

# The Right Way for Your One-Way

*VCAS™ for DVB*



# Video Content Authority System (VCAS™) for DVB

## Content and Revenue Security for Digital Video Broadcast Networks

### Challenges

Rising consumer expectations for access to pay-TV on an “anywhere, anytime” basis is challenging service providers to adopt content security strategies that will support the multi-screen experience customers look for.

Operators of one-way satellite, cable and terrestrial broadcast services face particular issues:

- Securing services without the benefit of a set-top box (STB) return path.
- Supporting basic tier, one-way segments with lower average revenue per user (ARPU).
- Raising ARPU by migrating subscribers to premium and interactive services.
- Combating revenue loss from piracy in many forms.
- Competing with triple-play operators including IPTV.
- Containing cost of call centers and customer care staffing.
- And, not least, complying with stringent content licensing and security requirements such as, “fingerprinting,” watermarking and regional blackouts.

### Opportunities

The Verimatrix approach to DVB one-way and hybrid network revenue security is ideal for:

- Card-less security in client devices providing secure System-on-a-Chip (SOC) facilities.
- Greenfield deployments, whether B2C or B2B.
- Pay-TV operators transitioning from analog to digital video broadcasting.
- Operators wishing to complement or replace legacy DVB CA systems.
- Operators planning advanced broadcast and IP/OTT hybrid services.

Thanks to the system architecture and compact form factor, VCAS for DVB is inherently cost effective for the smallest deployment while scaling efficiently to tier 1 pay-TV operations with millions of subscribers.

### Solution

VCAS for DVB, powered by the multi-network VCAS platform, enables digital TV operators to combine standards-based and proven Digital Video Broadcast (DVB) technology for broadcast distribution with the interactivity of IP-based networks using a single security system.

The VCAS architecture enables advanced multi-network and multi-screen services secured from a single head-end:

- One-way satellite, cable and terrestrial broadcast networks
- B2B and B2C content delivery.
- Hybrid broadcast and IP/OTT networks that enable higher ARPU with video-on-demand (VOD) and interactivity.
- Single point of integration with subscriber management and billing systems via Operator Management Interface (OMI).
- Unblemished security record.

The solution supports operators seeking a lower total cost of ownership while achieving a favorable positioning in a world that is steadily moving towards two-way connectivity.

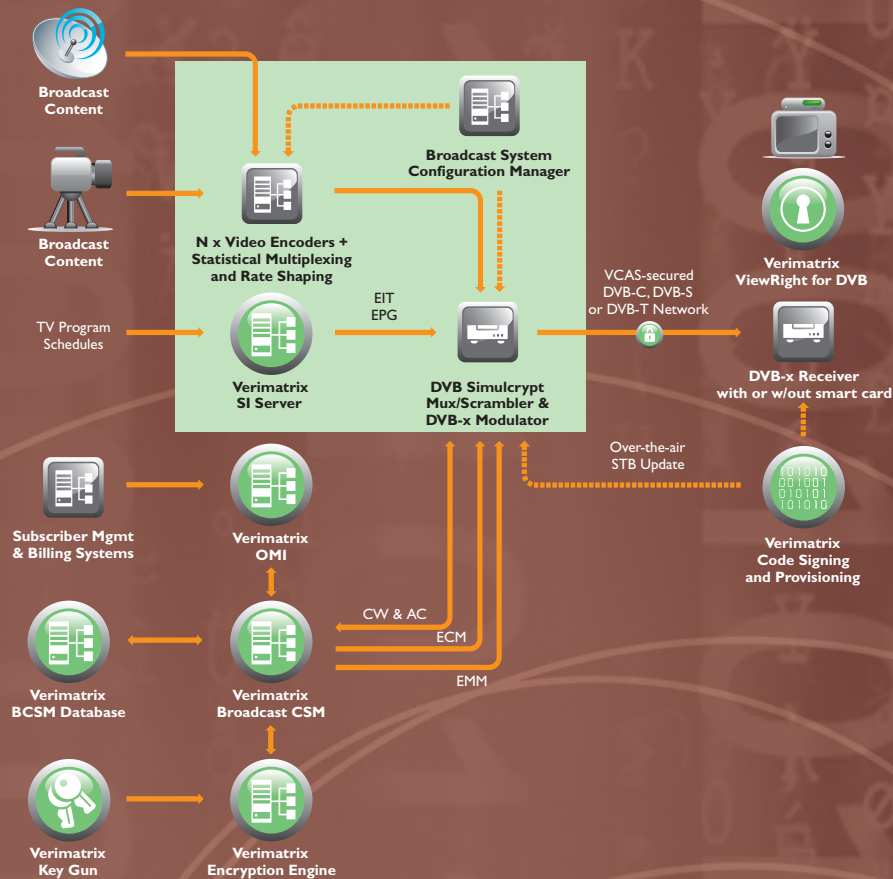
### Features & Benefits

VCAS for DVB secures content and the associated revenue for broadcast (one-way) services:

- Support for advanced pay-TV business models that provide service operators with virtually unlimited flexibility in defining pay-TV products and services.
- Choice of cardless (software or secure SOC) client security and smart cards, allowing operators to match the ARPU potential with suitable STBs.
- Mobile phone and web-based self provisioning, including pre-paid vouchers, reduces cost of call centers and staffing.
- Middleware-independent DVB SI Server for STB EPG.
- On-screen messages and chat rooms, parental control, client-STB pairing, fingerprinting.
- No “CA lock-in” means that the operator remains in control of client devices.
- Vast partner ecosystem.
- Very efficient form factor: Supports up to 1 million STBs in only 2 RU (3.5”) rack space, and 4 RU when 1:1 redundant.



# VCAS™ for DVB – System Architecture and Key Components



- **Operator Management Interface (OMI)** – The core administrative component of VCAS, OMI provides a single VCAS integration point for customer care, billing and middleware systems through a set of content, device and entitlement management interfaces. OMI enables VCAS domain-based business models for multi-screen digital TV services by providing homogenous subscriber and rights management for heterogeneous networks and devices: DVB, IPTV, Internet TV/OTT, and hybrid combinations thereof.
- **Broadcast Content Security Manager (BCSM)** – BCSM enables advanced pay-TV business models within VCAS secured one-way networks. It provides each operator with virtually unlimited flexibility to define pay-TV products and services, and it manages authentication, key distribution and user control. BCSM includes an entitlement control message (ECM) generator, implementing DVB Simulcrypt with DVB multiplexers, which enables MPEG-compliant Multi-Program Transport Stream (MPTS) encryption. Furthermore, BCSM generates and plays out entitlement management messages (EMMs) based on information received from the SMS via the OMI, or directly via the web-based user interface
- **Verimatrix EncryptionEngine** – This high-performance device encapsulates all cryptographic operations to protect ciphers and control mechanisms, and the set of operator keys. A single unit supports cryptographic operations for up to 1 million STBs.
- **Verimatrix SI Server** – A middleware-independent TV schedule spooler for STB electronic program guides (EPG).
- **ViewRight® STB for DVB** – In contrast to the legacy approach with its singular focus on hardware-based security, Verimatrix offers multi-level client security with a choice of software-based clients, cardless secure SOC implementations, and advanced smart cards, which can be mixed in the same broadcast network to match STBs with revenue potential.
- **ViewRight® DVB CI** – Single- and multi-stream Common Interface modules for consumer and professional decoding use.
- **ViewRight® CI+** –“CAM” module typically used with integrated digital TVs in Europe.

## Future Proof Solution to Changing Threat Model

As the video distribution industry is undergoing rapid changes, Verimatrix is focused on providing future proof – investment proof – solutions. VCAS for DVB is designed to be future proof in many aspects that should be taken into account when selecting a content and revenue security system for broadcast (one-way) networks.

VCAS for DVB is part of the multi-network VCAS platform that addresses, among else, the following aspects:

- Extension of operation to support video delivery over IP, either as IPTV or OTT, and hybrid DVB-IP/OTT
- Video watermarking, a requirement for licensing of premium content in the “early release window.” The Verimatrix VideoMark® solution enables watermarking at the STB level. Since content re-distribution is likely to be the main form of piracy form in the future, this kind of technology should be considered early.
- SOC hardening and increased security and countermeasures in cardless solutions. Verimatrix STB chipset partners have included new security technology in their latest products, which Verimatrix makes use of in its ViewRight STB client when operators choose these latest SOCs.

## Key Partnerships

The Verimatrix business strategy includes building and sustaining a network of strategic alliances with a broad range of the most significant pay-TV technology providers and CE manufacturers. These relationships, which emphasize seamless technology integration, ease of operation and extended value, enable Verimatrix to offer pre-integrated best-of-breed solutions to our customers and their users. The range of established partnerships is very wide and includes companies that offer products and services such as content aggregation, system integration, video processing, VOD servers, subscriber management and middleware systems, connected TVs, set-top boxes, and mobile devices.

## Verimatrix - Beyond Content Protection to Revenue Security

Verimatrix specializes in securing and enhancing revenue for multi-network, multi-screen digital TV services around the globe. The award-winning and independently audited Verimatrix Video Content Authority System (VCAS™) and ViewRight® solutions offer an innovative approach for cable, satellite, terrestrial, IPTV and OTT operators to cost-effectively extend their networks and enable new business models. As the established trend setter in cardless security solutions, the company has leveraged its innovative 3-Dimensional Security approach to provide a harmonized rights platform for premium content delivery to a range of devices over new hybrid network combinations. Maintaining close relationships with major studios, broadcasters, industry organizations, and featuring an unmatched partner ecosystem, enables Verimatrix to provide a unique perspective on digital TV business issues beyond content security as operators seek to deliver compelling new services.

- 3-Dimensional Security architecture for TV Everywhere applications
- Harmonized multi-network rights management across broadcast, streaming and file-based applications
- Market leading cardless security technology for broadcast and IP networks
- Enhanced HTTP Live Streaming (HLS) security
- Cross-DRM device and domain entitlement management – VCAS Super Domains
- Verimatrix ViewRight ONE multi-network embedded security client libraries



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DigitalGlue #

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