

Ultra Low Power Wi-Fi[®] SoC

Full Offload System-on-Chip for IoT Applications



FC9000

Highly Integrated Ultra Low Power Wi-Fi[®] System on Chip for the ConnectedHome



OVERVIEW

The **FC9000** is a highly integrated ultra-low power Wi-Fi system on a chip (SoC), which contains an 802.11b/g/n radio (PHY), baseband processor, media access controller (MAC), on-chip memory, and a host networking applications processor all on a single silicon die. The SoC enables full offload capabilities, running the entire networking stack on chip, so that no external network processor, CPU, or microcontroller is required, though the SoC may optionally be used with a microcontroller.

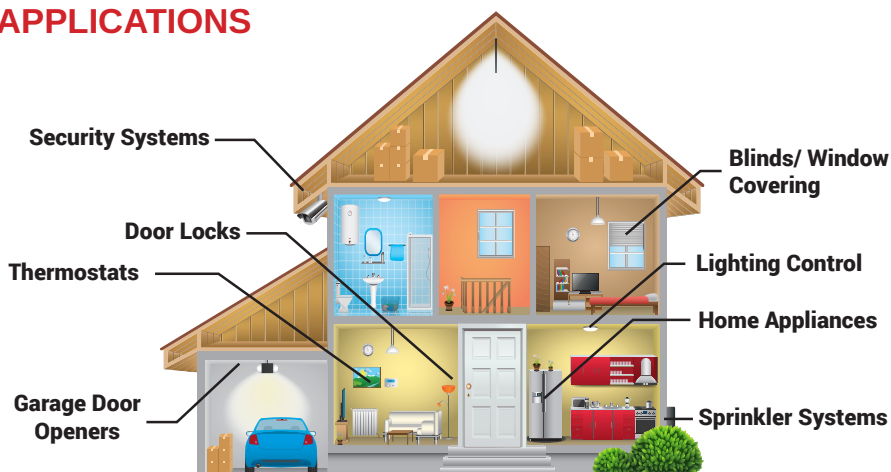
VirtualZero™ is a synthesis of breakthrough ultra low power technologies which enables extremely low power operation in the SoC. VirtualZero shuts down every micro element of the chip that is not in use, which allows a near zero level of power consumption when not actively transmitting or receiving data. Such low power operation can deliver a year or more of battery life depending on the application. Advanced algorithms enable staying asleep until the exact moment required to wake up to transmit or receive.

The SoC is built from the ground up for the “Internet of Things” and is ideal for door locks, thermostats, security video cameras, appliances, sprinkler systems, and other devices that comprise the ConnectedHome.

Evaluation boards and a complete software development kit (SDK) are available. The SDK includes sample applications, provisioning apps, AT command library, power management tools, and more.

A fully staffed, highly trained, worldwide application engineering support team is available to help you quickly integrate the SoC and its associated modules into your product.

APPLICATIONS



BENEFITS & FEATURES

- 
Ultra Low Power
 - + Breakthrough VirtualZero™ technology
 - + Virtually no power consumption in sleep state
 - + Enables year-plus battery life
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Superior Range
 - + Industry leading output power and Rx sensitivity for max range
- 
Highly Integrated SoC
 - + 802.11b/g/n radio PHY, BB/MAC, PA, LNA w/on chip SRAM
 - + Up to 72 Mbps, MCS0-7
- 
Full Offload
 - + SoC runs full networking OS & TCP/IP stack
- 
Simple Setup & Provisioning
 - + Automatically find & configure new devices w/ smartphone app
- 
Complete Software Stack
 - + Comprehensive networking software stack
- 
Leading Security
 - + Multiple layers of commercial, industrial, and banking grade security
 - + Hardware accelerated
 - + Digital certificates
 - + Elliptic curve encryption
 - + NIST Suite B compliant
- 
OTA Firmware Update
 - + Enables field deployed updates
- 
Multiple I/Os
 - + UART, SPI, SDIO, ADC, DAC, I2C, PWM, I2S, GPIOs, JTAG
- 
eMMC/SD Expanded Memory
 - + Data logging, memory intensive applications