

Overview of SMDs in ES 202 739 / 40

● = SMD – = no SMD	Handset	Headset	Desktop-operated hands-free	Handheld hands-free	Softphone	Group audio terminal
SMD title						
Activation Sensitivity SND	●	●	●	●	●	●
Attenuation Range DT in SND /RCV	●	●	●	●	●	●
Attenuation Range DT in SND /RCV with Variable Echo Path	–	–	●	–	●	–
BGNT with far end Speech	●	●	●	●	●	●
Clock Accuracy SND / RCV	●	●	●	●	●	●
Clock Drift PPM SND / RCV	●	●	●	●	●	●
Codec specific Tests - Objective Listening Speech Quality SND / RCV POLQA ¹	●	●	●	●	●	●
Codec specific Tests - Objective Listening Speech Quality SND / RCV TOSQA	●	●	●	●	●	●
Codec specific Tests - Terminal Signal Processing Delay SND / RCV	●	●	●	●	●	●
Comfort Noise Level/Spectral Adj.	●	●	●	●	●	●
Distortion SND / RCV	●	●	●	●	●	●
Echo Attenuation during DT	●	●	●	●	●	●
Frequency Response SND / RCV	●	●	●	●	●	●
Idle Channel Noise SND / RCV	●	●	●	●	●	●
Idle Channel Noise - Peak SND / RCV	●	●	●	●	●	●
Loudness Rating SND / RCV	●	●	●	●	●	●
Out-of-Band Signals SND / RCV	●	●	●	●	●	●
Positional Robustness - Frequency Response	●	–	–	–	–	–
Positional Robustness - Loudness Rating	●	–	–	–	–	–
Positional Robustness - Speech Quality in the Presence of BGN	●	–	–	–	–	–
Quality of Jitter Buffer Adjustment (Delay and POLQA ¹)	●	●	●	●	●	●
Round Trip Delay, DUT Speech Proc.	●	●	●	●	●	●
Send Delay Variation	●	●	●	●	●	●
Send Loudness Rating Mic Mute	●	●	●	●	●	●
Sidetone Delay	●	●	–	–	–	–
Sidetone Masking Rating STMR	●	●	–	–	–	–
Spectral Echo Attenuation	●	●	●	●	●	●
Speech Quality in the Presence of BGN	●	●	●	●	●	●
Stability Loss	●	●	●	●	●	●
Temporal Echo Effects	●	●	●	●	●	●
Terminal Coupling Loss weighted	●	●	●	●	●	●
Variable Echo Path	●	●	●	–	●	–
Variation of Loudness Rating SLR	●	●	–	–	–	–

General requirements

Software

- **ACQUA (Code 6810 etc.)**, Advanced Communication Analysis System
- **ACOPT 10 (Code 6820)**, Option TOSQA, Telecommunications Objective Speech Quality Assessment
- **ACOPT 21 (Code 6844)**, Option 3QUEST, 3-fold Quality Evaluation of Speech in Telecommunications
- **ACOPT 30 (Code 6857)**, Option POLQA¹
- **ACOPT 32 (Code 6859)**, Option speech-based double talk analysis
- **3PASS lab (Code 6990)**, Advanced background noise simulation system with automated equalization - lab version

Hardware

- **labCORE (Code 7700)**, Modular multi-channel hardware platform with

- **coreBUS (Code 7710)**, I/O bus mainboard
- **coreOUT-Amp2 (Code 7720)**, Power amplifier board, for sending direction
- **coreIN-Mic4 (Code 7730)**, Microphone input board, for receiving direction
- **coreBEQ (Code 7740)**, labCORE binaural equalization, incl. filter set for one artificial head
- **coreIP (Code 7770)**, labCORE I/O module, Voice over IP reference gateway
- **coreIP-IMP (Code 7771)**, labCORE VoIP impairment option

- One of the following

HEAD Measurement Systems:

- **HMS II.3 (Code 1703)**, HEAD Measurement System, basic version with right ear simulator, 3.3 pinna & artificial mouth

or

- **HMS II.3 LN (Code 1703.1)**, HEAD Measurement System, low-noise version with right ear simulator, 3.3 pinna & artificial mouth (based on IEC 60318-4, low-noise, high dynamics)

For handset measurements

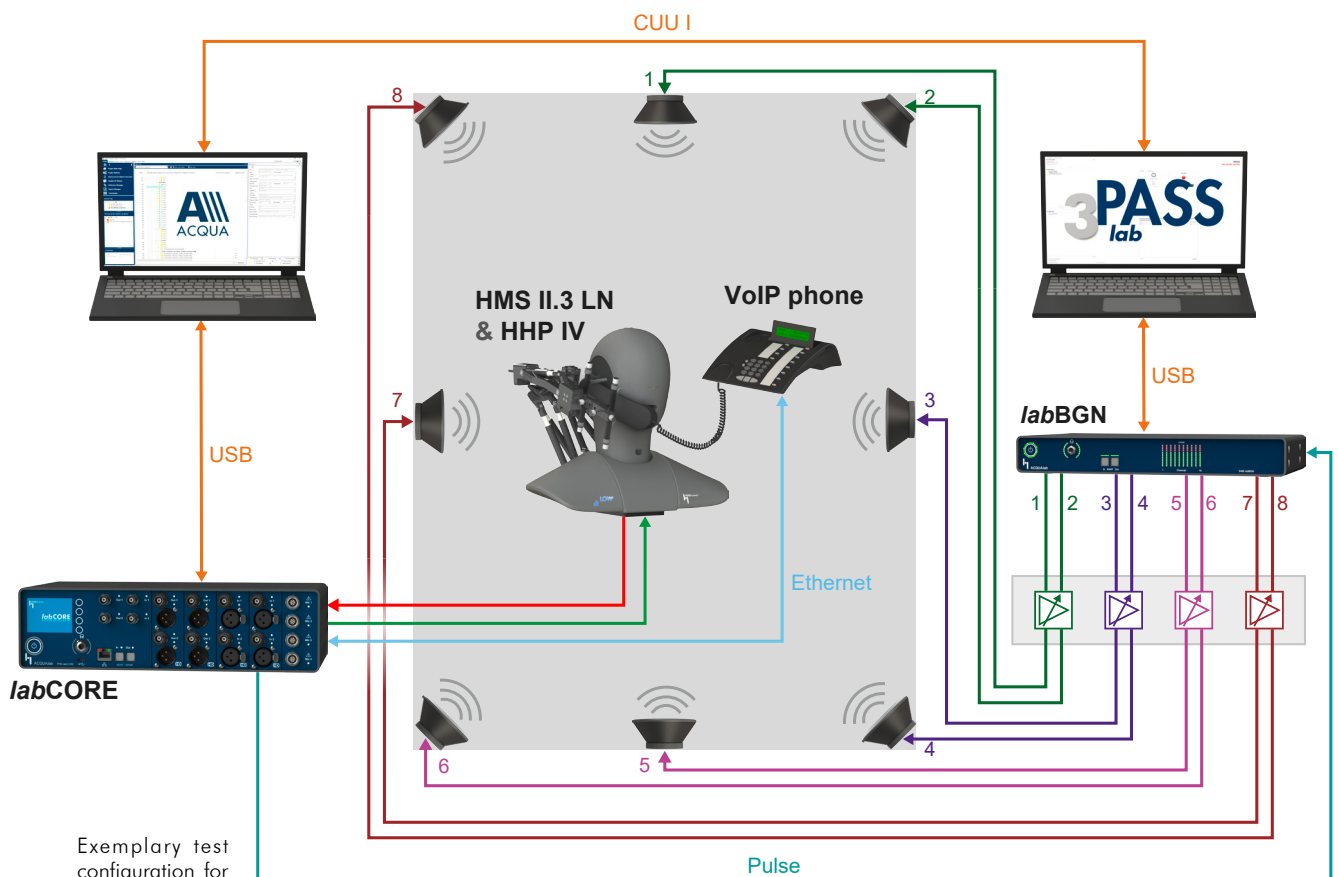
- **HHP IV¹ (Code 1406)**, motorized handset positioner

For headset measurements

- **HIS L (Code 1701)**, HEAD impedance simulator, left, for HMS II.3/4/5
- or
- **HIS L LN (Code 1701.1)**, HEAD impedance simulator, left, low-noise version, for HMS II.3/4/5

Delivery items

- **ES 202 739/40 (Code 6796)**, delivered as ACQUA database
- **V2C file**
- **Documentation** as PDF



Exemplary test configuration for handset testing with ES 202 739/40. The device under test is a VoIP phone in handset mode. The low-noise artificial head HMS II.3 LN simulates its user, the motorized handset positioner HHP IV¹ guarantees a repeatable position and contact pressure of the handset relative to the artificial ear and mouth. Background noise is simulated via 3PASS lab. In collaboration, labCORE and ACQUA generate, send and receive signals and automatically trigger background noise playback for precise synchronization with measurements.

1) Database Revision 5 with Service Pack 1 is also fully compliant with the latest specification version ES 202 740 V1.8.2 (05/2022). All relevant changes that were introduced with that version are already contained in this database revision.

2) POLQA version 3 is required.

3) Alternatively, HHP III.1 (Code 1403) can be used.