

TELESTE



Dense modulator for the Luminato 4X4 platform

VIDEO ENGINE OPTION

The Luminato 4X4 dense modulator supports L2TP encapsulation and works as a video engine besides multiplexer and modulator functions that it includes as well.

Comprehensive interoperability

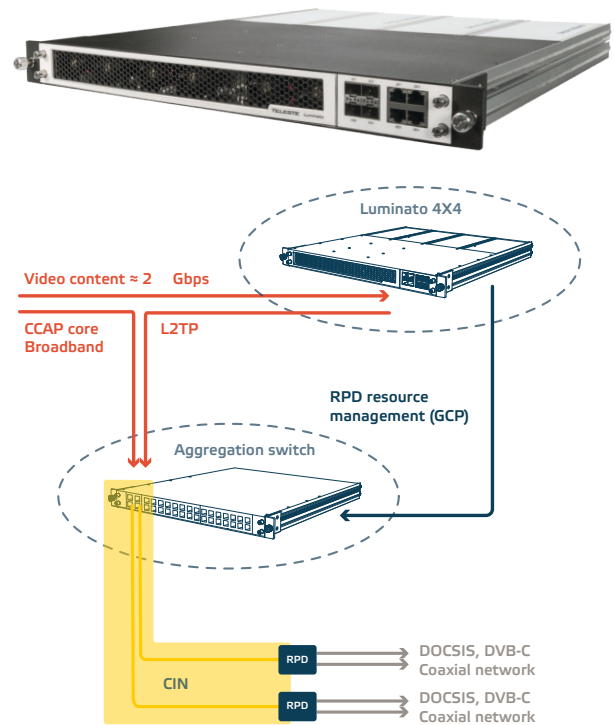
The video engine, together with Teleste video auxiliary core, is a robust solution for operators who know challenges of channelling and managing video services through the DOCSIS CCAP core. The solution allows broadcasting of television services over distributed access (DA) networks while subscribers can keep existing set top boxes. The distributed access networks can be Remote PHY and Remote MACPHY based and built using Teleste's DA products or other standard-based DA products. The Luminato 4X4 video engine together with the video core relieves DOCSIS CCAP core capacity for the traditional broadband data while robustness and manageability of linear video transmission remains superior, and DOCSIS CCAP core software upgrades or configuration changes do not impact availability of video core and engine resources.

Versatile video engine

The dense modulator with the video engine is fully compatible with the Luminato 4X4 chassis, where it can be fitted into any of the six module slots. In accordance with the Luminato system architecture, the transport stream video processing can be performed in the same module. This enables low-cost applications with a partially equipped chassis while performance can be scaled up by adding modules incrementally. The module supports free-to-air and scrambled services from IP stream sources, which can be adjusted to the operator's service line-up with the built-in advanced transport stream processing capabilities. The dense modulator with the video engine is compatible with SD, HD and UHD video standards in the MPEG-2, MPEG-4 AVC and HEVC video formats and numerous audio formats.

Luminato 4X4 – video gateway on DAA

The Luminato 4X4 platform can be used to integrate linear broadband channels without expensive video headend upgrades. The platform can act in a video engine and video core roles. The Luminato 4X4 video engine configuration uses QAM modules to form L2TP encapsulated multiplexes that are transmitted through the Converged Interconnect Network (CIN) and QAM modulated in RPDs. The DVB-C broadcast resources are managed by the Luminato Video Core module supporting a Generic Control Plane (GCP) connection. The pure encapsulation is not enough to manage broadcast channels in the same way as before, but the video core functionality embedded in one Luminato 4X4 module liberates video experts to manage broadcasting in the same familiar manner that has been proven to work at all times. Although edge QAMs are in the field, their channels can be configured and managed as they would be when edge QAMs were physically next to the video headend.



IP INPUTS		OUT OF BAND NOISE, 1)	
Frame formats	UDP/IP	< -60 dBc	1st adj. channel
TS packet per UDP frame	1...7	< -64 dBc	2nd adj. channel
Max inputs streams/module	1000	< -70 dBc	3rd adj. channel
Dejittering	PCR processing & buffering	< -70dBc	other channels
MULTIPLEXERS		Harmonics	< -63 dBc
Number of multiplexers	32	MER	> 45 dB
Max input services/multiplexer	120	IP STREAMER OUTPUT	
Max components per service	32	Framing format	L2TP encapsulated (DEPI) or raw UDP/IP
DVB COMMON SCRAMBLING ALGORITHM CONTENT PROTECTION		TS format	CBR, VBR
Max scrambled services	480 per module	Max TS packet speed/streamer	directly related to QAM output speed
QAM OUTPUT		GENERAL	
Standard	ITU-T J.83 Annex A, B and C	Power consumption	37 W
QAM constellations	Docsis CM-SP-DRFI-I16-170111 (64, 128, 256)	Supply voltage	24 V
Symbol Rate	4...7,4 MS/s	Connectors	F 75 Ω, RJ45
Impedance	75 ohm	Dimensions (h x w x d), 2)	(20 x 109 x 253) mm
Output return loss	>14 dB active channel	Weight	0,3 kg
	>12 dB out of act. ch 81...862 MHz	Enclosure classification	IP21
	>10 dB out of act. ch 862...1200 MHz	Operating temperature range	-10...+55 °C
Output Level	102 dBμV 21...32 channels	Storage temperature range	-30...+70 °C
	104 dBμV 17...20 channels	Specification is met	0...+45 °C
	105 dBμV 13...16 channels	Notes	
	107 dBμV 7...12 channels	1) Values for at least quad channels active.	
	110 dBμV 1...6 channels	Excluding harmonics	
Output Power step size	0,2 dB	2) Dimensions excluding connectors and locking screws	
Output center frequency	50...900 MHz or 100...1000 MHz		
Output frequency step size	50 kHz		

TELESTE

TELESTE CORPORATION
www.teleste.com

P4P_Luminato 4X4 Dense QAM module with video engine option_0922

Copyright © 2022 Teleste Corporation. All rights reserved. Teleste and the Teleste logo are registered trademarks of Teleste Corporation. Other product and service marks are property of their respective owners.

Teleste reserves the right to make changes to any features and specifications of the products without prior notice. Although the information in this document has been reproduced in good faith, the contents of this document are provided "as is". Teleste makes no warranties of any kind in relation to the accuracy, reliability or contents of this document, except as required by applicable law.