



verimatrix
Securing Content, Enhancing Entertainment



VCAS™ 3
Revenue Security for
Multi-Network, Multi-Format Video Services
Solution Brief

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VCAS™ 3 – Beyond Content Protection to Revenue Security

VCAS 3 is the next generation of the Verimatrix Video Content Authority System (VCAS™). It provides the tools and support pay-TV operators require in order to address the new opportunities arising from the accelerating convergence of video delivery over various types of networks – whether managed or unmanaged – to a multitude of devices. This convergence must encompass a proactive revenue protection and enhancement approach that enables pay-TV operators to cast a much wider net with their service offerings. As a consequence, the central value proposition for the pay-TV enterprise shifts beyond that of content protection alone, towards the broader perspective of revenue security, in order to turn these new challenges into opportunities for growth:

- Extending the operator brand and subscriber relationship beyond the living room screen.
- Addressing the competitive impact (and opportunities) of the Internet, OTT and mobile video offerings.
- Offering personalized choices and viewing models across growing number of devices.
- Enabling service delivery and content monetization spanning multiple networks and geographies.
- Assuring subscriber loyalty, enhanced average revenue per user (ARPU), and new revenue streams via self-management services, innovative online applications, targeted advertising, etc.

Challenges	Solution	Features and Benefits
<p>Video content offerings are becoming more diverse and ubiquitous, pushing pay-TV operators to adapt service offerings and operations to meet rising subscriber expectations.</p> <p>Extending the service brands and subscriber relationships of pay-TV operators beyond the living room to satisfy demands for personalized choices and flexible viewing models</p> <p>Proliferation of Internet TV and mobile video access presents both threats and opportunities, with significant impact on traditional delivery methods, technology and business models.</p> <p>Optimizing the monetization of valuable content bouquets across a multi-network, multi-screen environment becomes the key challenge for today's operators.</p> <p>Assuring subscriber loyalty and increased ARPU, capturing new revenue through self-provisioned services and attracting additional advertising streams represent challenges that require a re-think of technology and approach.</p>	<p>VCAS 3 represents the next generation of pay-TV security. It builds upon the market-leading position of VCAS with more than 12 million screens protected in some of the world's most successful IPTV deployments.</p> <p>VCAS 3 represents a security convergence that embodies a proactive revenue protection and enhancement approach, which enables pay-TV operators to cast a much wider net with their service offerings.</p> <p>VCAS 3 shifts the central value proposition for pay-TV operators beyond that of <i>content protection</i> alone, towards the broader perspective of <i>revenue security</i>:</p> <ul style="list-style-type: none"> ➤ Single content authority for all types of services. ➤ Extended service reach beyond managed networks. ➤ Offer subscribers increased control over the viewing experience, whether online or offline, with harmonized usage rights management. <p>VCAS 3 extends the Verimatrix 3-Dimensional security vision to new frontiers while keeping the pay-TV cash register operating!</p>	<p>The VCAS 3 platform enables:</p> <ul style="list-style-type: none"> ➤ Single content authority for IPTV, DVB, Hybrid, Mobile and Internet TV delivery that streamlines operations and maximizes revenue security. ➤ Multi-format delivery across managed and unmanaged networks, supporting OTT delivery channels alongside established pay-TV outlets, creating new revenue and profit opportunities. ➤ Multi-screen, multi-DRM content portability and usage rights transparency, which satisfies users' needs for '<i>content anywhere anytime.</i>' ➤ High value premium service options and consumption models, incl. self-service, enhancing subscriber loyalty and ARPU. ➤ Integration of value added services through a large and open ecosystem, broadening total solution versatility. ➤ Advanced service and client management with support for "subscriber domain" multi-device business models.

VCAS 3 – Deployment Versatility and Opportunities

VCAS 3 is the realization of the Verimatrix 3-dimensional pay-TV security strategy, which extends beyond the legacy conditional access (CA) approach in order to protect pay-TV services delivered to *any screen over any network* while combating *any threat*. It is ideally suited for operators engaged in or planning:

- “Walled garden” IPTV and digital video broadcasting (DVB) services over managed networks: telco, satellite, cable, terrestrial.
- Hybrid services, extending linear DVB services with IP-based on-demand services and vice versa.
- Internet TV, OTT and mobile streaming services, including HTTP adaptive rate streaming.
- Wholesale-retail content distribution: a centralized, hosted service with local control options.
- Harmonized rights management across multiple networks and devices.
- Legacy CA system replacement with software-based security for all types of networks and devices.

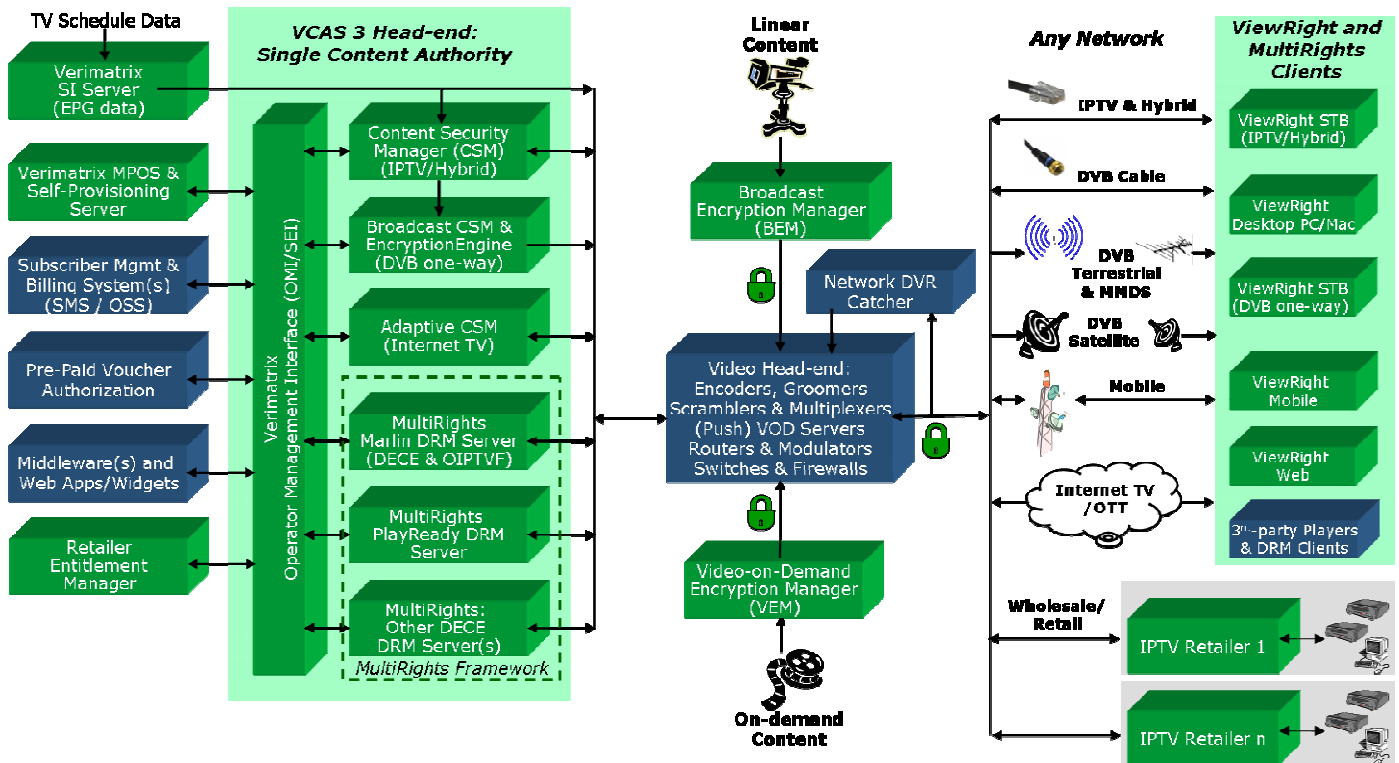
Based on a highly modular system architecture and efficient form factor, VCAS is inherently cost effective for the smallest deployment while scaling easily to operations with millions of subscribers.

Thanks to a vast Verimatrix partner ecosystem, operators can choose from a wide variety of pre-integrated components, such as middleware/subscriber management systems (SMS) and video-on-demand (VOD) servers, and more than 150 set-top box (STB) models.

VCAS 3 – System Architecture and Key Components

The VCAS 3 head-end consists of a number of server components to address IPTV, DVB including Hybrid, adaptive rate streaming for broadband and mobile networks, and associated content rights management. The resulting solution is a single content authority for multiple networks and devices, supporting various video and digital rights management (DRM) formats while providing a coherent user rights management.

The VCAS 3 client support incorporates ViewRight modules for IP- and DVB STBs, PCs and Macs, and mobile devices, and MultiRights support for devices equipped with native (pre-installed) DRM clients.



VCAS 3 key components:

- **Operator Management Interface (OMI/SEI)** – The core administrative component of VCAS 3 to address multiple pay-TV networks and device types through a single content authority. OMI provides human interfaces and various APIs to manage entitlement, messages, devices, content and configurations.
- **Content Security Manager (CSM™)** – Contains the VCAS security components for IPTV and DVB Hybrid networks to support authentication, key distribution and user control.
- **Broadcast Content Security Manager (BCSM™)** – Contains all VCAS security components for one-way DVB networks. Incorporates ECM and EMM generation in conjunction with the **EncryptionEngine**. The **Verimatrix SI Server** feeds Electronic Program Guide (EPG) data to STBs.
- **Mobile Phone Ordering System (MPOS)** – Self-provisioning support, also via web-based portal.
- **Adaptive CSM (ACSM™)** – Contains the VCAS security components for networks implementing adaptive rate streaming, including over-the-top (OTT), to support authentication, key distribution and user control.
- **MultiRights™** – The MultiRights framework is an enabler of the single content authority for multi-network and multi-DRM support, including Marlin and PlayReady DRMs. It provides harmonized device and service management, and subscribers enjoy transparent usage rights management.
- **Broadcast Encryption Manager (BEM):** Three optional components for linear content encryption:
 - **Real-Time Encryption System (RTES™)** –128-bit AES or RC4 multicast stream encryption.
 - **MultiCAS™/IP** – An alternative to RTES, MultiCAS™/IP generates ECMs in conjunction with third-party, high-performance IP streamers supporting DVB Simulcrypt.
 - **MultiCAS™/DVB** – Performs DVB Simulcrypt ECM generation for DVB hybrid networks.
- **VOD Encryption Manager (VEM)** – Supports manual or automated offline, faster than real-time AES-128 encryption of VOD assets, in conjunction with middleware and VOD servers.
- **ViewRight STB for IPTV/Hybrid** – A robust package of embedded code that implements VCAS security functions within each IP/hybrid STB without the need for smart cards
- **ViewRight Desktop & Mac Players** – Self-contained and highly secure players that turn any broadband-connected PC or Mac into full-function IPTV clients including video recording.
- **ViewRight® STB for DVB** – Multi-level client security that can be mixed in the same broadcast network: Software client; secure system-on-chip (SOC) client; and optional smart card-based security.
- **ViewRight Mobile** – A software-based client for mobile broadcasting devices, such as DVB-H, FLO, etc.
- **ViewRight Web** – A software-based client for devices supporting adaptive rate streaming.
- **IPTV Retailers** – Secure, multi-level content distribution to last-mile service providers, with several options for local content insertion, subscriber management, middleware and VOD asset management. Can be combined with the **Retailer Entitlement Manager** for remote rights management.
- **VideoMark** (not shown) – Patented technology for user-specific forensic tracking, inserts an invisible yet very robust watermark in the video stream prior to the content being output from the STB.

Verimatrix - Securing Content, Enhancing Entertainment

Headquartered in San Diego, Calif., Verimatrix offers both local sales and customer care in major centers around the world including the Americas, Europe, Russia/CIS and Asia Pacific, plus 24/7/365 online and phone support.

Maintaining close relationships with studios, broadcasters, industry organizations and its broad partner ecosystem enables the company to address the challenges facing pay-TV networks of today, and those of tomorrow. VCAS security has been approved by all major studios for protection of premium content as well as by all the major broadcasters including Disney, Discovery, HBO, Showtime and ESPN. VCAS operators benefit with the most favorable access to premium content – the key to pay-TV business success.

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