

# TFT 1.8 INCH WIFI CLOCK WITH DATE

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## NodeMCU to Display

- D8 -> CS
- D7 -> SDA
- D5 -> CSK
- D4. -> A0
- D3 -> RESET
- Vcc -> 3.3V
- Led -> 3.3V
- GND -> GND



```

#include <ESP8266WiFi.h>
#include <WiFiUdp.h>
#include <NTPClient.h>
#include <TimeLib.h>
#include <Adafruit_GFX.h>
#include <Adafruit_ST7735.h>

#define TFT_RST  0
#define TFT_CS   15
#define TFT_DC   2
Adafruit_ST7735 tft = Adafruit_ST7735(TFT_CS, TFT_DC, TFT_RST);
const char *ssid   = "user id ";
const char *password = " pwd ";
WiFiUDP ntpUDP;
NTPClient timeClient(ntpUDP, "time.nist.gov", 19800, 60000);
unsigned long unix_epoch;
void setup(void)
{
  Serial.begin(9600);
  tft.initR(INITR_BLACKTAB);
  tft.fillScreen(ST7735_BLACK);
  tft.drawFastHLine(0, 44, tft.width(), ST7735_BLUE);
  tft.setTextColor(ST7735_BLUE, ST7735_BLACK);
  tft.setTextSize(2);
  tft.setCursor(8, 10);
  tft.print("WiFi-Clock");
  tft.setTextSize(1);
  WiFi.begin(ssid, password);
  Serial.print("Connecting.");
  tft.setCursor(0, 54);
  tft.print("Connecting..");
  while ( WiFi.status() != WL_CONNECTED ) {
    delay(500);
    Serial.print(".");
  }
}

```

```

Serial.println("connected");
tft.print("connected");
delay(2000);
tft.fillRect(0, 54, tft.width(), 8, ST7735_BLACK);
tft.drawFastHLine(0, 102, tft.width(), ST7735_BLUE);
tft.setTextSize(2);
tft.setTextColor(ST7735_MAGENTA, ST7735_BLACK);
tft.setCursor(37, 112);
timeClient.begin();
}
void RTC_display()
{
  char dow_matrix[7][10] = {"SUNDAY", "MONDAY", "TUESDAY", "WEDNESDAY", "THURSDAY",
"FRIDAY", "SATURDAY"};
  byte x_pos[7] = {29, 29, 23, 11, 17, 29, 17};
  static byte previous_dow = 0;

  if( previous_dow != weekday(unix_epoch) )
  {
    previous_dow = weekday(unix_epoch);
    tft.fillRect(11, 55, 108, 14, ST7735_BLACK);
    tft.setCursor(x_pos[previous_dow-1], 55);
    tft.setTextColor(ST7735_CYAN, ST7735_BLACK);
    tft.print( dow_matrix[previous_dow-1] );
  }
  tft.setCursor(4, 79);
  tft.setTextColor(ST7735_YELLOW, ST7735_BLACK);
  tft.printf( "%02u-%02u-%04u", day(unix_epoch), month(unix_epoch), year(unix_epoch)
);
  // print time
  tft.setCursor(16, 136);
  tft.setTextColor(ST7735_GREEN, ST7735_BLACK);
  tft.printf( "%02u:%02u:%02u", hour(unix_epoch), minute(unix_epoch),
second(unix_epoch) );
}
void loop()
{
  timeClient.update();
  unix_epoch = timeClient.getEpochTime();
  RTC_display();
  delay(200);
}

```