

# triple tv



**TRIPLETV IPTV  
& ENTERPRISE VIDEO**



# SECURE, INNOVATIVE, FLEXIBLE & SCALABLE

## TRIPLETV IPTV & VIDEO STREAMING HEADEND

Tripleplay's IPTV and Video Streaming platform is a full AV/IT software solution built onto HP enterprise class servers ensuring high resilience and reliability compared to black box alternatives. Our IPTV headend, which comes with a complete set of management tools, receives, encodes and distributes content across an IP network in digital format, securely to Set Top Boxes, Smart TVs, PC, Mac, Mobile Devices and Thin Clients.

Tripleplay's headend captures and ingests content from sources that include;

- DVB-T/T2 (with or without CI card)
- DVB-S/S2 (with or without CI card)
- DVB-C (with or without CI card)
- Analogue SD & HD
- 3rd Party Encoders, IP Cameras, Headends
- SDI & 3G HD SDI
- ASI
- IP Multicast
- HDMI

Tripleplay's IPTV headend is a server-based solution using PCIe cards for all interfaces. The majority are provided as QUAD input cards to maximise the number of interfaces available in one server; servers can host up to 8 interface cards. This allows Tripleplay to provide a single environment for all systems and services needed for the majority of solutions, removing the headache of trying to integrate and support a number of receivers and encoders from different sources.



All streams are output as multicast IPTV transport streams using MPEG-2, H.264 or H.265/HEVC. DVB sources are not re-encoded so there is no degradation of the quality that is output by broadcasters. All analogue encoders use hardware encoding chips so that the load on the server CPU is minimal.

## SYSTEM MANAGEMENT

Tripleplay solutions are all managed using standard web browsers over HTTPS allowing management and monitoring from almost anywhere there is an IP connection to the server. The system allows operators to configure the headend devices, tune receivers, select the services required, configure the network parameters such as address, port, TTL, QoS. Tripleplay's headend also provides an SNMP agent and MIBs to allow Network Operation Centres (NOCs) to monitor and report on the headend's performance.

## MONITORING & REPORTING

The Tripleplay IPTV headend has a range of monitoring and reporting features designed to ensure continuous operation, and to alert operators when problems do occur. All incoming streams and all output streams are monitored for errors or drop outs and where possible the headend will attempt remedial action to try and recover the streams. Remedial actions range from restarting receivers, dropping back to alternate sources and, where provisioned, failing over to a second server. All stream failure detection events can be sent to external management systems as SNMP notifications.

## CLUSTERING & HIGH AVAILABILITY

Tripleplay has developed a high availability solution for our Digital Media Platform, with mirrored and clustered servers allowing automatic failover and continuity of service in operationally mission critical deployments. Solution includes support for split-site clusters, giving added business continuity and resilience to any deployment.

## LOW LATENCY HD ENCODER

The Tripleplay Low Latency HD Encoder distributes HD video quality over IP networks with an encoder latency of 100ms and a glass-to-glass delivery time of 250-450ms. Tripleplay's HD Encoder delivers full 1080p quality, a low price point and simple integration into the rest of our solution. Tripleplay's HD Encoder is designed for use in live entertainment, education and sporting environments and comes as a dual input, 1U rack mount solution for simple deployment in IT server rooms and AV cabinets.



# CONTENT MANAGEMENT & DISTRIBUTION



Our in-built Content Management System, TripleCMS, allows the management of a wide variety of file types, images, videos, live TV and streaming sources, HTML, audio and document, creating a single interface for management of IPTV, Digital Signage and Media Portal content.

TripleCMS provides a wide range of features allowing users to upload, edit meta data, manipulate and search for content. Content uploading is available from the management tools as well as from client devices using the media portals. Multiple conversions can take place, for example, a WMV file can be converted into a supported H.264 format for local streaming and at the same time converted to HLS for mobile use.

## CLIENT MANAGEMENT

TripleCare client management allows full control of all end points on an IPTV and video network, allowing you to update, upgrade, health check and manage your entire network from a single point. TripleCare also allows you to run system diagnostics, manage LDAP permissions and control screens; TripleCare is a Tripleplay network manager's essential tool.



## CONTENT DISTRIBUTION

Our CMS solution allows users to distribute video content from a central server, across their corporate network to other Tripleplay servers, delivering content locally, alleviating network congestion and improving latency. Our platform also integrates with a leading Content Distribution Network (CDN) to deliver HLS streaming across the internet.

## RECORDING FEATURES

Live TV and IP streams can be recorded on the Tripleplay platform either via our management interface or end user request from our Media Portal or interactive IPTV Portal, creating an on-demand asset with full PVR capability. Using our intelligent management system, regardless of the number of requests for a specific content item, only one copy is made, thus saving storage space. Tripleplay supports both ad-hoc and series link functionality and has the capability of delivering time delayed channels, with trick play features enabled.

## STREAM & CONTENT MANIPULATION

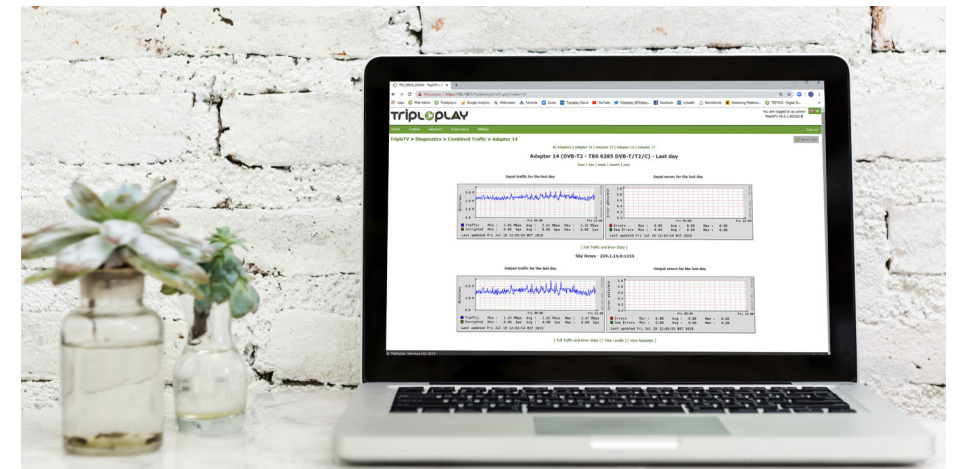
The Tripleplay headend provides a rich variety of stream manipulation tools, allowing system providers to inject images into audio only radio streams, switch between different sources depending on the time of day to manage part time channels, detect stream failure and switch to an alternative source. Live programmes can also be transcoded from one format to another, for example transcode H.264 to MPEG-2 to support legacy client devices, or from MPEG-2 to H.264 to optimise network usage. Multicast streams can also be transcoded to HLS for use with mobile devices both over the internal network and for remote streaming.

## VOD STREAMING

Stored content can be streamed over local networks using TripleVOD which provides a load balancing RTSP streamer. Multiple streaming servers can be used to provide standard streams for hundreds of concurrent users. Full reporting of which assets have been viewed, by whom, when and for how long is available using our reporting tools. A HLS streaming solution, which scales to thousands of concurrent users given suitable networks for the delivery, is also part of our platform.

## QUICKDROP

Our Quickdrop application allows content managers to quickly and easily 'drop' video and image files into our CMS, streamlining the process for users with large volumes of media files to add into their Tripleplay platform.





# END POINTS & DELIVERY

## TRIPLETV - SMART TV, STB & MEDIA PLAYERS

Tripleplay solutions can be delivered directly to Smart TV screens from LG, Samsung and Philips for interactive TV portal services. This delivery method removes the requirement for use of a Set Top Box (STB) at the point of delivery, reducing cost of ownership and decreasing complexity for implementations.

In environments without compatible Smart TV screens, or where such screens are deemed inappropriate, we deliver IP Television services via a supported range of Set Top Boxes (STBs) and Media Players. Our players include support for resolutions up to 4k, RS232 control, Power over Ethernet options and full remote monitoring.

## INTERACTIVE IPTV PORTAL

Tripleplay's IPTV solution comes complete with a customisable Interactive IPTV Portal option complete with channel line up, video library, Electronic Programme Guide (EPG), information pages, Property Management System (PMS) integration, support for BYOD, BYOC via our PlayMedia App, Google Chromecast and more.

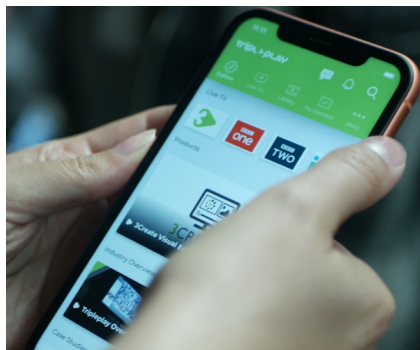
Unique to our solution's EPG, we can combine the meta data and programme listings from multiple sources including free to air, satellite, free sat and subscription-based TV channels.



Tripleplay's Interactive IPTV Portal also supports Google Chromecast, allowing personal streaming account content to be securely delivered via our in-room portal solution.

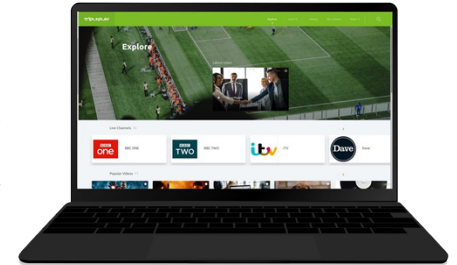
## TRIPLEPLAY MMA - MOBILE

Tripleplay has been delivering video 'off network' for a number of years, using secure delivery methods and security encryption to stream live and recorded content to mobile devices. This facility is available via browser or through the Tripleplay Mobile Media Application (MMA), providing a variety of features including content download, upload and recording from TV. Available on iOS and Android.



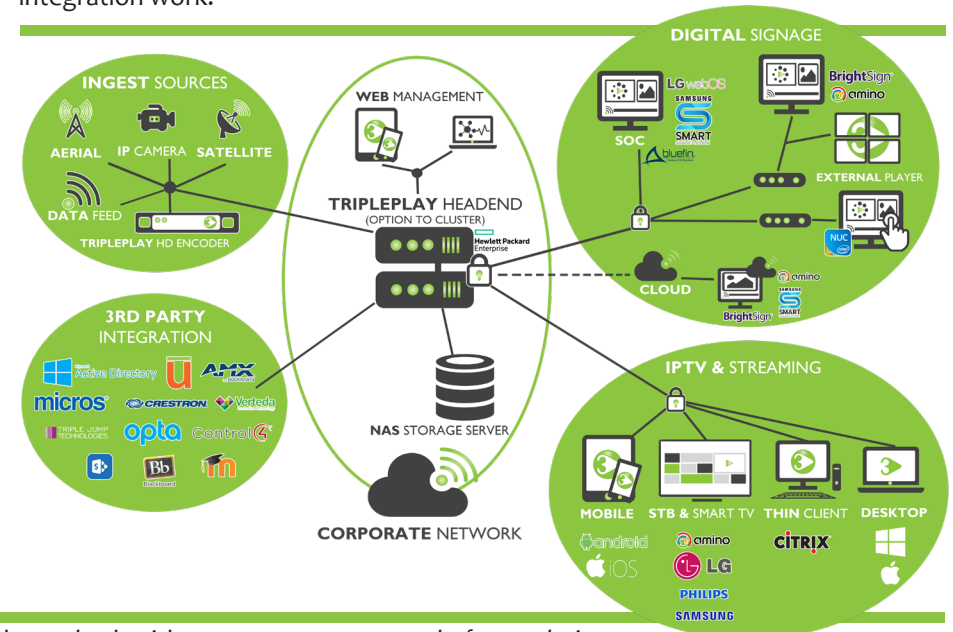
## TRIPLEPLAY MVP - PC, MAC & THIN CLIENT

Our IPTV and Video on Demand solution is available via a standard web browser, or via our own Media Video Player app. Our secure browser ensures we can manage and control the video quality you receive, owning the experience from start to finish. For users looking to implement video and TV solutions in VDI environments, Citrix for example, Tripleplay has a market leading solution that delivers encrypted, full HD video and live TV to virtual desktops. Our solution is delivered via our MVP and streams content securely with low latency and no loss in quality.



## TRIPLESIGN - DIGITAL SIGNAGE

Our single platform IPTV solution has its own integrated Digital Signage platform called TripleSign. Through implementation of our IPTV solution any organisation's investment will be future 'friendly' allowing Digital Signage to be delivered across the same IP and display network with a simple software upgrade rather than costly integration work.



# TRIPLEPLAY

**SIMPLE INNOVATION**

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