SimpleLink™ Wi-Fi® CC3220/CC3120 MCUs

Texas Instruments

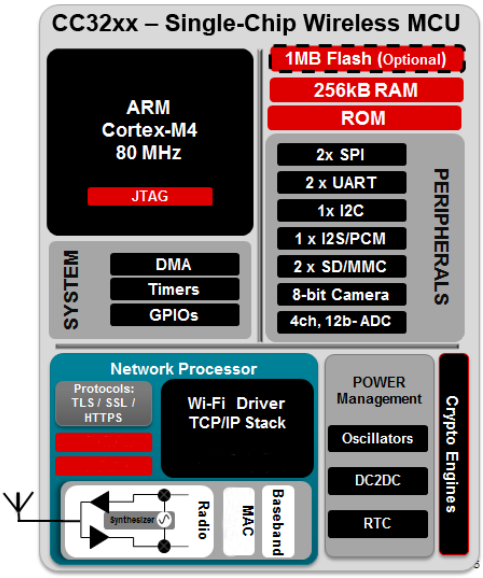
Lowest power, built-in security, fast time to market

TI expands its **SimpleLink™ MCU** portfolio with the new SimpleLink Wi-Fi® CC3220 wireless MCU solutions and CC3120 wireless network processor. These devices deliver the lowest power, enhanced security features and easy-to-integrate Wi-Fi CERTIFIED™ solutions. With **CC3220** and **CC3120** developers can:

- Create products that will run on 2× AA batteries for several years
- Implement protection against hostile takeover, as well as theft of customer intellectual property
- Build large applications, in a single chip, utilizing the on-chip 1-MB executable Flash
- Design and ramp to production quickly; no Wi-Fi or RF experience needed

The **CC3120** Wi-Fi Network Processor handles all Wi-Fi networking communication and Internet protocols. It easily connects to any low-cost microcontroller (MCU) via UART or SPI interfaces such as the MSP432P401R in order to enable low-power, cloud-connected applications. The CC3120 device features the industry's lowest power radio with configurable low-power profiles, an on-chip HTTPS webserver, IPv4/IPv6 TCP/IP stack and a hardware cryptography engine which enables a secure SSL/TLS connection establishment within 200 mSec.

The **CC3220** Wireless Microcontroller is a standalone system-on-a-chip solution, which integrates a user's dedicated 80-MHz ARM® Cortex®-M4 application processor and a Wi-Fi network processor that handles all networking and Internet protocols. The application processor features 256-KB RAM, an optional 1-MB executable Flash and a rich set of peripherals. The built-in power management allows direct battery connection to enable



low-power applications. This device is offered in three variants:

- CC3220R, the base reference with networking security features
- CC3220S = CC3220R with application-level security
- CC3220SF = CC3220S with 1-MB executable Flash

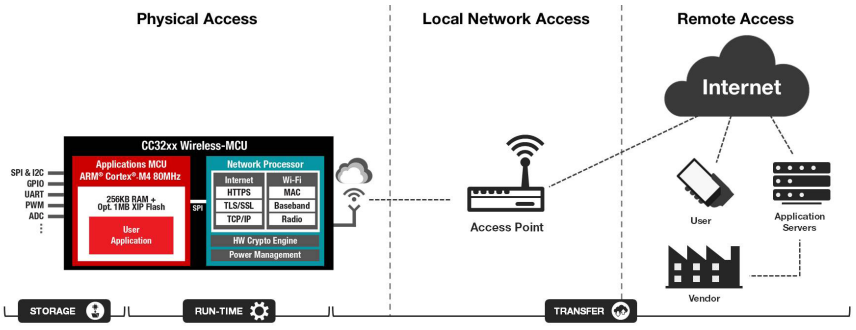
Enhanced security

The security-enhanced CC3220S and CC3220SF variants have a multi-layered (application, Internet and Wi-Fi) set of security features that enables protection against malicious theft and hostile takeover of identity, keys and data. They feature an internal cloning protection mechanism, file access control, file encryption, software tamper detection, secure boot, debug security, a unique device identity, secure content delivery, API access to hardware cryptography engines to deliver a comprehensive end-to-end set of security.

The robust **SimpleLink** devices are tested against 215+ APs for best-in-class interoperability. They support industrial temperature from –40°C to 85°C and have transferable Wi-Fi Alliance certification. They are offered in a 64-pin VQFN package or module.

The **CC3120MOD**, **CC3220MOD** and **CC3220MODA** modules enable faster development, lower manufacturing costs and simplify procurement. Designers can choose between the flexibility of antenna placement and a plug-and-play module with PCB antenna. The certifications are: FCC, IC, CE/RED, TELEC and SRRC.

Visit **www.ti.com/simplelinkwifi**



Comprehensive end-to-end security

Support and Resources	
Overview	Overview video SimpleLink MCU
Low power	Low Power Wi-Fi App note and Training
Integrated security	Security brochure App note, Blog and Video
Ease of use	Wi-Fi certification Training series

SimpleLink™
MCU Platform
One environment.
Unlimited potential.

Getting started: SimpleLink™ Wi-Fi CC3220 and CC3120 hardware development kits

Device	Wi-Fi Network Processor	Integrated ARM® Cortex®-M4	Application memory	Wi-Fi + Internet security	Application-level security	HomeKit support	Availability			Tool
							IC	MOD No ant	MOD + ant	
CC3220SF	✔	✔	1 MB Flash + 256 KB RAM	✔	✔	✔				CC3220SF-LAUNCHXL $49.99 USD LAUNCHCC3220MODASF $59.99 USD
CC3220S	✔	✔	256 KB RAM	✔	✔	✔				CC3220S-LAUNCHXL $39.99 USD
CC3220R	✔	✔	256 KB RAM	✔						CC3220S-launchXl board $39.99 USD
CC3120	✔	–	–	✔	–	–				CC3120BOOST $29.99 USD BOOSTXL-CC3120mod $37.99 USD

Growing cloud of ecosystem partners

The TI IoT cloud ecosystem helps manufacturers using TI technology to easily and rapidly connect more to the IoT. Open to cloud service providers with a differentiated service offering and value-added services running on one of TI's IoT solutions, the TI cloud ecosystem provides options to meet individual manufacturer needs.

amazon web services · arrayent · EXOSITE · IBM · KAA IOT · Microsoft Azure · TEMBOO · xively by LogMeIn

SimpleLink Wi-Fi enables a range of Apple HomeKit products

The SimpleLink wireless MCUs, combined with an Apple MFi authentication coprocessor, the CC3220 SDK and the software add-on for HomeKit, enable a fully operational solution for Apple's HomeKit technology. The SimpleLink Wi-Fi HomeKit SDK, is an implementation of the Apple wireless accessory configuration (WAC), and HomeKit accessory protocol (HAP). The add-on incorporates the low-power framework of the SimpleLink Wi-Fi CC3220 devices and the included advanced security features. ti.com/homekit

Wi Fi CERTIFIED

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