

**APPLICATION
EXAMPLES
INCLUDED**



Code 7705

coreUSB-DR

labCORE I/O Module, USB Device Reference

OVERVIEW

coreUSB-DR

Code 7705

coreUSB-DR extends the modular multi-channel *labCORE* hardware platform.

coreUSB-DR enables *labCORE* to simulate a USB audio device (e.g., a headset) to an external USB audio host (e.g., a smartphone) for performing measurements without the need for an acoustic interface.

coreUSB-DR comprises an internal hardware module which extends the capabilities of the front side USB Type-C connector of *labCORE*. It supports a wide variety of configuration options to generate arbitrary test cases.

KEY FEATURES

Enables *labCORE* to act as a USB audio device for testing of USB hosts without the need for audible playback

Various configuration options and profiles to generate arbitrary test cases

Can enforce desired connection settings for the DUT

APPLICATIONS

Performing electrical measurements of USB hosts such as:

- > Smartphones
- > Tablets
- > Computers (e.g., running conferencing software)

DETAILS

DESCRIPTION

With the optional hardware extension module *coreUSB-DR*, *labCORE* gains the additional capability to act as a reference device for any voice and audio host that connects via USB, e.g., smartphones, tablets, or computers. This enables purely electrical measurements of USB hosts.

In combination, *labCORE* equipped with *coreUSB-DR* and *ACQUA* enables to create arbitrary test cases for suitable USB hosts. *coreUSB-DR* supports the following settings and functions:

- › USB audio device (playback and capture)
- › USB full-speed (12 Mbit/s) with USB Audio Class (UAC) 1 and 2
- › Sample rates between 8 kHz and 96 kHz
- › 1 or 2 channels per direction
- › Bit depth: 16/24/32
- › Product ID and vendor ID can be set manually

Settings can be chosen as desired within the technical scope of the connection. The total bandwidth resulting from the combination of the number of channels, bit depth, and sample rate cannot exceed the USB full-speed bandwidth of 12 Mbit/s for technical reasons.

GENERAL REQUIREMENTS

Hardware

labCORE (Code 7700)

- › Modular multi-channel hardware platform

Software

ACQUA (Code 6810)

- › Advanced Communication Quality Analysis Software, full license version

RC-labCORE (Code 6984)

- › Remote configuration software for *labCORE*

SCOPE OF DELIVERY

coreUSB-DR (Code 7705)

- › *labCORE* I/O module, USB device reference

Initial equipping

- › *coreUSB-DR* is installed to *labCORE* during production

Retrofitting

- › Send in *labCORE* to HEAD acoustics for installation

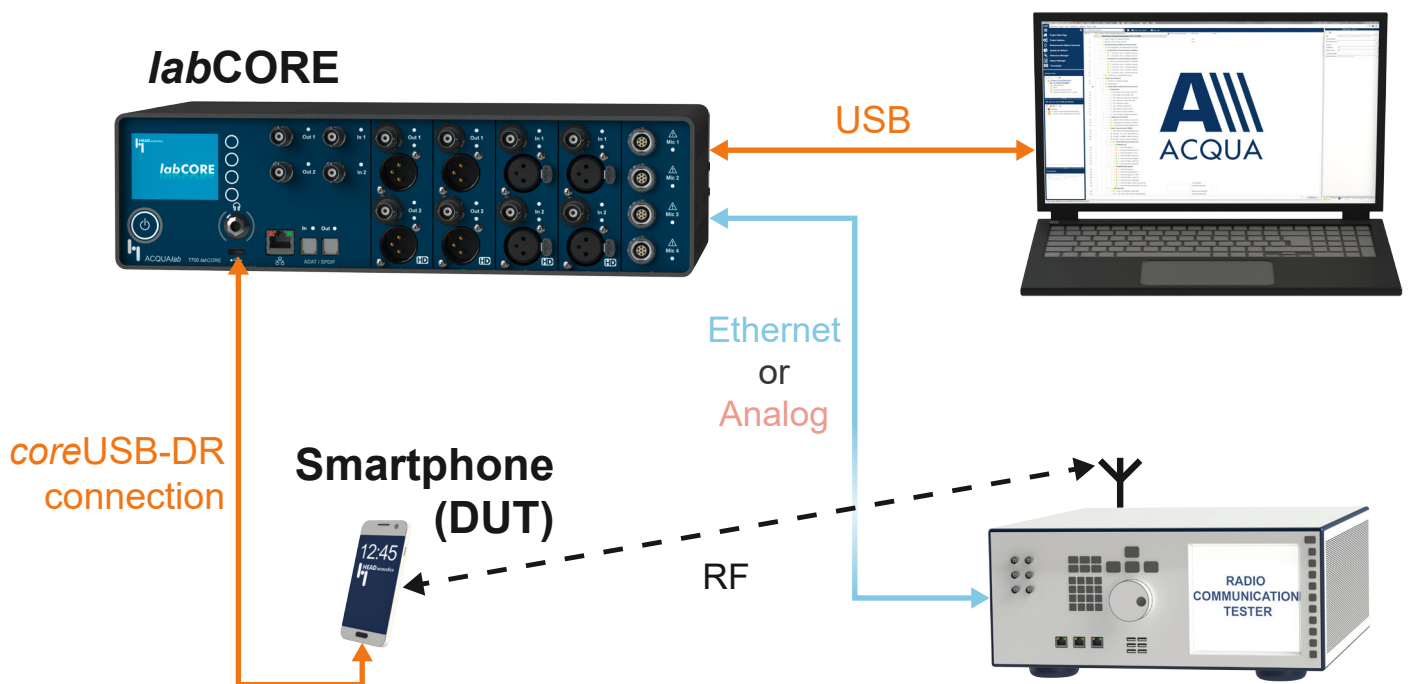
IN PRACTICE

APPLICATION EXAMPLES

Measurement of a smartphone with coreUSB-DR

This exemplary test scenario depicts testing a smartphone with coreUSB-DR. *labCORE* connects to the smartphone via USB, simulating a headset. A radio tester simulates a local mobile network for the device under test (DUT) to connect to *labCORE* can therefore send and receive signals from/to the DUT for testing. ACQUA operates as the central software tool to generate, receive and analyze signals.

There are no acoustic measurements when using coreUSB-DR in this application. The absence of audible playback makes an artificial head and a suitable acoustic environment (e.g., an anechoic chamber) superfluous.

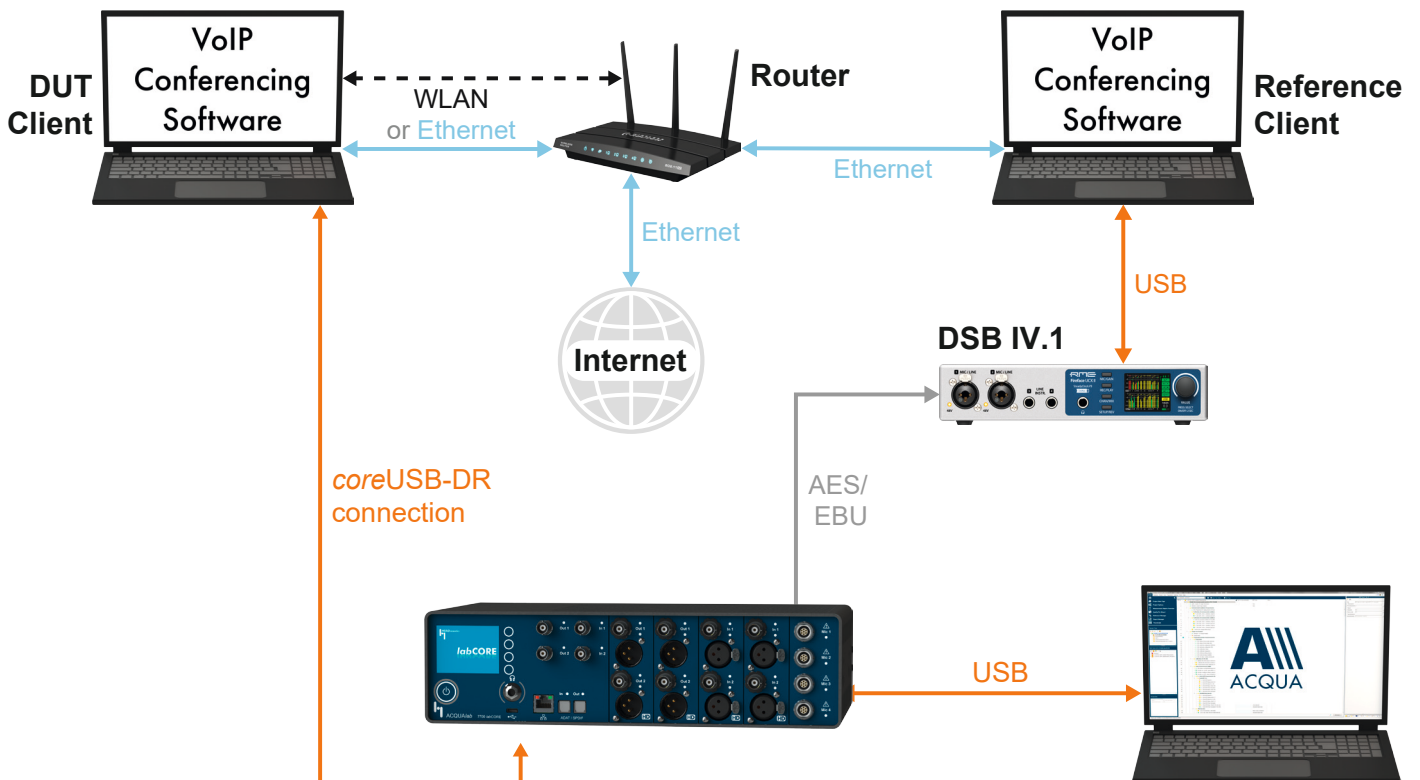


Measurement of conferencing software with coreUSB-DR

This exemplary test scenario depicts testing a conferencing software running on a (client) PC with coreUSB-DR. labCORE connects to the PC via USB, simulating a headset to the DUT client. A second PC serves as a reference client for the conferencing software. This PC connects to labCORE via the DSB IV.1 audio interface. Both PCs are connected to the Internet via a router.

ACQUA operates as the central software tool to generate, receive, and analyze signals.

There are no acoustic measurements when utilizing coreUSB-DR in this application. The absence of audible playback makes an artificial head and a suitable acoustic environment (e.g., an anechoic chamber) superfluous.



Contact Information