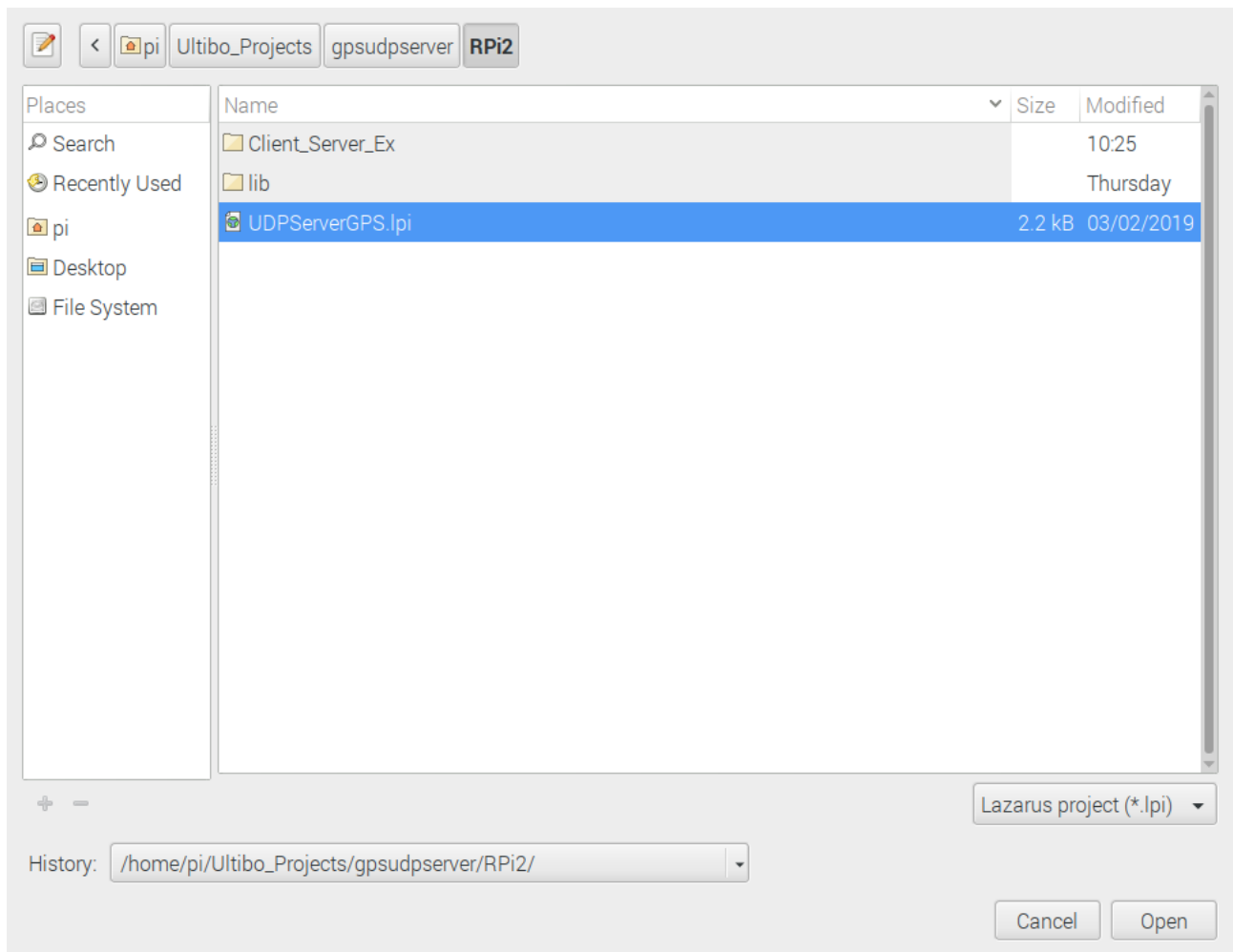
This are the line in file ServerUnitGPS.pas

```
SendDataTo('192.168.1.215',8888,PChar(MessageText),Length(MessageText));
```

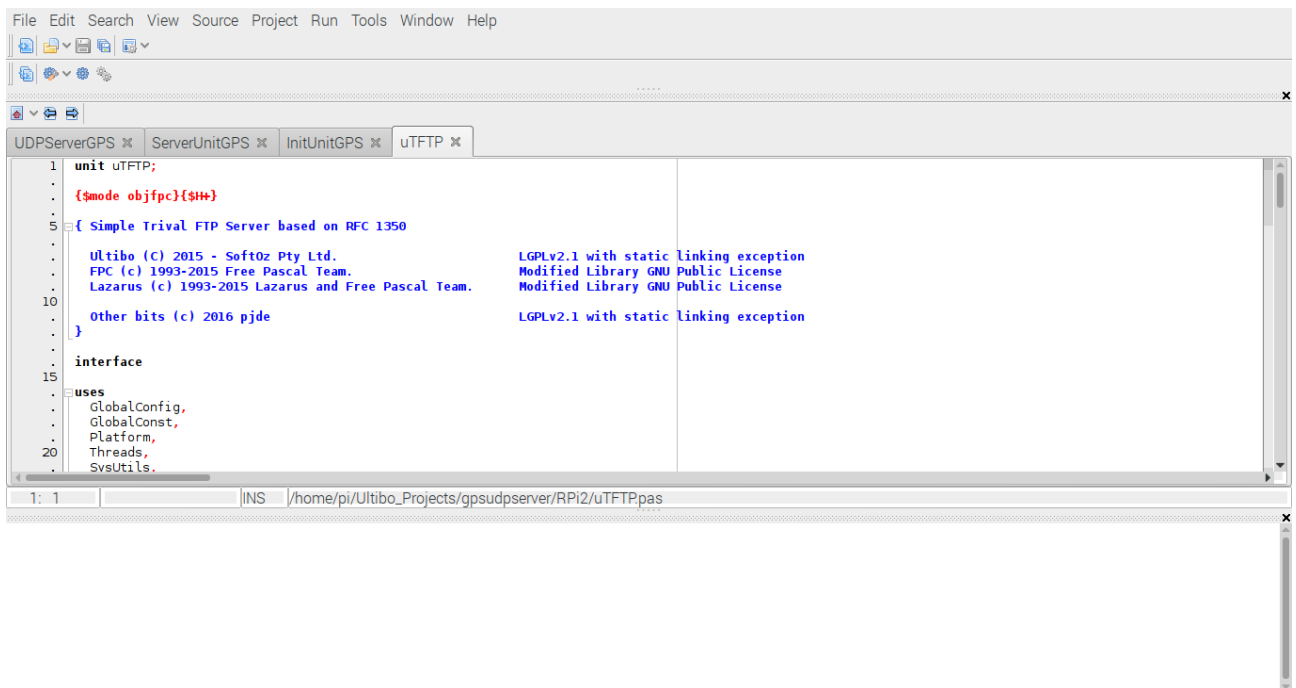
Open a new project



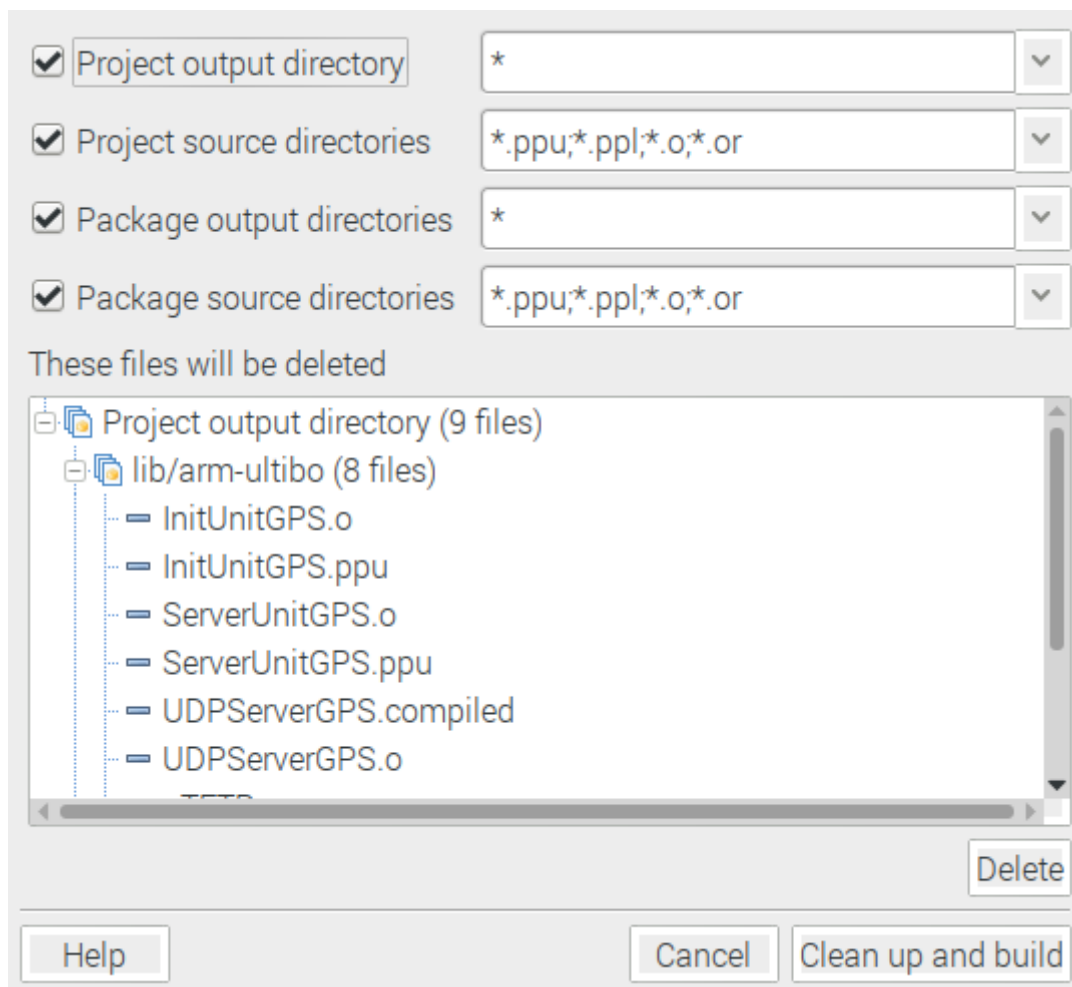
Select the UDPServerGPS.lpi



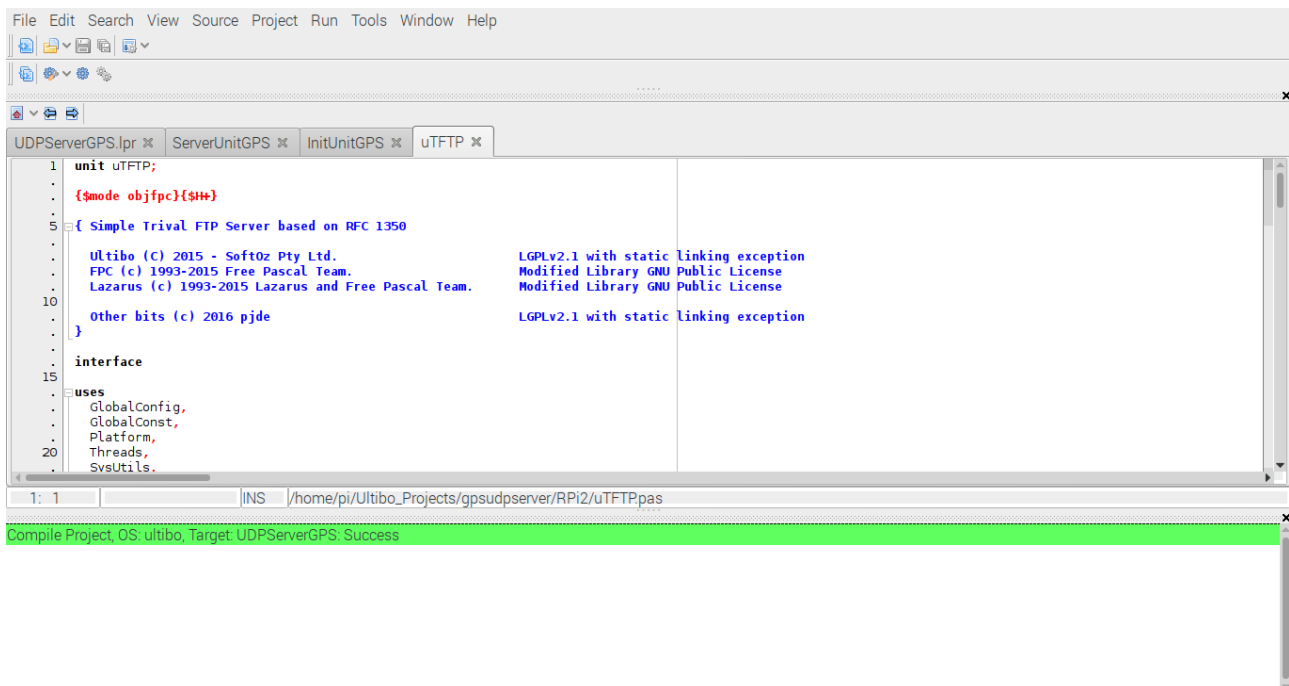
This displays the files used in the project.



From Run/Clean up and Build



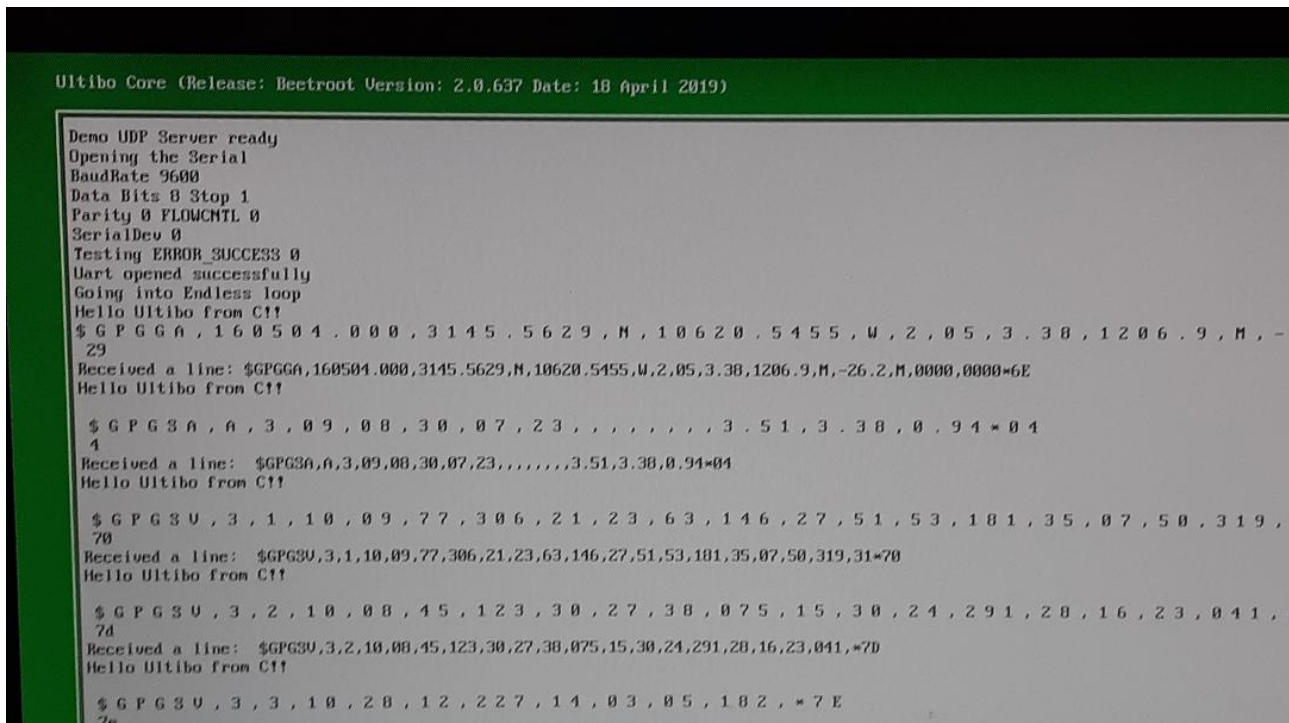
Depress Clean up and build



The kernel7.img can now be transferred to Ultibo System with GPS connected to Rpi2B RX.

```
pi@mypi3-1:~/Ultibo_Projects/gpsudpserver/RPi2 $ tftp 192.168.1.179 < cmdstftf
tftp> tftp> Sent 2880960 bytes in 16.5 seconds
```

Following the reboot the follow image will be displayed.



A telnet session can also be established with the Ultibo System.

```
pi@mypi3-1:~/Ultibo_Projects/gpsudpserver/doc $ telnet 192.168.1.179
```

Ultibo Core (Release: Beetroot Version: 2.0.637 Date: 18 April 2019)

(Type HELP for a list of available commands)

Available commands:

HELP
INFO
VER
TIME
CLS
RESTART
SHUTDOWN
UPTIME
THREAD
MEMORY
DEVICE
FILESYSTEM
CONTROLLER
DISK
PARTITION
VOLUME
DRIVE
CACHE
DIR
CD
MD
RD
TYPE
COPY
MOVE
DEL
REN
ATTRIB
TOUCH
VOL
LABEL
DELTREE
XCOPY
UPDATE
LOGOUT

The server receiving data from the Ultibo System

00,0000*60

V

Waiting for data...Received packet from 192.168.1.179:49215

Data: <14>Apr 27 17:06:56 192.168.1.179 00001D25 - 004699DC:0 -

\$GPGGA,170657.000,3145.5650,N,10620.5432,W,2,07,1.20,1192.9,M,-26.2,M,0000,0000*62

V

Waiting for data...Received packet from 192.168.1.179:49215

Data: <14>Apr 27 17:06:56 192.168.1.179 00001D26 - 004699DC:0 -

\$GPGSA,A,3,09,08,23,27,11,30,07,,,,,1.51,1.20,0.91*0D

2.9,M,-26.2,M,0000,0000*62

V

Waiting for data...Received packet from 192.168.1.179:49215

Data: <14>Apr 27 17:06:56 192.168.1.179 00001D27 - 004699DC:0 -

\$GPRMC,170657.000,A,3145.5650,N,10620.5432,W,0.30,48.06,270419,,,D*4B

000,0000*62

V

Waiting for data...Received packet from 192.168.1.179:49215

Data: <14>Apr 27 17:06:57 192.168.1.179 00001D28 - 004699DC:0 -

\$GPVTG,48.06,T,,M,0.30,N,0.56,K,D*02

5432,W,0.30,48.06,270419,,,D*4B

000,0000*62

V

Waiting for data...