

# SRAF® HTML5 BROWSER FREEVIEW PLAY EDITION

The affordable Freeview Play solution compliant with the industry leading hybrid TV technology

## FREEVIEW PLAY OVERVIEW

Freeview Play (FVP) is the next evolution of the UK's most popular TV service and will be central to Freeview's and Digital UK's long term vision for an open hybrid DTT platform. This new service will give audiences easy access to both broadcast and On Demand (OD) content, including a range of popular OD players that are available free to users. FVP will offer users a common set of the most popular players presented in a way that is consumer-friendly and broadcast-centric.

FVP draws on experience of working closely with manufacturers and their proven ability to align with open international standards (D-Book and HbbTV) to facilitate mass market deployment. FVP creates an open internet-connected TV technical standards environment built in HTML5 and a Metadata Delivery System (MDS) to enable manufacturers to have a backwards EPG with deep links to OD content, aggregated browsing, search and viewing recommendations across all FVP content.

SERAPHIC, the leading digital TV browser technology provider cooperates with Digital UK closely to support Freeview Play compliant solutions in a very early stage. By leveraging the powerful Blink based Sraf HTML5 TV Browser and co-work with the mainstream DTV SoC vendor, SERAPHIC provides the ready-for-certification Freeview Play solution, which is highly optimized for embedded DTV platform and is the best cost-effective solution for massive affordable product deployment. SERAPHIC keeps up with Digital UK closely to support the latest Freeview Play technology, whose specification is updated every year.



Figure 1. Freeview Play powered by Sraf HTML5 Browser  
Copyright Freeview Play content: Freeview Play

## BENIFITS OF FREEVIEW PLAY

### Provides access to the UK's most popular free- to-air OD services

Enables manufacturers to offer the FVP players, including BBC iPlayer, Discovery, ITV, All 4, My5, UKTV, STV and etc.

### One contract for many content Providers

FVP will represent a way to simplify negotiations between manufacturers and content providers (CPs) – by coming onto the FVP platform, manufacturers will be able to present all content players that have joined the FVP platform, with the exception of the BBC which needs a separate agreement. CPs must agree not to charge manufacturers for their content to be available via the FVP platform on manufacturers' FVP devices, and manufacturers must not charge CPs to list CPs' content via the FVP platform on their FVP devices.

### Lower technical integration and testing costs

The detailed specification for devices and FVP Players will ensure that once initial product development has been successfully completed and tested it should be possible to integrate all existing and future FVP Players (bar BBC iPlayer) without further development time or costs i.e. all FVP Players should run on all devices.

### Access to the FVP Metadata Delivery System (MDS) supports evolving, seamless consumer functionality

The MDS enables the backwards EPG, aggregated search, browse and viewing recommendations, as well as enhanced metadata throughout the UI.

### High profile launch campaign

The multi-million pound campaign promoting a one-stop hub of popular broadcast and OD content is expected to drive significant customer interest in FVP products.

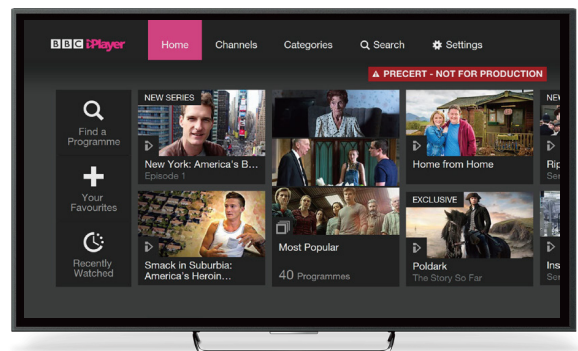


Figure 2. BBC iPlayer powered by Sraf HTML5 Browser  
Copyright BBC iPlayer content: BBC

## SPECIFICATION

### Product Highlights

One SDK supports all Freeview Play functionality  
 Easy-to-port HbbTV 2 integration  
 Best compliant common HTML5 Application runtime environment  
 Dynamic Ad-insertion into DASH-based streams  
 Digital Rights Management capability  
 Fully meet with general security requirements  
 EME(Encrypted Media Extensions) Clearkey TTML (Timed text markup language)  
 DVB DASH

### Content Players Highlights

BBC series including BBC iPlayer, News, Sports and RB+ / Discovery / All 4 / My5  
 ITV / STV / UKTV / Other New FVP CPs

### Standard Compliances

ETSI TS 102 796 v1.5.1  
 Freeview Play specific tests  
 W3C HTML5  
 Freeview Play 2021  
 CEA-2014-A  
 DVB DASH ETSI TS 103 285

### Browser Core Features

HTML5 (Canvas, Web Storage, Web Components, WebRTC, Web Workers, Web Socket, Audio/Video Tags, Server-Sent Events, Web Cryptography API, Web Animations, WebAudio, WebGL, etc.) HTML4.01 (XHTML 1.1, XHTMLBasic 1.1, XML 1.1, RSS feed, etc.)  
 CSS3 (3D Transforms, CSS3 Animations & Transitions, CSS3 Media Queries and Selectors, CSS3 Opacity, CSS3 Outline, CSS3 Background)  
 CSS1, CSS2.1 XHTML 1.1  
 Image support: GIF, JPEG, PNG, SVG URL scheme dvb:// support  
 Smooth Streaming, HLS, DVB DASH  
 HTTP Caching, Redirect, Cookies, User-Agent  
 TLS 1.3

### JavaScript APIs

Application Management / Audio/Video Component / Audio/Video Control Object  
 Companion Screen / Capabilities  
 Configuration and Settings / Channel and Channel List / Download Manager / Download Trigger / DRM Agent

DSM-CC Contents Access / DSM-CC Stream Event Listener / Gateway Information  
 HTML5 Media Elements / Object Factory  
 Parental Rating and Parental Control Programme Metadata  
 Media Synchronization Scheduled Recording  
 Search manager  
 Scheduled Content and Hybrid Tuner TTML based Subtitle  
 Video Broadcast  
 Other Mandatory HbbTV APIs

### Supported OS

Android  
 Linux

### Documents

Sraf HTML5 Browser Integration Guide  
 Sraf HbbTV Adaptor API Specification Sraf  
 HbbTV AMP Integration API Specification  
 Sraf MediaPlayer Adaptor API Specification Sraf  
 FVP System Adaptor API Specification

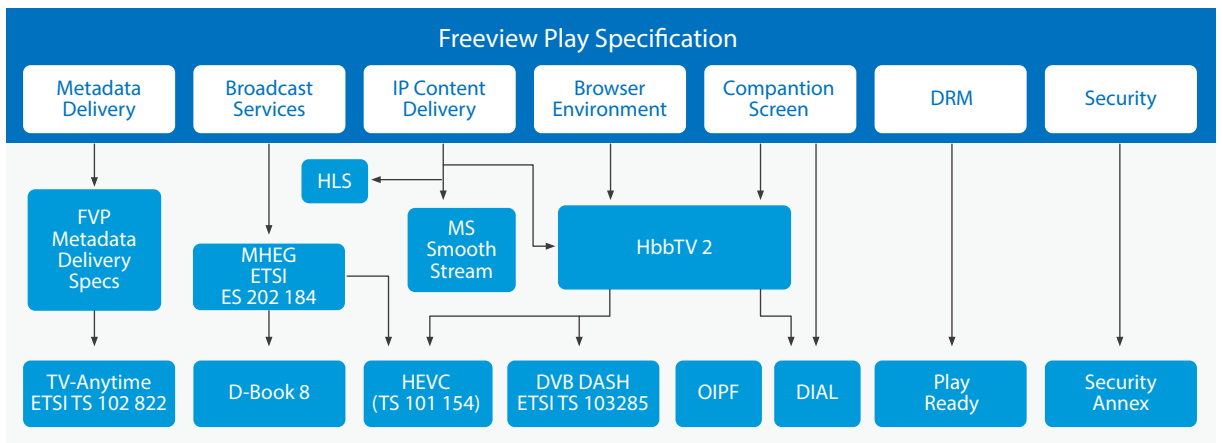


Figure 3. Freeview Play Module Diagram