Learn how you can use the new SimpleLink™ Wi-Fi wireless microcontrollers (MCU), featuring RTP video and audio streaming over Wi-Fi with enhanced security features for your low power camera design.

**Reference design**
- Wi-Fi Audio Streaming Reference Design
- Wi-Fi Audio Streaming Application for SimpleLink Wi-Fi CC3200 Launchpad

**User Guide (reference design)**
- Wi-Fi Audio Streaming Reference Design User Guide

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### Features

- **Industry’s lowest power**, with TI’s cutting edge proprietary network learning algorithm and **configurable low-power modes**, optimizing across more than 100 Access Points world wide
  - 115 µA/135 µA for CC3120/CC3220 in deep sleep mode, and as low as 210 µA for CC3220 while maintaining a secured connection to AP
  - 4.5 µA in hibernate mode, intermittently connected with fast reconnection
- **Enhanced security protocols** allow secure connection and encryption up to application level
  - CC3220 offers robust Wi-Fi and networking stacks running on a separate on-chip execution environment with a dedicated Cortex™
  - On-chip **Wi-Fi security features**, including network and manufacturer IP protection facilitated by hardware crypto engine (incl. APIs to AES256, DES, SHA/MD5, CRC)
- **Best-in-class interoperability with extensive testing with over 200 access points**
  - **Wi-Fi alliance certified** IC’s and modules
  - Regulatory certifications for FCC, IC, CE/RED and more
- **Highly integrated CC32xx wireless MCU (SOC)** with an ARM Cortex -M4 at 80 MHz, and a separate network processor managing all Wi-Fi and internet IP sockets
  - Application dedicated 256 KB of RAM + optional 1 MB of XIP flash
  - 16 Mbps UDP throughput for H.264 compressed 1080p via RTP
  - Video streaming royalty-free reference design
  - Fast wakeup by an external trigger (300 msec), from a 4.5 uA hibernate mode to WPA2 secured AP connection
  - TLS/SSL connection to local network in 200msec utilizing the embedded hardware crypto engines
- **SimpleLink™** common software architecture across the SimpleLink MCU portfolio of MCUs, Sub1GHz, BLE and Wi-Fi technologies
  - Allowing developers to invest once and reuse across technologies Using code and tool compatibility between platforms
- **Software and plug-ins** for Amazon Web Services, Apple’s HomeKit, IBM Watson, IoT and other cloud partner applications
  - Get to market faster with easy to integrate cloud-compliant options

### Benefits

- **CC3220 Runs on 5000mAh battery life up to**:
  - Almost 2 years in “always connected” low power mode, and 1 year including 5 min of streaming per day
  - Over 5 years for waking up on trigger mode, and 1.5 years including 5 min of streaming per day
- Enables protection against hostile takeover (e.g. malicious over the air update), and IP or video theft, without external secure components
  - Since CC3220 offers extensive Wi-Fi security features, the video encoder is free of Wi-Fi/networking/security threads and better able to perform intelligent image processing
- **Robust communication with a variety of access points world-wide**
  - Reduced design complexity, time, resources and costs with free reference design and certified and transferrable
  - CC3220 in the heart of the system: running the customer application and simultaneously controlling wake-up triggers, lock control processing and network connection
  - Reduced BOM cost to the customer
- **High quality video/audio**
  - Enhanced user experience with low latency response from a button push or RF event
- **Allowing developers to invest once and reuse across technologies**
  - Using code and tool compatibility between platforms
- **Get to market faster with easy to integrate cloud-compliant options**

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Learn more at [SimpleLink™ Wi-Fi® application tab](#)
See additional system parts at [TI IP network camera reference design](#)
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