

# **s132\_nrf52 release notes**

## **Introduction to the s132\_nrf52 release notes**

These release notes describe the changes in the s132\_nrf52 from version to version.

The release notes are intended to list all relevant changes in a given version. They are kept brief, to make it easy to get the overview. More details regarding changes and new features may be found in the s132\_nrf52 migration document (normally available for major releases only).

Issue numbers in parentheses are for internal use, and should be disregarded by the customer.

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## s132\_nrf52\_1.0.0-3.alpha

The s132 SoftDevice for the nRF52 platform is based upon Nordic Semiconductor's s130 SoftDevice for the nRF51 platform, which in turn is based upon Nordic Semiconductor's S110 and S120 SoftDevices, extended to support concurrent LL (master and slave) and GAP (central and peripheral) roles.

This release contains several bug fixes and an updated license agreement.

## New functionality

There is no new functionality in this release.

## Changes

- Added the s132 SoftDevice to the license agreement (DRGN-5948).

## Bug fixes

- SoftDevice
  - Fixed an issue where passing pointers to code memory above 256 kB as parameters to SoftDevice API calls would lead to an error being returned (DRGN-5834).
  - Temperature based calibration of the RC low frequency clock is now verified to work as expected (DRGN-5429).
  - Fixed an issue where the chip would not wake up via GPIO after calling SYSTEMOFF (DRGN-6001).
  - Fixed an issue where writing to the flash could cause the SoftDevice to not send packets to the peer or deliver events to the application (DRGN-5993).

## Limitations

- MBR
  - The MBR in this release uses 12 kB of flash, meaning that the SoftDevice start address is 0x3000 and the SoftDevice info structure address is 0x5000. This is subject to change in future releases (DRGN-5436).
- SoftDevice
  - If Radio Notifications are enabled, flash write and flash erase operations initiated through the SoftDevice API will be notified to the application as Radio Events (DRGN-5197).
  - Synthesized low frequency clock source is not tested or intended for use with BLE stack.
- LL
  - The peripheral role has priority over the central role when it comes to keeping the links alive.
- GATTS
  - To conform to the Bluetooth specification there shall not be a secondary service that is not referenced somehow by a primary service. The SoftDevice does not enforce this (DRGN-906, DRGN-2260).

## Known Issues

There are no known issues in this release.

## s132\_nrf52\_1.0.0-2.alpha

The s132 SoftDevice for the nRF52 platform is based upon Nordic Semiconductor's s130 SoftDevice for the nRF51 platform, which in turn is based upon Nordic Semiconductor's S110 and S120 SoftDevices, extended to support concurrent LL (master and slave) and GAP (central and peripheral) roles. The s132\_nrf52\_1.0.0-2.alpha is the first alpha release of s132, and these release notes list the changes and differences from s130\_nrf51\_1.0.0.

Notes:

- This is a major release which has changed the Application Programmer Interface (API) from the s130 for nRF51, requiring applications to be recompiled.

## SoftDevice properties

- There is no SoftDevice Specification corresponding to this release, but the S130 SoftDevice Specification version 1.0 should be applicable in large parts.
- This version of the SoftDevice contains the Master Boot Record (MBR) version 1.1.0.
- The combined MBR and SoftDevice memory requirements for this version are as follows:
  - Flash: **124 kB** (0x1F000 bytes).
  - RAM: **10 kB** (0x2800 bytes) (default value - dependent upon configured size of the GATT Server Attribute Table).

## New functionality

Since this is the first release of this SoftDevice, this section is not applicable.

## Changes

- API changes from **s130\_nrf51\_1.0.0**:
  - New event: `NRF_EVT_FLASH_OPERATION_VERIFY_FAILED`, only available on nRF52.
  - `sd_flash_protect()` has been changed to be compatible both with nRF52 and with future nRF51 releases.
  - Platform-specific declarations, definitions and macros split out and placed in subfolders with the platform name (e.g. 'nrf52').
- Call stack usage increased from s130\_nrf51\_1.0.0: The application should reserve 2 kB of stack space for the SoftDevice.

## Bug fixes

There are no bug fixes in this release.

## Limitations

- MBR
  - The MBR in this release uses 12 kB of flash, meaning that the SoftDevice start address is 0x3000 and the SoftDevice info structure address is 0x5000. This is subject to change in future releases (DRGN-5436).
- SoftDevice
  - If Radio Notifications are enabled, flash write and flash erase operations initiated through the SoftDevice API will be notified to the application as Radio Events (DRGN-5197).
  - Synthesized low frequency clock source is not tested or intended for use with BLE stack.
- LL
  - The peripheral role has priority over the central role when it comes to keeping the links alive.
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  - To conform to the Bluetooth specification there shall not be a secondary service that is not referenced somehow by a primary service. The SoftDevice does not enforce this (DRGN-906, DRGN-2260).

## Known Issues

- SoftDevice
  - Temperature based calibration of the RC low frequency clock source does not work. (DRGN-5429)