EZ TV

Enterprise Grade IPTV Solution

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The award winning EZ TV IPTV System is a comprehensive solution for high quality delivery, recording and management of live and on-demand video over IP networks securely and cost-effectively.

EZ TV offers advanced viewing options, collaboration and distribution tools - all packed in an easy-to-use Web Browser interface. With EZ TV, local and remote users can watch external and locally produced content anytime, anywhere and on any device; TV's, Computers, and Mobile Devices.

Designed to seamlessly integrate with any IT environment and deploy on all types of networks; LAN, WAN and Wireless - EZ TV is the IPTV system of choice for any organization size and any number of users.

With EZ TV's modular architecture, operators can deploy and maintain an advanced, scalable IPTV solution with the capacity to expand the system without interruption to service.

One-Stop-Shop for All IP Video Needs

EZ TV allows operators and users to create, store, view, stream and share HD and SD video from any source, anytime, anywhere and to any screen: Desktops, Laptops, TV's and Mobile Devices. The system is comprised of two main Web interfaces: The first is the EZ TV Administration interface - a centralized, powerful interface used for setting up video services, managing users, adding content, configuring permissions and tracking usage. The second interface is the EZ TV Player – a user friendly video player that supports various video workflows – from basic viewing through unique multi-screen mosaic grid layouts to advanced recording and time shifted TV.

Deployed in hundreds of sites around the world and with more than 250,000 users - EZ TV Player has been field-proven to be the most flexible IPTV Solution for simple or complex environments. Applications include a variety of video related use-cases as well as IP streams from a mix of providers / sources.

To ensure full compatibility with civilian and federal secure environments, EZ TV has been designed to conform to the most stringent network and information assurance security standards. Specific accreditations can be provided by VITEC upon request.

IT-Centric Architecture, Rapid Deployment of IPTV Services

Whether for locally generated content that is encoded by VITEC's IPTV Encoders or for using with third-party encoders / IP Streams – the EZ TV IPTV System empowers Corporations, Government Agencies, Military Units, Broadcasters and Educational Institutions to rapidly deploy an advanced IP video delivery service:

Connect to Network: EZ TV IPTV Portal software is deployed as a Web Server on the network (As a Virtual Machine or Physical Server instance).

Select Content: Administrators map all digital videostreams and files to a simple channel lineup with user-friendly channel names, numbers and optional metadata description.

Organize and Classify: Content is organized and grouped by type / origin / genre / classification / security level. This allows different groups to have their own access rights.

Define Access Rights and Control Features: VITEC's Smart integration with Microsoft Active Directory establishes the EZ TV System as a secure network resource allowing the operator to select, using a visual interface, which domain groups or individual users will have access to what content and system features. Additionally, EZ TV allows administrators to selectively turn on/off playback and recording features for specific users/groups.

EZ TV Enterprise Grade IPTV Solution

Go Live: Send your users a link to your local IPTV Portal. Users open URL with their browser, sign-in with their regular network credentials and they can now search, view, record and collaborate on TV over IP and locally-generated content.

Centralized Management and Monitoring for your IPTV Services

The EZ TV IPTV Systems offers powerful management options, monitoring tools and analytics that helps you to maintain the system, to ensure 100% up time for the organization's critical IPTV services and to maximize user experience.

The centralized EZ TV Administration Portal web-interface, is accessible from anywhere on the network and provides the operator with the ability to create content listings manually or configure the server to automatically look for IPTV content on the network using Session Announcement Protocol (SAP) discovery feature.

The powerful User Management engine provides operators with a visual topology view of all local Domains, Trusted Domains, Organizational Units (OU's), Groups and Users that exist on the network. A revolutionary drag-and-drop interface is used for assigning live video, recorded content and application features to groups or individual users – eliminating the need to use complex routing filters, networks access lists and firewall rules to regulate access to IPTV and FMV content.

Redundancy, Clustering, Multi-site synchronization and Backup features are also available through the EZ TV Administration Portal – advanced capabilities designed to help organizations and IT teams to achieve 99.999% availability of critical video services 24x7x365.

EZ TV System also monitors the usage of the system and offers Administrators valuable data about content consumption, user trends, network bandwidth utilization statistics and event logging for operator's and/or users actions for traceability, billing or other needs.

Service Provider Experience on Your Enterprise Network

Your users want more than a video window?
EZ TV packs the best user experience in an enterprise-grade professional IPTV System. The powerful browser-based EZ TV Player includes advanced Digital TV capabilities:

Personal Video Recorder (PVR) that allows users to record, manage and playback content on their local computers.

Network Digital Video Recording (NDVR) that can be used by administrators or users to record content on a centralized server with network storage (eliminating the storage and security challenges of local recording).

Video On Demand (VOD) – enables local and remote users instant access to recorded content. Users enjoy "Trick-Play" features such as Fast Forward, Rewind, Play/Pause/Resume.

Client Mosaic Playback – each user can select his own mosaic layouts for watching up to 25 videos simultaneously on the screen. This feature utilizes the existing streams on the network and generates the resized mosaic videos for each user on-the-fly, without using additional bandwidth on the network.

Electronic Programming Guide (EPG) – EZ TV can be configured to receive programming information for all major Cable, Satellite and Local Off-Air Channels and show current and future programming data on TV's and PC's for users to search and use to schedule their recordings.

IPTV Monitoring – EZ TV can serve as IP monitoring system; Analytical and statistical tools monitor, log and analyze IPTV channels for quality and compliance, ensuring that video streaming is offered to the user with best quality and availability.

Analytics and Reports – View real-time dashboards measuring content consumption, user activity, network bandwidth utilization and other insights. Generate reports with graphs that can be used to optimize user's experience or to bill individuals or groups for usage.

EZ TV for Televisions and Public Displays

Need to distribute content to televisions around the building? EZ TV's Set-Top-Box extension enables full control of your live and recorded videos from personal TV's and displays installed in public areas.

Using standard-based IP set-top-boxes with our integrated middleware - individual users enjoy the ultimate TV experience on their personal screens with EZ TV's intuitive on-screen graphic interface. Advanced features include navigation through channel guide with programing information and locally injected metadata, view live streams, record current and future shows and VOD playback - all from a cost-effective IP set-top-box.

Want to remotely control displays?
EZ TV's Remote Control application provides you with full control of any display or group of displays around the building or in remote sites – all from your computer's browser or handheld device; simply map your displays onto EZ TV's Remote Control database, assign logical names and optional description to each TV and start commanding your TV monitors remotely, over IP;
Push new content to specific displays, tune to any stream, control volume levels, turn TV power on/off and view real-time status of each TV monitor on one visual interface, accessible from anywhere using a browser.

EZ TV for Mobile Users – TV over WiFi or 3G/4G Networks

With a comprehensive suite of mobile applications, VITEC is re-defining the way organizations distribute videos on campus and to remote users:

• Perform real-time transcoding of existing MPEG streams to mobile bit-rate streams using VITEC's MGW Prism Appliance.

• Use EZ TV to provision which streams can be available for mobile users and configure access rights for individual users or groups of users.

• Download VITEC's free EZ TV Player for iOS™ or Android™, login to EZ TV from your mobile devices using your network credentials and immediately access live streams using the corporate WiFi network or via cellular connection.

• Use VITEC's Enterprise Mobile Streaming Blades as distribution servers in case you need to scale your mobile delivery service to support large number of users or would like to limit traffic between the HQ and remote sites by establishing local distribution nodes in each remote site.
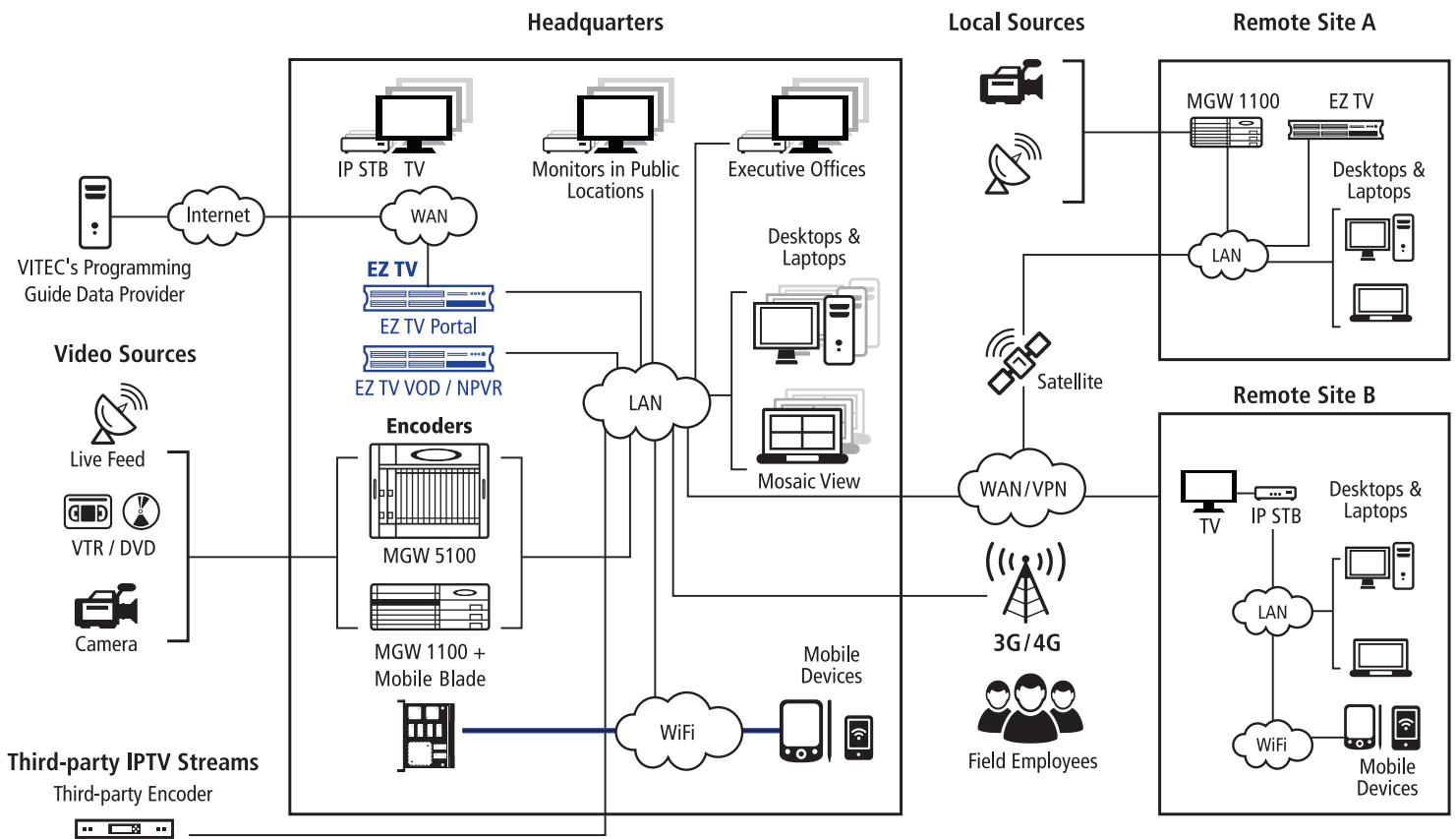
EZ TV Enterprise Grade IPTV Solution

Applications

• Corporate TV and company communications

• TV over IP – Distributing Cable / Satellite TV / Local Channels

• RF TV Upgrades – cost-effective transition to TV over IP with VOD and Desktop Playback

• Sports Stadiums – combining distribution of main event and standard TV service to VIP Suites and other monitors

• Situational Awareness and dissemination of Tactical Full-motion-video (FMV)

• Video Confidence and Real-Time Monitoring

• Training and Education

Flow Diagram

Headquarters

IP STB   TV
Monitors in Public Locations
Executive Offices
Internet
WAN
VITEC's Programming Guide Data Provider
EZ TV
EZ TV Portal
EZ TV VOD / NPVR
Desktops & Laptops
LAN
Video Sources
Live Feed
Encoders
Mosaic View
VTR / DVD
MGW 5100
Camera
MGW 1100 + Mobile Blade
Mobile Devices
Third-party IPTV Streams
Third-party Encoder
WiFi

Local Sources
Satellite
WAN / VPN
3G / 4G
Field Employees

Remote Site A
MGW 1100   EZ TV
Desktops & Laptops
LAN

Remote Site B
TV   IP STB   Desktops & Laptops
LAN
WiFi   Mobile Devices

Technical Specifications

EZ TV Portal Server

General
• HTTP management interface monitors and controls all IPTV services
• Up to 5,000 concurrent viewers; Desktops, Laptops, Mobile Devices and TV (IP Set-Top-Box)
• Centralized remote control interface for managing and assigning content to public area TV screens and monitor walls, activating emergency channels, regulating access to advanced features such as recording, push notifications, on-demand viewing and mosaic player grids
• Automatic discovery of available IPTV streams on the network using Session Announcement Protocol (SAP)

Footprint
EZ TV IPTV System is offered on a rack-mountable physical server and as a software package that is installed on any third-party machine or as a Virtual Machine.

• Physical server specifications:

  • Windows 2012 Server 64-bit operating system
  • 1-RU IBM x3250 M5 Professional Server
  • 1 x Intel XEON Quad-Core 3.1GHz 8MB cache processor
  • 8GB RAM
  • 2 x 1000/100 Mbps network interface
  • 2 x Power supply AC 110/230 V (50/60 Hz), 350 W
  • Dimensions: 17" W x 22" D x 1.7" H
  • Weight: 10.5Kg / 23.15 Lbs
  • 19" racking rails kit included with server

· Minimum Requirements for installation on third-party servers or as a Virtual Machine:

  • Windows Server 2008 R2 or 2012 Server operating system
  • 1 x Intel Dual Core CPU 2.4Ghz CPU
  • 8 x GB RAM
  • 1 x 1000/100 Mbps network interface
  • 100GB disk space (local or network or network installation)

Advanced Capabilities
• Automatic data replication between EZ TV Servers - High Availability redundant configuration
• Digital Rights Management (DRM) – management of AES-256/128-bt keys based on user access rules
• Clustering capability to support HQ server with multiple edge servers serving remote users
• Integration with 2003/2008/2012 Microsoft Domain Controllers for users and content access management
• Integration with Tribune™ electronic programing data syncs up-to-date information for all major satellite, cable and local channels
• Designed to operate on Windows servers patched for security in accordance with DISA's guidelines
• Certificates of Net Worthiness, documentation for secret and top secret networks can be provided upon request

EZ TV VOD/NDVR Server

General

- Seamless integration with EZ TV Portal – content, permissions and recording services managed via EZ TV Portal Administration interface
- Serves as central point for network recordings and on-demand requests of recorded video assets
- Supports streaming to desktops, laptops, TV's and mobile devices
- Network protocols: UDP, RTP/RTSP, HTTP Progressive Download, Multicast and Unicast
- Support recording and streaming of AES-256/128-bit encrypted streams
- Streaming capacity – up to 400Mbps
- Recording Capacity – up to 400Mbps from a single server
- Built-in storage 2TB (Raid-5) + support for network attached storage (NAS)

Footprint

EZ TV VOD Server is offered in a rack-mountable physical server or a Virtual Machine.

· Physical server specifications:

- Linux Red Hat 6.2
- 1-RU IBM x3250 M5 Professional Server
- 1 x Intel XEON Quad-Core 3.1GHz 8MB cache processor
- 8GB RAM
- 2 x 1000/100 Mbps network interface
- 2 x Power supply (available for most EZ TV flavors) AC 110/230 V (50/60 Hz), 350 W
- Dimensions: 17" W x 22" D x 1.7" H
- Weight: 14.8Kg / 32.6 Lbs
- 19" Racking rails kit included with server

· Minimum Requirements for installation on third-party servers or as a Virtual Machine:

- 1 x Intel Dual Core CPU 2.4Ghz CPU
- 8GB RAM
- 1 x 1Gbps network interface
- 100GB Disk Space for operating System, Video assets disk space – user defined (CIFS/NFS)

Video Formats

· Video:

- MPEG-1
- MPEG-2 (ISO/IEC 13818-2)
- MPEG-4 part 2 (ISO/IEC 14496-2)
- MPEG-4 part 10 H.264 (ISO/IEC 14496-10)
- HEVC (High Efficiency Video Coding) H.265 - ITUT H.265 / ISO IEC 23008-2

· Network:

- IPv4, IPv6

· Audio:

- MPEG 2 AAC-LC
- MPEG 2 AAC-HE
- MPEG 4 AAC-LC
- MPEG 4 AAC-HE
- Dolby AC-3
- MPEG-1 Layer 2 (ISO/IEC 11172-3)

EZ TV Player

• Operating systems:

- Microsoft Windows 10 / XP / 2008 / 2012 / Windows 7 / Windows 8.0/8.1 (32-bit and 64-bit)
- Mac OS X 10.7 or higher (32-bit and 64-bit)

· Internet browsers:

- Windows Internet Explorer 8, 9, 10 and 11
- Mac Safari 6.x

· Performance:

- Up to 25x SD/HD channels on single screen

· Supported Streaming Protocols:

- UDP
- RTP/RTSP
- MPEG-2 Transport Stream
- HTTP progressive download
- HLS
- Multicast / Unicast
- AES-128/256 Decryption

· Supported Video Formats:

- MPEG-1
- MPEG-2 (ISO/IEC 13818-2)
- MPEG-4 part 2 (ISO/IEC 14496-2)
- MPEG-4 part 10 H.264 (ISO/IEC 14496-10)
- Adobe Flash VP-6
- WMV
- Quick Time
- HTTP live streaming HLS
- VITEC TurboVideo™ and TurboVideo2™
- All resolutions from QCIF up to 1080p

· Supported Audio Formats:

- MPEG 2 AAC-LC
- MPEG 2 AAC-HE
- MPEG 4 AAC-LC
- MPEG 4 AAC-HE
- Dolby AC-3
- MPEG-1 Layer 2 (ISO/IEC 11172-3)

· Metadata:

- Teletext, Teletext subtitling
- Line 21: SCTE-20/21 Closed captioning, CEA-608/708 (user configurable enable/disable + captions position)
- DVB subtitles (ESTI EN 300 743)
- MISB KLV/STANAG input over UDP
- NGA Motion Imagery Standard Profile (MISP) Compliant; EG 0104.5, EG 0601.6, MISB STD 0604.2, MISB EG 0904, MISB STD 0601.6, STANAG 4609 (Edition 3), SMPTE 336M/335M

· Network:

- IPv4, IPv6

Advanced Capabilities

• Auto detection and enumeration of multiple audio tracks
• On screen text overlay / Supports Landscape & Portrait configuration
• Carousel player setting – automatic channel rotation based on user-defined channel lists
• DoD security classification tagging – real-time color coding of displayed video based on classification
• HEVC / H.265 decoding engine for HD and SD content
• Backup channel automatically directs player to alternate IP stream when primary stream fails