NORDIC SEMICONDUCTOR



nRF9151 SiP

Low power cellular IoT System-in-Package with integrated LTE-M, NB-IoT, GNSS and DECT NR+ wireless modem

LTE-M NB-IoT GNSS nr+

Overview

The nRF9151 sets a new standard for highly integrated and compact System-in-Package (SiP) solutions, specifically designed for cellular IoT and DECT NR+ applications. Leveraging low power LTE technology, advanced processing capabilities, and robust security features, the nRF9151 offers unparalleled performance and versatility, and supports 3GPP release 14 LTE-M/NB-IoT and DECT NR+.

Compared to its predecessor (nRF9161), it boasts a significant footprint reduction of 20% and brings additional support for Power Class 5 20 dBm.

Main Benefits

- Enhanced Capabilities: The nRF9151 surpasses its predecessor with support for Power Class 5 20 dBm output power, complementing the existing Power Class 3 23 dBm, which provides great design flexibility as it eases the requirements for battery-powered products.
- Global Connectivity and Power Efficiency: The integrated modem of the nRF9151 enables global connectivity without regional limitations, and include new unique modem features for further power saving and ease of use.
- Unleashing the Potential of DECT NR+: Harness the capabilities of the DECT NR+ stack, enabling massive mesh applications that prioritize reliability, secure connections, long range, and scalability.

Key features

- Fully integrated SiP with 64 MHz Arm Cortex-M33 and multimode LTE-M/NB-IoT modem with DECT NR+ support and GNSS
- 700-2200 MHz LTE band support
- Power Class 5 20 dBm
- Power Class 3 23 dBm
- 1.9GHz NR+ band support
- Certified for global operation
- Dedicated programmable application processor and memory
- 1 MB flash + 256 KB RAM
- Arm TrustZone + Arm CryptoCell 310

Applications

- Asset Tracking
- Smart Metering
- Smart City
- Smart Agriculture
- Predictive maintenance
- Portable Medical Devices
- Industry 4.0

nRF 9 SERIES

For more information please visit: nordicsemi.com/nRF9151