



CONTENT PROTECTION SOLUTIONS

TELESTE

CONTENT PROTECTION SOLUTIONS FOR VARIOUS NEEDS

Protect content from unauthorised use

Operators are providing consumers a diversity of video content through their networks. Content owners and producers usually require the content to be transmitted in encrypted format to prevent unauthorised use and piracy. To enable this, the operators need to take advantage of content protection solutions providing the means for encryption and decryption.



Conditional Access

Conditional access (CA) is a technology used to control access to digital television services to authorised users by encrypting the transmitted programming. "Traditional" Conditional Access Systems (CAS) allow operators to sell channel-bundles, and access to these encrypted services is provided to customers with valid decryption rights. CA systems are provided by several companies; Conax, CryptoGuard, Irdeto, Mediaguard (a.k.a. SECA), Nagravision, NDS, Verimatrix, Viaccess are among the most known CA system vendors.

Digital Rights Management

Lighter and more cost-effective solutions for content protection are DRM (Digital Rights Management) based, and these can be used to securely deliver video across the network in hotels and resorts.

DRM solutions enable hospitality segment to protect content against piracy, but with DRM protection managing user rights of premium channels becomes difficult, and hotels cannot bundle channels precisely as cable television operators are used to. However, DRM solutions can be used together with Video-On-Demand solutions to sell movies or other premium content, even in the hospitality domain.

Pro:Idiom® by LG Electronics subsidiary Zenith Electronics is the most widely deployed Digital Rights Management system in the worldwide hospitality industry, and another widely spread solution is LYNK™ DRM by Samsung.

Luminato headend platform

Teleste Luminato headend platform is well integrated with all major conditional access systems. It includes a versatile selection of modules with DVB scrambling and descrambling. The Luminato can host DVB Common Interface modules for decryption as well as embedded software based content protection solutions. For the needs of the hospitality sector, the Luminato features LYNK DRM and Pro:Idiom Digital Rights Management support.

The Luminato is the most compact headend platform in the industry with minimal power consumption and cabling requirements. The chassis has six processing modules, and the module slots can be equipped with any combination of available Luminato receivers and output modules, depending on the application requirements. It is trusted by cable TV operators and Telco's of varying sizes and feature demands, and they all appreciate its unparalleled reliability and ease of use.

Receive content from various sources

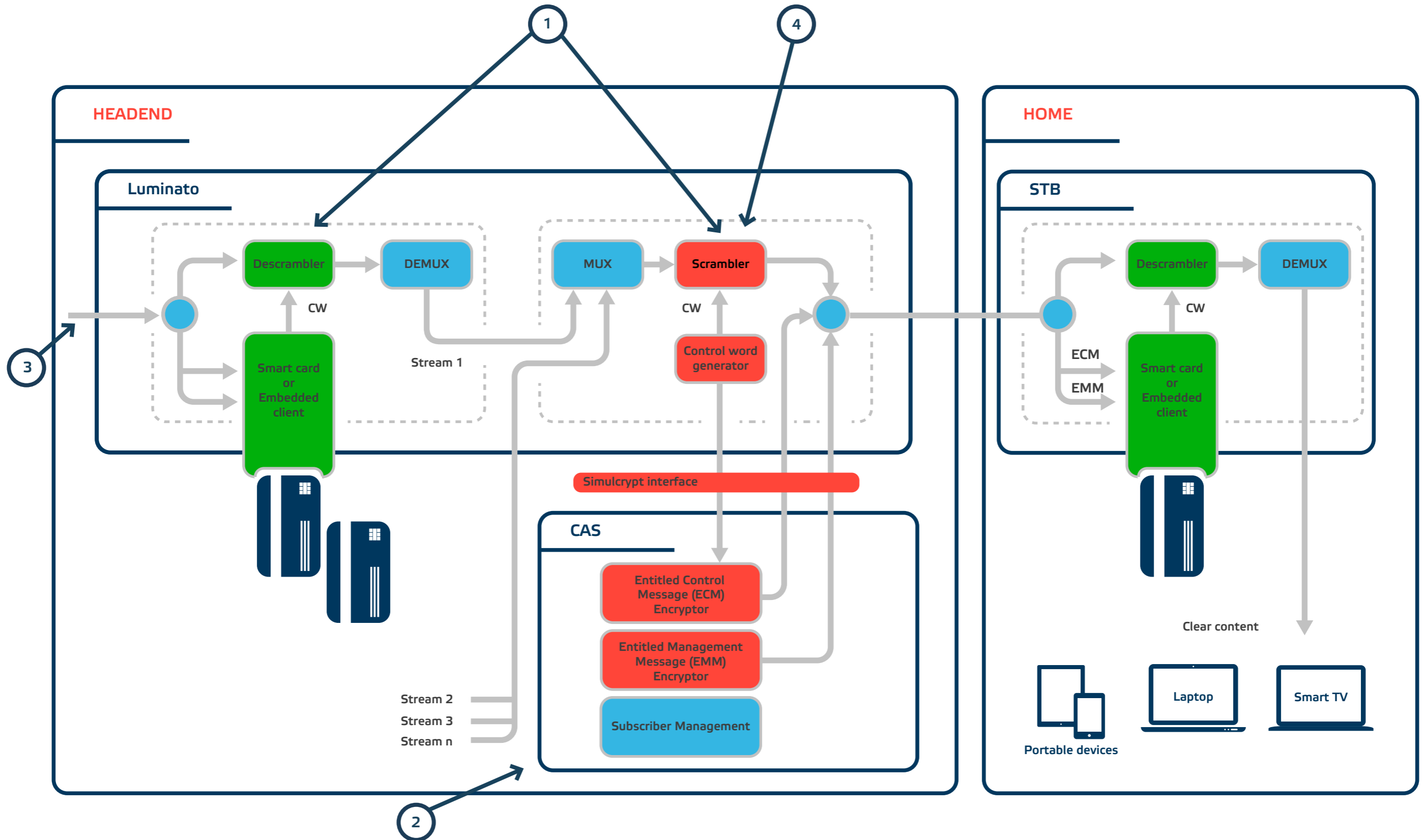
Operators have different service line-ups depending on the content they are offering to their customers. Teleste Luminato receivers feature built-in advanced transport stream-processing capabilities allowing a flexible selection of free-to-air and scrambled services from DVB-S/S2/S2X, DVB-T/T2, DVB-ASI, DVB-C or IP sources.

Satellite and terrestrial receivers are available as quad-receiver models or dual-receiver models with DVB descrambling. All Luminato module slots that are furnished with quad-receivers allow having up to 24 receivers in one RU chassis. One receiver can process multiple services, so the amount of received services can be vast.

Content protection in Luminato

1. Luminato can host DVB Common Interface modules as well as embedded software based content protection.
2. CA systems are provided by several companies; Conax, CryptoGuard, Irdeto, Mediaguard (a.k.a. SECA), Nagravision, NDS, Verimatrix, Viaccess are among the most known CA system vendors.

3. Luminato receivers allow a flexible selection of free-to-air and scrambled services from DVB-S/S2/S2X, DVB-T/T2, DVB-ASI, DVB-C or IP sources.
4. Encryption (scrambling) solutions are embedded in Luminato receivers and transmitters



Encryption and decryption in Luminato

Encrypting and decrypting content is accomplished in a single Luminato receiver module, avoiding external exposure of any decrypted content and preventing possible security breaches.

Encryption (scrambling) solutions are embedded in Luminato receivers and transmitters. The conditional access scrambling is done by interaction with the CAS (Nagra, Conax, etc.) through DVB Simulcrypt Interface.

The optional descrambling uses DVB Common Interface modules, flexibly supporting a large variety of Conditional Access Systems.

LYNK™DRM and Pro:Idiom® for the hospitality sector

The Teleste Luminato supports both LYNK DRM and Pro:Idiom technologies used for encrypting all content in hotels. LYNK DRM and Pro:Idiom decryption is embedded in selected hospitality grade televisions. LYNK DRM and Pro:Idiom are not encryption or decryption algorithms, traditional algorithms such as AES are still behind many DRM solutions.

Integration with the Luminato headend provides hoteliers with a simple way to deploy the Pro:Idiom or LYNK DRM systems: all that is needed are hospitality grade TV sets with support for Pro:Idiom or LYNK DRM in guest rooms and a single Luminato headend serving the entire hotel. There is no need to invest in additional set-top-boxes in guest rooms in order to decrypt the protected signal.

Pro:Idiom® is a registered trademark of Zenith Electronics LLC.



Conditional Access descrambling solutions

Conditional access descrambling solutions can be either embedded (cardless) or CAM based separate solutions requiring Common Interface Conditional Access Modules.

Bulk Descrambler

The Luminato Bulk Descrambler is an effective and inexpensive cardless alternative for CI based descramblers. A smart choice without smart cards.

Fully equipped Luminato Bulk Descrambler can decrypt 2 Gbit/s payload comprising of up to 300 streams. This enormous capacity is achieved when Luminato hosts one server card called LAB-A and five LIM modules. The supported descrambling algorithm is widely used AES.

Receiver modules

All relevant Luminato receiver modules can be equipped with CI cards to manage decryption. Luminato supports a vast selection of different Conditional Access Systems and offers you versatile opportunities for content aggregation from diverse sources. The receiver modules support two cards simultaneously. Both CI cards can be provided by the same CAS vendor to double the capacity, or by separate CAS vendors based on the incoming content encryption.

Luminato receivers are available in quad or dual configurations with DVB descrambling. Luminato module slots furnished with quad-receivers allow having up to 24 receivers and 12 CI cards in one RU chassis.

Application module

The Luminato Application module offers an additional way to integrate new content protection solutions into Luminato. The compact module is in fact a complete Linux computer providing an open platform for application development. The innovative opportunity has been realized by many Teleste partners and the first CA implementation is done by Swedish CryptoGuard.



Features

CONTENT PROTECTION			
Pro:Idiom® DRM		LYNK™ DRM	
Products	LPI-A	Products	All Luminato modules except LCM
Input capacity	120 streams	Input capacity	LYNKDRM embedded in the modules, limits defined in the module specifications
Scrambled services per module	8	Scrambled services per module	120
Max output bitrate	210 Mbit/s	Max output bitrate	LYNKDRM embedded in the modules, limits defined in the module specifications
Pro:Idiom®	Pro:Idiom® is a registered trademark of Zenith Electronics LLC		
Bulk Descrambler		DVB Common Interface Descrambling	
Products	One LAB-A server & up to 5 LIM modules	Products	All Luminato receivers except LRS-D, LAS-C
Descrambling capacity	5 x 60 streams (2 Gbit/s)	Descrambling capacity	Up to 192 Mbit/s (Transport stream bitrate)
Descrambling algorithm	AES	Interface	Dual PCMCIA
Supported CA systems	Verimatrix	Standard	DVB-CI EN50221
Authentication	Cardless, Software based	CA module	PC-Card type II
DVB CSA & AES Scrambling		Luminato Chassis	
Products	All Luminato modules except LCM	Scrambled services per chassis	720
Input capacity	Scrambling embedded in the modules, limits defined in the module specifications	Integrated CA systems	All main vendors
Scrambled services per module	120	Max number of connected CA systems	4
Max output bitrate	Scrambling embedded in the modules, limits defined in the module specifications	Max Number of ECM generators	4
		Max ECM streams in one ECM generator	256
		Max number of EMM streams	32





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