

COFDM output multiplexer for Luminato platform

Dual/quad COFDM module for Luminato platform

The dual/quad COFDM module enables flexible multiplexing of SPTS and MPTS video services as well as PSI/SI table streams. High quality DVB-T modulation with agile up conversion provides easy adaptation to DVB-T delivery over HFC-network.



Versatile functionality

The Teleste Luminato dual/quad COFDM modules provide an advanced DVB-T platform for Cable TV operators. The COFDM module enables flexible multiplexing of SPTS and MPTS video services and also PSI/SI table streams. High quality QAM modulation with agile up conversion provides easy adaptation to DVB-T delivery over HFC-network.

The Luminato dual/quad COFDM multiplexers support selection of 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 Luminato dual/quad COFDM module support Standard Definition and High Definition video in MPEG-2 and MPEG-4 AVC video formats and numerous audio formats.

Effective flexibility

Luminato dual/quad COFDM module is fully compatible with the high-performance Luminato chassis, where it can be fitted freely to any of the six module slots. In accordance with the Luminato system architecture, the video processing is performed on the dual/quad COFDM modules, which enables low-cost applications even with partially equipped chassis, while having the performance scalability to fully equipped chassis.

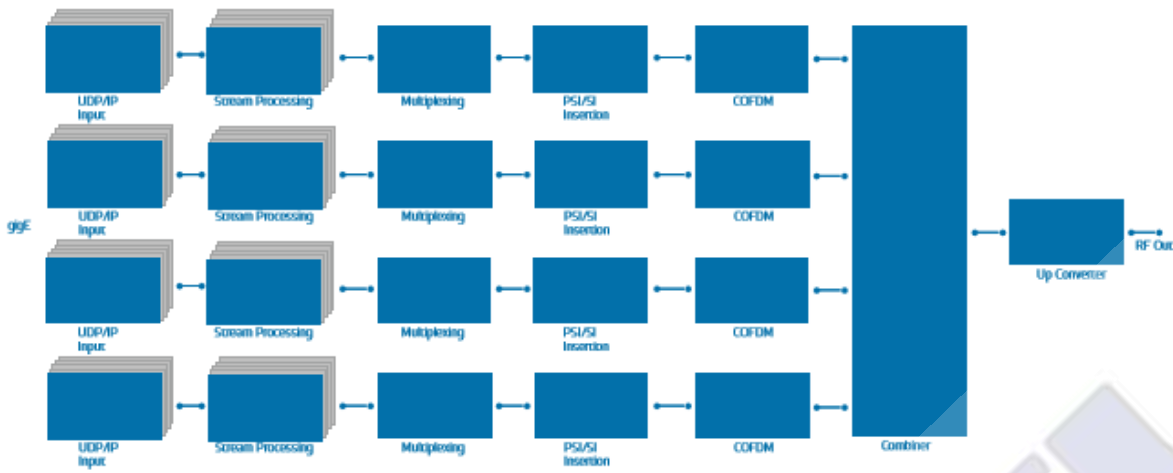
Complete cable TV headend in 1 RU

As one or more dual/quad COFDM modules can be included in 1 RU Luminato platform with Luminato DVB-S, DVB-S2, DVB-ASI, DVB-T receivers and QAM modules, together they can form a complete cable TV headend. This provides an effective way for receiving services from multiple sources as well as ingesting them to network in various formats.

Efficiency and reliability

With the advanced transport stream processing, operator can select the services and components which are relevant to his network. The Luminato will follow-up any changes on the stream to automatically readjust the processing to provide uninterrupted service. This will allow the operator to efficiently manage network capacity usage.

The available tools provide high degree of automated features to minimise the cost of system set-up and operation, and avoiding downtime due to changes in the received services.



Block Diagram, Quad COFDM Out

Features

- DVB TS over UDP/IP reception
- IP address / UDP port selector for input streams
- Network dejittering
- PCR processing
- Advanced transport stream processing
- Multiplexing
- Automatic PSI/SI table generation
- Custom PSI/SI creation and streaming
- High quality COFDM modulation
- Agile upconversion

Technical specifications

Parameter	Specification	Note	Parameter	Specification	Note
IP inputs			General		
Frame formats	UDP/IP	1...7 TS packets/frame	Power consumption	15 W	
Max inputs streams/module	128		Supply voltages	24 V	
Dejittering buffersize	200 ms	adj. 100...500 ms	Connectors, DVB-T RF out	F	
Multiplexers			Dimensions	20 x 109 x 253 mm (HxWxD), 1)	
Number of multiplexer	2 or 4	2)	Weight	0,4 kg	
Max input service/multiplexer	64		Enclosure classification	IP21	
Max components per service	32		Operating temperature range	-10...+55 °C	
Output speed	depends on COFDM modulator settings		Storage temperature range	-30...+70 °C	
COFDM Output			Specification is met	0...+45 °C	
Transmission mode	2K, 8K		Notes		
Transmission Guard Interval	1/32, 1/16, 1/8, 1/4		1) Dimensions excluding connectors and locking screws		
QAM constellations	QPSK, QAM16, QAM64		2) Dual/Quad COFDM module can have 2 modulators in 8K transmission mode and 4 modulators in 2K transmission mode		
HO code rate	1/2, 2/3, 3/4, 5/6, 7/8		3) Values for quad channels active. Excluding harmonics (8 MHz channel)		
Impedance	75 ohm		4) Typical value outside 100 MHz of active channel block (8 MHz channel)		
Output return loss	>14 dB	active channel			
	>12 dB	act. ch 81...862 MHz			
	>10 dB	act. ch 862...1000 MHz			
Output Level, 5)	102 ... 112 dBμV	Four adj. channels			
	104 ... 114 dBμV	Three adj. channels			
	106 ... 116 dBμV	Two adj. channels			
	110 ... 120 dBμV	One channel			
Output Level accuracy	+/- 2 dB				
Output Power step size	0,2 dB				
Output center frequency	85...999 MHz				
Output frequency accuracy	+/- 30 kHz				
Output frequency step size	50 kHz				
Out of band noise, 3), 5)	<-58,5 dBc	1st adj. channel			
	<-62 dBc	2nd adj. channel			
	<-64 dBc	3rd adj. channel			
	<-66 dBc	other channels			
	-70 dBc	other channels, 4)			

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