Differentiated Wi-Fi® for the Internet of Things

IoT applications are often constrained by power, size, resources, and vulnerable to online and physical hacking. The challenge for IoT Wi-Fi is to deliver adequate performance while lowering power consumption, reducing MIPS requirements, and delivering high levels of security. Learn more about some of the differentiating aspects of our IoT Wi-Fi solution.

All the Security

Our devices have several advanced built in security features – like secure boot, secure link, and secure debug to protect your IoT devices, along with the capability to run industry standard encryption efficiently. In addition to online hacking, these features prevent physical hacking to run malicious code, steal SSID/passwords and enable the debug port, and make your end device more secure.

A more secure Wi-Fi solution to thwart online and physical attacks

Half the Power

Low power enhances battery life by a factor of two or more
Our Wi-Fi devices are optimized for power and delivers industry's lowest power across Transmit, Receive and Sleep modes. Our low sleep and receive current enables DTIM 3 currents of <250µA. Our sleep current is <40µA, with Transmit current <160mA and Receive current <48mA. All these power numbers are best in class and ensure that no matter what your use case, you will gain a significant power advantage by using our devices.

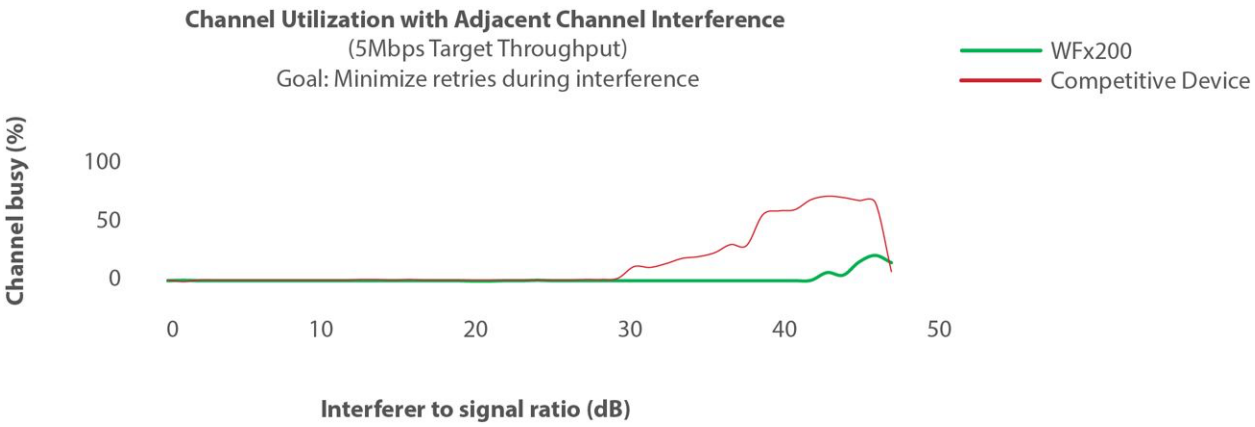
Get the most out of your battery by learning about various factors that contribute to Wi-Fi power consumption in sleepy IoT systems and how to optimize them for the best possible battery life.

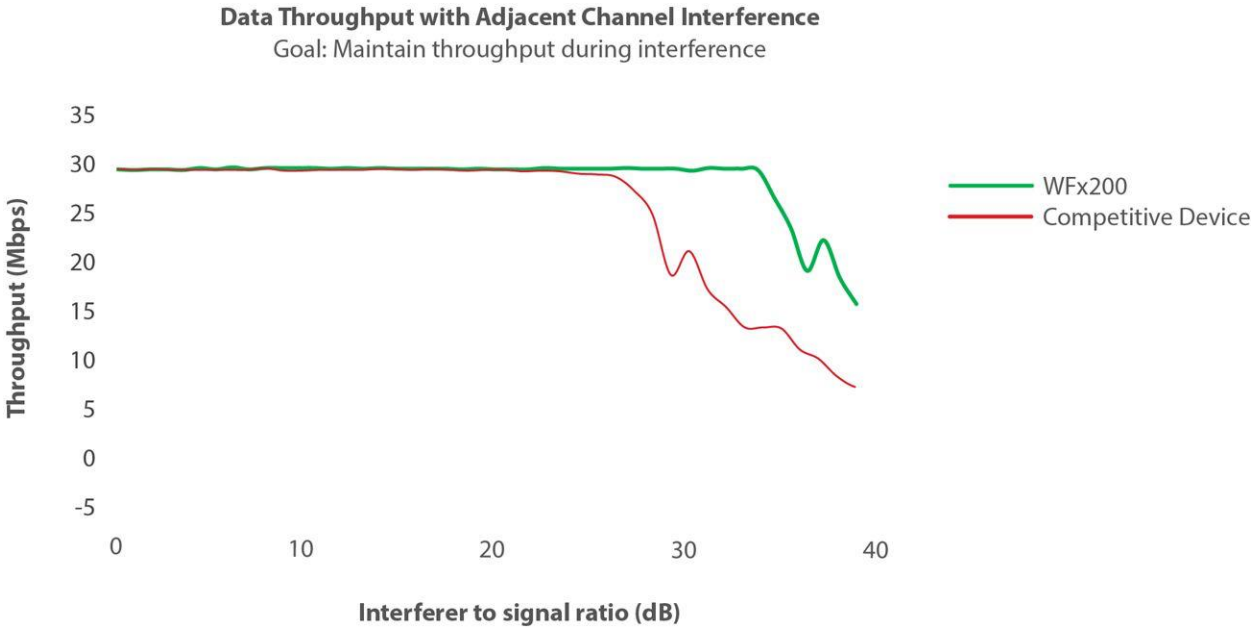
Prototype in Hours

Our Wi-Fi Xpress modules, part of the Wireless Xpress family of modules, provides a configuration-based development experience with everything developers need, including certified Wi-Fi modules, integrated protocol stacks and easy-to-use tools supported by the Silicon Labs Gecko OS IoT operating system. With Silicon Labs' Wi-Fi Xpress modules, you don't have to be a wireless expert to connect your product to the cloud and enable new features including remote access, real-time product health, and usage analytics.

Most Reliable Wi-Fi for IoT Under Verity of Environments

Wi-Fi radio environments can be challenging. Nearby access points can overwhelm end nodes with interference on adjacent channels. Silicon Labs' superior RF selectivity ensure reliable connectivity in the face of large RF interference maintaining high data rate with fewer retransmissions to save power and channel capacity.



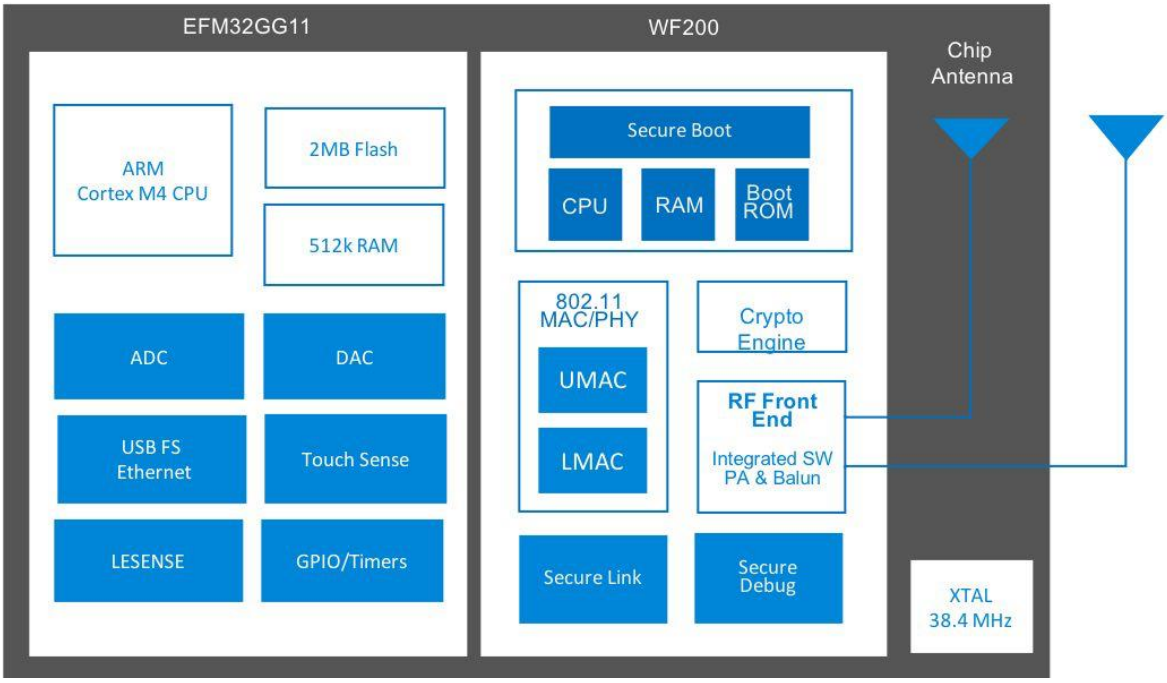


Extended operating temperature -40°C to +105°C

Our WF200 and WFM200S Wi-Fi transceivers offer an operating temperature range from -40°C to +105°C with automatic temperature compensation to maintain RF calibration offering superior performance in challenging environmental conditions.

Application Flexibility with High Peripheral Integration

Our Wi-Fi Gecko modules take full advantage of our Gecko MCU platform offering scalability, security, and the most advanced feature set available on a low-power platform today – tailored for the creation of modern IoT products. Each device provides access to a large set of Gecko MCU peripherals including Ethernet, SPI, I2C, PWM, ADC and Touch Sense.



Zentri Cloud and Device Management Services

The real value of IoT is found in the data that connected products can generate. Silicon Labs is supporting the internet of things with hardware, software, and cloud that work together to securely deliver valuable data and drive innovation in your industry. The Zentri cloud platform offers all the key ingredients to connect your product, create a dashboard to manage and monitor in-field products.