BBB must be powered up from mains supply. PC supply not sufficient.

Copy files to PC from google/usb drive
1. **Beagle**
   Copy the following into ~/workbeagle/Beagle/src directory in PC
   NOTE: Do backup your beagle_main.cpp first before copying over.
   atsmsgps.h
   atsmsgps.cpp
   ttyU.sh

2. **sierra usb port access**
   Copy ttyU.sh into ~/Desktop directory in PC

3. **AT commands for SMS and GPS**
   Copy AirPrime MC73XX-8805 AT Command Reference_V4 pdf.pdf
   to ~/Desktop directory in PC.

Now, Copy file into BBB
cd ~/Desktop
scp ttyU.sh debian@192.168.7.2:Desktop

Running SMS and GPS via Sierra Wireless with AT commands.

Writing AT commands in C++

Running sms
NOTE:
1. Power adapter must be used.
2. Sim card must be inserted into sierra modem.

Need to refer to smsgps.cpp program for clarification. Cant show examples as phone numbers and SMS are confidential. Please use your own sim card to try.

At+cops?
At+creg
At!band?

```
Reply: at+cops?


+COPS: 0,0,"MY MAXIS",7



OK
Handle: 3
Reply: at+creg


OK
Handle: 3
Reply: at+cgmi;+CPIN?;+cmgf=1


Sierra Wireless, Incorporated



+CPIN: READY



OK
Handle: 3
Reply: at!band?


Index, Name,                      GW Band Mask      L Band Mask

00, All bands,                    000200000CE80380 00000000000800C5




OK
Handle: 3
```

At+cgmi
At+cgml="all"
at+cpin?
at+cmgf=1
at+cgms="<phone number>"

Running active GPS antenna

```
ubuntu@arm: ~/Desktop
Handle: 3
Reply: at!entercnd="A710"


OK
Handle: 3
Reply: at!custom="gpsenable",1


OK
Handle: 3
Reply: at!custom="gpssel",0


OK
Handle: 3
Reply: at!reset


OK
Handle: 3
Reply: at!entercnd="A710"


OK
```

at!gpsautostart=1,1,20,10,10
NOTE: 1=Enable, 1=GPS standalone, 20=maxtime to wait for position fix(sec), 10=maxdistance (m), 10=time to wait between fixes.

at!gpssatinfo?

```
OK
Handle: 3
Reply: at!gpsautostart=1,1,20,10,10


OK
Handle: 3
Reply: at!gpssatinfo?


Satellites in view:  16

* SV: 10  ELEV:  0  AZI:     0  SNR: 34

* SV: 12  ELEV:  0  AZI:     0  SNR: 40

* SV: 14  ELEV:  0  AZI:     0  SNR: 30

* SV: 18  ELEV:  0  AZI:     0  SNR: 38

* SV: 20  ELEV:  0  AZI:     0  SNR: 42

* SV: 21  ELEV:  0  AZI:     0  SNR: 33

* SV: 22  ELEV:  0  AZI:     0  SNR: 33

* SV: 25  ELEV:  0  AZI:     0  SNR: 35

* SV: 29  ELEV:  0  AZI:     0  SNR: 34

* SV: 31  ELEV:  0  AZI:     0  SNR: 35

* SV: 40  ELEV:  0  AZI:     0  SNR: 33

* SV: 41  ELEV:  0  AZI:     0  SNR: 38

* SV: 50  ELEV:  0  AZI:     0  SNR: 34

* SV:255  ELEV:  0  AZI:     0  SNR: 37

* SV:255  ELEV:  0  AZI:     0  SNR: 41

* SV:255  ELEV:  0  AZI:     0  SNR: 42


OK
```

at!gpsstatus?

```
ubuntu@arm: ~/Desktop
Handle: 3
Reply: at!gpsstatus?


Current time: 2016 01 14 3 05:06:21



2016 01 14 3 05:06:20 Last Fix Status    = SUCCESS

2016 01 14 3 05:06:00 Fix Session Status = ACTIVE



TTFF (sec) = 20




OK
```

at!gpsloc?

```
ubuntu@arm: ~/Desktop
Handle: 3
Reply: at!gpsloc?


Lat: 5 Deg 17 Min 49.98 Sec N  (0x000F1151)

Lon: 100 Deg 17 Min 41.39 Sec E  (0x011D4878)

Time: 2016 01 15 4 06:43:12 (GPS)

LocUncAngle: 123.7 deg  LocUncA: 32.0 m  LocUncP: 24.0 m  HEPE: 40.000 m

2D Fix

Altitude: -172 m  LocUncVe: 64.0 m

Heading: 0.0 deg  VelHoriz: 0.0 m/s  VelVert: 0 m/s




OK
ubuntu@arm:~/Desktop$
```
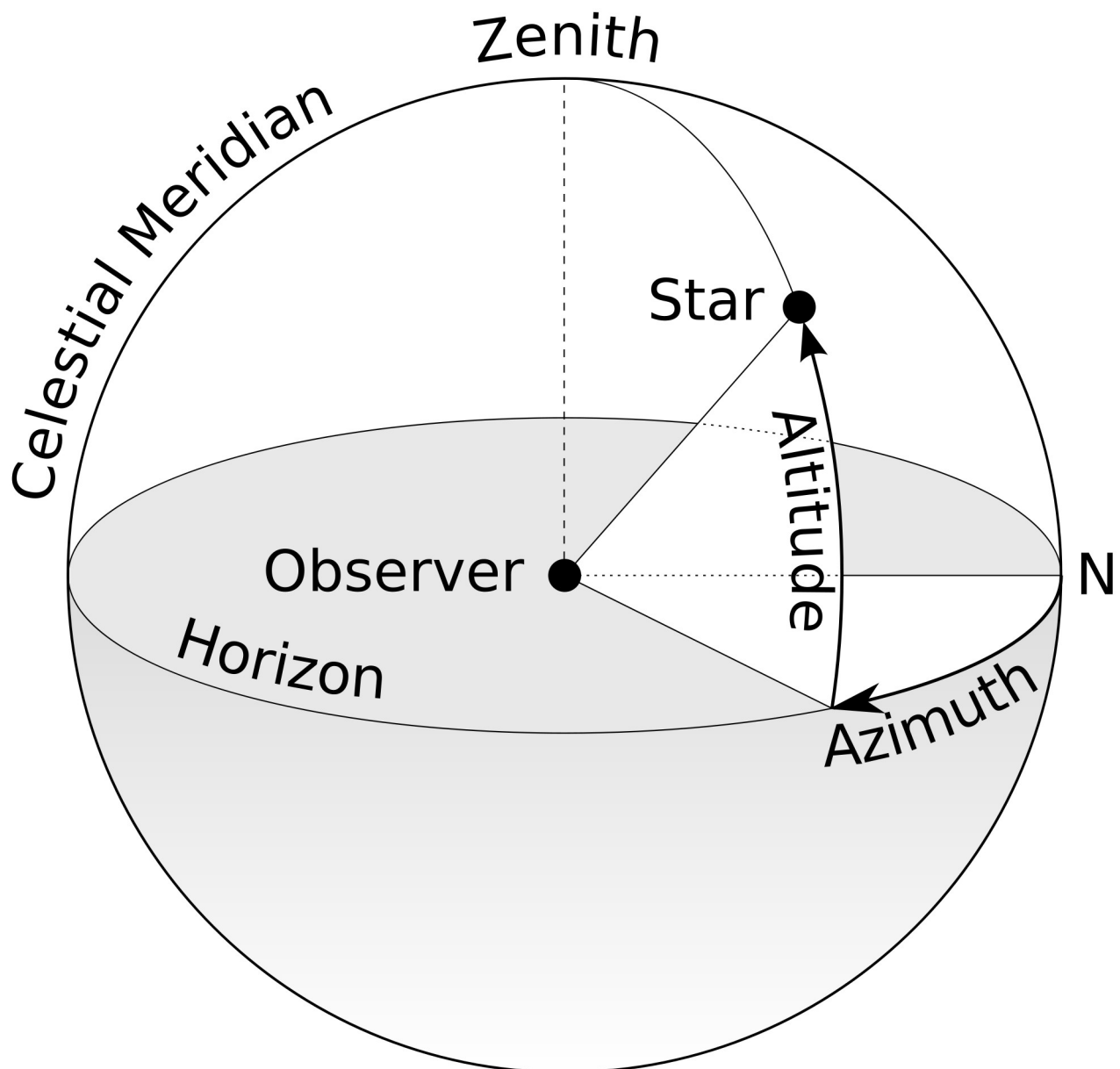
Azimuth and Elevation.

Elevation: 0-90deg. 90deg=vertical. 0deg=horizontal.
Azimuth: 0-360deg. 0Deg =North. 90deg=East. 270deg=West.

Latitude & Longitude