

```

#include <ESP8266WiFi.h>
#include <ESP8266WiFiMulti.h>
#include <ESP8266HTTPClient.h>
ESP8266WiFiMulti WiFiMulti;

#define WIFI_STA_NAME "xxx" //SSID
#define WIFI_STA_PASS "xxx" //PASS

float temp_celsius = 0;
float temp_fahrenheit = 0;
HTTPClient http;

#include <MAX6675_Thermocouple.h>
#define SCK_PIN D4
#define SO_PIN D6
#define CS1_PIN D1
#define CS2_PIN D2

MAX6675_Thermocouple*thermocouple1 = NULL ;
MAX6675_Thermocouple*thermocouple2 = NULL ;

/*****Declare variable*****/

float T1 , T2 ;
String url = "http://202.44.53.36/chiller.php";
String payload; //สำหรับใส่ data

/*****Function read thermocouple1,2 & Include Payload*****/
void thermocoupletest(){
thermocouple1 = new MAX6675_Thermocouple (SCK_PIN, CS1_PIN, SO_PIN);
thermocouple2 = new MAX6675_Thermocouple (SCK_PIN, CS2_PIN, SO_PIN);

T1 = thermocouple1->readCelsius();
T2 = thermocouple2->readCelsius();

/**ปรับค่าความคลาดเคลื่อน จาก MAX6675**/

```

```
float T3 = T1-0 ;
```

```
float T4 = T2-0 ;
```

```
payload = "T_testNakornthon1=" + String(T3) + " C " + "&" + "T_testNakornthon2=" + String(T4) + " C " ;
```

```
if (isnan(T1) || isnan(T2) ) {
```

```
    Serial.println(F("Failed to read from thermocouple sensor!"));
```

```
    return;
```

```
}
```

```
}
```

```
/******Function upload DATA by POST command*****/
```

```
void posteiei() {
```

```
    http.begin(url);
```

```
    http.addHeader("Content-Type", "application/x-www-form-urlencoded");
```

```
    int httpCode = http.POST(payload);
```

```
    if (httpCode == 200) {
```

```
        String content = http.getString();
```

```
        Serial.println("Content -----");
```

```
        Serial.println(content);
```

```
        Serial.println("-----");
```

```
    } else {
```

```
        Serial.println("Fail. error code " + String(httpCode));
```

```
    }
```

```
    Serial.println("END");
```

```
}
```

```
void setup() {
```

```
    Serial.begin(115200);
```

```
thermocouple1 = new MAX6675_Thermocouple (SCK_PIN, CS1_PIN, SO_PIN);
```

```
thermocouple2 = new MAX6675_Thermocouple (SCK_PIN, CS2_PIN, SO_PIN);
```

```
#define SCK_PIN D4
```

```
#define SO_PIN D6
```

```
#define CS1_PIN D1
```

```
#define CS2_PIN D2
```

```
    Serial.println();
```

```
Serial.println();  
Serial.print("Connecting to ");  
Serial.println(WIFI_STA_NAME);
```

```
WiFi.mode(WIFI_STA);  
WiFi.begin(WIFI_STA_NAME, WIFI_STA_PASS);
```

```
while (WiFi.status() != WL_CONNECTED) {  
    delay(1000);  
    Serial.print(".");  
}
```

```
Serial.println("");  
Serial.println("WiFi connected");  
Serial.println("IP address: ");  
Serial.println(WiFi.localIP());  
Serial.println("Get content from " + url);  
}
```

```
void loop() {  
    thermocoupletest(); //call input Value from Thermocouple  
    posteiei(); //Send Value  
    delay(1500);  
    // วัด Temp.  
    const double celsius1 = thermocouple1->readCelsius();  
    const double celsius2 = thermocouple2->readCelsius();  
    Serial.print( "Temp 1 : " + String(celsius1) + " C , " );  
    Serial.println ( "Temp 2 : " + String(celsius2) + " C ");  
    delay(1500);  
}
```