

nRFGo Development Kit for nRF24LU1+

Enabling single chip ultra compact USB dongles

The nRF24LU1+ Development Kit comes in one variant, fitted with the largest memory option device, the nRF24LU1P-F32Q32. All SW developed on this device can be used directly on the smaller F16Q32 version. This kit used in conjunction with the nRFGo Starter Kit enable users to perform evaluation, testing, prototyping, firmware development and debugging on the nRF24LU1+.

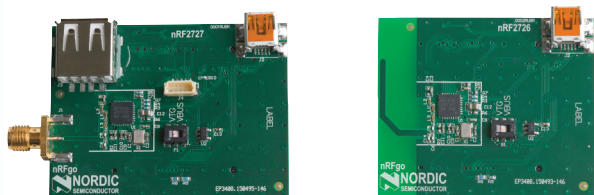


The kit includes two nRFGo compatible radio modules, one with PCB antenna and one with an SMA connector for use with external antennas or in closed loop measurement set-ups. The kit also contains a production ready USB dongle. The DK CD contains a complete Software Development Kit (SDK), the nRFprobe hardware debug utility as well as documentation.

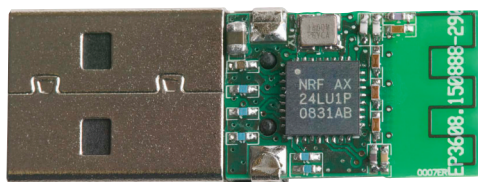
nRF24LU1+ DK modules

For the nRFGo Starter Kit

The nRF24LU1+ DK modules are designed to be used with the nRFGo Starter Kit (nRF6700).



The module integrates all required external circuitry and special connectors including a 16MHz crystal, matching network, PCB antenna as well as an USB connector. The module also includes a switch for selecting power supply from the on board USB connector or externally from the nRFGo starter kit. All chip I/O pins are made available on the module connectors. The SMA module is identical except for the antenna being replaced with a SMA connector and the addition of a programming socket for the USB dongle.



The USB dongle is a production ready HW design enabling real life performance testing of an application with a compact USB dongle.



RF Silicon

Software

Reference Design

Development Tools

PRODUCT BRIEF

nRFGo Development Kit for nRF24LU1+ nRF24LU1P-FxxQ32-DK

KEY FEATURES

- nRFGo compatible development kit for nRF24LU1+
- One kit for both memory sizes, 16 and 32 kbytes
- Compatible with nRFGo Starter Kit (nRF6700)
- Enables evaluation, testing, prototyping, firmware development and debugging on nRF24LU1+
- 1 nRF24LU1+ radio module with PCB antenna
- 1 nRF24LU1+ radio module with SMA connector
- One production ready USB dongle
- Five nRF24LU1P-F32Q32 samples
- All I/O pins available on nRFGo module connectors
- Complete Software Development Kit (SDK)
- Comprehensive library of Hardware Abstraction Layers (HAL) including: radio, USB, SPI, AES co processor and more
- Gazell ultra low power RF link layer stack: Error handling, frequency agility, frequency hopping, payload data encryption supported.
- Example applications utilizing the HAL and RF link layer stack
- nRFProbe hardware debug solutions for Keil µVision IDE
- Comprehensive documentation

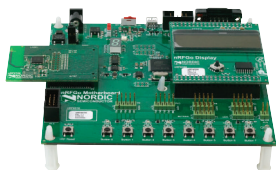
SUMMARY OF BENEFITS

- Used in conjunction with nRFGo Starter Kit the nRF24LU1+ development kit forms a complete HW solution for evaluation, prototyping and firmware development on nRF24LU1+
- Full integration with Keil µVision IDE offers a complete SW development environment
- Fully featured nRFprobe hardware debug solution when used with the nRFGo Starter Kit (nRF6700) enables easy and fast debug of new applications.
- Production ready USB dongle HW enables 'real life' testing of applications on a compact USB dongle.
- The nRF24LU1+ is a device targeted at USB dongles; by utilizing the functionality and flexibility in the nRFGo platform HW and SDK, you enable quick development of wireless systems utilizing nRF24LU1+ together with other nRF devices like nRF24LE1.

Easy access to all chip I/O pins

Application prototyping using nRFgo Starter Kit

With the nRFgo nRF24LU1+ DK module plugged into the nRFgo Motherboard the user gets easy access to all the generic chip I/O pins via the I/O port headers on the motherboard. The USB interface of the nRF24LU1+, which always needs to be connected to an USB hub, is routed to a separate USB connector on the DK module.



Using patch cables on the nRFgo motherboard, it is easy to route the I/O pins to the on-board buttons, diodes, or the interface connectors. The chip I/O is also available on the extension board socket so users can use custom extension boards for advanced prototyping.

nRFgo Software Development Kit

Kick start your SW development on the nRF24LU1+

The nRFgo SDK contains everything needed to enable fast firmware development the nRF24LU1+. The nRFgo SDK includes a compressive library of Hardware Abstraction Layer (HAL) modules, the Gazell RF link layer stack, USB function blocks as well as example applications.

The Gazell RF link layer stack makes it easy to design robust wireless products. Through simple configuration of the the Gazell link layer you can ensure your application have proper error correction procedures as well as state of the art co-existence performance through frequency agility or FHSS interference avoidance schemes.

About Nordic Semiconductor ASA

Ultra low power RF silicon solutions

Nordic Semiconductor is fabless semiconductor company specializing in ultra low power (ULP) short-range wireless communication. Nordic is a public company listed on the Norwegian stock exchange.

Nordic provides RF Silicon Solutions for ultra low power wireless including:

- Highly integrated RF silicon
- Sophisticated and flexible development tools
- Application specific communication software
- Complete reference designs

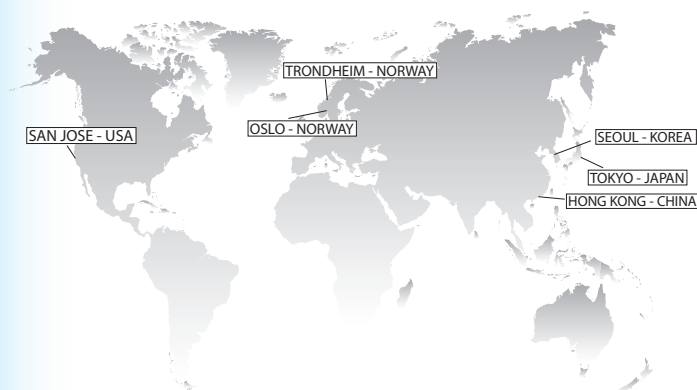
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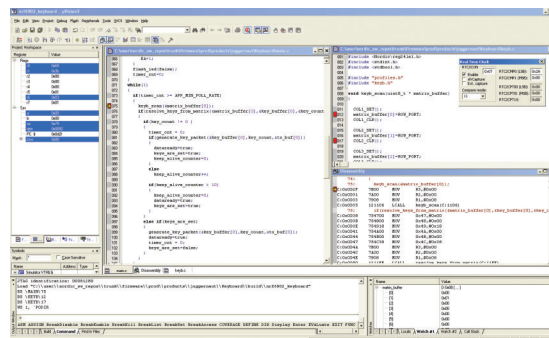
www.nordicsemi.com



Integrated Development Environment

Code development, programming and debugging

The nRF24LU1+ development environment is built around the Keil μ Vision IDE. All key functions such as flashing and debugging are accessed through the Keil μ Vision GUI. The kit includes download access to an evaluation version of Keil (4k code size limit).



Hardware debugging using nRFprobe

Complete HW debug solution included in the kit.

nRFprobe is a fully featured hardware debugger solution specifically designed for Nordic Semiconductor radios with embedded microcontrollers. It is fully integrated with Keil uVision IDE and nRFgo, and for the nRF24LU1+ has extended support also for specialized I/O blocks. No external dongle or other HW is required as the nRFgo motherboard has built-in support for the nRFProbe, enabling it to work over the USB interface between the PC and the nRFgo motherboard.

Product content

Hardware, Software and Documentation

The following is included in the box:

- One nRF24LU1+ module with PCB antenna
- One nRF24LU1+ module with SMA connector
- Production ready USB dongle
- Five nRF24LU1+ samples
- Printed Getting Started Guide
- Installation CD with nRFgo SDK, nRFprobe and documentation.

Ordering information

Ordering code	Description
nRF24LU1P-FxxQ32-DK	nRFgo Development Kit for nRF24LU1+

Related Products

nRF6700	nRFgo Starter Kit (Required to use this development kit)
nRF24LE1	Ultra low power wireless System-on-Chip (SoC) solution, the typical counter part of nRF24LU1+ in a wireless application.
nRF24L01+	Single chip 2.4GHz transceiver
nRF24LU1+	Ultra low power wireless system-on-chip USB solution

Visit www.nordicsemi.com for Nordic Semiconductor sales offices and distributors worldwide.