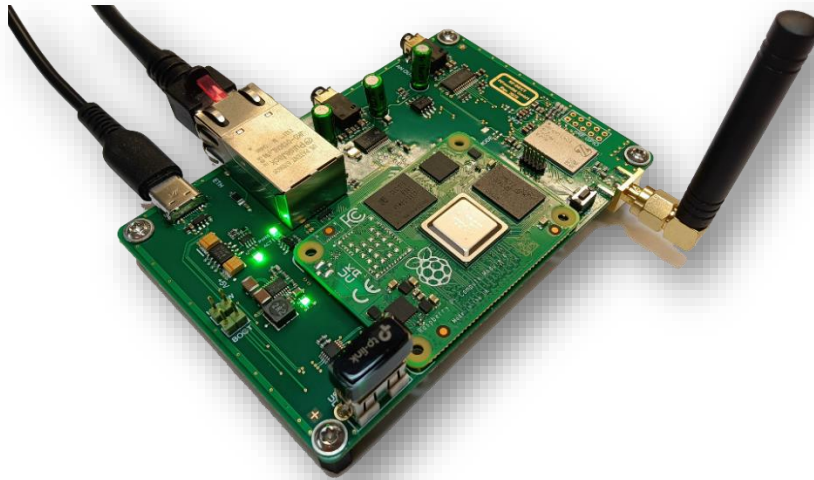


## DECT NR+ Evaluation Board



### Overview

The DECT NR+ Evaluation Board can be used to experience the features and capabilities of DECT NR+. It consists of an NRF9161 as modem running the RTOS Zephyr, and a Raspberry Pi Compute Module (CM4) as host processor running Linux.

The current board is designed for the following applications, but not restricted to:

- Unidirectional audio FT to PT
- Unidirectional audio broadcast from FT to multiple PTs
- Bidirectional (talk-back) audio from PT to FT
- Evaluation and Measurement of e.g. PER, range
- Unidirectional Video transmission

### DECT NR+ SiP NRF9161

#### Specs

[www.nordicsemi.com/products/nrf9161](http://www.nordicsemi.com/products/nrf9161)

[www.zephyrproject.org](http://www.zephyrproject.org)

#### Pin Header

- 1.27mm Pin header for programming (e.g. with NRF91610-DK as programmer and Visual Studio Code extension by Nordic Semiconductor)
- 2.5mm Pin Header for power consumption measurements

#### Buttons

- Reset button connected to NRF9161
- Mode button connected to NRF9161

#### LEDs

- Three green LEDs connected to NRF9161

### Raspberry Pi CM4 Compute Module

#### Specs

[www.raspberrypi.com/products/compute-module-4/?variant=raspberry-pi-cm4001000](http://www.raspberrypi.com/products/compute-module-4/?variant=raspberry-pi-cm4001000)

#### On-board eMMC of CM4 can be flashed through USB-C port

- 2.5mm Pin Header to put CM4 into boot mode
- 2.5mm Pin Header for USB-C port OTG function

### Internal Interfaces between NRF9161 and CM4

- 17 GPIOs between CM4 and NRF9161

#### GPIOs support

- SPI with 8 MHz clock
- UART NRF9161 (TX) to CM4 (RX)
- Reset of NRF9161 can be triggered from CM4

### External Interfaces

#### Connected to CM4

- 1Gbit/s Ethernet
- USB-A 2.0
- 3.5mm Stereo Audio Jack Input
- 3.5mm Stereo Audio Jack Output (Mic Input with bias voltage)

#### Connected to NRF9161

- RF Out SMA female
- 2.5mm Pin Header with four GPIOs from NRF9161 (two shared with CM4 for UART)

### Power Supply

- 5V via USB-C port
- Total Board current consumption with current firmware version < 500mA

### Mechanical dimensions

- 110mm x 74mm x 18mm