

Announcing the General Availability of Alexa Smart Screen SDK for TVs, Smart Displays, and More

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Today, we are excited to announce the general availability of **Alexa Smart Screen SDK v2.0**. The SDK enables device makers to bring rich Alexa visual experiences to voice-enabled products with screens. Last year we announced the [preview of the SDK](#) and have since enhanced its capabilities to deliver a richer experience for customers. We are also introducing qualified solutions (based on the new SDK) from Broadcom and CommScope to help accelerate product development and time to market. The Alexa Smart Screen SDK is C++ based and available on GitHub along with sample apps for Raspberry Pi3 and MacOS.

Alexa, Optimized for the TV Experience

The Alexa Smart Screen SDK has been optimized for television viewing experiences (on smart TVs, set-top boxes, soundbars, AV receivers, etc.). The SDK offers native integration of Alexa functionality with TVs and supports adaptive visual responses to minimize interruption. Device makers can render partial screen-responses when the TV is playing video, and full-screen responses when the TV is idle.

“Customers love interacting with visually rich, voice-enabled products throughout their home. As we’ve seen with the recent LG TV integration, the Alexa Smart Screen SDK makes it easier than ever for device makers to build visual products with Alexa,” said Nedim Fresko, vice president of Alexa Devices. “The SDK enables developers to natively integrate Alexa functionality with the device’s UX, so manufacturers can make Alexa feel at home on televisions.”

Enjoy Your Favorite Alexa Experiences and Skills

With the launch of Echo Show, Amazon pioneered multimodal voice-forward experiences that augmented Alexa’s existing voice-only experience with rich visuals that make it even easier to consume

- Music: Discover and play music from Amazon Music, Tuneln, iHeartRadio, Pandora
- Information: Ask Alexa questions, info from Wikipedia, hear a joke, the weather forecast, and more
- Household Organization: Ask Alexa what’s on your To-Do list or add items to your shopping lists, check your calendar
- Alexa Skills: Interact with your favorite skills like Who Wants to Be a Millionaire, Food Network, CNBC, and more
- Video Skill API: Control your video experience by voice. Control video devices and consume content by leveraging the [Video Skill API](#).
- Much More: More Alexa visual experiences will be added with frequent updates to the SDK, including smart home cameras, visual shopping, and many more.

Includes Alexa Presentation Language (APL) Core Engine

The Alexa Smart Screen SDK includes a new core rendering engine for [Alexa Presentation Language \(APL\)](#). APL is the common design language for the Echo family and 3rd party screen-based Alexa devices. Through APL, developers can build interactive voice skills that include images, slideshows, video, vector graphics, and animation. The SDK’s APL engine supports rendering in a web browser and includes sample implementations for Raspberry Pi and MacOS that package everything to get you up and running quickly.

Product Spotlight: LG TVs with Alexa Built-in

Alexa Smart Screen SDK powers LG’s award winning OLED, NanoCell, and UHD Alexa built-in TVs, enabling TV customers to see a live feed of their smart camera, look up weather and get access to 100,000+ skills. Support for interactive Alexa visuals using Alexa Presentation Language (APL) means customers get more out of their TV. For instance, LG Alexa built-in TV customers can book tickets (“Alexa, open Kayak”), view video recipes (“Alexa, open Food Network”), play games (“Alexa, open play who wants to be a millionaire”) and more.



“We are excited to offer Alexa to our Smart TV customers,” said SP Baik, head of LG’s TV Product Strategy. “Alexa helps our customers get more out of their TV, whether it be playing music from a variety of providers, shopping, smart home controls, interactive skills and more. The Alexa Smart Screen SDK, with its stunning visuals for services such as weather, highlights the award winning picture quality of our TVs”.

New Qualified Solution Providers for Alexa Smart Screen SDK

The **Broadcom BCM972180 Voice STB Development Kit for AVS** enables device makers to create set top boxes with Alexa built-in. It is the first kit with a STB system-on-chip (SoC) that supports far-field voice and leverages the Smart Screen SDK. This solution features the BCM72180 STB SoC, a quad-core processor with support for 4K/60p 10-bit video and multi-channel audio. The kit includes form-factor reference hardware with 2 microphones and Broadcom's audio front end algorithms processed directly on the SoC (no external DSP required). It also includes Broadcom’s Nexus Set-Top Box reference software stack (for Linux or RDK) and comes pre-integrated with Broadcom's audio front end, the Amazon wake word engine, and the Alexa Smart Screen SDK.



“The Broadcom Voice STB development kit for AVS offers a compelling solution for bringing Alexa to television viewing experiences”, said John Gleiter, VP of STB Marketing at Broadcom. “Our work on integrating the Broadcom Nexus software stack with Amazon’s Alexa Smart Screen SDK will dramatically reduce the development effort for set-top-box operators to integrate Alexa voice and visuals. This highly optimized solution provides best-in-class Alexa far-field performance and reduces cost by integrating Broadcom’s audio algorithms inside the BCM72180.”

CommScope/ARRIS, a global leader in entertainment and communications solutions, is an AVS-qualified systems integrator that combines hardware, software and services to enable advanced video experiences with the Alexa Smart Screen SDK. They support enabling Alexa built-in solutions for service providers, commercial verticals, and enterprises.



“Voice control has positively changed the way people interact with their homes, and now the Alexa Smart Screen (SDK) enables us to expand on this, adding engaging visual consumer experiences,” said Charles Cheevers, chief technology officer for Customer Premises Equipment at CommScope. “We are working to bring Alexa into the home in multiple ways including using our smart media device (SMD) concept to give service providers one solution to bring together multiple connected smart devices throughout the home, and in the case of our SMD soundbar, these experiences are paired with larger-than-life audio quality too. The SMD7852 is our next generation Wi-Fi 6 enabled SMD with Alexa Smart Screen SDK support that allows richer converged experiences in the home through the Commscope Home Command Center portal.”

Get Started Today

Device makers can get started with the Alexa Smart Screen SDK today. Start development with the SDK source on GitHub with included sample apps for Raspberry Pi3 and MacOS, review technical documentation including functional requirements and design guides, or procure a development kit for commercial products.

- Learn more at about the [Alexa Smart Screen SDK](#)
- Build with the Alexa Smart Screen SDK and see technical documentation on [GitHub](#)
- Start prototyping with supported dev kits: [Broadcom BCM97271 Voice STB Development Kit for AVS](#)
- Learn more by registering for the Alexa Smart Screen SDK [live webinar](#)

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