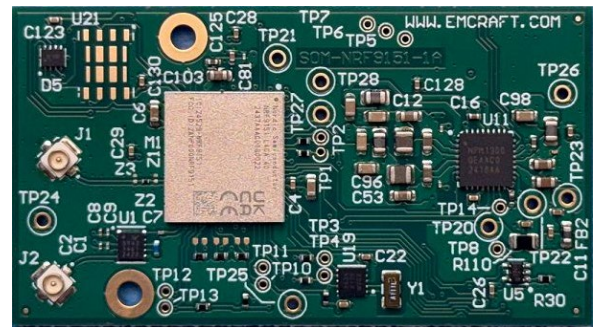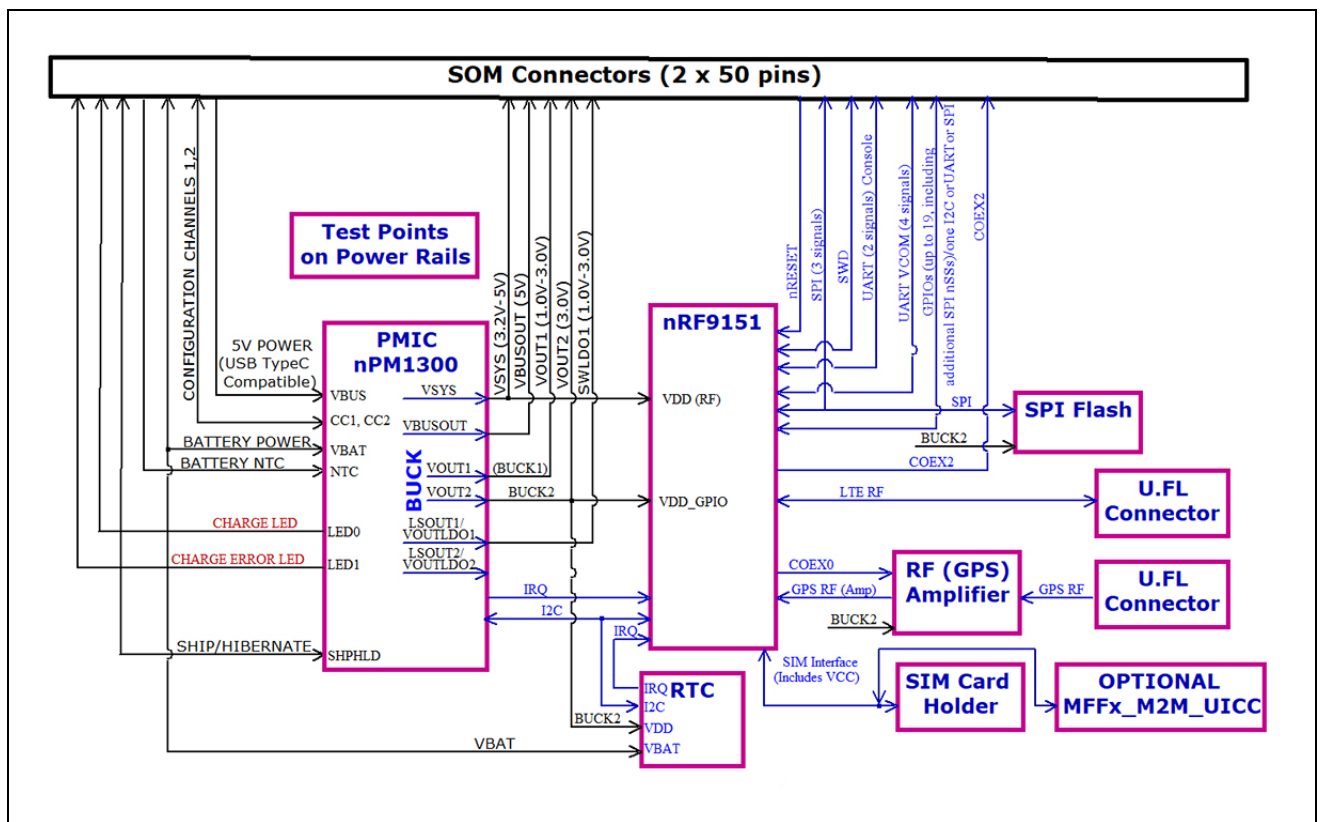# nRF9151 System-On-Module

The Emcraft nRF9151 System-On-Module (SOM-NRF9151) is a miniature module (30.5mm x 55mm) that is centered around the Nordic Semiconductor nRF9151 low-power SiP (System-In-Package), providing powerful processing capabilities using the ARM Cortex-M33 CPU core and advanced cellular IoT connectivity using the integrated LTE-M/NB-IoT and DECT NR+ modem, and GNSS.

High-Level Block Diagram

SOM Features

Core

- Arm Cortex-M33 @ 64MHz for the RTOS and user application
- Arm TrustZone
- Integrated Flash / RAM: 1MB / 256KB

Power Management

- Nordic PM1300 as the Power Management IC
- Efficient battery charging
- Low-power and longer run times

Memory

- 16GB SPI NOR Flash

Connectivity

- LTE-M/NB-IoT and DECT NR+ modem
- GNSS
- U.fl connectors for LTE and GNSS antennas
- I^2C-based RTC

Software

- Based on Nordic SDK
- Zephyr BSP (Board Support Package) and a customised Nordic's Asset Tracker v.2 application
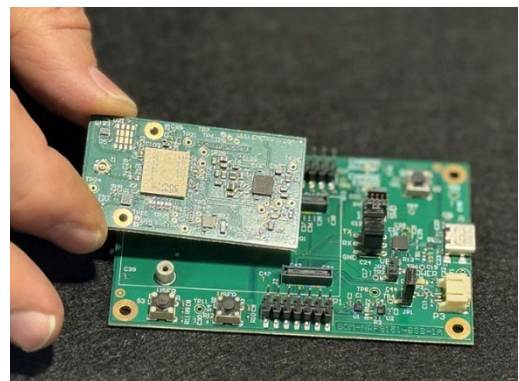- Connectivity to the Nordic cloud
- FOTA

Services

Software and hardware engineering services for SOM-NRF9151-based applications are available from Emcraft on demand.

Starter Kit

The SOM-NRF9151 Starter Kit provides a hardware platform enabling development of nRF9151 applications using the Emcraft SOM-NRF9151 module.
The kit includes the following items:

- nRF9151 module (SOM-NRF9151)
- Development baseboard (SOM-NRF9151-BSB).