DTVKit

ATSC 3.0 STACK

DTVKit provides a production-ready, royalty-free ATSC 3.0 Core stack designed to accelerate development for manufacturers, chipset vendors, and integrators building next-generation broadcast receivers.

Our shared-source model ensures transparency, long-term sustainability, and a collaborative ecosystem that reduces cost and speeds time-to-market.

The ATSC 3.0 Core integrates seamlessly with Android and Linux platforms and is actively evolving to support emerging interactive and hybrid TV requirements.

Key Features

Universal Support
Implements both ROUTE and MMT delivery protocols.

Flexible Architecture
Includes a well-defined porting layer for seamless integration with a wide range of frontends and platforms.

Platform Agnostic
Compatible with Linux, Android, and RDK–based systems.

Configurable
Suitable for set–top boxes (STBs), televisions, and gateway device

Reference Integration
Android AOSP Tuner HAL/TIF reference integration is available.

Multi-Tuner Support
Supporting multi-tuner configurations for advanced broadcast scenarios.

Key Benefits

Accelerated time-to-market
Built for fast, low-friction integration, enabling manufacturers to deliver competitive products sooner with less engineering effort.

Full source-code access
Complete transparency and control: fix bugs quickly, customise freely, and shape the stack around your product needs.

Robust standards-based software
Compliant with ATSC 3.0 specifications, tested against in-market broadcasts and formal test streams.

Royalty-free model
A simple membership structure with no per-unit fees, keeping total cost of ownership low and commercially predictable.

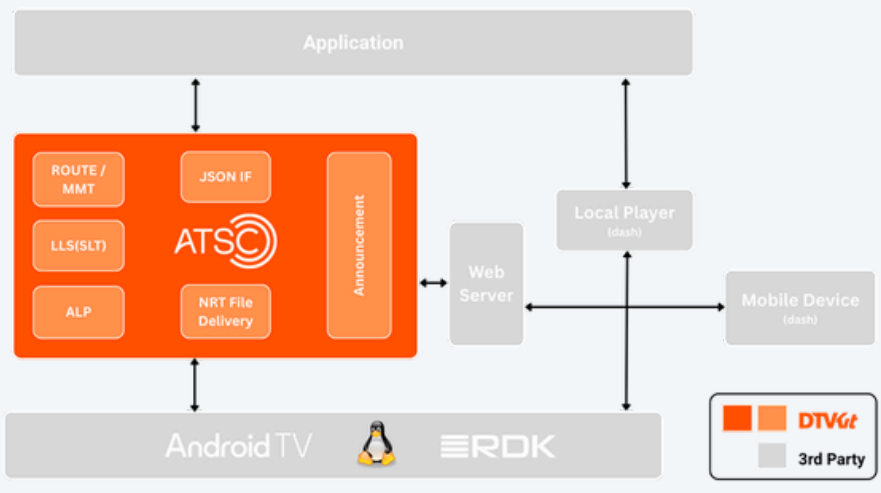
Flexible Architecture
Designed to adapt to operator requirements, regional variations, and advanced features through a modular plug-in framework.

Ongoing maintenance
Regular updates, security patches, and performance improvements ensure long-term reliability and alignment with emerging standards.

Architecture

DTVKit's ATSC 3.0 software stack is a Linux-based solution supporting multi-tuner configurations. It implements the ATSC 3.0 standard supporting both MMT & ROUTE protocols.

The architecture is modular and extensible, featuring a porting layer for integration with various frontends and platforms. The stack is compatible with all Linux style OS platforms including Android, RDK and Linux.



Android Reference Integration

To reduce complexity and accelerate time to market, DTVKit provides a reference integration of the ATSC 3.0 software stack with Android AOSP 14. The reference integration makes use of the Android TV Input Framework and TunerHAL, ensuring compatibility with a wide range of chipsets.

- **Local Playback -** Media 3/ Exoplayer is used as the media engine to enable local playback of ATSC 3.0 content, including support for closed captions.
- **UI** - A reference UI is provided to enable service discovery, navigation and selection by the user.
- **Remote Playback** - The ATSC stack makes services available in both DASH and HLS formats for consumption by mobile and tablet devices via the local network (where rights allow).

The ATSC 3.0 Android reference integration is developed and validated using the DTVKit Android Reference Set Top Box.

Robustness

To ensure robustness and give confidence to OEMs developing ATSC 3.0 enabled TVs and set top boxes the DTVKit stack is validated with a combination of in-market stream captures and formal test streams including the A3SA signature verification and DRM test suites.
(Please note this is not a replacement for formal end device testing.)

DTVKit Android Reference Set Top Box

The DTVKit Android reference set-top box is available to members and non-members for the evaluation of DTVKit software components. Rapid prototype of custom applications is supported using standard Android tools.

Specification:

- **Tuners:** 1x ATSC 3.0/1.0 & 1 x DVB-S2X
- **Processor:** 16K DMIPS Quad Core A55
- **Video Support:** HEVC 4K P60 10-bit, AV1
- **Memory:** 2GB DDR4 RAM
- **Storage:** 8GB eMMC
- **Connectivity:** USB 3.0, USB 2.0, Bluetooth 5, Wi-Fi, RJ45
- **OS:** Android AOSP 14
- **DRM:** Widevine L1

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THE VERY BEST PRODUCTION READY TV SOFTWARE