ENENSYS Networks

Scrambling Solution

ENENSYS scrambling offering is designed for the delivery of Pay TV services for Cable TV, IPTV and Mobile TV market.

- **Live Mobile TV broadcasting**
- **Live Bulk-encryption of Video On Demand Content**
- **Live TV-like encryption to re-use legacy STB, to fasten Catch-Up TV availability and to enable Network VOD services**

The ENENSYS scrambling solution is composed of standalone scramblers that aims at encrypting in real-time live TV or video-on-demand content to secure any audiovisual content. The scrambling solution portfolio ranges from the **CryptoCaster DVB-H** that scrambles live TV content for DVB-H based services, to the **CryptoCaster-VOD** that provides bulk-encryption of VoD content.

Integrated with major CAS vendors using the DVB-simulcrypt standard protocol, the ENENSYS scrambling offering supports the most widely deployed ciphering algorithms (DVB-CSA, ISMACryp) that makes the solution the ideal choice to deploy pay TV services. Although clear-to-air services may be already on-air, the network operator can easily integrate the ENENSYS scrambling solution within their network infrastructure to leverage their free-to-air TV services to advanced pay TV services.

Applications

- **Cable TV, IPTV**
  - Pay TV services for VoD content
  - Real-time bulk-encryption of VoD services
  - Instantaneous Catch-Up TV availability
  - Enable Network Time Shifting and Network PVR
- **Mobile TV**
  - Pay TV services for DVB-H networks
  - Real-time encryption for OMA-BCAST DRM, SCP and IPDC standards

Benefits

- Network infrastructure independent
- Easy migration
  - from clear-to-air to scrambled services
  - from free-to-air to Pay TV services
- Integrated with major CAS vendors
- Multi-CAS support capable
- Enables wide range of business models
- Standard-based solution
- Easy-to-use web-based GUI

Secure and Monetize

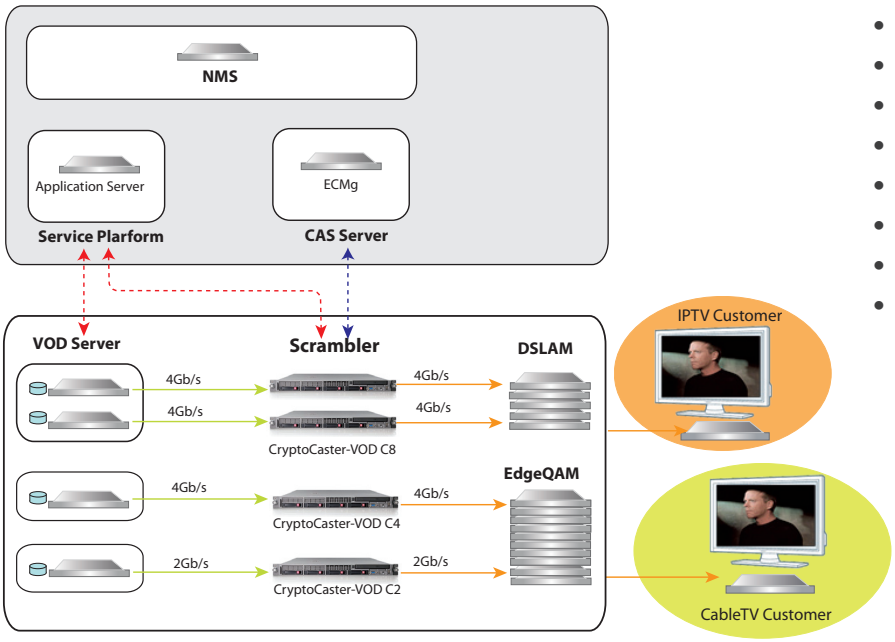
CryptoCaster-VOD

Bulk encryption server

The **CryptoCaster-VOD** is designed to receive MPEG-2 Transport Streams (SPTS) conveyed over IP network, to simultaneously encrypt them in real-time and to output over UDP the incoming streams encrypted.

The **CryptoCaster-VOD** relies on DVB-CSA cypher algorithm to perform its real-time encryption. It randomly generates the Control Word (CW) and encrypts the content with it. It communicates with a conditional access system (CAS) using the DVB-simulcrypt standard protocol to provide the control word and to receive the ECM to include into the stream.

The **CryptoCaster-VOD** provides a RTSP interface for the management of the VOD sessions. Service Delivery Plaforms can create, start, stop and delete VOD sessions throughout this interface. The **CryptoCaster-VOD** can also output VOD content without performing any encryption.



Applications

- VOD scrambling for IPTV and Cable TV
- Live TV-like scrambling of VoD content
- Catch-Up TV services
- Network Time Shifting and Network PVR

Benefits

- Fasten the availability of Catch-Up TV services
- Enable Network VOD services (NTS and NPVR)
- VOD encryption enabler for legacy Pay TV STB
- Transparent network infrastructure integration
- VOD servers agnostic
- No need to upgrade EdgeQAM/DSLAM pool
- Standard-based and open solution

Features

- Bulk encryption of VOD content
- Real-time scrambling of MPEG-2 SPTS streams carried over UDP/IP
- DVB-CSA cypher algorithm
- Standard DVB-Simulcrypt interface with CAS
- Multi-CAS capable
- PCR restamping
- Bypass support at stream level
- RTSP control for session management
- Statistics information of VOD sessions
- Easy-to-use web-based GUI

your Content

CryptoCaster-DVB-H

Broadcast Mobile TV scrambler

CryptoCaster is designed to scramble video and audio content to provide content protection and to guarantee secured revenues for any Mobile TV deployments.

Based on ISMACryp standard, the **CryptoCaster** can encrypt incoming RTP video and audio streams stemming from any encoding sources (professional or software based). The **CryptoCaster** retrieves the Session Description Protocol (SDP) file generated by the encoder to get the source stream and to include the necessary scrambling features.

The **CryptoCaster** integrates DVB-simulcrypt interface to integrate with any content and protection system. The standalone unit supports all the different content and protection standards for Mobile TV (DVB-OSF, OMA-DRM, OMA-BCAST SCP). Also it offers FTP facilities to enable ESG server to download the updated SDP files and broadcast an up-to-date ESG referring pay TV services.

Applications

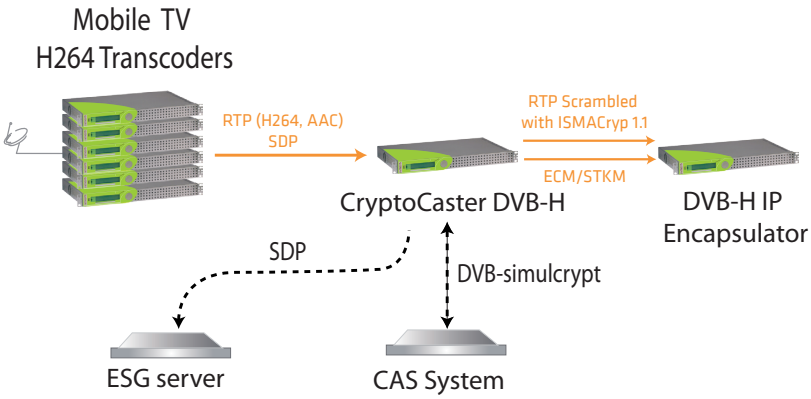
- Broadcast Mobile TV Pay TV deployments
- CAS integration with third-party encoders

Benefits

- Allows heterogeneous head-end from multiple vendors (coder/video server source agnostic)
- Simplifies migration from free-to-air to scrambled DVB-H head-end
- Multi-CAS capable with dedicated interfaces
- Integrated with major CAS vendors
- Support all Mobile TV SPP standards

Features

- Real-time encryption of MPEG-4 over RTP streams
- ISMACryp based encryption
- Standard DVB-Simulcrypt interface with CAS
- Byoass support at stream level to output clear-to-air service
- SDP generation with scrambling information
- FTP access for SDP download
- DVB-OSF, OMA DRM and OMA-BCAST SCP support



Scrambling Solution

ENENSYS Networks

Standalone real-time scramblers

CryptoCaster-VOD

Real-time bulk-encryption of VOD content for Cable TV and IPTV

Inputs	4x Gigabit data Ethernet inputs SPTS MPEG-2 TS over UDP
Outputs	4x Gigabit data Ethernet outputs Clear-to-air/scrambled VOD content SPTS MPEG-2 TS over UDP ECM over UDP
Content format	Clear-to-air VOD content (SPTS MPEG-2 TS) MPEG-2/MPEG-4 SD/HD video format
Control	1x Gigabit Ethernet for control/monitoring HTTP web-based GUI RTSP interface with Service Platform SNMP for integration with any NMS 1x Gigabit Ethernet for CAS interface DVB-simulcrypt protocol

CryptoCaster-DVB-H

Real-time encryption of live TV content for Mobile TV

Inputs	1x Gigabit data Ethernet input MPEG-4 AVC/HE AAC over RTP Multicast input stream
Outputs	1x Gigabit data Ethernet output Clear-to-air/Scrambled content MPEG-4 AVC/HE AAC over RTP ECM/STKM over RTP
Content format	Clear-to-air Audio/Video content H.264 / MPEG-4 AVC (ISO/IEC 14496-10) AAC-HE audio (ISO/IEC 14496-3)
Control	1x Fast Ethernet for control/monitoring HTTP web-based GUI FTP interface for SDP download HTTP interface for SDP fetch SNMP for integration with any NMS

Ordering

CryptoCaster-VOD

CryptoCaster-VOD-C2	Bulk-encryption of VoD content (Up to 2Gps)
CryptoCaster-VOD-C4	Bulk-encryption of VoD content (Up to 4Gps)
CryptoCaster-VOD-C8	Bulk-encryption of VoD content (Up to 8Gps)

CryptoCaster-DVB-H

CryptoCaster-DVB-H	Broadcast Mobile TV scrambler
Options	
Crypto-1Service	Scrambling of 1 additional service
Crypto1CAS	Management of an additional CAS

RoHS 2002/95/EC

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