LuxeVision™ provides a robust suite of digital video, audio, and control technologies combined to create a full-featured and high-quality interactive television experience. Expanding on standard Internet protocol based systems widely known as Internet Protocol Television (IPTV), LuxeVision integrates encoding, scheduled playback, transcoding, delivery, and decoding functions in an end-to-end solution. LuxeVision delivers live television, time shifting, and video-on-demand (VOD) services using standardized processes over multiple transport technologies including DSL/PON, cable, and/or Ethernet.

### Features

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media Delivery over DSL/PON, Cable, and/or Ethernet</td>
<td>Operator flexibility for network deployment</td>
</tr>
<tr>
<td>Highly Customizable Middleware</td>
<td>Puts the operator in control of their system’s look and feel</td>
</tr>
<tr>
<td>Optional Time Shift (Pause), Local &amp; Network Personal Video Recorder &amp; Video-on-Demand</td>
<td>Create operator revenue opportunities</td>
</tr>
<tr>
<td>Developed, Deployed, &amp; Integrated</td>
<td>System deployed since 2007 in multiple countries, multiple operating environments and markets with integrated Ecosystem partners</td>
</tr>
<tr>
<td>Cost Effective</td>
<td>Low cost of entry and fully scalable</td>
</tr>
</tbody>
</table>

### Industries

- Hotels/Motels/Resorts
- Medical Facilities
- Correctional Facilities
- Multi-Dwelling Units
- Military Installations
- Private Communities
- Campus Communications
- Onboard Communications
Delivering Advanced Television Services Over Multiple Transport Technologies

System Diagram

**LuxeVision**

- **Applications Server**
- **Video Server**
- **Gigabit Ethernet Switch**
- **Management Interface**
- **Local Channels**
- **Network Video Feed**
- **IRDs**
- **Digital Cable QAM (ATSC/8VSB)**
- **Over the Air**

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**Delivering Advanced Television Services Over Multiple Transport Technologies**

**edgeQAM IP**

- Enables affordable delivery of IPTV over cable using existing standards-based DOCSIS® 1.1 and 2.0 cable modems and low-cost IP set-top boxes. Provides DOCSIS timing and control information for up to eight attached edgeQAMs to deliver any mix of DOCSIS and H.264/MPEG-2 video, even within a single channel. The edgeQAM IP provides a versatile, cost-effective way to deliver broadcast, multicast, and unicast services using both MPEG-2 standards and IP. It also allows MSOs to leverage the development boom in IPTV technologies, including a wide variety of readily available IP set-top boxes, advanced encryption systems, soft-client conditional access, and interactive middleware.

**edgeQAM**

- A versatile, 24-channel QAM modulator with DOCSIS encapsulation capability. When paired with an edgeQAM IP controller unit, it enables the delivery of IP video to IP set-top boxes over coaxial cable via DOCSIS cable modems on any or all of its QAMs. IP video and conventional H.264/MPEG-2 video can be delivered simultaneously in the same QAM. Also acts as a standalone broadcast, narrowcast, or switched broadcast edge QAM, having a flexible software-based H.264/MPEG-2 multiplexer whose functionality includes multiple program transport stream (MPTS) passthrough with rate matching, single program transport stream (SPTS) add/drop, SPTS remultiplexing, program clock reference (PCR) correction, and packet identifier (PID) remapping. Also supports a flexible transition strategy from analog broadcast and digital broadcast switched broadcast to multicast and unicast H.264/MPEG-2 and IPTV services.

**Video Server**

- Manages and monitors the entire LuxeVision system, including scheduling video streams, dynamically configuring edge QAMs, monitoring system components, and initiating failure switchover when necessary. The application server provides switching path coordination for high-ingestion video servers, edgeQAMs, and edgeQAM IP cable IPTV controllers. It also stores user settings and preferences and provides application processing of remote client set-top functionality. Also serves as a resource manager for switched digital video (SDV) and cable IPTV switched multicast configurations.

**Ethernet**

- Video Server
- Channel Information
- Set-Top Box
- Cable Modem
- Cable
- Video-on-Demand
- My Favorite Channels

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**DSL/PON**

- DSL/OLT
- DSL Modem/ONT
- Set-Top Box

**Cable**

- Cable Modem
- edgeQAM IP
- HFC Combiner
- Set-Top Box

**Over the Air**

- **Digital Cable QAM (ATSC/8VSB)**
- **Over the Air**

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**Key**

- LEIGHTRONIX provided components
- See back page for more details

**This high ingestion video server provides between 3,400 and 5,000 hours of real-time storage (SD/HD, H.264/MPEG-2), and sufficient disk throughput to simultaneously ingest 100 digital channels and serve up to 720 independent video streams at 2Mbps. The video server is tailored to the demanding I/O requirements of narrowcast digital video services such as time shifting, network personal video recorder (nPVR), video-on-demand, and broadcast-on-demand. This highly scalable two-rack unit configuration makes it easy to start small and grow to virtually unlimited service deployments with very high availability.**
**Customizable Middleware**

LuxeVision middleware includes advanced services that are simple to administer, maintain, and extend, providing the option for a graphically enhanced or text-guided viewing experience. In conjunction with stream-based television services, LuxeVision enables operators to deliver customized navigation and information services to subscribers’ set-top boxes using a standard browser interface.

Two distinct middleware display foundations are provided as standard, allowing administrators to choose between a menu that guides with the aid of graphics or a menu that primarily utilizes text to help viewers easily find desired video programming.

<table>
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<th>Features</th>
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</tr>
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<tbody>
<tr>
<td>Browser-Based Environment</td>
<td>Easy to customize, maintain, and update client graphical user interface (GUI)</td>
</tr>
<tr>
<td></td>
<td>- Defined by JavaScript and PHP</td>
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<tr>
<td></td>
<td>- Supports open PHP/HTML authoring tools</td>
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<tr>
<td></td>
<td>- Simple to add new services and screens</td>
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<tr>
<td></td>
<td>- Easy to make simple changes like adding logos in-house</td>
</tr>
<tr>
<td></td>
<td>- Integrates quickly with new set-top boxes and integrated displays</td>
</tr>
<tr>
<td></td>
<td>Can be deployed as a standalone zero footprint middleware, but it can also be integrated with third-party middleware solutions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program Guide</th>
<th>Navigation for time-shifting and nPVR applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designed for Interactive, Stream-Based Services</td>
<td>Enables user navigation and control of state-of-the-art services such as switched broadcast, VOD, nPVR, time shifting, playlists, custom channels, user-configurable channel bundles, and variable pricing and business rules</td>
</tr>
<tr>
<td>Multi-Platform Access</td>
<td>Access through set-top boxes, mobile devices, integrated displays, and PC-based web browsers</td>
</tr>
<tr>
<td>User-Level Granularity</td>
<td>Customization to follow individual users within an account</td>
</tr>
<tr>
<td>Hosted on Application Server</td>
<td>Leverages the standards-based resource management and service management platform of the LuxeVision System; Reduces set-top box processing requirements for potential customer premise equipment savings</td>
</tr>
</tbody>
</table>

Administrators can manipulate the standard out-of-the-box graphics and text middleware display options by adding a logo alongside advanced customization features such as industry specific graphics and text. Customization can be easily achieved after a system is delivered or administrators can opt to have LEIGHTRONIX provide customization to enhance a viewer’s experience as an add-on to a LuxeVision system’s price.
LuxeVision ipMerge™ is breaking price barriers as the first all-in-one IPTV solution starting at under $20,000. The LuxeVision ipMerge platform is designed for situations where a small to medium number of TV end points are required. LuxeVision ipMerge starts at 50 TV end points and can support up to 500 end points within a single system, providing an all-in-one solution that includes an application server with customizable middleware, a multi-channel video-on-demand server, and a multi-channel multicast server within a one rack unit platform. The LuxeVision ipMerge solution is designed to integrate with one or any combination of transport technologies allowing providers to utilize their existing DSL/PON, Ethernet, and even cable infrastructures simply by adding LuxeVision edgeQAM technology.

UltraNEXUS Video Server

The UltraNEXUS™ features dual digital encoders, recording high quality media files for television broadcast while simultaneously creating digital media files optimized for Web streaming. Combine the UltraNEXUS with a PEG Central® streaming video-on-demand account, and experience the seamless integration of broadcast and Web-based media.

IncodeX One

The IncodeX One™ live streaming encoder is designed for 24/7/365 unattended operation and provides high quality H.264 encoding and AAC audio encoding. It allows for multiple video input types, including HD/SD-SDI, and composite, as well as embedded and unbalanced analog audio inputs.

LuxeVision Streaming TV Tuner

A powerful component of LuxeVision™, this streaming IP tuner pulls content from an antenna or an unencrypted cable source, and allows for simple integration of digital TV channels into any LuxeVision IPTV system solution. Customers can enjoy viewing channels streamed to smart TVs, over IPTV set-top boxes, or on computers running designated video client software applications with cross platform support.

LEIGHTRONIX Provided Components

You may also be interested in...

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