nRF5340 Audio DK Hardware

v1.0.0

User Guide

4406_708 / 2023-01-12

NORDIC® SEMICONDUCTOR

Contents

Revision history

Date	Description
2023-01-12	First release

1 Introduction

The nRF5340 Audio *Development Kit (DK)* is a hardware development platform that demonstrates the use of the nRF5340 Audio application.

The DK is the recommended platform for *Bluetooth*® Low Energy Audio products and contains everything needed to start development. The DK is configurable and can function as a *Universal Serial Bus (USB)* dongle to send or receive audio data from a computer. It can also function as a business headset, a broadcast receiver, or a *True Wireless Stereo (TWS)* earbud. For most use cases, we recommend using two or more DKs.

The three main components of the DK are the nRF5340 *System on Chip (SoC)*, nPM1100 *Power Management Integrated Circuit (PMIC)*, and Cirrus Logic's CS47L63 Audio DSP. The CS47L63's high-performance DAC and differential output driver are optimized for direct connection to an external headphone load. It is perfect for earbuds and direct speaker output.

The new Low Complexity Communications Codec (LC3) is also available and can be used with this DK. It replaces Bluetooth Classic's Low Complexity Subband Codec (SBC). The LC3 codec has superior audio quality compared to SBC, even at about half the wireless data rate. This low data rate is a key factor in minimizing the power consumption of your products.

Key features

- Nordic Semiconductor's nRF5340 Bluetooth LE or multiprotocol SoC
- Nordic Semiconductor's nPM1100 power management SoC
- CS47L63 AD-DA converter from Cirrus Logic dedicated to TWS devices
- Stereo analog line input
- Mono analog output
- On-board *Pulse Density Modulation (PDM)* microphone
- Computer connection and battery charging through USB-C
- Second nRF5340 SoC that works as an onboard SEGGER debugger
- SD card reader (no SD card supplied)
- Five user-programmable buttons and LEDs
- DK contains several voltage and current monitors. This enables higher accuracy current measurement using dedicated current measurement pins. The use of Nordic's Power Profiler Kit II is recommended.
- Normal operating temperature range 10–40°C
- Embedded battery charge system
- Rechargeable Lithium-Polymer (*Li-Po*) battery with 1500 mAh capacity

nRF5340 aQFN94 SoC

- Application core
  - 128 MHz or 64 MHz Arm® Cortex®-M33 with TrustZone® technology
  - 1 MB flash and 512 kB low leakage RAM
  - Arm TrustZone CryptoCell™-312 security subsystem
  - *Quad Serial Peripheral Interface (QSPI)* for communicating with an external flash memory device
  - *Near Field Communication (NFC)*-A tag with wake-on field and touch-to-pair
  - Up to five *Serial Peripheral Interface (SPI)* master/slave with EasyDMA
  - Up to four *Inter-integrated Circuit (I^2C)* compatible two-wire master/slave with EasyDMA
  - Up to four *Universal Asynchronous Receiver/Transmitter (UART)* (*Clear to Send (CTS)*/*Request to Send (RTS)*) with EasyDMA

  - Audio peripherals: I^2C, digital microphone interface (PDM)
  - Up to four *Pulse Width Modulation (PWM)* units with EasyDMA
  - 12-bit, 200 ksps ADC with EasyDMA, eight configurable channels with programmable gain
  - Full-speed (12 Mbps) USB device
- Network core
  - 64 MHz Arm Cortex-M33
  - 256 kB flash and 64 kB low leakage RAM
  - Bluetooth 5.2, IEEE 802.15.4-2006, 2.4 GHz enabled transceiver
  - SPI master/slave with EasyDMA
  - I^2C compatible two-wire master/slave with EasyDMA
  - *UART* (*CTS*/*RTS*) with EasyDMA

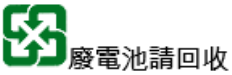
nPM1100 PMIC

- 400 mA linear Li-ion/Li-Po battery charger with thermal protection
  - Automatic trickle, constant current, and constant voltage charging
  - Battery thermal protection
  - Discharge current limitation
- 1.8 V–3.0 V, 150 mA step-down buck regulator
  - Automatic transition between hysteretic and PWM modes
  - Forced PWM mode for clean power operation
- Input regulator with USB compatible current limit of 100 mA and 500 mA
  - 4.1 V–6.7 V input voltage range for normal operation
- LED drivers for charger state indication
- 2.3 V–4.35 V battery operating input range

Environmental Protection

Waste electrical products should not be disposed of with household waste.

Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.



WARNING:

Due to the following safety concerns the battery in this product shall only be removed and replaced by qualified professionals:

- Replacing the battery with an incorrect battery type can cause a fire or explosion.
- Disposing the battery into a fire or hot oven, crushing it mechanically, or cutting it, can cause an explosion.
- Leaving the battery in an environment with an extremely high temperature can cause an explosion or the leakage of flammable liquid or gas.
- Subjecting the battery to extremely low air pressure can cause an explosion or the leakage of flammable liquid or gas.

The nRF5340 Audio DK must not be operated outside the internal battery's charge and discharge temperature range between +10°C and +60°C or stored or transported outside the internal battery's storage temperature range between -10°C and +45°C.

The power supply adapter must meet PS1 requirements.

Radio frequency notice

The nRF5340 Audio DK operates in the 2.4 GHz ISM radio frequency band. The maximum radio frequency power transmitted in the frequency band in which the DK operates equals +3 dBm (2 mW).

2 Kit content

The nRF5340 Audio *DK* consists of hardware and access to software components, hardware design files, applications, and documentation.

Figure 1: nRF5340 Audio DK

The nRF5340 Audio DK contains the following:

- nRF5340 Audio development board (PCA10121) with plastic casing
- Battery

Hardware files

The hardware design files, including schematics, *Printed Circuit Board (PCB)* layout files, bill of materials, and Gerber files are available on the nRF5340 Audio DK product page.

3 Hardware description

This section focuses on the hardware components of the nRF5340 Audio *DK*, with descriptions of the various hardware components that are present on the device.

3.1 Block diagram

The block diagram illustrates the nRF5340 Audio *DK* functional architecture.

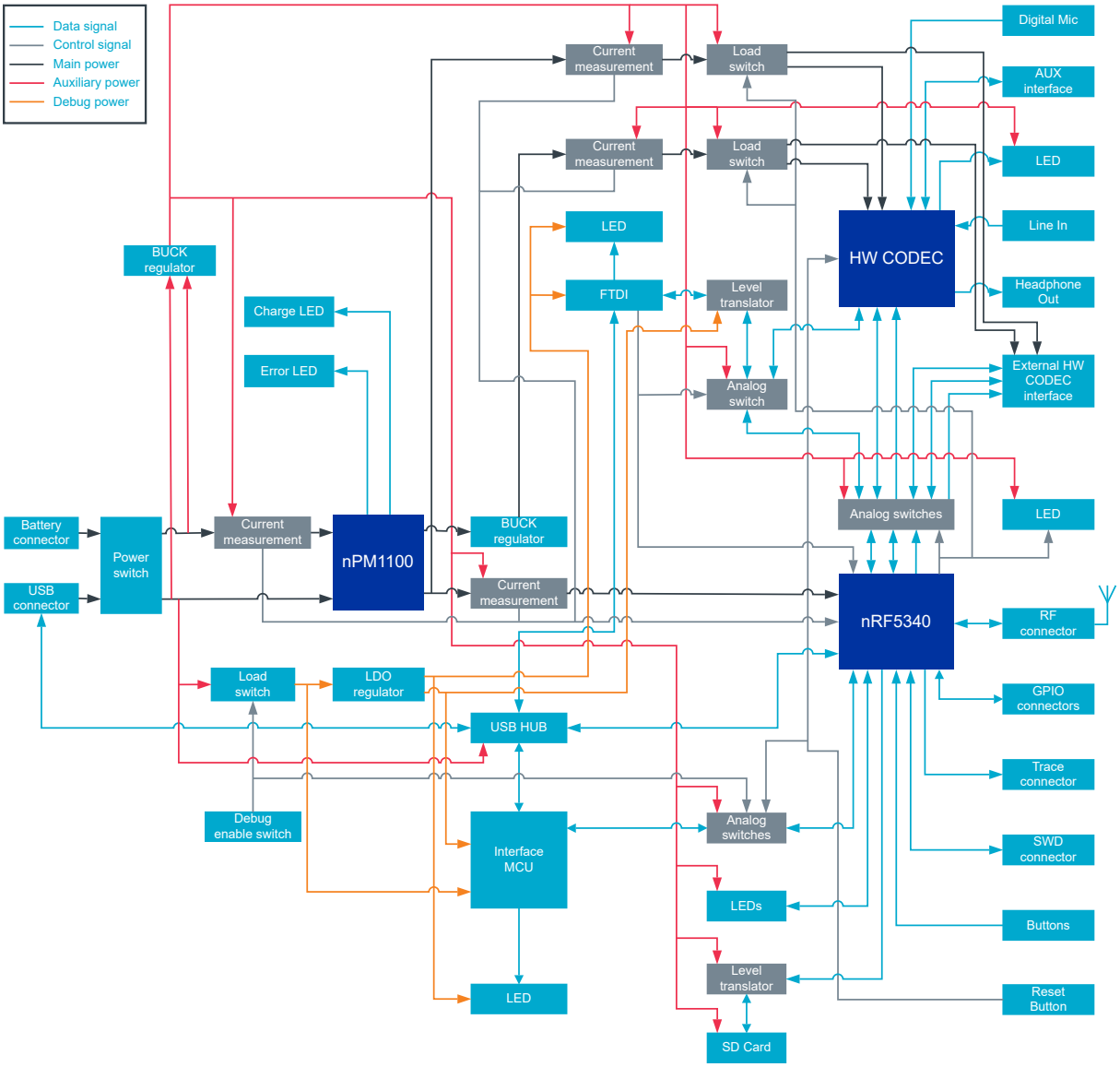


Figure 2: nRF5340 Audio DK block diagram

3.2 Hardware figures

The hardware figures show the elements of the nRF5340 Audio *DK*.

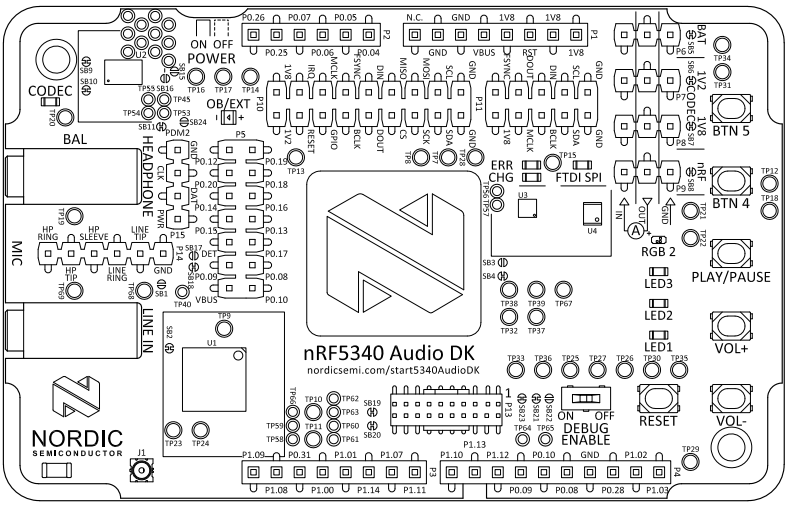


Figure 3: nRF5340 Audio DK (PCA10121) front view

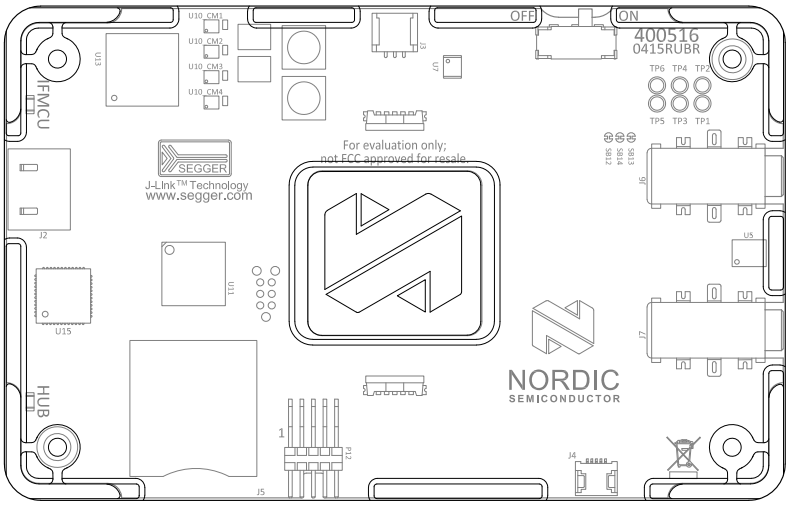


Figure 4: nRF5340 Audio DK (PCA10121) back view

The following figure shows the back of the DK without the case:

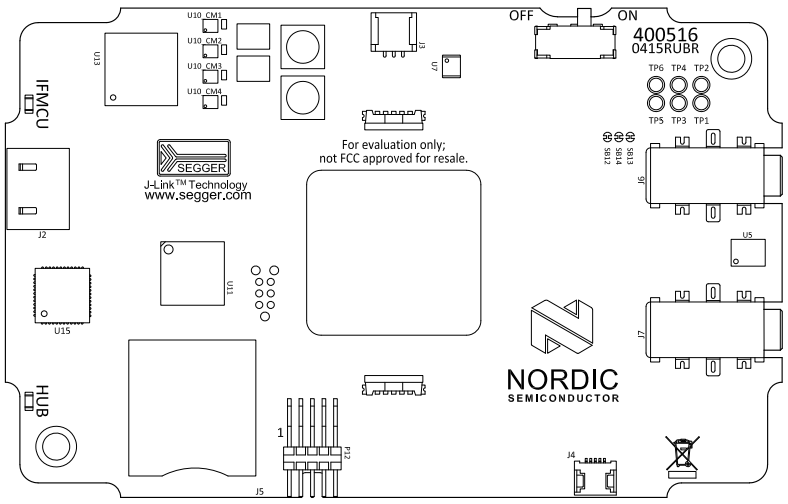


Figure 5: nRF5340 Audio DK (PCA10121) back view without case

3.3 nRF5340 SoC

The nRF5340 is an ultra-low power wireless *SoC* with two Arm Cortex-M33 processors and a multiprotocol 2.4 GHz transceiver.

The two flexible processors combined with advanced security features and an operating temperature up to 105°C make the nRF5340 SoC a great choice for professional lighting, advanced wearables, and other complex *Internet of Things (IoT)* applications.

For more information on the nRF5340 SoC, see nRF5340 Product Specification.

The following schematic describes the nRF5340 SoC.

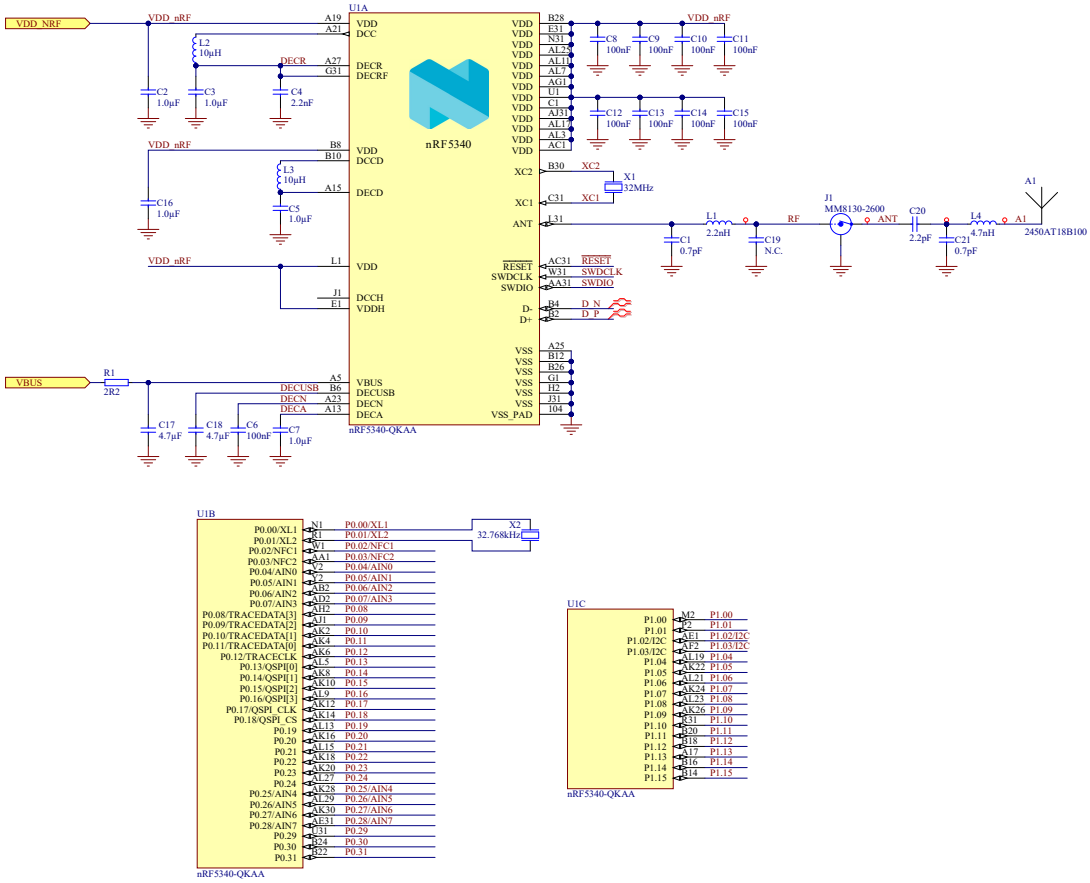


Figure 6: nRF5340 SoC schematic

3.4 Pin maps

The pin assignments for the nRF5340 *SoC* are listed in the pin map table.

The following table describes the pin numbers, their label names, and their functions.

I/O	Label	Description
P0.00	**XL1**	Low frequency crystal
P0.01	**XL2**	Low frequency crystal
P0.02	**BUTTON1/NFC1**	Button 1 / *NFC* antenna (Not used)

I/O	Label	Description
P0.03	BUTTON2/NFC2	Button 2 / NFC antenna (Not used)
P0.04	BUTTON3	Button 3
P0.05	BUTTON5	Button 5
P0.06	BUTTON4	Button 4
P0.07	RGB1_LED_RED	Red color of the RGB LED 1
P0.08	SPI_SCK	*SPI* clock to hardware codec and microSD card
P0.09	SPI_MOSI	SPI data output to hardware codec and microSD card
P0.10	SPI_MISO	SPI data input from hardware codec and microSD card
P0.11	MICRO_SD_CS	SPI chip select signal for microSD card
P0.12	HW_CODEC_MCLK	Master clock of hardware codec
P0.13	HW_CODEC_DIN	Audio serial port data input of hardware codec
P0.14	HW_CODEC_BCLK	Audio serial port bit clock of hardware codec
P0.15	HW_CODEC_DOUT	Audio serial port data output of hardware codec
P0.16	HW_CODEC_FSYNC	Audio serial port frame sync of hardware codec
P0.17	HW_CODEC_CS	SPI chip select signal for hardware codec
P0.18	HW_CODEC_RESET	Digital reset input of hardware codec
P0.19	HW_CODEC_IQR	Interrupt request (IRQ) output of hardware codec
P0.20	HW_CODEC_GPIO	Interrupt request (IRQ) output of hardware codec
P0.21	HW_CODEC_SELECT	Interrupt request (IRQ) output of hardware codec
P0.22	SPI_SELECT	Input from FTDI chip when FTDI has taken control of the hardware codec SPI lines
P0.23	PMIC_ISET	Current limit set pin for the nPM1100 PMIC
P0.24	BOARD_ID_EN	Enable signal for the resistor voltage divider for version identification
P0.25	RGB_LED1_GREEN	Green color of the RGB LED 1
P0.26	RGB_LED1_BLUE	Blue color of the RGB LED 1
P0.27	BOARD_ID	Enable signal for the resistor voltage divider for version identification
P0.28	RGB_LED2_RED	Red color of the RGB LED 2
P0.29	RGB_LED2_GREEN	Green color of the RGB LED 2
P0.30	RGB_LED2_BLUE	Blue color of the RGB LED 2
P0.31	LED1	LED 1 (Blue)
P1.00	LED2	LED 2 (Green)
P1.01	LED3	LED 3 (Green)

I/O	Label	Description
P1.02	**SDA**	Data signal for current-shunt monitor devices
P1.03	**SCL**	Clock signal for current-shunt monitor devices
P1.04	**UART1_RXD**	Data input signal of serial port 1
P1.05	**UART1_TXD**	Data output signal of serial port 1
P1.06	**UART1_CTS/MIC_DOUT**	Clear to send signal of serial port 1 / Optional connection to DOUT signal of digital microphone
P1.07	**UART1_RTS**	Request to Send signal of serial port 1
P1.08	**UART2_RXD**	Data input signal of serial port 2
P1.09	**UART2_TXD**	Data output signal of serial port 2
P1.10	**UART2_CTS**	Clear to send signal of serial port 2
P1.11	**UART2_RTS**	Request to send signal of serial port 2
P1.12	**D10**	Routed to connector **P4**
P1.13	**D9**	Routed to connector **P4**
P1.14	**D5**	Routed to connector **P3**
P1.15	**CURR_MON_ALERT**	Alert signal from current-shunt monitor devices

Table 1: nRF5340 SoC pin map

3.5 Audio codec

Schematic drawing for the nRF5340 Audio DK codec.

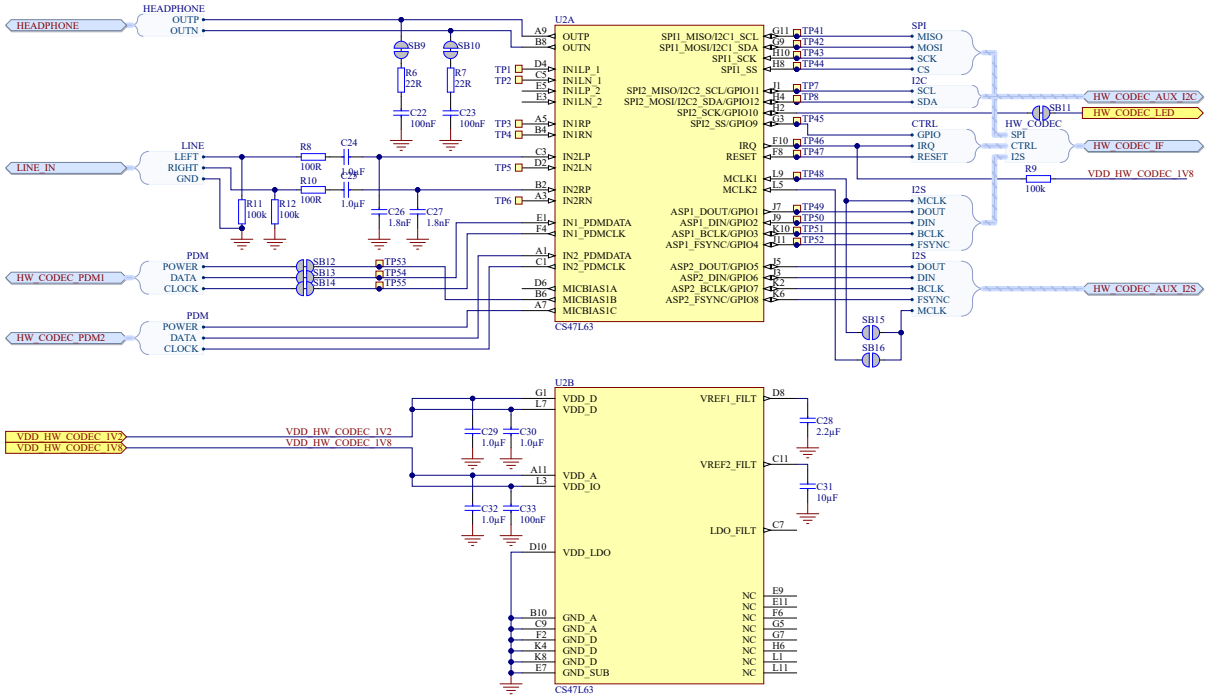


Figure 7: nRF5340 Audio DK codec

3.6 Connector interface

Access to the *General-Purpose Input/Output (GPIO)*s for the nRF5340 Audio *DK* is available from connectors **P1-P5**, **P10-P11**, and **P14-P15**.

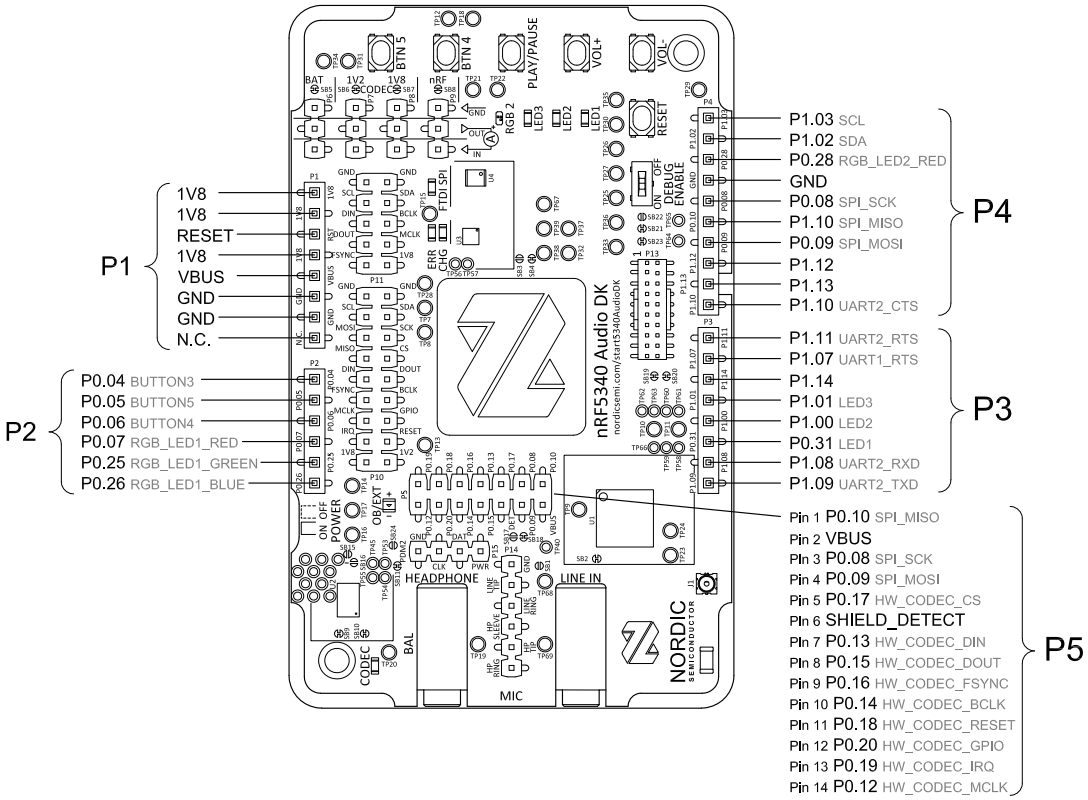


Figure 8: Interface connectors for GPIO and Arduino

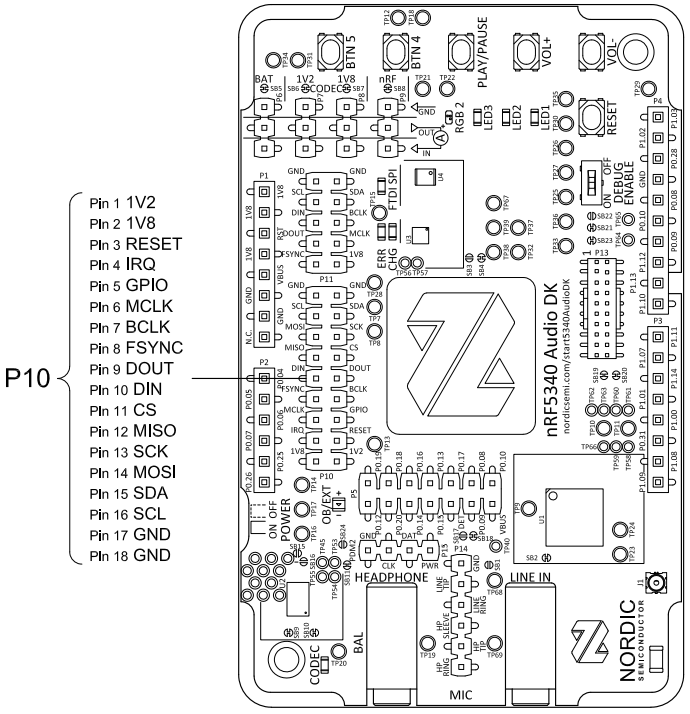


Figure 9: Interface connectors for external hardware codec

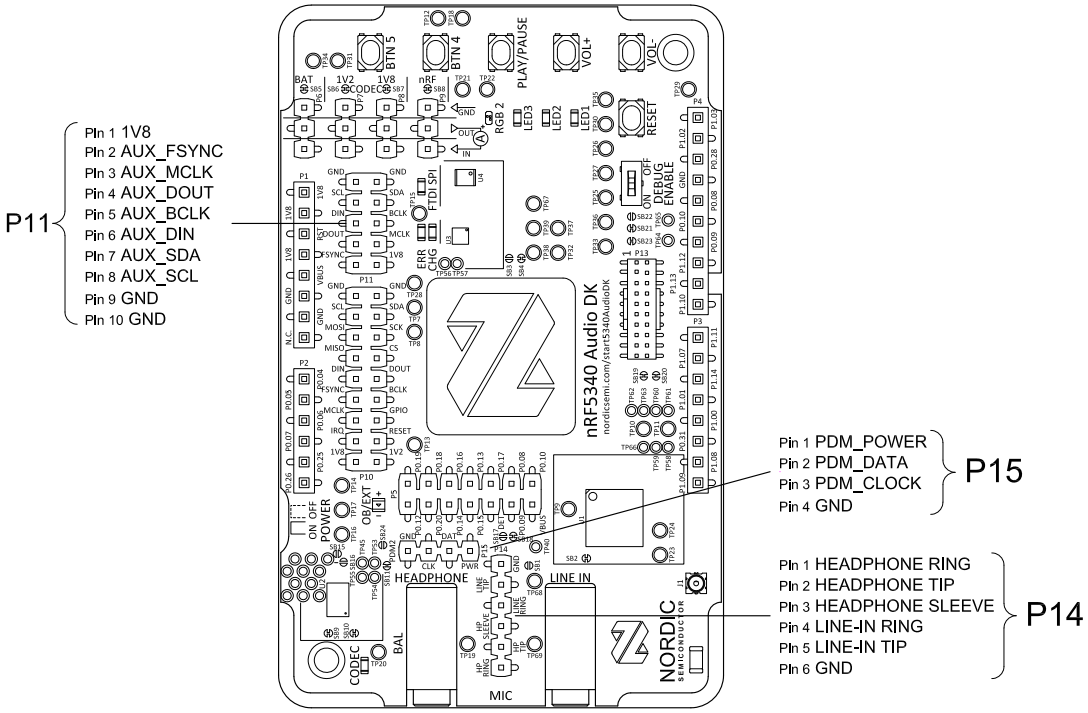


Figure 10: Interface connectors for onboard hardware codec

3.7 Microphone

The *PDM* microphone (**U5**) on the nRF5340 Audio *DK* captures audio input.

The following schematic describes the PDM microphone.

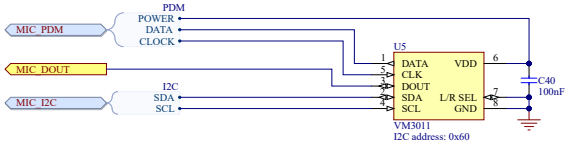


Figure 11: PDM microphone

3.8 LEDs and buttons

The user interface on the nRF5340 Audio *DK* consists of five user-programmable LEDs and five user-programmable buttons.

The two buttons (**SW1**) and (**SW1**) are the VOL- and VOL+ buttons, respectively. Button (**SW3**) is for PLAY/PAUSE.

The following schematic describes the LEDs and buttons.

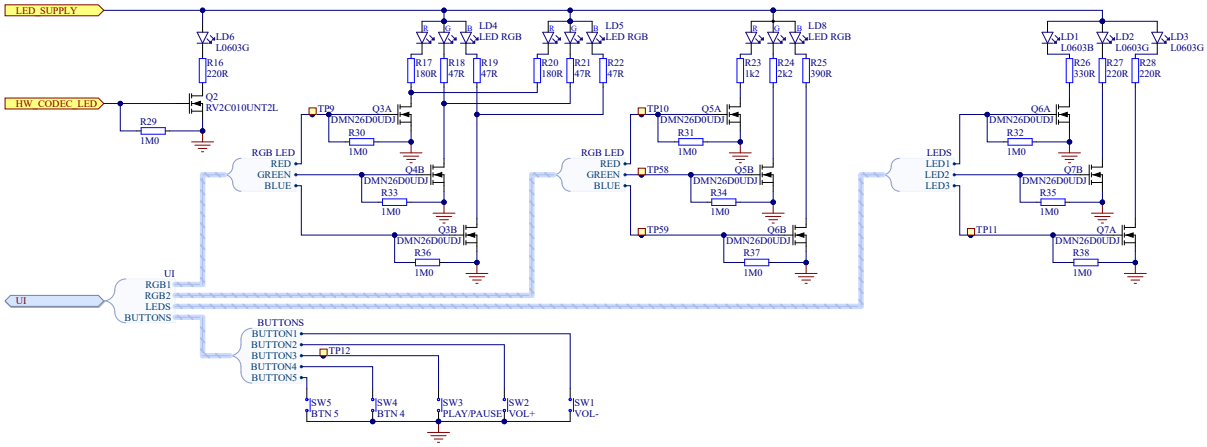


Figure 12: LEDs and buttons

3.8.1 Switches

The nRF5340 Audio *DK* support switches.

Switch	Function
POWER	Turns the DK on or off.
DEBUG ENABLE	Toggles power on or off for debug features. This switch is used for accurate power and current measurements.

Table 2: nRF5340 Audio DK switches

3.9 Requirements for external flash memory DFU

To enable the external flash DFU, you need an additional flash memory shield.

The nRF5340 Audio DK application uses the MX25R6435F as the SPI NOR Flash. See the following table for the pin definitions.

DK pin	SPI NOR Flash pin	Arduino pin
P0.08	SCK	D13
P0.09	MOSI	D11
P0.10	MISO	D12
P1.10	CS	D8

Table 3: Pin definitions

Note: If your current firmware is configured to do DFU using external flash, the flash shields must be connected for the kits to boot, even if DFU mode is not initiated.

3.10 Interfaces

The nRF5340 Audio *DK* has points for test purposes and solder bridges for enabling and disabling different functionalities.

3.10.1 Test points

The nRF5340 Audio *DK* has several test points that can be useful during development and debugging.

The following table is a complete overview of the test points.

Designator	Net	Description	Size	Layer
TP1	NetTP1-1	IN1LP_1 pin of CS47L63	1.5 mm	Bottom
TP2	NetTP2-1	IN1LN_1 pin of CS47L63	1.5 mm	Bottom
TP3	NetTP3-1	IN1RP pin of CS47L63	1.5 mm	Bottom
TP4	NetTP4-1	IN1RN pin of CS47L63	1.5 mm	Bottom
TP5	NetTP5-1	IN2LN pin of CS47L63	1.5 mm	Bottom
TP6	NetTP6-1	IN2RN pin of CS47L63	1.5 mm	Bottom
TP7	HW_CODEC_AUX_I2C.SCL	AUX SCL pin of CS47L63	1.5 mm	Top
TP8	HW_CODEC_AUX_I2C.SDA	AUX SDA pin of CS47L63	1.5 mm	Top
TP9	**P0.07**/AIN3	RGB LED 1 Red color input pin	1.5 mm	Top
TP10	**P0.28**/AIN7	RGB LED 2 Red color input pin	1.5 mm	Top
TP11	**P1.01**	LED 3 input pin	1.5 mm	Top
TP12	**P0.04**/AIN0	Button 3	1.5 mm	Top
TP13	VDD_EXT_HW_CODEC.1V2	External HW CODEC 1.2 V supply	1.5 mm	Top
TP14	VDD_EXT_HW_CODEC.1V8	External HW CODEC 1.8 V supply	1.5 mm	Top
TP15	BAT_NTC	*Li-Po* battery NTC pin	1.5 mm	Top
TP16	BATTERY	Li-Po battery voltage after power switch	1.5 mm	Top
TP17	NetC41-1	*USB* voltage after power switch	1.5 mm	Top
TP18	NetC43-2	USB voltage before power switch	1.5 mm	Top
TP19	HEADPHONE.OUTP	Headphone jack tip	1.5 mm	Top
TP20	HEADPHONE.OUTN	Headphone jack sleeve	1.5 mm	Top
TP21	DU_N	USB connector D-	1.5 mm	Top
TP22	DU_P	USB connector D+	1.5 mm	Top

Designator	Net	Description	Size	Layer
TP23	SWDIO	nRF5340 *Serial Wire Debug (SWD)* data	1.5 mm	Top
TP24	SWDCLK	nRF5340 SWD clock	1.5 mm	Top
TP25	RESET	nRF5340 Reset	1.5 mm	Top
TP26	SD_CS	SD card slot CS line	1.5 mm	Top
TP27	SD_SCK	SD card slot SCK line	1.5 mm	Top
TP28	VDD_IN_1V	1.2 V regulator output	1.5 mm	Top
TP29	SUPPLY_1V8	nPM1100 1.8 V output	1.5 mm	Top
TP30	SUPPLY_3V3	3.3 V regulator output	1.5 mm	Top
TP31	VDD_DBG_3V3	Debug regulator 3.3 V output	1.5 mm	Top
TP32	VDD_DBG_1V8	Debug regulator 1.8 V output	1.5 mm	Top
TP33	SW_EN	Load switch enable signal	1.5 mm	Top
TP34	GND	Ground	1.5 mm	Top
TP35	GND	Ground	1.5 mm	Top
TP36	NetQ9-1	Debug enable signal	1.5 mm	Top
TP37	IMCU_SWDIO	Interface MCU SWD data	1.5 mm	Top
TP38	IMCU_RESET	Interface MCU Reset	1.5 mm	Top
TP39	IMCU_SWDCLK	Interface MCU SWD clock	1.5 mm	Top
TP40	SHIELD_DETECT	Detect signal for Arduino compatible shield	1.0 mm	Top
TP41	HW_CODEC_IF.SPI.MISO	*SPI* MISO pin of CS47L63	1.0 mm	Top
TP42	HW_CODEC_IF.SPI.MOSI	SPI MOSI pin of CS47L63	1.0 mm	Top
TP43	HW_CODEC_IF.SPI.SCK	SPI SCK pin of CS47L63	1.0 mm	Top
TP44	HW_CODEC_IF.SPI.CS	SPI SS pin of CS47L63	1.0 mm	Top
TP45	HW_CODEC_IF.CTRL.GPIO	*GPIO* pin of CS47L63	1.0 mm	Top
TP46	HW_CODEC_IF.CTRL.IRQ	IRQ pin of CS47L63	1.0 mm	Top
TP47	HW_CODEC_IF.CTRL.RESET	RESET pin of CS47L63	1.0 mm	Top
TP48	HW_CODEC_IF.I2S.MCLK	MCLK1 pin of CS47L63	1.0 mm	Top
TP49	HW_CODEC_IF.I2S.DOUT	I2S DOUT pin of CS47L63	1.0 mm	Top
TP50	HW_CODEC_IF.I2S.DIN	I2S DIN pin of CS47L63	1.0 mm	Top
TP51	HW_CODEC_IF.I2S.BCLK	I2S BCLK pin of CS47L63	1.0 mm	Top
TP52	HW_CODEC_IF.I2S.FSYNC	I2S FSYNC pin of CS47L63	1.0 mm	Top
TP53	NetSB12-1	MICBIASB pin of CS47L63	1.0 mm	Top
TP54	NetSB13-1	IN1_PDMDATA pin of CS47L63	1.0 mm	Top

Designator	Net	Description	Size	Layer
TP55	NetSB14-1	IN1_PDMCLK pin of CS47L6	1.0 mm	Top
TP56	PMIC_ERR	nPM1100 error indication	1.0 mm	Top
TP57	PMIC_CHG	nPM1100 charge indication	1.0 mm	Top
TP58	**P0.29**	RGB LED 2 Green color input pin	1.0 mm	Top
TP59	**P0.30**	RGB LED 2 Blue color input pin	1.0 mm	Top
TP60	**P1.04**	UART1 RXD	1.0 mm	Top
TP61	**P1.05**	UART1 TXD	1.0 mm	Top
TP62	**P1.06**	UART1 CTS	1.0 mm	Top
TP63	**P1.07**	UART1 RTS	1.0 mm	Top
TP64	NetJ5-10	SD card slot card detect	1.0 mm	Top
TP65	**P0.11**	SD card slot level translator enable	1.0 mm	Top
TP66	**P1.15**	Current shunt monitor alert signal	1.0 mm	Top
TP67	GND	Ground	1.5 mm	Top
TP68	LINE_IN.LEFT	Line-in jack tip	1.5 mm	Top
TP69	LINE_IN.RIGHT	Line-in jack ring	1.5 mm	Top

Table 4: Test points

3.10.2 Solder bridge overview

The nRF5340 Audio *DK* has a range of solder bridges for enabling or disabling selected functionalities. Changes to the solder bridges are not needed for normal use of the DK.

The following table is a complete overview of the solder bridges on the nRF5340 Audio DK.

Designator	Description	Default state	Layer
SB1	Short to connect digital microphone DOUT to **P1.06**	Open	Top
SB2	Cut to disconnect **P0.12** from TRACE	Shorted	Top
SB3	Short to connect PMIC MODE to VOUTB, must not be shorted while **SB4** is shorted	Open	Top
SB4	Cut to disable PMIC MODE from GND, must not be shorted while **SB3** is shorted	Shorted	Top
SB5	Cut to enable VBAT current measurements on **P6**	Shorted	Top
SB6	Cut to enable HW CODEC 1.2V current measurements on **P7**	Shorted	Top

Designator	Description	Default state	Layer
SB7	Cut to enable HW CODEC 1.8V current measurements on **P8**	Shorted	Top
SB8	Cut to enable VDD_nRF current measurements on **P9**	Shorted	Top
SB9	Cut to disconnect filter from OUTP	Shorted	Top
SB10	Cut to disconnect filter from OUTN	Shorted	Top
SB11	Cut to disconnect the LED for the HW CODEC GPIO	Shorted	Top
SB12	Cut to disconnect digital microphone POWER from the HW CODEC	Shorted	Bottom
SB13	Cut to disconnect digital microphone DATA from the HW CODEC	Shorted	Bottom
SB14	Cut to disconnect digital microphone CLOCK from the HW CODEC	Shorted	Bottom
SB15	Short to connect AUX I2S MCLK to HW CODEC MCLK1	Open	Top
SB16	Short to connect AUX I2S MCLK to HW CODEC MCLK2	Open	Top
SB17	Short to connect **P5** pin 6 to GND	Open	Top
SB18	Cut to disconnect **P5** pin 6 from SHIELD DETECT	Shorted	Top
SB19	Cut to disconnect RTS and CTS flow control lines on UART1	Shorted	Top
SB20	Cut to disconnect RTS and CTS flow control lines on UART2	Shorted	Top
SB21	Cut to disconnect nRF53 RESET from RESET button when debug is disabled	Shorted	Top
SB22	Short to permanently connect RESET button to nRF53 RESET	Open	Top
SB23	Cut to disconnect RESET button from interface MCU	Shorted	Top
SB24	Short to bypass analog switch for MCLK	Open	Top

Table 5: Solder bridges

3.11 Hardware limitations

Different versions of the *DK* have some hardware limitations and workarounds.

PCA10121 revision	Limitation	Description	Workaround	Fixed in revision
Rev 1.0.0	CS47L63 AD-DA converter (**U2**) may fail to start	On some occasions, the 1.2 V power supply for **U2** is not provided at boot-up. This is caused by higher than expected inrush current. This function is tested in production.	Restart the DK or attach the battery to the DK before connecting the *USB* cable. If the problem persists, contact Nordic Semiconductor and ask for a replacement.	Rev 1.0.1

Table 6: Hardware limitations for the nRF5340 Audio DK

Glossary

Clear to Send (CTS)

In flow control, the receiving end is ready and telling the far end to start sending.

Development Kit (DK)

A hardware development platform used for application development.

Device Firmware Update (DFU)

A mechanism for upgrading the firmware of a device.

General-Purpose Input/Output (GPIO)

A digital signal pin that can be used as input, output, or both. It is uncommitted and can be controlled by the user at runtime.

Inter-integrated Circuit (I^2C)

A multi-master, multi-slave, packet-switched, single-ended, serial computer bus.

Internet of Things (IoT)

Physical objects that are embedded with sensors, processing ability, software, and other technologies that connect and exchange data with other devices and systems of the Internet or other communications networks.

Li-Po

Lithium-polymer

Near Field Communication (NFC)

A standards-based short-range wireless connectivity technology that enables two electronic devices to establish communication by bringing them close to each other.

Power Management Integrated Circuit (PMIC)

A chip used for various functions related to power management.

Printed Circuit Board (PCB)

A board that connects electronic components.

Pulse Density Modulation (PDM)

A form of modulation used to represent an analog signal with a binary signal where the relative density of the pulses corresponds to the analog signal's amplitude.

Pulse Width Modulation (PWM)

A form of modulation used to represent an analog signal with a binary signal where the switching frequency is fixed, and all the pulses corresponding to one sample are contiguous in the digital signal.

Quad Serial Peripheral Interface (QSPI)

A *SPI* controller that allows the use of multiple data lines.

Request to Send (RTS)

In flow control, the transmitting end is ready and requesting the far end for a permission to transfer data.

Serial Peripheral Interface (SPI)

Synchronous serial communication interface specification used for short-distance communication.

Serial Wire Debug (SWD)

A standard two-wire interface for programming and debugging Arm CPUs.

System on Chip (SoC)

A microchip that integrates all the necessary electronic circuits and components of a computer or other electronic systems on a single integrated circuit.

True Wireless Stereo (TWS)

The transfer of audio to multiple devices using only wireless technology, with two separate mono audio streams sent from the source to each respective listening device.

Universal Asynchronous Receiver/Transmitter (UART)

A hardware device for asynchronous serial communication between devices.

Universal Serial Bus (USB)

An industry standard that establishes specifications for cables and connectors and protocols for connection, communication, and power supply between computers, peripheral devices, and other computers.

Recommended reading

In addition to the information in this document, you may need to consult other documents.

- nRF5340 Product Specification
- nPM1100 Product Specification
- nRF5340 Errata
- nPM1100 Errata
- nRF Connect SDK documentation
- nRF Connect Programmer

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