Multireceivers for Teleste Luminato platform

SATELLITE, TERRESTRIAL, CABLE, AND IP RECEIVER FOR VERSATILE NETWORKS

Teleste Luminato multireceivers, available as dual and quad versions, enable a vast selection of free-to-air and scrambled services, which can be adjusted to the operator's service line-up with the built-in advanced transport stream processing capabilities.

Flexibility for diverse needs

The Luminato quad and dual multi-standard receivers enable receiving services via DVB-S, DVB-S2, DVB-S2X, DVB-T, DVB-T2, DVB-C, ISDB-T and ITU-T J.83 A/B/C interfaces. The quad module features also two IP inputs for receiving video content over IP network.

Several possible input configurations simplify the system set-up and save space as less input modules are equired for receiving content from different sources. All input alternatives are enabled with software and available

without additional software keys/licenses. If you need satellite reception only, there is a cost-effective alternative for this purpose as well.

Efficiency and reliability

With advanced transport stream processing you can save bandwidth or otherwise simplify the outgoing stream content by selecting only services and components relevant to your network. The available tools provide high degree of automated features to minimise the cost of system set-up and operation.

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Multi-standard receiver in a nutshell:

- Two physical ports: Several possible input configurations
- Descrambling on all of the inputs
- DVB-S2X reception for efficient high bitrate satellite video
- Advanced transport stream processing
- All input alternatives are enabled with software and available without additional software keys/licenses

- High service availability with input stream redundancy
- Multiple services per receiver – high efficiency, lower investments
- Embedded security – services can't be accessed in unprotected format
- Hot swap as standard – swap the module and keep the configurations

Multiservice descrambling

Luminato receivers use DVB Common Interface modules to descramble incoming services. They are equipped with two Common Interface modules slots, and the Common Interface modules can be flexibly connected to either of the inputs. Each input can use separate Common Interface module, or one input can use both modules for descrambling higher number of services. When both descrambling slots are assigned to one input, then other input can still be used for free-to-air services.

Luminato chassis

The Luminato chassis has six module slots and the multireceiver module can be fitted to any of them. Advanced video processing can be performed in the receiver module and additional output modules are not necessary in pure IP based headend solutions.

Support for numerous video & audio formats

The Luminato multireceiver supports video resolutions from SD (Standard Definition) to UHD (Ultra High Definition) in MPEG-2, MPEG-4 AVC and HEVC video formats and numerous audio formats such as AAC or MPEG.
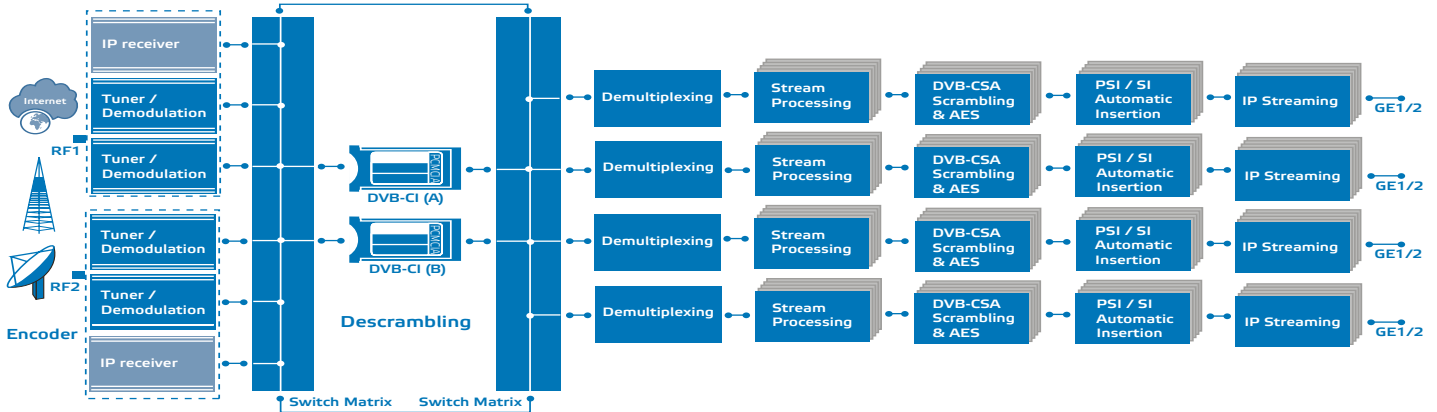
Block Diagram

Embedded content protection

No additional hardware is needed for the embedded DVB Common Scrambling Algorithm and AES content protection, and the user can freely select which services will be scrambled. Component level scrambling allows scrambling only video and audio and to leave other streams untouched to avoid descrambling challenges in set-top boxes.

Interoperability as a standard

The output of the receivers is always fully DVB compatible IP stream containing automatically generated PSI/SI streams. The output can be either carried as Multi Program Transport Stream or de-multiplexed to Single Program Transport Streams, which are directly suitable for IPTV networks and allow highly flexible stream routing and re-multiplexing on Cable TV networks.
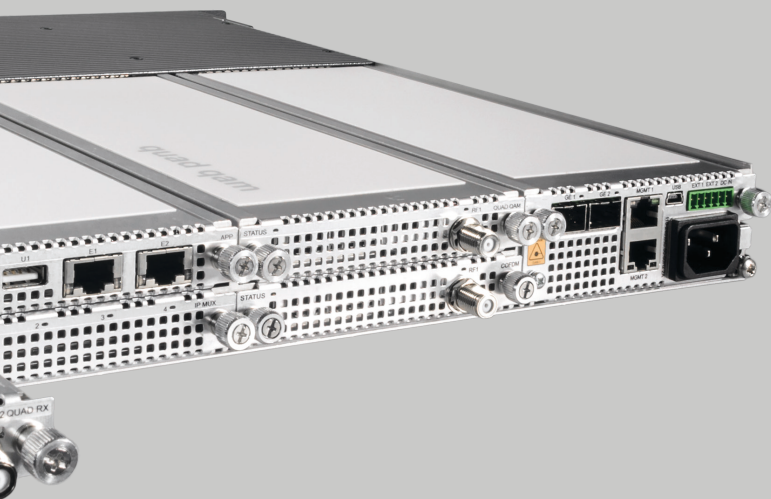
Emergency signal streaming

A useful function for added security and safety. All output services in MPTS or SPTS streams can be overridden with a user specified multicast stream content. In case of emergency or other significant trigger event, all existing services can be replaced with emergency channel to transmit instructions to every connected viewing point.

LUMINATO MULTIRECEIVER

Parameter	Specifications	Note	Parameter	Specification	Note
Satellite receiver RF input – DVB-S / DVB-S2 / DVB-S2X			**IP Input (quad module only)**		
Impedance	75 ohm		Packet format	UDP/IP 1...7 TS packets per frame	
Frequency range	950 ... 2150 MHz		Traffic type	unicast or multicast	
AFC Range	8 MHz		Input streams per module	2	
Constellation	QPSK, 8PSK, 16APSK, 32APSK		Maximum bitrate per input	192 Mb/s	
FEC modes (autodetected)	All ratios compliant with ETS302307		Bitrate format	CBR & VBR	
Spectral Inversion	Automatic				
Signal levels	-70... -25 dBm		**IP Streaming**		
Symbol rate	1,5...67,5 MS/s		Packet format	1...7	DVB transport packets in UDP/IP or RTP/P
Transport Stream Bitrates per input	up to 145 Mb/s		Traffic type	unicast or multicast	
Adjustable LNB voltage	off/13/18 V		Max. IP streamer per module	120	
Max output current per connector	500 mA	2)	Max. streaming capacity per module	394 Mb/s 490 Mb/s	CSA scrambling AES scrambling
22 kHz tone	on/off		**DVB Common Interface Descrambling**		
DiSEqC	v 1.1		Connector	PCMCIA	dual slots
Standard	ETS300421, ETS302307, BlueBook A83-1	DVB-S, DVB-S2	Standard	DVB_CI EN50221	
	EN302307-2/ BlueBook A83-2	DVB-S2X	CA module	PC-Card type II	
Terrestial receiver RF input – DVB-T / DVB-T2 / ISDB-T			TS bitrate	up to 192 Mbit/s	
Impedance	75 ohm		**DVB CSA and AES Content Protection**		
Frequency range	47...862 MHz		Max services to be scrambled per module	120	
Constellation	QPSK, 16QAM, 64QAM	DVB-T/T2/ISDB-T	**DC Feed**		
	256QAM	DVB-T2	Adjustable voltage	off/13/18 V	1)
	DQPSK	ISDB-T	Max output current per connector	500 mA	2)
FEC modes (autodetected)	All ratios compliant with standards		**General**		
Adjustable voltage	off/13		Supply voltages	24 V	
Max output current per connector	500 mA	2)	Power consumption	14 W	3)
OFDM spectrum	2k, 8k	DVB-T	Connectors, RF	F female	
	2k, 4k, 8k	ISDB-T	Dimensions	20 x 109 x 253 mm	h x w x d, 4)
	1k, 2k, 4k, 8k, 16k, 32k	DVB-T2	Weight	0,3 kg	
Segments	Full (13seg)	ISDB-T	Enclosure classification	IP21	
Signal levels	-90 ... -20 dBm		Operating temperature	-10...+55 ºC	
Channel Bandwidth	6, 7, 8 MHz		Storage temperature	-30...+70 ºC	
Transport stream bitrates per RF input	According to standards		Specification is met	0...+45 ºC	
Standard	EN300744	DVB-T			
	EN302755 V1.4.1	DVB-T2	**Notes**		
	Nordig unified ver 2.2.1	DVB-T/T2	1) On terrestrial reception 13 V only		
	ABNT NBR 15601	ISDB-T			
Cable receiver RF input - DVB-C			2) Do not exceed the chassis PSU total power capacity when feeding external devices.		
Impedance	75 ohm				
Frequency range	110...862 MHz		3) Excluding CAM modules and DC feed.		
Constellation	16QAM, 64QAM, 128QAM, 256QAM		4) Dimensions excluding connectors and locking screws.		
FEC modes (autodetected)	All ratios compliant with standards				
Levels	-65...-32 dBm				
Channel bandwidth	7, 8 MHz				
Symbol rate	4... 7,2 MS/s				
Standard	ITU-T J.83 Annex A,B and C				
	EN 300 429				
	Nordig unified ver 2.2.1				

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