



## MPEG-4/H.264 IP Television Solutions for Broadband Network Operators

*Telcos, Utilities, MSOs & ISPs*



- **Deliver digital multi-channel TV over IP networks**
- **Over 50% improvement over MPEG-2 solutions**
- **Secure and scalable VOD and networked PVR**
- **Integrated headend systems reduce cost and complexity**
- **Open, standards-based platform and architecture**
- **Encode and transcode into various formats, including high definition (HD)**
- **Deliver live programming to multiple set-top boxes over xDSL**
- **Manage and deliver commercial TV services using interactive content**

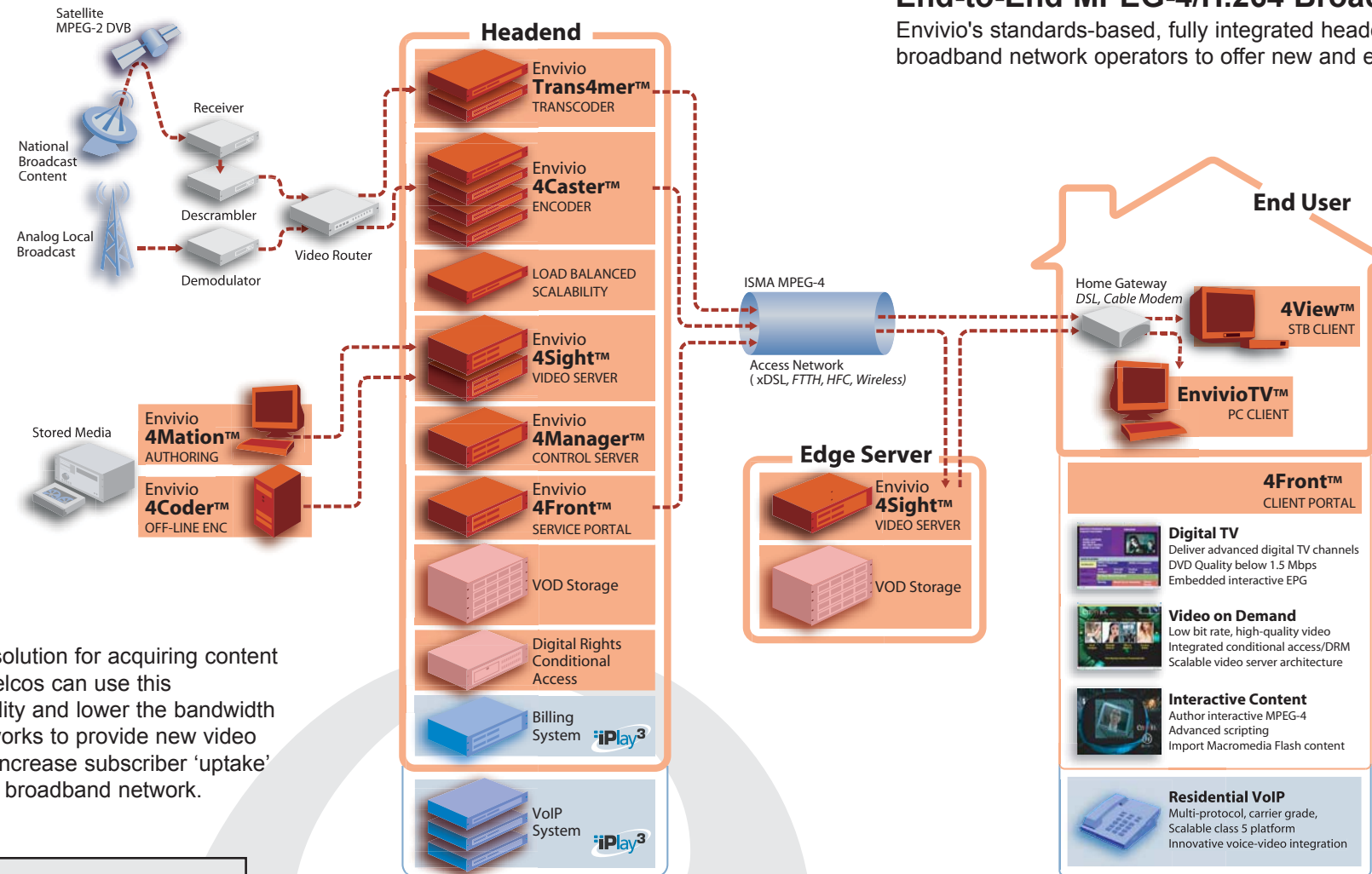
The landscape of digital video delivery is changing quickly. Despite the benefits of higher quality and the flexibility of new network-based interactive services, the cost and complexity of delivering digital video services remain as major challenges. MPEG-2 was not designed for the new generation of IP video services – MPEG-4/H.264 was. As competition for subscribers heats up and broadcast operators look for new ways to reduce costs and increase revenues through feature-rich advanced television services, MPEG-4/H.264 has become the logical choice as the new standard for digital media.

Envivio has developed a broad range of broadcast-quality MPEG-4/H.264 encoders, video servers, authoring tools, players, and management systems for broadband network operators who are in the business of providing digital television and interactive media services such as video on demand. Envivio's solutions include high-quality encoders that reduce the bandwidth required for DVD-quality video in half, video servers that can be deployed anywhere on a network to store and deliver interactive video content, players and decoders for set-top boxes, an IPTV middleware video services portal for set-top boxes and PCs, and remote management systems to control and monitor all the equipment deployed in headend locations.

Envivio delivers the quality and experience you need to deploy world-class video services today.

## End-to-End MPEG-4/H.264 Broadcasting and Distribution Solutions

Envivio's standards-based, fully integrated headends and content distribution systems enable broadband network operators to offer new and enhanced digital media services to consumers



The headend contains dedicated MPEG-4/H.264 systems to encode, store, and distribute content over local and wide area networks. These highly reliable and scalable systems can be deployed quickly and efficiently in the most demanding broadcast environments.

### IP Television

Envivio provides an integrated MPEG-4/H.264 solution for acquiring content suitable for delivery over IP access networks. Telcos can use this technology in place of MPEG-2 to improve quality and lower the bandwidth requirements. This allows xDSL and FTTH networks to provide new video services. These video services have proven to increase subscriber 'uptake' and generate significantly higher income from a broadband network.

MPEG-4 has advanced interactivity included inside the stream format to enable new interactive content without proprietary middleware. Envivio has powerful tools to create and customize this content.

- DVD quality at 1.2 Mbps bit rates
- Increase xDSL loop lengths to 18 kft
- Up to 4 simultaneous STBs per sub
- Deliver high-resolution HD channels
- Produce interactive MPEG-4 content
- Client playback on PC or set-top box

### Broadband Portals

Create streaming content for video Internet portals using MPEG-4/H.264 content. Envivio delivers the encoders to create the highest quality Internet video at the lowest bit rates using open standard formats. Use Envivio 4Mation™ to create interactive MPEG-4 content and applications. Envivio 4View™ is a fully ISO MPEG-4/H.264 compliant player, and EnvivioTV™ is a plug-in for all the popular streaming PC clients, including QuickTime, RealOne, RealPlayer, and Windows Media player. The Envivio player allows broadband ISPs to deliver the most advanced, high-quality video to any platform, PC, Macintosh, Linux, or PocketPC device.

- Broadband video at < 500 kbps
- Fully ISO MPEG-4 compliant player
- Protocols: RTP, RTCP, or RTSP over UDP or using HTTP tunneling, in unicast and multicast
- Comprehensive authoring tool
- Support for 2D vector graphics and text, overlays, transparency composition, and transition effects

### DVB Broadcast

Incorporate MPEG-4/H.264 content into existing DVB streams and deliver the next generation of low bit rate interactive video to existing customers over HFC or DVT networks. Envivio simplifies the bandwidth requirements for offering new services such as VOD and interactive gaming. These services increase average revenues per subscriber and decrease churn. MPEG-4 enabled set-top boxes deliver advanced services inside the streaming content. Features that would normally require middleware are now delivered as part of the MPEG-4 stream. This makes the content more flexible and lowers the dependency on proprietary middleware.

- MPEG-4/H.264 can be multiplexed in DVB
- Interactive features are encoded into the MPEG-4 stream
- MPEG-4 set-top boxes display interactive content without proprietary middleware

### Content Delivery Networks

Incorporate Envivio MPEG-4 live and on-demand media into sophisticated Content Delivery Networks (CDNs). Scale applications from local to metropolitan deployments. Envivio has real-time control servers to configure, manage, and maintain multiple components across disparate network architectures.

- Real-time SNMP monitoring and control
- Instantaneous multicast switching
- 1-to-1 and n+1 redundancy management
- Distribute over IP or DVB
- Supports HD



### Integrated Triple-Play Solution

IPlay3 is a consortium that merges the market-leading technologies from Envivio, NetCentrex, and Highdeal into one flexible and cost-effective Triple-Play solution.

IPlay3 offers an integrated Voice over IP, IP-TV, IP-VOD, and Billing solution that leverages any type of broadband IP infrastructure (ETTx/FTTx, xDSL, cable, WiFi).

IPlay3 enables service providers deploying a residential broadband IP infrastructure to offer value-added voice and video services on top of a high-speed Internet offering.

# MPEG-4 broadcast and streaming solutions

## Product Overview



### 4Caster™

Real-time MPEG-4/H.264 encoder for full resolution, full frame rate video. A key component of Envivio's carrier-grade solutions for deployment of IPTV.



### 4Front™ Video Service Portal

Complete service management platform that allows network operators to integrate Envivio MPEG-4 technology into a commercial television broadcast business. 4Front enables the network operator to provide the complete solution for digital television beyond just content and set-top boxes.



### 4Coder™

High-quality, dual-pass non real-time MPEG-4/H.264 encoding for full resolution, full frame rate video.



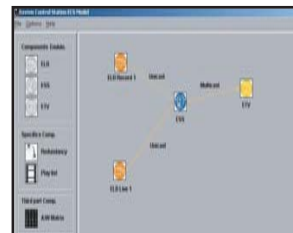
### 4Mation™

Envivio 4Mation development environment enables content developers to manage the entire MPEG-4 authoring process as they import, compose, edit, preview, and encode object-oriented interactive content.



### 4Sight™

Optimized MPEG-4/H.264 streaming server for small-, medium-, and large-scale broadcast, broadband, and enterprise deployments.



### 4Manager™

Real-time control server that manages multiple encoder and server components within an IP television headend. It configures, manages, and monitors a headend and provides redundancy management for scalable deployments.



### 4View™ and EnvivioTV™

4View provides real-time MPEG-4/H.264 decoding for D1 resolution, full frame rate video. EnvivioTV is a plug-in for RealNetworks, QT, and Windows Media player.

For more information, visit:  
[www.envivio.com](http://www.envivio.com)

