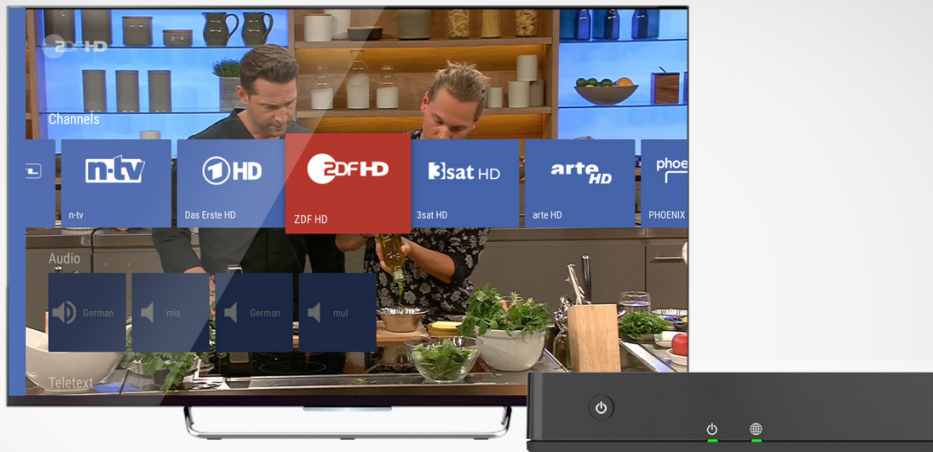# DVB / IPTV Solution for Android

November 2018

Our Inaris Middleware is a full-featured DVB/IPTV solution which supports DVB-C2/T2/S2, channel scan, favourite lists, DVB-SI EPG, time-shifted TV, PVR and many other features. Our middleware is based on a hardware abstraction layer (HAL) which is ported to various platforms, like Broadcom and HiSilicon.
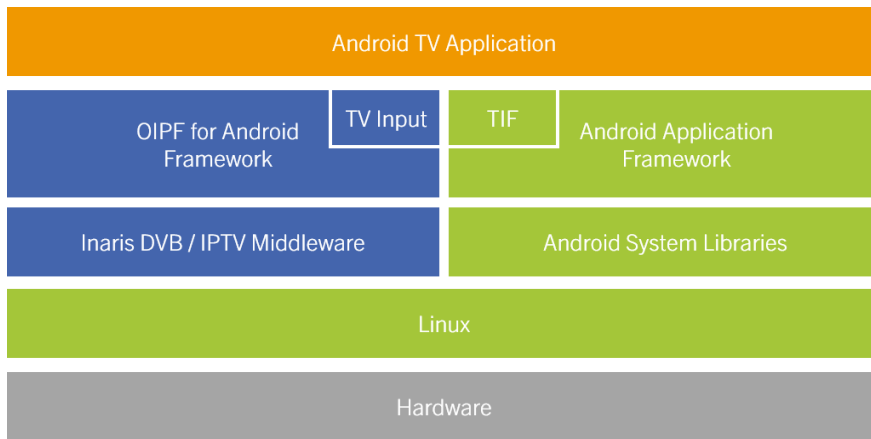
Our player for DVB and OTT streams uses the native platform player in the most efficient way. For OTT the player also supports HLS and MPEG-DASH with ultra-fast playback start times. The player is integrated with Verimatrix (ultra security) and Nagra CA systems. With our CA Manager new CA systems can easily be added.

Inaris DVB/IPTV Middleware is fully integrated with Android and Android TV. All features can be accessed via a Java API which can be used on all Android devices. The API is based on the OIPF API which is also used by HbbTV.

For Android TV the TV Input Framework (TIF) is used. Channel lists, EPG and recordings can be accessed via the TV Provider, the TV View is used for playback of live channels, time-shifted TV and recordings. Features currently not supported by TIF, like channel scan or favourite lists, can still be used with the underlying OIPF based Java API.

Features

- Modular and flexible architecture
- DVB-C2/T2/S2, ISDB-Tb
- Channel Scan & Management
- DVB-SI EPG
- Teletext, DVB Subtitle
- Time-shifted TV and PVR
- HbbTV
- Player for HLS and MPEG-DASH
- Verimatrix, Nagra
- SAT>IP Client & Server
- Highly responsive UI

Android TV Application			
OIPF for Android Framework	TV Input	TIF	Android Application Framework
Inaris DVB / IPTV Middleware		Android System Libraries	
Linux			
Hardware			

TARA Systems	Google	Customer / TARA

OIPF for Android is our Java API to the Inaris DVB/IPTV Middleware.

TV Input uses the OIPF for Android API to provide TV features to Android TV's TV Input Framework (TIF).

HbbTV on Android TV

In many countries worldwide, HbbTV is the standard for broadcasters to provide interactive content to their audience. Our HbbTV solution for Android TV is based on the Chromium browser. It is pre-integrated with our Inaris DVB/IPTV Middleware which uses the platform media player. We also provide an HbbTV integration for Android TV based on TIF and ExoPlayer.

LiveOn TV App

LiveOn TV is our reference TV application for Android and Android TV. The application uses the Leanback library and is a perfect starting point for customer projects. LiveOn TV accesses the Inaris DVB/IPTV Middleware using the OIPF for Android API. The application exposes a channel to the Android Launcher for fast access to the TV services with live preview. Besides of live TV functionality for DVB-C2/T2/S2, IPTV and channel management, also HbbTV and Teletext is supported.

Services

Android TV is a powerful but also complex framework. We provide all the components and support you need to realize a TV experience on Android TV devices. With our embedded systems background and long-term relationship to semiconductor manufacturers we also support you in finding the best way how your product can be realized with Android TV. Product extensions and customizations are developed in close relationship with our customers in an agile way. Our skills in the area of testing and quality assurance will help you to launch a successful product.