



nRF7002

Low-power Wi-Fi 6 companion IC providing seamless connectivity and Wi-Fi-based locationing



The nRF7002 Wi-Fi 6 companion IC is a highly integrated IC designed to enable the integration of Wi-Fi 6 connectivity into a wide variety of applications. The IC provides a low power and cost-effective solution for adding the latest Wi-Fi 6 technology to products, allowing them to benefit from high speeds, improved range, and greater reliability offered by the latest Wi-Fi standard.

The nRF7002 features a 2.4 GHz and 5 GHz radio with low power consumption for extended battery life. The IC also has advanced security features included to help protect user data. The IC is designed to be the ideal Wi-Fi companion IC to Nordic's nRF52840, nRF5340, and to nRF91 Series devices. Additionally, the IC supports a wide variety of host controllers and can be used with both Linux and RTOS operating systems.

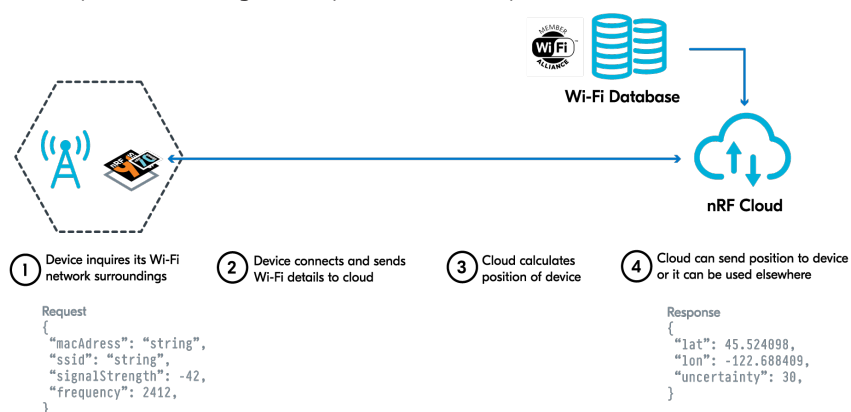
Overall, the nRF7002 Wi-Fi 6 companion IC is a powerful, low-cost solution for adding the latest Wi-Fi 6 technology to products. It provides fast and reliable connectivity with advanced security features and is designed for interoperability with other wireless protocols and easy integration into a wide range of applications.

nRF Connect SDK

The nRF7002 is designed to be used in conjunction with the nRF Connect SDK, which provides a comprehensive unified developing platform with a set of tools and libraries for developing applications that utilize the nRF7002's capabilities. With the nRF7002 and nRF Connect SDK, developers can quickly and easily add Wi-Fi connectivity to their products, allowing them to connect to the internet and communicate with other devices over a Wi-Fi network. The nRF7002 supports both 2.4 GHz and 5 GHz Wi-Fi bands, providing a range of options for connecting to networks. It also features low power consumption, making it ideal for use in battery-powered devices. The nRF7002 is a highly versatile and powerful solution for adding Wi-Fi connectivity to a wide range of applications.

Wi-Fi locationing

The nRF7002 is an ideal choice for implementing low-power Wi-Fi locationing with nRF Cloud Location Services and the nRF91 Series SiPs. It perfectly complements GPS-based or cell-based locationing by providing an accurate location indoors and in places with a high density of Wi-Fi access points.



nRF7002 Wi-Fi Companion IC

- 2.4 GHz and 5 GHz dual-band
- Low-power and secure Wi-Fi for the IoT
- Ideal coexistence with Bluetooth LE
- Supported in nRF Connect SDK
- Target Wake Time (TWT)
- WPA3 Personal/Enterprise
- SPI / QSPI
- Wi-Fi 6 Station (STA)
- Complies with 802.11a/b/g/n/ac/ax
- 1 Spatial Stream (SS)
- 20 MHz channel bandwidth
- 64 QAM (MCS7), 86 Mbps PHY throughput
- OFDMA (Downlink and Uplink)
- BSS coloring
- Co-existence interfaces
- QFN and WLCSP packages

Applications

- Battery operated Wi-Fi products
- Smart city & smart agriculture
- Smart home
- Industrial sensors
- Asset tracking
- Wearables & medical

Preferred Nordic host devices

- nRF52840
- nRF5340
- nRF91 Series