



# nRF7001

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



The nRF7001 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 nRF7001 features a 2.4 GHz radio with low power consumption for enabling long 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.

Overall, the nRF7001 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 easy integration into a wide range of applications.

## nRF Connect SDK

All nRF70 Series Wi-Fi companion ICs are 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 IC's capabilities. With the nRF7001 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 features low power consumption, making it ideal for use in battery-powered devices. The nRF7001 is a highly versatile and powerful solution for adding Wi-Fi connectivity to a wide range of applications.

## nRF70 Series

The nRF70 Series is a family of low-power Wi-Fi companion ICs designed for embedded applications. The series includes: nRF7002 for dual-band Wi-Fi 6, nRF7001 for lower-cost 2.4 GHz applications, and nRF7000 for Wi-Fi network scanning and SSID-based Wi-Fi locationing. They enable Wi-Fi connectivity, and provide a flexible and low-power solution for adding Wi-Fi connectivity to embedded applications.

Functionality	<a href="#">nRF7000</a>	<a href="#">nRF7001</a>	<a href="#">nRF7002</a>
Scanning (Passive & active)	✓	✓	✓
Station (STA)		✓	✓
SoftAP		✓	✓
Dual Band	✓		✓

## nRF7001 Wi-Fi Companion IC

- 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

## Applications

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

## Preferred Nordic host devices

- nRF52840
- nRF5340
- nRF9160

