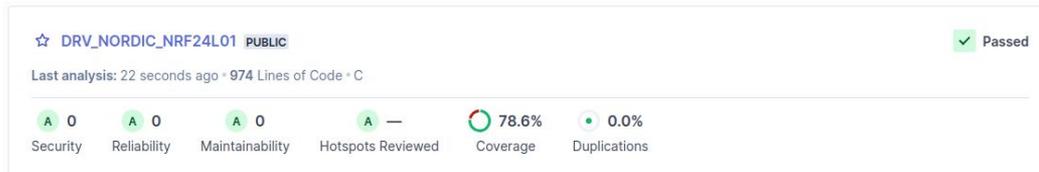# Nordic nRF24L01+ :: 2.4GHz RF Transceiver

The Nordic nRF24L01+ is a single-chip 2.4GHz transceiver with an embedded baseband protocol engine (Enhanced ShockBurst™) suitable for ultra-low power wireless applications. The nRF24L01+ is designed to operate in the global ISM frequency band at 2.400 - 2.4835GHz.

The radio front end uses GFSK modulation. It has user configurable parameters such as frequency channel, output power and air data rate. The nRF24L01+ supports an air data rate of 250 kbps, 1 Mbps and 2Mbps. The high air data rate in combination with two power saving modes makes the nRF24L01+ very suitable for ultra-low power designs.

The software is architected with long-term maintainability, portability across MCU platforms, and adherence to high software quality standards as core design principles.

✅ Layered architecture with clear HAL abstraction
✅ Conforms to ISO C99 standard
✅ Portable across multiple MCU platforms
✅ Supports both RTOS and bare-metal environments
✅ CMake build system for scalable integration
✅ Seamless integration with GCC toolchain
✅ Statically analyzed for MISRA, CERT, and CWE compliance

Initialization Interface

```
nrf24l01_result_t nrf24l01_init( nrf24l01_handle_t*, ... )
```

Configuration Interface

```
nrf24l01_result_t nrf24l01_set_power_mode( nrf24l01_handle_t*, ... )
nrf24l01_result_t nrf24l01_set_output_power( nrf24l01_handle_t*, ... )
nrf24l01_result_t nrf24l01_set_channel( nrf24l01_handle_t*, ... )
nrf24l01_result_t nrf24l01_set_address( nrf24l01_handle_t*, ... )
```

Data Retrieval Interface

```
nrf24l01_result_t nrf24l01_get_config( nrf24l01_handle_t*, ... )
nrf24l01_result_t nrf24l01_read( nrf24l01_handle_t*, ... )
```

Transmission Interface

```
nrf24l01_result_t nrf24l01_send( nrf24l01_handle_t*, ... )
```

☆ DRV_NORDIC_NRF24L01 **PUBLIC**   ✔ Passed

Last analysis: 22 seconds ago • **974** Lines of Code • C

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Security	Reliability	Maintainability	Hotspots Reviewed	Coverage	Duplications

Communication Interface:
SPI