nRF93M1 Smart Modem

Cellular IoT made easy — higher bandwidth, low power, global LTE coverage

nRF SERIES 93

The nRF93M1 is a compact, pre-certified LTE Cat 1 bis module delivering global connectivity for more data-intensive cellular IoT applications. It integrates Wi-Fi and cellular location, and a feature set enabling optimized, robust designs. The nRF93M1 is available in pin- and interface-compatible multi-regional and global module options.

The nRF93M1 and the nRF93M1 Development Kit are supported by Nordic's AI-assisted development flow and comes out of the box with nRF Cloud services that lower deployment risk and speed time-to-market. Backed by Nordic's long-term availability and lifecycle support.

Why the nRF93M1 Smart Modem

Easy to use

- Smart Modem with control, data & diagnostics over UART or USB
- nRF93M1 Development Kit with nRF54L host MCU reference design
- nRF Cloud enabled and open software/hardware documentation

Ultra-low power

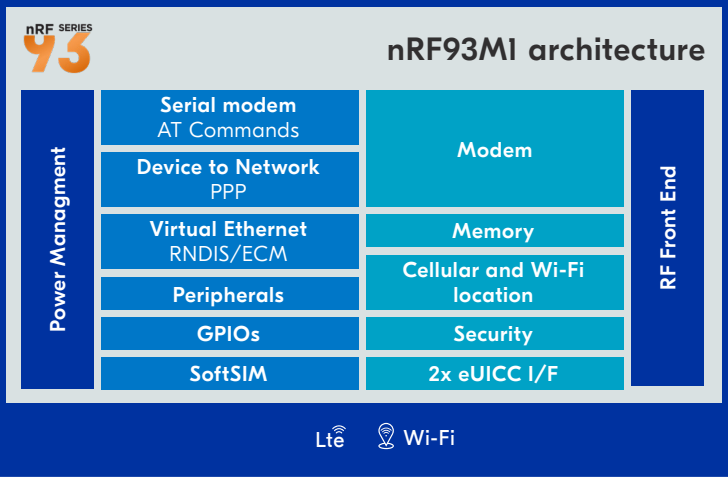
- 2 µA PSM sleep floor current
- eDRX, PSM and Nordic proprietary power optimizations
- Power efficient connectivity stack for long battery life

Truly global

- Global LTE support in multi-regional and global band SKU options
- Global GCF and regional certifications
- Dual SIM interface, IoT eSIM (SGP.32) and SoftSIM support

Key Benefits

- Low-power LTE™ Cat 1 bis modem with low-power Wi-Fi and cellular-based location tracking
- Easy-to-use host and modem architecture with control, data and diagnostics over UART or USB
- nRF Cloud enabled out of the box — location, observability and OTA services via AT commands
- Flexible SIM support including multi-SIM, IoT eSIM (SGP.32) support and integrated SoftSIM framework
- Extended battery life with standard 3GPP and Nordic proprietary power saving features in an optimized design



Target applications

- Fleet management and telematics
- Asset tracking and shared transport
- Point-of-sale (POS) terminals
- Healthcare and remote patient monitoring
- Gateways and data concentrators
- Smart energy and metering

At A Glance

nRF93M1-LABA Multi-regional band SKU	**FDD:** B1, B3, B5, B7, B8, B20, B28 **TDD:** B38, B40, B41
nRF93M1-LACA Global band SKU	**FDD:** B1, B2, B3, B4, B5, B7, B8, B12, B13, B18, B19, B20, B25, B26, B28, B66, B71 **TDD:** B38, B40, B41
Package	LGA 15.8 × 17.7 × 2.4 mm
Protocol	LTE Cat 1 bis (3GPP rel. 14)
Data rate	10 Mbps DL / 5 Mbps UL
Location	Wi-Fi + cellular
Interfaces	UART, USB, GPIO · 3.3–4.5 V

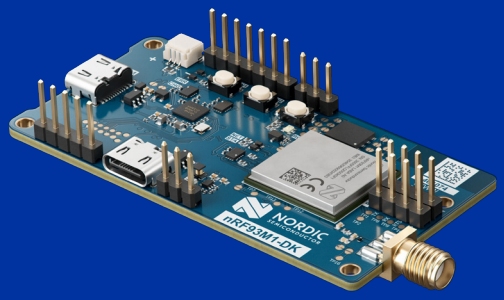
nRF93M1 Development Kit

The fastest way to evaluate and build with the nRF93M1 — innovate faster

The nRF93M1 Development Kit (DK) is the ideal starting point for evaluating the nRF93M1 and prototyping your Cat 1 bis connected cellular IoT application.

The nRF93M1 DK pairs the ultra-low-power nRF54L15 as a host MCU with the nRF93M1 so you can also prototype and develop your embedded application rapidly with nRF Connect SDK and Nordic's AI assisted development flow

The nRF93M1 DK is flexible and also works with any other embedded or rich-OS host via the direct AT command interface, PPP, or USB — so you can prototype your preferred way. It works out of the box, with a pre-loaded Onomondo SIM card and LTE antenna included.



Kit highlights

- On-board nRF93M1 Smart Modem: LTE Cat 1 bis with Wi-Fi and cellular-based location
- nRF54L15 host MCU with AI assisted nRF Connect SDK development for rapid application development
- Pin headers, buttons and USB-C interfaces for easy prototyping and programming
- On-board SEGGER J-Link debugger/programmer — flash and debug over USB-C
- Flexible SIM (nano/4FF + eSIM), with pre-loaded SIM card and LTE antenna in the box

At a glance

Product Name	nRF93M1 Development Kit
Order code	nRF93M1-DK
Evaluates	nRF93M1 and nRF54L Host MCU
Host MCU	nRF54L15
Interfaces	ADC, GPIO, I2C, I2S, JTAG, SPI, UART, USB
Debugger	On-board SEGGER J-Link · 3.3–4.2 V
In the box	Development Board, LTE antenna, SIM card

nRF Cloud Services and Features - Ready to Go

Every nRF93M1 ships and are ready for nRF Cloud from day one — secure provisioning, firmware updates, location and observability built in to lower deployment risk and speed up time-to-market.

Device management

- Secure device provisioning, configuration and operation
- Firmware-Over-TheAr update keeping your device fleet secure, up to date and aligned with EU Cyber Resilience Act
- Storing and routing IoT device data to and from nRF Cloud

Embedded observability

- In-field debugging catching every firmware crash
- Device fleet health monitoring easily identifying field reliability issues
- Product analytics giving field insights on exactly how your product in used

Location services

- High accuracy cloud-assisted GNSS, offering ultra-low power consumption and first Time-To-First-Fix for fast, low-power fixes
- Robust medium accurate Wi-Fi location tracking ideal for indoor and urban areas
- Ultra-low power cellular location tracking

Learn more:

nordicsemi.com/nRF93M1

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