



GP session

CS

IT

**GP2016 - Arduino
Sessions - WiFi Shield 2
serial Bridge**

By:

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```
/******
```

Uno Pin	CC3000 Board	Function
+5V	VCC or +5V	5V
GND	GND	GND
2	INT	Interrupt
7	EN	WiFi Enable
10	CS	SPI Chip Select
11	MOSI	SPI MOSI
12	MISO	SPI MISO
13	SCK	SPI Clock

```
*****/
```

```
#include <SPI.h>
#include <SFE_CC3000.h>
```

```
// Pins
```

```
#define CC3000_INT      3 // Needs to be an interrupt pin (D2/D3)
#define CC3000_EN       5 // Can be any digital pin
#define CC3000_CS      10 // Preferred is pin 10 on Uno
```

```
// IP address assignment method
```

```
#define USE_DHCP        1 // 0 = static IP, 1 = DHCP
```

```
// Connection info data lengths
```

```
#define IP_ADDR_LEN     4 // Length of IP address in bytes
#define MAC_ADDR_LEN    6 // Length of MAC address in bytes
```

```
// Constants
```

```
char ap_ssid[] = "XXXXXXXXXXXX"; // SSID of network
char ap_password[] = "XXXXXXXXXXXXXX"; // Password of network
unsigned int ap_security = WLAN_SEC_WPA2; // Security of network
unsigned int timeout = 30000; // Milliseconds
//const char static_ip_addr[] = "0.0.0.0";
```

```
// Global Variables
SFE_CC3000 wifi = SFE_CC3000(CC3000_INT, CC3000_EN, CC3000_CS);

void setup() {

    ConnectionInfo connection_info;
    int i;

    // Initialize Serial port
    Serial.begin(9600);
    Serial.println();
    Serial.println("-----");
    Serial.println("---- CC3000 - Connection Test ---");
    Serial.println("-----");
    setupWiFi();

}

void loop() {

    // Do nothing
    delay(1000);

}

void setupWiFi()
{
    ConnectionInfo connection_info;
    int i;

    // Initialize CC3000 (configure SPI communications)
    if ( wifi.init() )
    {
        Serial.println(F("CC3000 Ready!"));
    }
    else
    {
        // Error: 0 - Something went wrong during CC3000 init!
```

```
Serial.println(F("Error: 0"));
}

// Connect using DHCP
Serial.print(F("Connecting to: "));
Serial.println(ap_ssid);
if(!wifi.connect(ap_ssid, ap_security, ap_password, timeout))
{
    // Error: 1 - Could not connect to AP
    Serial.println(F("Error: 1"));
}

// Gather connection details and print IP address
if ( !wifi.getConnectionInfo(connection_info) )
{
    // Error: 2 - Could not obtain connection details
    Serial.println(F("Error: 2"));
}
else
{
    Serial.print(F("My IP: "));
    for (i = 0; i < IP_ADDR_LEN; i++)
    {
        Serial.print(connection_info.ip_address[i]);
        if ( i < IP_ADDR_LEN - 1 )
        {
            Serial.print(".");
        }
    }
    Serial.println();
}
}

// Print out an IP Address in human-readable format
void printIPAddr(unsigned char ip_addr[]) {
    int i;

    for (i = 0; i < IP_ADDR_LEN; i++) {
```

```
    if ( i < IP_ADDR_LEN - 1 ) {  
        Serial.print(".");  
    }  
}
```



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