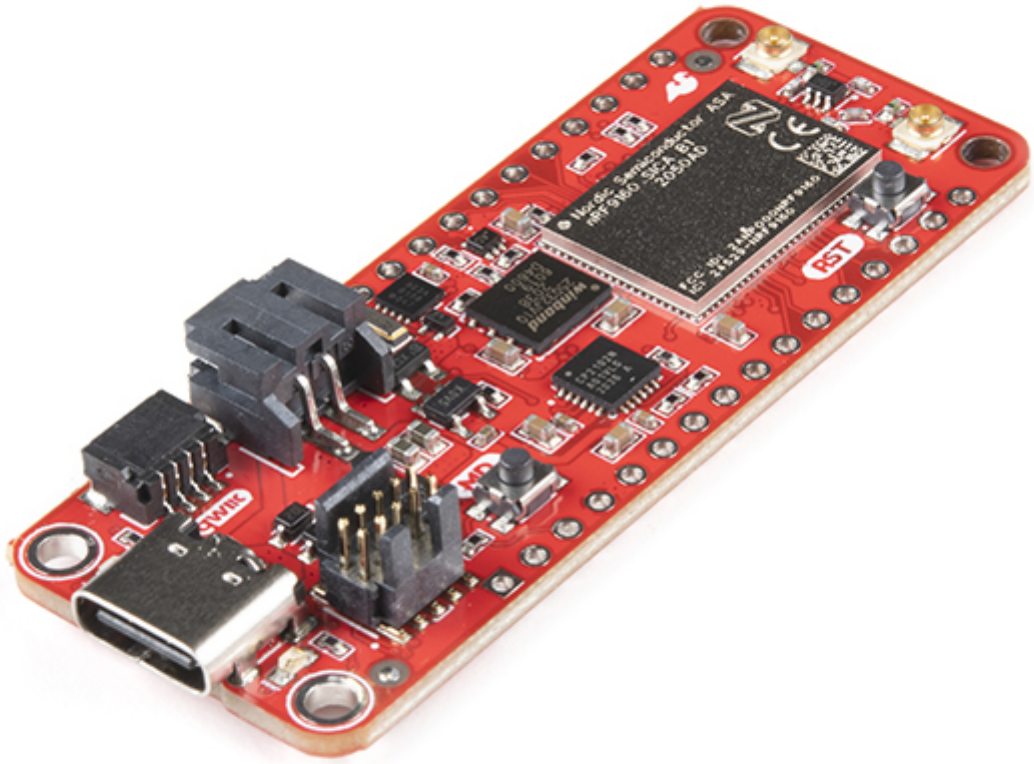
SparkFun Thing Plus - nRF9160



- Nordic nRF9160 Microcontroller with ARM Cortex M33
  - 1MB Flash
  - 256kB RAM
  - ARM® TrustZone®
  - ARM® Cryptocell 310
  - Up to 4x SPI, I2C and UART with Easy DMA
  - I2S w/ EasyDMA
  - 4x PWM with EasyDMA
  - 12bit SADC with EasyDMA
  - 2x RTC
  - PPI (Programmable peripheral interconnect) interface
  - Radio
    - Transceiver and baseband
    - 3GPP LTE release 13 Category M1 and NB1 compliant
    - 3GPP release 14 NB2 compliant
    - GPS receiver (GPS L1 C/A supported) - Active antenna only.
    - RF Transceiver for global coverage supporting bands:
      - Cat-M1: B1, B2, B3, B4, B5, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B66
      - Cat-NB1/NB2: B1, B2, B3, B4, B5, B8, B12, B13, B17, B18, B20, B25, B26, B28, B66
    - Supports 4FF Nano SIM
- USB-C connection for USB-to-Serial and DFU
- Pre-programmed MCUBoot bootloader
- External NOR Flash by Winbond
  - 4MB of space
  - Max bus speed of 133MHz
  - Standard SPI
- Power supply
  - 3.3V Buck/Boost up to 0.9A of current draw
  - Operating range 2.8 to 5.5V
  - External LiPoly battery connection (JST SPH type)
  - Charge rate set to 300mA with LED indication
- Programmer

  Capable of interfacing with J-Link and CMSIS-DAP based programmers
- Low Power RTC on board for time keeping and as a low power wakeup source.
- User I/O
  - Standard feather form factor GPIOs (0.1" pitch)
  - 2x buttons (1 Reset, 1 General Purpose)
  - 1x Blue LED connected to D7
- Antenna connections:
  - 1x U.FL for LTE with matching network
  - 1x U.FL for active GPS antennas
- Feather form factor

  58.42mm x 22.86mm (2.3" x 0.9")