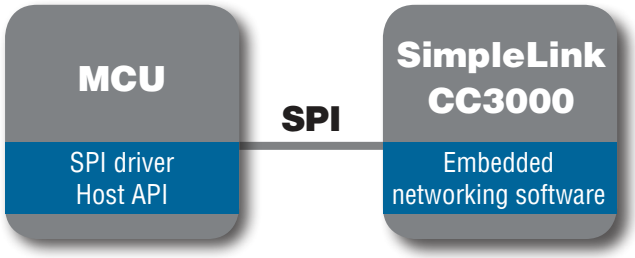
SimpleLink™ Wi-Fi® CC3000

Self-contained Wi-Fi solution enables easy-to-implement Internet connectivity

Overview

SimpleLink™ CC3000 Wi-Fi is a self-contained wireless solution that simplifies the process of implementing Internet connectivity. SimpleLink Wi-Fi minimizes host microcontroller (MCU) software requirements making it the ideal solution for embedded applications using any low-cost/low-power MCU.

The SimpleLink CC3000 Wi-Fi solution is provided as a module to reduce development time, lower manufacturing costs, save board space, ease certification, and minimize RF expertise required. Additionally, TI has created a number of example implementations available in source code for MSP430, Stellaris and other microcontrollers to help accelerate customers time-to-market. These examples include ported software, sample applications, wiki instructions and are accompanied by API and porting guides.



Connecting to low-memory microcontrollers is enabled by complete software integration on CC3000

Module vendor	TI Part number	Orderable part number	Description
LSR	CC3000-TiWi-SL	450-0067	FCC/IC-certified, ETSI-tested module, and U.FL dipole antenna or chip antenna design guide available
Murata	CC3000-TypeVK	LBWA1ZZVK7	FCC/IC-certified, ETSI-tested module, and chip antenna design guide available

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Key Features and Benefits

Embedded Wi-Fi and networking software including drivers, stack, and supplicant

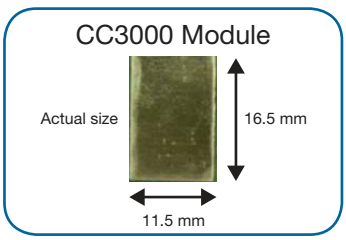
- Universal IP connectivity enabled anywhere
- Pair easily with low-memory, low-cost, low-power microcontroller systems
- Implement Wi-Fi quickly without previous Wi-Fi or RF experience
- Connect to Access Points on the fly with TI's First Time Config

Credible, proven solution with best-in-class link budget

- Longer range than competitors, reliable coverage throughout the entire house
- Proven Wi-Fi interoperability

Complete platform solution and certified modules

- Get started quickly with sample applications on multiple platforms
- Very simple APIs (~35 total), primarily BSD socket
- Wi-Fi, FCC/IC certified and ETSI tested modules
- Comprehensive documentation aids porting to new MCUs in a matter of a few days



▲ Murata TypeVK module shown

CC3000 Specifications	
Standards	802.11b/g, Station
RF performance	Tx Power: +20dBm @ 11Mbps (CCK) Rx sensitivity: -89dBm @ 11Mbps (CCK)
Wi-Fi security modes	WEP, WPA / WPA2 (AES and TKIP – Personal)
Embedded networking software	TCP/IP stack (IPv4 - DHCP client, DNS, ARP), Wi-Fi driver, embedded security supplicant Auto transmit calibration
Host interface	SPI @ 16MHz
Shutdown mode	<5uA using FET
Host MCU driver required	As low as 6KB Flash and 3KB RAM host memory requirements

CC3000 / MSP430-FRAM Evaluation Kit

Hardware

- LSR TiWi-SL module & EM board
- Murata TypeVK module & EM board
- Wi-Fi Access Point
- MSP430 FRAM Experimenter Board (MSP-EXP430FR5739)
- USB hub

Implementation Examples (in source code)

- **Sensor application:** Transfer temperature and accelerometer data and show effects of data crossing a threshold
- **Data logger:** Show recorded accelerometer data on PC over time
- **Home automation:** Adjust temperature from anywhere via Twitter using PC app/server. Receive notifications from Twitter if the temperature measures outside of range
- **Basic Wi-Fi application:** Tx/Rx UDP data which connects to access point and can ping (also available for MSP430F5438, F5529, FG4618, and Stellaris® DK-MS3S9B96 and EKS-LM45232)

More evaluation kits coming in 1Q12

Applications

- Automation
- Home Security / Surveillance
- Network Appliance
- Fitness / Health / Medical



CC3000 Resources

- E2E Forum: www.ti.com/wiconforum
- Wireless Connectivity Wiki: www.ti.com/connectivitywiki

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Module Manufacturers

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