



Professional Support for Self-Test Services of Alexa Built-in Products and Audio Lab

Audio Lab Services

FEATURES

- ▶ Absorbent Room
- ▶ Low noise floor
- ▶ Controlled reverberation
- ▶ Localized noise and diffuse noise field
- ▶ Head and Torso Simulator HATS
- ▶ Turn Table for directional response
- ▶ High precision, large frequency range, large dynamic, reference microphone
- ▶ Sound Pressure Level SPL Meters
- ▶ Tests Automation [Calibration, Run, Analysis]

OVERVIEW

Amazon Alexa users expect a high quality and consistent experience across all Alexa built-in products. To recognize speech from a distance in noisy conditions, special attention must be paid to echo cancellation, voice processing and acoustical design for microphones and speakers.

To help meet these requirements and build the best possible product with Alexa Built-in, NXP now offers at its Mougins, Sophia-Antipolis facilities, a sound absorbent chamber with control room and fully automated test equipment available to its customers desiring to test their devices.

This facility is particularly suited for customers needing to self-test their Alexa built-in products.

In order to achieve the best possible Alexa built-in integration, one must follow the Alexa Voice Service (AVS) development lifecycle including product testing.

If your product supports music and/or is far-field enabled and uses a wake word to initiate interactions with Alexa, testing is required prior to submitting your product to Amazon for evaluation.

This is where Pro-Support Audio Lab Services can help complete the self-test checklists before an Alexa built-in product can be submitted to Amazon for evaluation prior to commercial distribution of your product.

Service available to NXP powered devices only.

CHAMBER SPECIFICATIONS

- ▶ Large audio test room: 4.2 x 6.1 m
- ▶ Low noise floor: < 30 dB SPL(A)
- ▶ Ambient noise simulation
- ▶ Localized noise and diffuse noise field
- ▶ Head and Torso Simulator HATS
- ▶ Turn Table for directional response
- ▶ High precision, large frequency range, large dynamic, reference microphone
- ▶ Sound Pressure Level SPL Meters
- ▶ Tests Automation [calibration, run, analysis]
- ▶ Conforms with standards (ETSI TS 103 224, ETSI EG 202 396-1)



HOW TO GET STARTED

1. Go to www.nxp.com/prosupport/audiolabservices or contact your local distributor.
2. Purchase the service package that matches you need.
3. The NXP Professional Support team will contact you to reserve a time slot in our lab.

OTHER SUPPORT AND SERVICES

NXP also offers other levels of support and services to meet your design needs.

- ▶ **NXP Professional Engineering Services** provides a comprehensive set of software life cycle development services. www.nxp.com/engservices
- ▶ **NXP Direct Support** provides standard support through online service requests. www.nxp.com/support
- ▶ **NXP Communities** allow you to connect and collaborate with product experts and design enthusiasts to bring your ideas to life. www.nxp.com/community

AUDIO LAB SERVICE PACKAGES

Professional Support Audio Lab services are available in multiple packages to suit your needs and budget.

Package	Audio Performance	Self-test	Self-test Pack
Part Number	DL-AUDIOLAB-PRF	DL-AUDIOLAB-CRT	DL-AUDIOLAB-PKG
Features	Measurements of devices audio performances	Self-test services for Alexa Built-in products (one session)	Self-test services for Alexa Built-in products (three sessions)
Includes	Renting the NXP Audio Lab facility One NXP Audio support engineer for 2 days.	Renting the NXP Audio Lab facility One NXP Audio support engineer for 4 days.	Renting the NXP Audio Lab facility One NXP Audio support engineer for 8 days.
	<ul style="list-style-type: none"> • Frequency response • SNR • THD • Electroacoustic measurement • Microphone input audio path • Directionality • Sensitivity, • Transducers audio paths (both loudspeaker and microphone) 	<ul style="list-style-type: none"> • 1 day Alexa Built-in setup • 2 days Alexa Built-in test specification tests including a 24 hours FAR (automated testing). • 1 day wrap-up: report review and debriefing with the Customer. • Alexa Built-in test specification • Benchmarking vs. EchoDot 	<ul style="list-style-type: none"> • 1 day Alexa Built-in setup • 3 x 2 days Alexa Built-in test specification tests including a 24 hours FAR (automated testing). Valid one year. • 3 x1 day wrap-up: report review and debriefing with the Customer. • Alexa Built-in test specification • Benchmarking vs. EchoDot
Price (\$ USD)	\$10,000	\$17,500	\$30,000



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