**RDK-V Overview**

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**Overview**

The RDK (Reference Design Kit) is a standardized software stack with localization plugins created to accelerate the deployment of next-gen video products and services by Multichannel Video Providers (MVPDs). It enables MVPDs to standardize certain elements of these products and devices such as set-top boxes, gateways, and converged devices, and to easily customize the applications and user experiences that ride on top. It sits below the MVPD application and services layer and provides a common interface to SoC’s (System-on-Chip), acting as a universal SoC adapter. This standardized stack provides a common method to manage complex video functions such as tuning, conditional access, DRM, and stream management.

The RDK is supported by more than 200 licensees including CE and SoC manufactures, software developers, system integrators, and MVPDs from around the world. It is administered by the RDK Management LLC, a joint venture between Comcast Cable, Time Warner Cable, and Liberty Global. The RDK software is available at no cost to RDK licensees in a shared source manner, and RDK community member companies are encouraged to contribute software changes and enhancements to the RDK stack.

**Advanced Support Program**

The Advanced Support Program (ASP) was developed in response to requests from community members for shared development, training, and testing tools. The program leverages RDK expertise across the community to develop new tools, enhance training materials and lower individual costs for development.

**Media Sponsorship Program**

The Media Sponsorship Program (MSP) is an exciting new way for RDK members to get even more exposure with their participation in RDK. It acts as an advertising platform for RDK community members to drive awareness of their products, skills, and knowledge.

**The Benefits of RDK**

- The RDK is a $0/royalty free commercial source code license
- The RDK provides the MVPD full transparency into the source code, allowing vendors to efficiently collaborate on the project
- As an open-source code initiative, the RDK enables community members to add new features and resolve issues on their own schedule and make contributions back to the community
- The RDK design enables the MVPD to focus, innovate, and differentiate at the application and services layer
- RDK community members will have access to frequent, robust releases and tools to dramatically improve product development velocity
- Rich graphics with smooth animation

The RDK is mostly based on open source components and standards, such as Linux Kernel and Drivers, BusyBox, OpenSSL, WPE, OpenGL, GStreamer, UPnP libraries and so on. The small subset of components that are developed by Comcast are made available to the community of RDK users for comments and improvements. While there exists a common set of functionalities that is required to be supported by all RDK devices such as tuning, graphics, standard output port requirements and so on, the exact requirements are available as part of a separate set of hardware specifications which are usually made available by the MSO/ Operator tailored to the type of device being developed.

**RDK Layers**

The below table describes the four high-level partitions that make up a typical RDK-based software stack, and they are:

1. MSO/ Operator Layer
2. Generic RDK
3. SoC RDK
4. OEM Software
RDK LLC release the Generic RDK source code to its licensees. The SoC RDK is distributed by the SoC vendor. OEM Firmware consists of any complementary software components that are added on by the OEM to create a fully functional set-top box.

### Useful Links
- [RDK-V Architecture](#)
- [RDK-V Components](#)
- [RDK-V Use Cases](#)