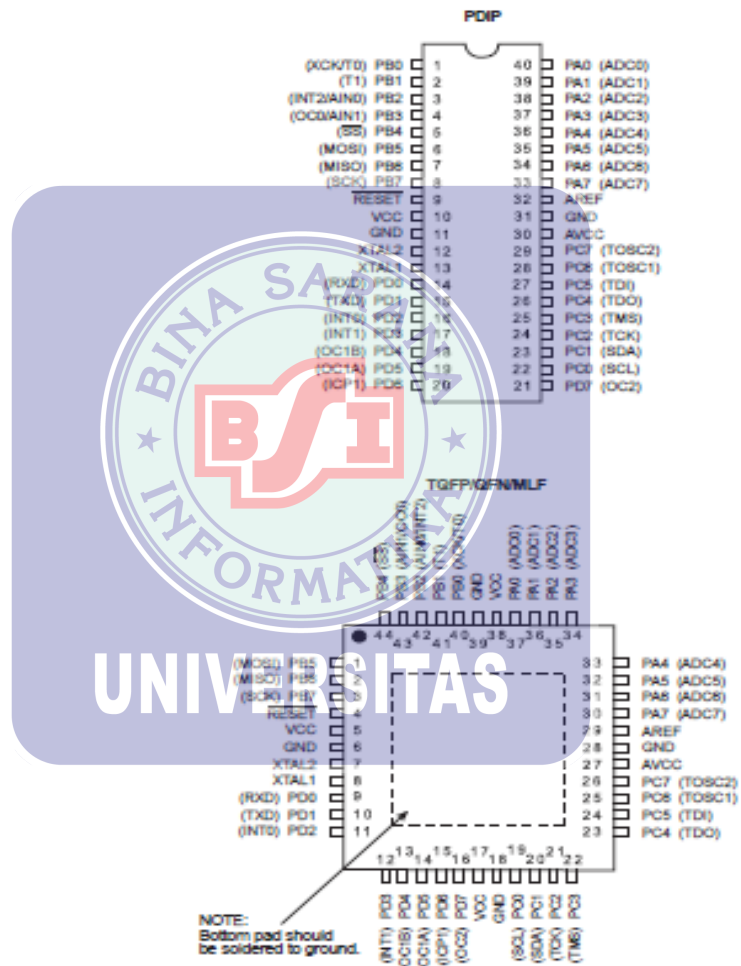


LAMPIRAN-LAMPIRAN

A.1.Datasheet Mikrokontroler ATMEGA16

ATmega16A



Sumber: <https://pdf1.alldatasheet.com/datasheet-pdf/view/255660/ATMEL/ATMEGA16A/+Q4W7J3VYSL.LcEXSKMpVGI+/datasheet.pdf>

A.2.Datasheet Modul GSM SIM800L



Smart Machine Smart Decision

3. Package Information

3.1. Pin out Diagram



Figure 2: SIM800L pin out diagram (Top view)

Sumber: https://img.filipeflop.com/files/download/Datasheet_SIM800L.pdf

B.1.Listing Program Keseluruhan

```
#include <LiquidCrystal.h>

#include <SoftwareSerial.h>

LiquidCrystal lcd (16, 17, 20, 21, 22, 23);

SoftwareSerial SIM800L (2, 3);

boolean aman = false;

boolean siaga = false;

boolean bahaya = false;

void setup() {
  SIM800L.begin(9600);
  Serial.println("Configure sms");
  delay(30000);
  Serialprintln("Sending sms untuk mengetest signal SMS Gateway.by Water Level
  SMS");
  SIM800L.write("AT+CMGS=\"081542886084\"\r\n");
  delay(1000);
  lcd.begin(16, 2);
  lcd.setCursor(0, 0);
  lcd.print(" Water Level SMS.by GENK" );
  delay(500000);
}

void loop() {
  lcd.setCursor(0, 0);
  lcd.print(" Status saat ini : ");
```

```

boolean a = digitalRead(24);
boolean b = digitalRead(25);
boolean c = digitalRead(26);

Serial.println("AT+CMGF=1");
delay(1000);
lcd.setCursor(0, 1);
if (!c && !b && !a) {
  lcd.print("BAHAYA");
  delay(500000);
  if (!bahaya) {
    Serial.println("AT+CMGS=\"+6281542886084\"\\r");
    delay(1000);
    Serial.println("Status dalam keadaan BAHAYA.by Water Level SMS");
    delay(100);
    Serial.println((char)26);
    delay(1000);
    bahaya = true;
    siaga = false;
    aman = false;
  }
}
else if (!b && !a) {
  lcd.print("SIAGA");
  delay (500000);
  if (!siaga) {
    Serial.println("AT+CMGS=\"+6281542886084\"\\r");

```

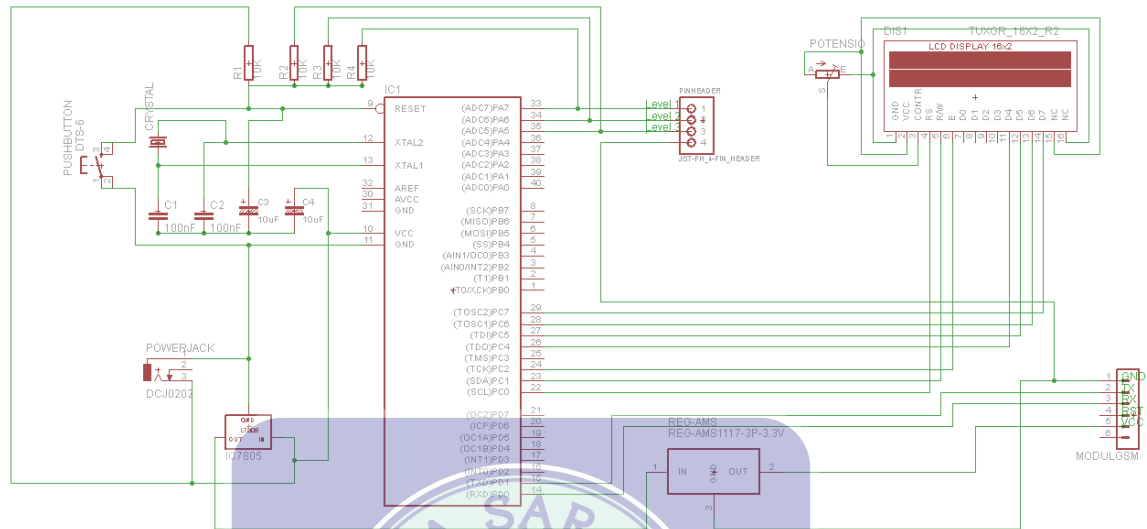
```

delay(1000);
Serial.println("Status dalam keadaan SIAGA.by Water Level SMS");
delay(100);
Serial.println((char)26);
delay(10000);
siaga = true;
aman = false;
bahaya = false;
}
}
else if (!a) {
lcd.print("A M A N");
delay(500000);
if (!aman) {
Serial.println("AT+CMGS="+6281542886084+"\r");
delay(1000);
Serial.println("Status dalam keadaan AMAN.by Water Level SMS"); // isi pesan yang
dirikim melalui modul GSM ketika dalam kondisi aman
delay(100);
Serial.println((char)26);
delay(10000);
aman = true;
siaga = false;
bahaya = false;
}
}

```



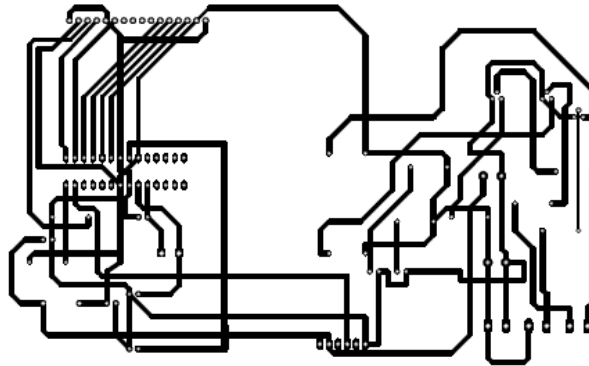
C.1. Skema Rangkaian Keseluruhan



D.1. Daftar Komponen dan Harga

NO	Komponen	Satuan	Jumlah	Harga
1	ATMEGA 8	22.000	1	22.000
2	Socket ATMEGA8	1.500	1	1.500
3	ATMEGA 16	30.000	1	30.000
4	Socket ATMEGA 16	2.500	1	2.500
5	Resistor 10k	500	4	2.000
6	Kapasitor 100nF	500	2	1.000
7	Regulator AMS 1117 3,3 V	1.000	1	1.000
8	IC Regulator 7805	1.500	1	1.500
9	Crystal 16 MHz	1.000	1	1.000
10	Potensiometer / Trinpot	1.000	1	1.000
11	Pin Header Male	1.000	1	1.000
12	Pin Header Female	2.500	3	7.500
13	Kabel Jumper	2.500	1	2.500
14	Push Button	1.000	1	1.000
15	DC Connector	1.000	1	1.000
16	Adaptor 12 V	35.000	1	35.000
17	LCD 16 X 2	35.000	1	35.000
18	Modul GSM SIM800L	56.000	1	56.000
19	PCB	16.500	1	16.500
20	Kapasitor 10uF	500	2	1.000
TOTAL				220.000

E.1.PCB Layout



F.1.Foto Alat

