

# High-quality Broadcast TV Services for Versatile Deployments - Luminato X32

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Provided by: Mega Hertz | 800-883-8839 | [info@go2mhz.com](mailto:info@go2mhz.com) | [www.go2mhz.com](http://www.go2mhz.com)



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## Reasons for delivering broadcast TV signal to consumers

Delivering main tv channels as broadcast next to streaming services

All consumer reception devices not having IP-reception still

Competitive edge

Regulation (e.g. must-carry channels)

Generating revenue still with minimal investments required



# Different architectures to transmit broadcast TV



## Traditional eQAM product

- From big to small networks
- More parameters to monitor
- Advanced stream processing capabilities
- Bigger buffering capacity and normal multicast reception
- Management via WebUI, CLI and Argus
- Single/multiple unit deployment(s)
- Price \*\*\*



## Remote PHY (RPD)

- For smaller networks
- Very limited input parameters to monitor
- Small buffering and separate L2TP tunnelling
- Management via Aux Core/GCP
- Multiple unit deployments
- Price \*\*



## Luminato X32 Mini eQAM

- Small to medium networks
- More parameters to monitor
- Advanced stream processing capabilities
- Bigger buffering capacity and normal multicast reception
- Management via Argus, WebUI and CLI
- Multiple unit deployments
- Price \*

# Seamless TV Delivery Across Diverse Networks

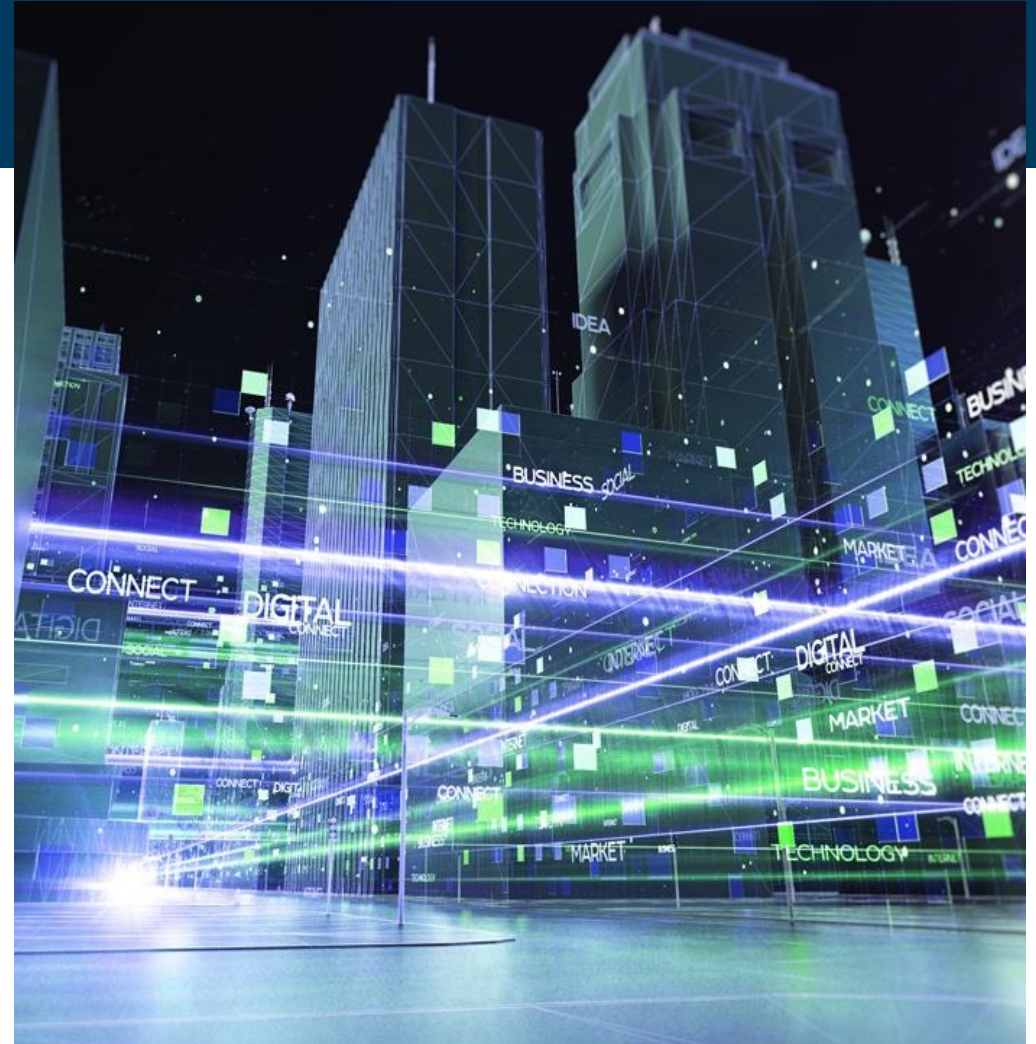
Traditional Edge QAMs meant for large operator deployments

**Need for cost-effective solution** with smaller subscriber count per device, like in hospitality

Eliminate hard-to-maintain EDFA cascades, simplifying broadcast TV distribution by **replacing legacy RF-overlay** architectures

**Integrate to PON solutions** by complementing with broadcast TV services without additional IP-based set-top boxes

Professional approach in **Distributed Access Architectures** for RPD/RMD nodes for broadcast TV delivery



# Luminato X32 – Versatile Mini Edge QAM

Newest member of Luminato Product Family

32 Independent QAM Channels

Silent and Reliable Operation

Optimized configuration and price level

All-Inclusive Functionality



32 QAM channels

10G input for payload and management

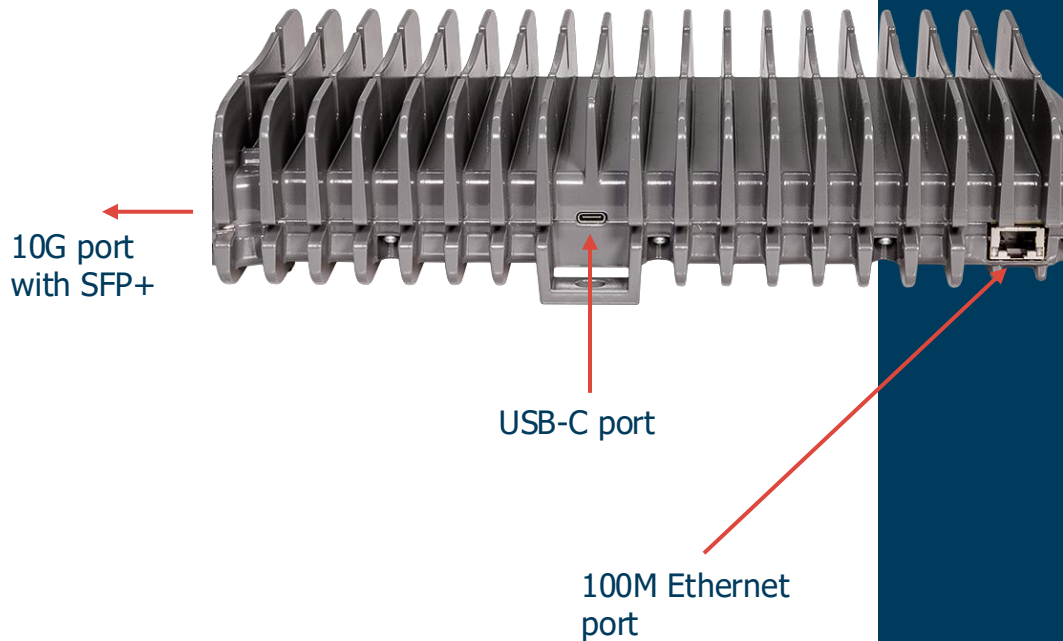
External power supply

## Interfaces tailored for effective use

High-throughput 10G IP input (SFP+) for shared payload (SPTS/MPTS) and management

USB-C port to access device locally

Separate management port (RJ45)



# Configuring / managing Luminato X32 deployments



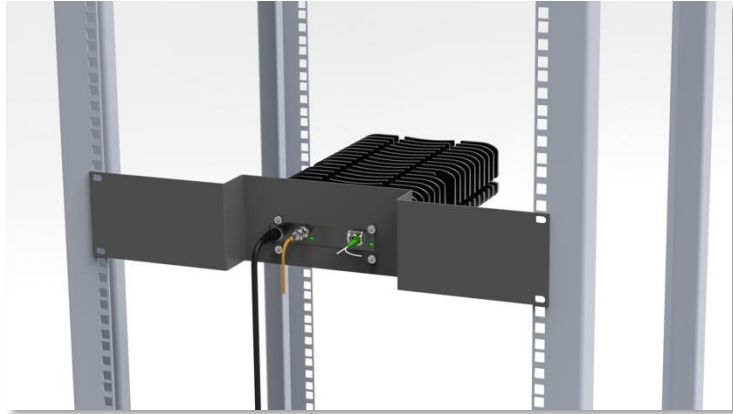
CLI and WebUI for single device configuration

Centralized management and status monitoring with Argus Luminato Manager

SNMP monitoring and traps

REST API as interface for Teleste Argus and 3<sup>rd</sup> party management systems

# Luminato X32 – Installation



IP rating 20 (normal headend premise)

Front-mounting bracket included for standard 19-inch rack installations



Bracket design takes into account cables protection

Product design enables also installation into wall

# X32 package contains



Luminato X32



Power supply



19" Rack assembly  
plate

# Carrier-class broadcast quality throughout the entire infrastructure



## LUMINATO 4X4



Master headends with central multiplexing and scrambling.  
Edge QAM for large subscriber bases with carrier-class redundancy requirements.



## LUMINATO X32

Cost-effective solution with optimized configuration, targeted for smaller networks

# Feature matrix 4X4 vs. X32

Feature	Luminato X32	Luminato 4X4
		
<b>Number of QAMs</b>	<b>32</b>	<b>Up to 192</b>
<b>No. of mgmt ports</b>	<b>1</b>	<b>Up to 8</b>
<b>No. of payload ports</b>	<b>1</b>	<b>Up to 7</b>
<b>HW redundancies (PSU, 1+1, N+1, Port)</b>	<b>No</b>	<b>Yes</b>
<b>Cooling</b>	<b>Passive</b>	<b>Active</b>
<b>Stream redundancy</b>	<b>Yes</b> (within 1 physical port)	<b>Yes</b>
<b>Management interfaces</b>	<b>WebUI, CLI, API</b>	<b>WebUI, CLI, API</b>
<b>IP outputs</b>	<b>No</b>	<b>Yes</b>
<b>Mass configuration and management</b>	<b>Argus Luminato</b>	<b>Argus Luminato</b>
<b>Monitoring interface</b>	<b>SNMP</b>	<b>SNMP</b>
<b>Multiplexing</b>	<b>Yes</b>	<b>Yes</b>
<b>Scrambling</b>	<b>No</b>	<b>Yes (Europe)</b>
<b>PSI/SI editor</b>	<b>No</b>	<b>Yes</b>
<b>License enabled features</b>	<b>No</b>	<b>Yes</b>
<b>SLA</b>	<b>Yes</b>	<b>Yes</b>



# Luminato X32 Roadmap

# X32 Product schedule and planned roadmap

1/2025

6/2025

9/2025

12/2025

First X32 version

X32 roadmap features

DVB-C  
No multiplexing  
No WebUI

Customer  
samples  
and product  
launch at  
Anga

General  
availability  
Multiplexing  
WebUI

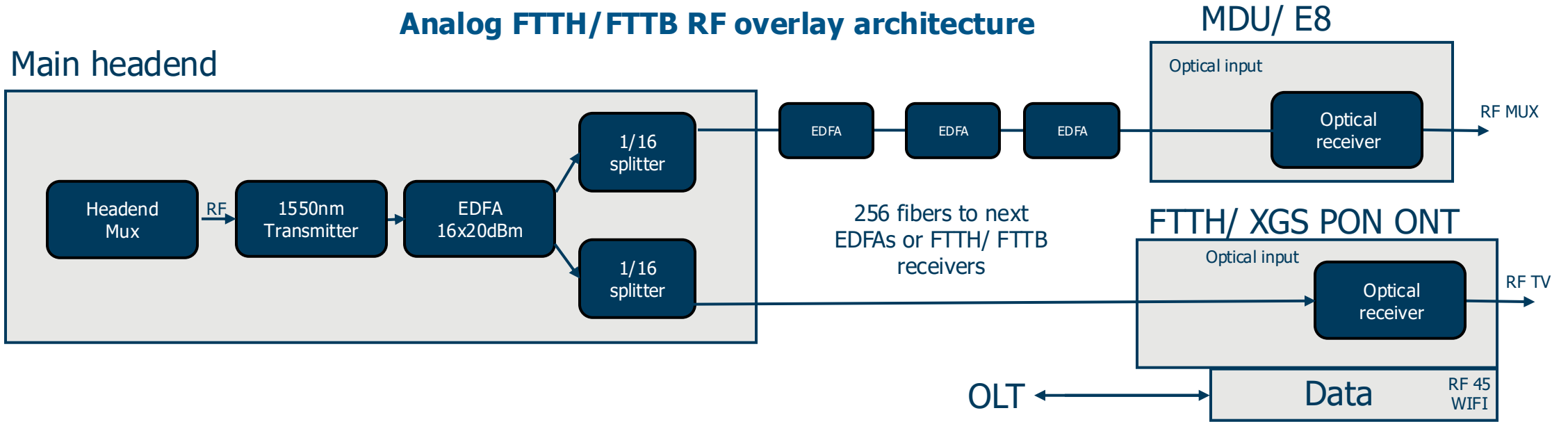
ISDB-T output  
DVB-T output  
DVB-T2 output  
L2TP input



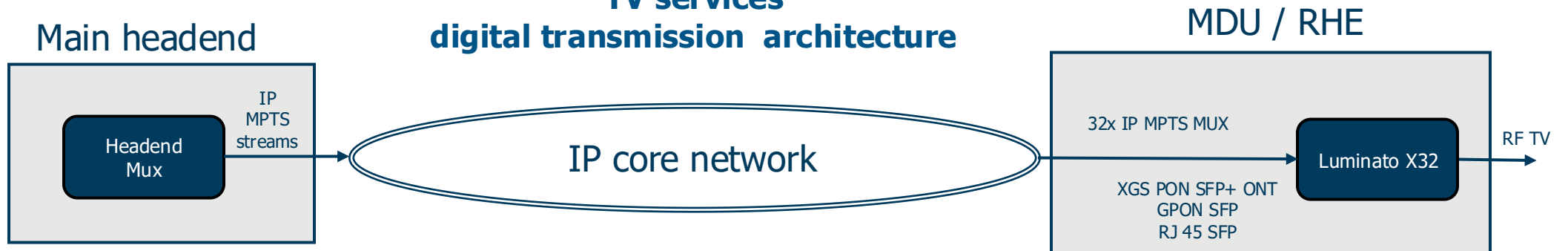
# **Luminato X32 for MDU architectures**

# Analog RF overlay vs. future digital transmission architecture for MDU/RHE

## Analog FTTH/FTTB RF overlay architecture



## TV services digital transmission architecture



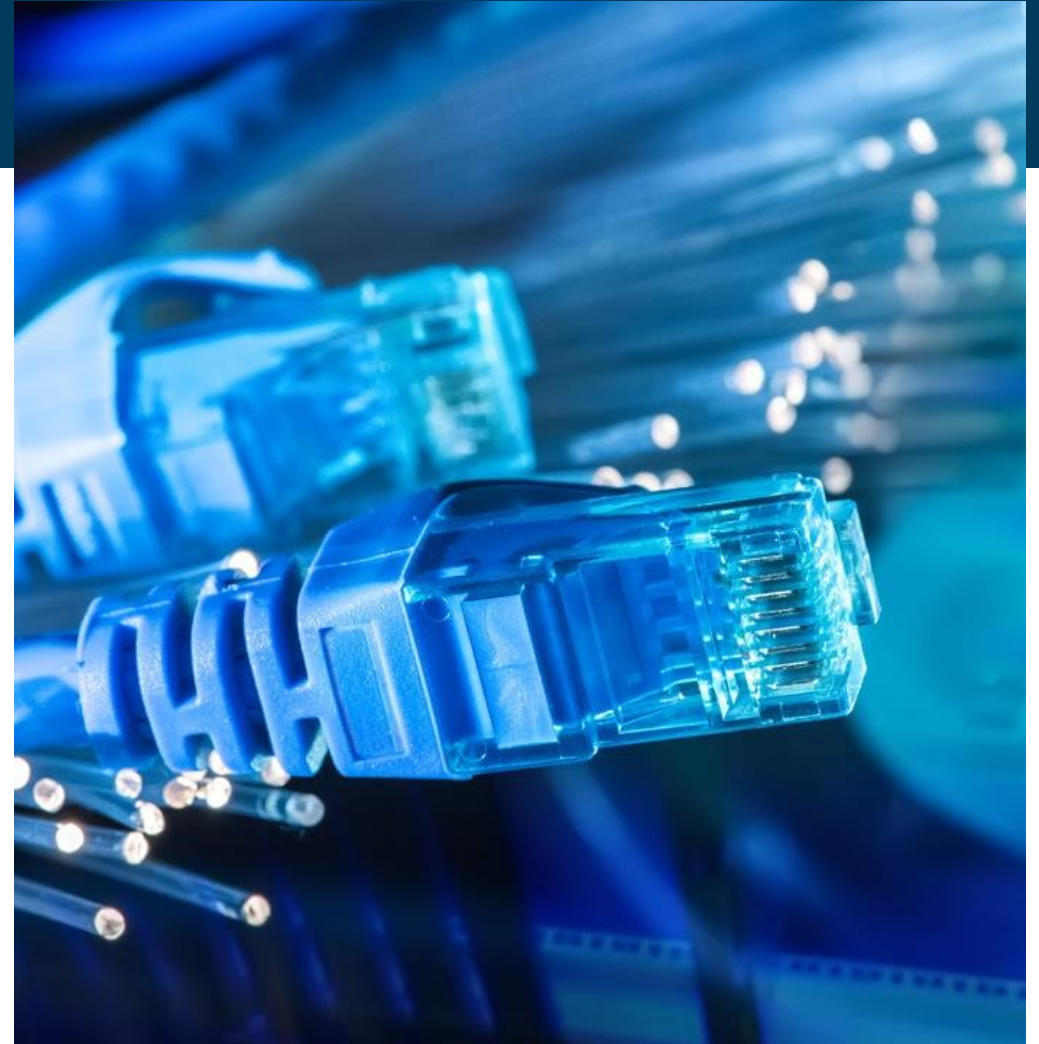
# Use cases when delivering broadcast TV effectively over IP core network

## MDU / RHE Edge QAM

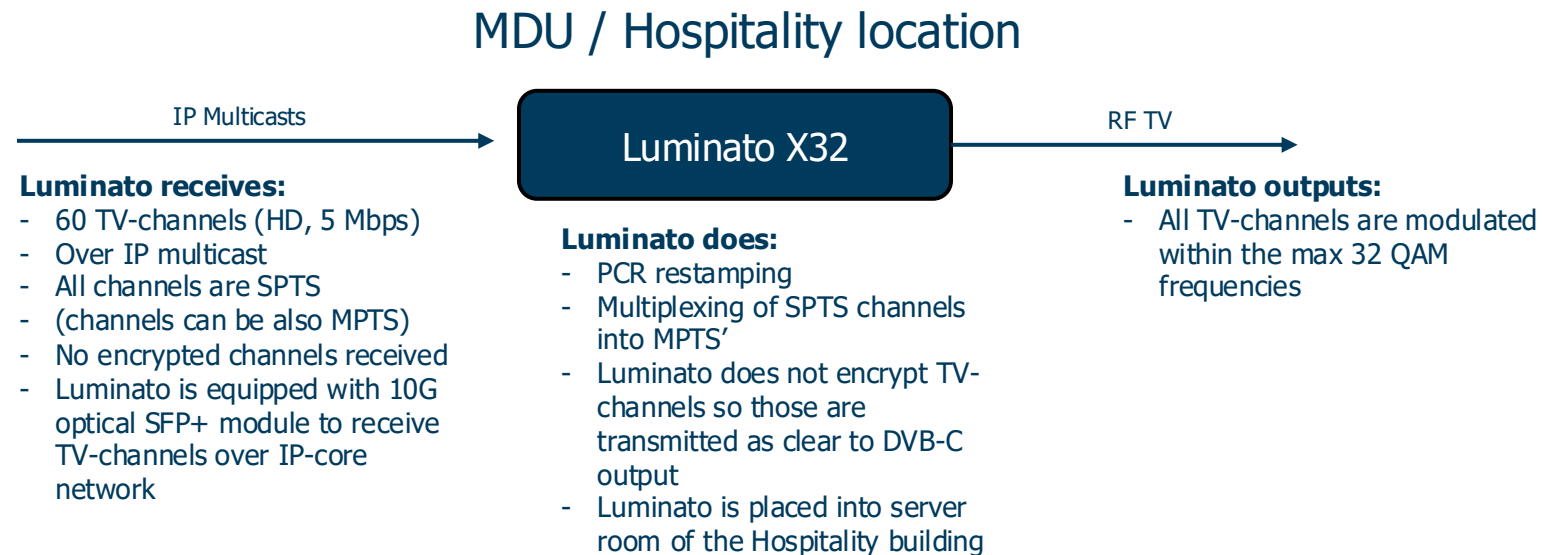
- Optimised for 32QAMs pass through operation
- Stream redundancy ensures the service availability
- Supported by Teleste's NMS Argus Luminato Manager

## Different network types supported:

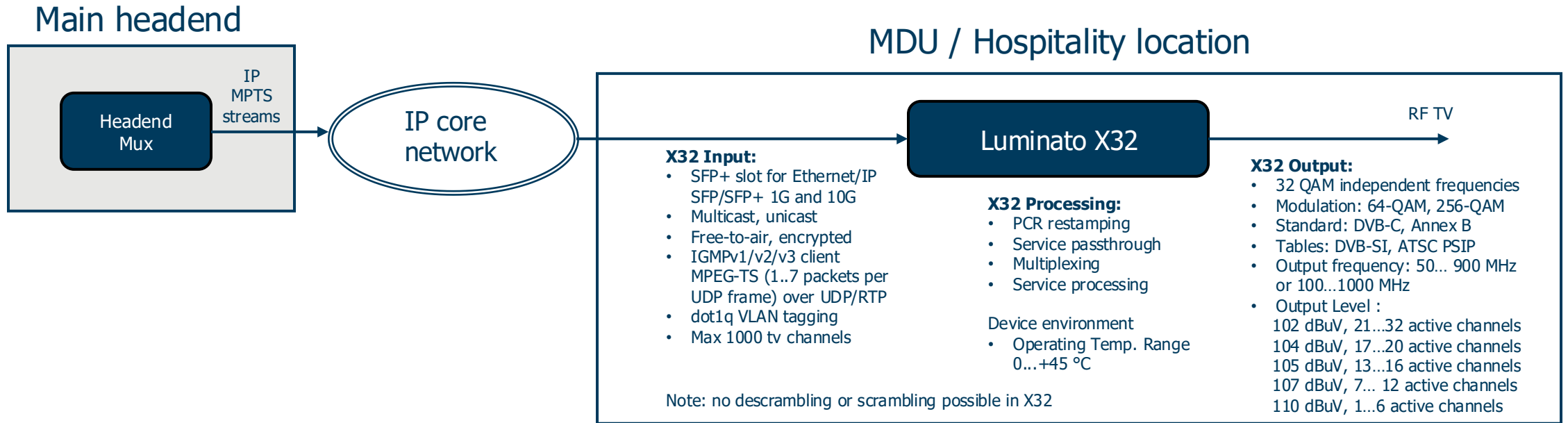
- PON solutions (e.g. XGSPON)
- Point-to-point ethernet
- DOCSIS (e.g. RPD/RMD)
- g.Fast
- Other broadband solutions



# Luminato X32 – Example use case



# Luminato X32 – Input and output possibilities



## Available Luminato X32 SFP/SFP+ module types

- Electrical CAT5 (100m) 10/100/1000Base-TX SFP module, RJ-45 connector
- Optical MMF 850nm (550m) 1000Base-SX SFP module, Dual LC optical connector
- Optical MMF 1310nm (2km) 1000Base-SX SFP module, Dual LC optical connector
- Optical SMF 1310nm (10km) 1000Base-LX SFP module, Dual LC optical connector
- Optical SMF 1310nm (30km) 1000Base Fibre channel SFP module, Dual LC optical conn.
- Optical SMF 1550nm (70km) 1000Base-XD SFP module, Dual LC optical connector
- SFP 1G Copper
- SFP+ 100M/1G/10G Copper
- SFP+ 10G Optical MMF 850 nm
- SFP+ 10 G Optical SMF 1310 nm, 10 km

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<https://www.go2mhz.com/product/luminato-x32-mini-edge-qam/>



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