

CC3000 WiFi Shield



This is a shield for the CC3000 WiFi Module. The CC3000 from TI (Texas Instruments) is a self-contained wireless network processor that makes incorporating internet connectivity into your project simple. Instead of the more standard UART communication method, the CC3000 module utilizes an SPI interface allowing you, the user, to control the flow of data as you please. What makes the CC3000 unique is its ability to associate to a WiFi access point using a cell phone app in the Texas Instruments process called SmartConfig.

Features

1. Arduino, Crowduino, Seeeduno, Arduino Mega and Crowduino Mega compatible
2. Support SD card 2GB and 4GB
3. Wireless network processor
 - IEEE 802.11 b/g (2.4GHz)
 - Embedded IPv4 TCP/IP stack
4. Best-in-class radio performance
 - TX power: +18.0 dBm at 11 Mbps, CCK
 - RX sensitivity: -88 dBm, 8% PER, 11 Mbps
5. Works with low MIPS and low-cost MCUs with compact memory footprint
 - Small code size (Flash and RAM) required for MCU

6. FCC, IC, CE and TELEC certified reference design with a chip antenna
7. Integrated crystal and power management
8. Small form factor
 - 16.3 mm × 13.5 mm × 2 mm
9. Operating temperature: –20°C to 70°C
10. SmartConfig technology enables simple Wi-Fi configuration using a smartphone, tablet or PC
11. Proven Wi-Fi interoperability; based on TI's seventh generation of proven Wi-Fi solutions
12. Complete platform solution including user and porting guides, API guide, sample applications, and support community

Specifications

CC3000 Specifications	
	CC3000's Characteristics
Standards	802.11 b/g, BSS Station
Wi-Fi Security Modes	WEP, WPA/WPA2 (AES and TKIP – Personal)
Embedded Wi-Fi	TCP/IP stack (IPv4 – DHCP client, DNS, mDNS, ARP), Wi-Fi driver, security supplicant, Auto-calibrated radio
Required Code size	As low as 5KB Flash & 360B RAM
Host Interface	SPI at 16MHz
Power Modes	Active Mode (92mA typ RX current), Shutdown Mode (<5uA)
Power Supply	2.9V – 4.8V
I/O Voltage	1.8V – 3.6V
Connections	4 Sockets (UDP or TCP)
Throughput (TCP)	~4 Mbps* Note This was measured for CC3000, when combined with MSP430FR5739
Headless Configuration	SmartConfig™ Technology