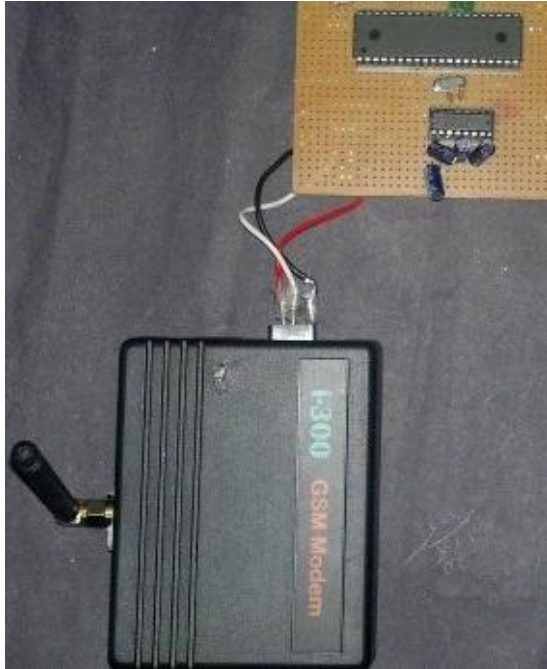


GSM : Global System for Mobile Communication

This tutorial describes the way to interface GSM modem with a microcontroller(Atmega16/32).



COMPUTER INTERFACE

Hyperterminal, a terminal emulation program is used to connect GSM. The above program can be found on the following link:

<http://www.hilgraeve.com/hyperterminal/>

GSM modem is controlled using AT commands.

AT COMMANDS

These AT commands have the format of “AT<x><n>”, where “<x>” is the command, and “<n>” is/are the argument(s) for that command.

e.g.

ATD 1234567890; //calls a number

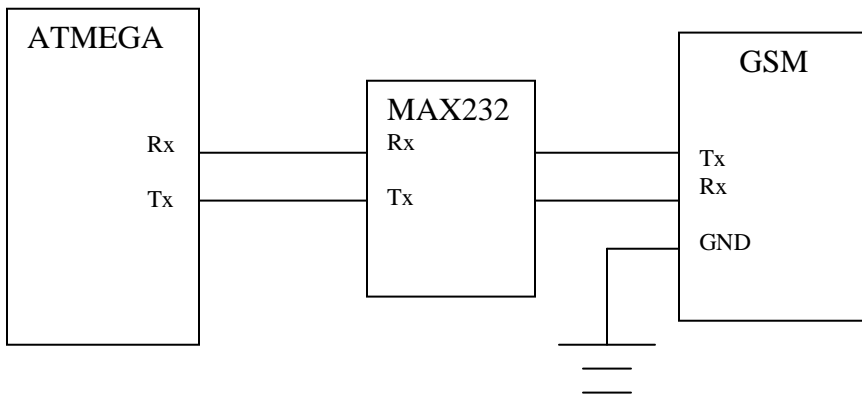
Entire AT command set can be accessed from:

http://www.developer.nokia.com/Community/Wiki/AT_Commands

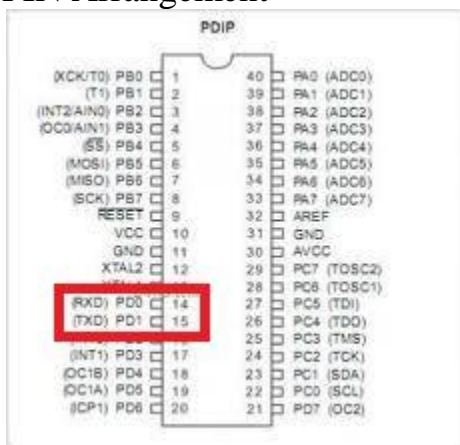
GSM ATMEGA INTERFACE

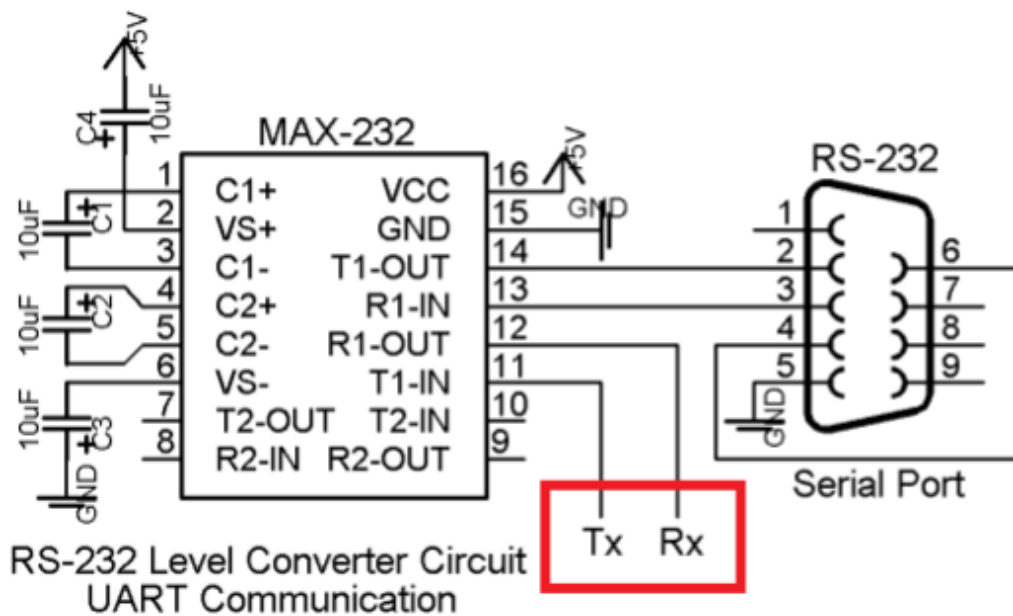
CONNECTIONS

GSM is connected to Atmega via MAX 232.



PIN Arrangement





SMS: Using AT Commands

- Two message modes: PDU and Text
- AT+CMGF=1 //Text Mode

OK

AT+CMGS="9559753551"

> Hello World<Ctrl>+<Z>

+CMGS: 44

OK

SAMPLE CODE FOR SENDING AN SMS

```
void sendmessage(char msg[], char num[]);
{
    int i=0,j=0;
    puts("AT+CMGF=");
    putchar(49); // sends the ASCII value of '1'
    puts("AT+CMGS=");
    putchar("\n");
    while(num[i]!='\0')
    {
        j=(int)num[i];
```

```
        putchar(j); //sends the ASCII values of the numbers
        i++;
    }
    puts("Hello World");
    putchar('26'); //sends the ASCII value of <Ctrl>+<Z>
}
```