

PRELIMINARY DATA SHEET



Code 7788

coreBT2LE-Auracast

labCORE Bluetooth® Low Energy Audio (LC3), Option Auracast



OVERVIEW

coreBT2LE-Auracast

Code 7788

labCORE Bluetooth® Low Energy Audio (LC3), Option Auracast

HEAD acoustics provides coreBT2LE-Auracast as a software extension for coreBT2LE. The *lab*CORE extension coreBT2LE enables the hardware platform *lab*CORE to become a reference access point for Bluetooth Low Energy profiles. coreBT2LE-Auracast together with coreBT2LE enables *lab*CORE to apply Auracast broadcast audio. Thus, *lab*CORE allows acoustic and electrical measurements of Auracast transmitters or Auracast receivers for speech and audio transmission.

KEY FEATURES

Bluetooth reference access point for application of AuracastTM broadcast audio

Uses Bluetooth Low Energy technology

Supports AuracastTM broadcast audio streams

Quick & easy setup for existing labCORE units

APPLICATIONS

Performing electrical & acoustic measurements of capable devices for AuracastTM broadcast audio





2

DETAILS

Bluetooth Low Energy expands the communication topology of the Bluetooth signal by adding broadcast mesh networks like AURACASTTM broadcast audio. Auracast broadcast audio is a technology to distribute one or more audio streams to several devices at once via Bluetooth. This provides applications in both, private environments and public spaces. In practice, this presents use cases like enjoying music together from one playback device on different headphones or streaming important public announcements in public spaces such as airports and train stations. The application of Auracast broadcast audio via Bluetooth Low Energy together with HEAD acoustics measurement technology helps optimizing and enhancing the quality of audio signals of Auracast transmitters and Auracast receivers.

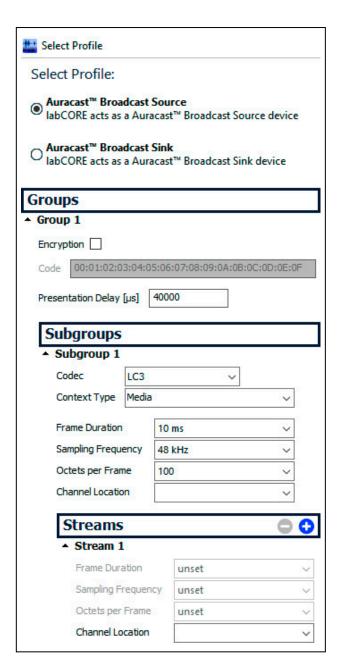
DESCRIPTION

AURACAST™ Broadcast Audio

HEAD acoustics provides coreBT2LE-Auracast as a software extension for coreBT2LE. It enables *lab*CORE to apply Auracast broadcast audio. There are two applications for *lab*CORE with Auracast broadcast audio. Firstly, *lab*CORE acts as Auracast transmitter. Hence, it provides Auracast audio streams for appropriate Auracast receivers to assess their audio quality. Connection parameters for the Auracast broadcast are determined via the general user interface in ACQUA. Furthermore, *lab*CORE is also capable of receiving an Auracast broadcast from an Auracast transmitter. Then, *lab*CORE transfers the audio signal to ACQUA for assessing the audio quality of the Auracast transmitter.

Bluetooth Low Energy

The stack for Bluetooth Low Energy included in the *labCORE* firmware, combined with the corresponding transceiver, enables *labCORE* to act as transmitter or receiver of Bluetooth Low Energy signals. The applied audio codec of audio signals transmitted with Bluetooth Low Energy is LC3. LC3 operates at low latency, low computational complexity and has a low memory footprint.



Profile selection and Auracast broadcast settings in ACQUA

SCOPE OF DELIVERY

coreBT2LE-Auracast (Code 7788)

labCORE Bluetooth Low Energy Audio (LC3),
 Option Auracast (coreBT2LE module required)

GENERAL REQUIREMENTS

Hardware

labCORE (Code 7700)

- ACQUAlab modular multi-channel hardware platform for speech & audio quality testing coreBT2LE (Code 7787)
- > labCORE I/O Module, Bluetooth reference access point version 2, Base for low energy audio (LC3) Consists of:
 - » Software stack (embedded in labCORE firmware)
- » CBA V (Code 6603), Bluetooth transceiver for labCORE module coreBT2LE (USB-based)
- » CUU III.10 (Code 6114-10), Cable extension USB <> USB, Type-A, 10 m

Software

One of the following HEAD acoustics Software: ACQUA (Code 6810)

Advanced Communication Quality Analysis
 Software, Full-license version (Version 6.0.100 or newer)

or

ACQUA Compact (Code 6860)

> Version 6.0.100 or newer

or

RC-labCORE (Code 6984)

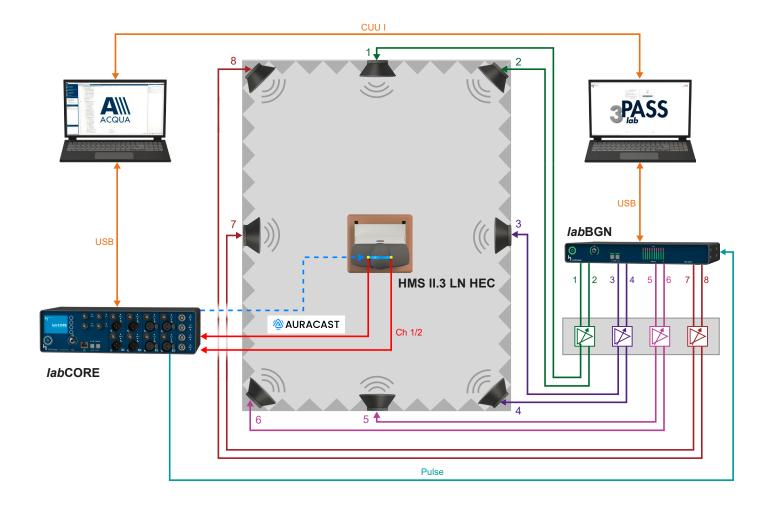
> Version 2.0.200 or newer

IN PRACTICE

APPLICATION EXAMPLES

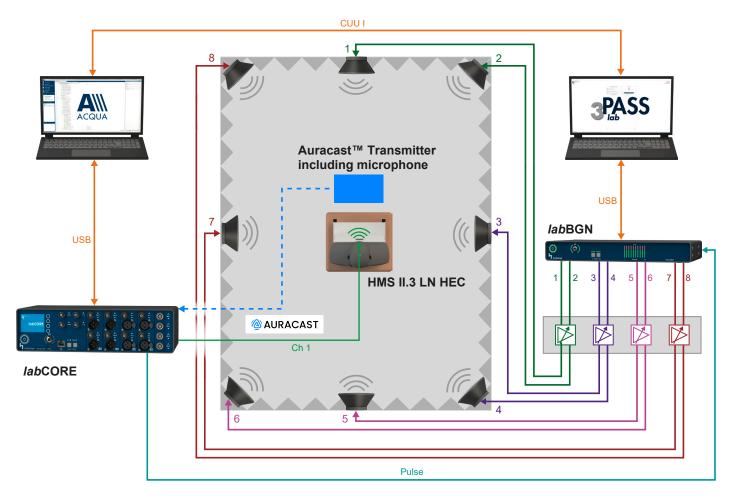
Measurement of headset with Auracast receiver

labCORE connects to the headsets via coreBT2LE-Auracast. An Auracast assistant (e.g. smartphone) connects the headset initially to the Auracast broadcast. Once the headset is connected, the assistant is not necessary anymore. Background noise is simulated with 3PASS lab. For full repeatability of measurements, background noise playback and measurement signal are synchronized by labCORE through a pulse connection to the hardware platform labBGN. ACQUA generates signals for the Auracast broadcast. Further, it receives and analyzes signals from HMS II.3 LN HEC.



Measurement of Auracast transmitter

As preparation, *lab*CORE connects to the active Auracast broadcast from the Auracast transmitter. *lab*CORE sends an audio signal for playback to HMS II.3 LN HEC. The microphone of the Auracast transmitter receives the acoustic signal. The transmitter broadcasts the audio signal via Auracast to *lab*CORE. Background noise is simulated with 3PASS *lab*. For full repeatability of measurements, background noise playback and measurement signal are synchronized by *lab*CORE through a pulse connection to the hardware platform *lab*BGN. ACQUA generates the speech signal, receives and analyses the signal from the Auracast broadcast.



The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by HEAD acoustics GmbH is under license. Other trademarks and trade names are those of their respective owners.

The Auracast™ word mark and logos are trademarks owned by Bluetooth SIG, Inc. and any use of such marks by HEAD acoustics GmbH is under license. Other trademarks and trade names are those of their respective owners.



Contact Information

Ebertstraße 30a

52134 Herzogenrath, Germany

Phone: +49 (0) 2407 577-0

E-Mail: sales@head-acoustics.com

Website: www.head-acoustics.com