



CS
IT

GP session GSM/GPS 2 Serial Bridge

By:

Dr. Ahmed ElShafee

GSM 2 Serial bridge

```
#include <SoftwareSerial.h>
SoftwareSerial GSM(2, 3);
void setup()
{
  Serial.begin(19200);
  GSM.begin(19200);

  GSM.print("AT+IPR=19200\r");

  GSM.listen();
}

void loop()
{
  if(Serial.available())
  {
    Serial.write((unsigned char)Serial.read());
  }

  if(GSM.available())
  {
    Serial.write((unsigned char)GSM.read());
  }
}
```

Commands to test

- AT#BND=0
- AT+CSQ?
- at+cmgf=1
- AT+CPMS="SM"
- at+cmgs=0100789250
- > xxxxxx ctrl^z
- at+cmgr=01
- at+cmgl=all
- at+cmgd=01
- ATD 010000000000;
- ATA
- ATH

GSM/GPS 2 serial bridge

```
#include <SoftwareSerial.h>
SoftwareSerial GSM(2, 3);
SoftwareSerial GPS(10, 11);
char Lat[10];
char Lon[10];
unsigned char ch;
int m=0;
void setup()
{
  Serial.begin(19200);
  GSM.begin(19200);
  GSM.print("AT+IPR=19200\r");
  GPS.begin(9600);
  GSM.listen();
}

void loop()
{
  if(Serial.available())
  {
    ch=(unsigned char)Serial.read();
    if(ch=='!')
    {
      Serial.write(ch);
      Serial.write("\n\r");
      readGPS();
      Serial.write("Lat = ");
      Serial.write(Lat);
      Serial.write("\n\r");
      Serial.write("Lon = ");
      Serial.write(Lon);
      Serial.write("\n\r");
      GSM.listen();
    }
    else
      GSM.write(ch);
  }
}
```

```
else if(GSM.available())
{
  Serial.write((unsigned char)GSM.read());
}
}
```

```
boolean readGPS()
{
  long interval=2000;
  char res[100];
  boolean recieved=false;
  strcpy(res,"");
  m=0;
  GPS.listen();
  long previousMillis=millis();
  unsigned long currentMillis;
  while(true)
  {
    if (GPS.available() > 0)
    {
      res[m]=GPS.read();
      if(m<98)m++;
    }
    currentMillis = millis();
    if(currentMillis - previousMillis > interval)
    {
      res[m+1]='\0';
      break;
    }
  }
  if(m>0)recieved=true;
  /*******
  char *pos;
  char cor[30];
  int i;
  if(recieved)
  {
```

```
pos=strstr(res,"$GPGGA,");
for(i=0;i<=28;i++)
{
    cor[i]=pos[18+i];
}
cor[29]='\0';
for(i=0;i<=28;i++)
{
    if((cor[i]==',')&&(cor[i+1]=='N')&&(cor[i+2]==','))
    {
        Lat[i]='\0';
        break;
    }
    Lat[i]=cor[i];
}
int x=0;
for(int n=i+3;n<=28;n++)
{
    if((cor[n]==',')&&(cor[n+1]=='E')&&(cor[n+2]==','))
    {
        Lon[x]='\0';
        break;
    }
    Lon[x]=cor[n];
    x++;
}
}

return recieved;
}
```



Thanks,..
See you next week (ISA),...