

# WISI OPTOPUS

## High Density Optical Platform for FTTx and HFC



**Hypex** THE NAME BEHIND GREAT TECHNOLOGY



*excellence in digital ...*

## Optical Platform for FTTx and HFC

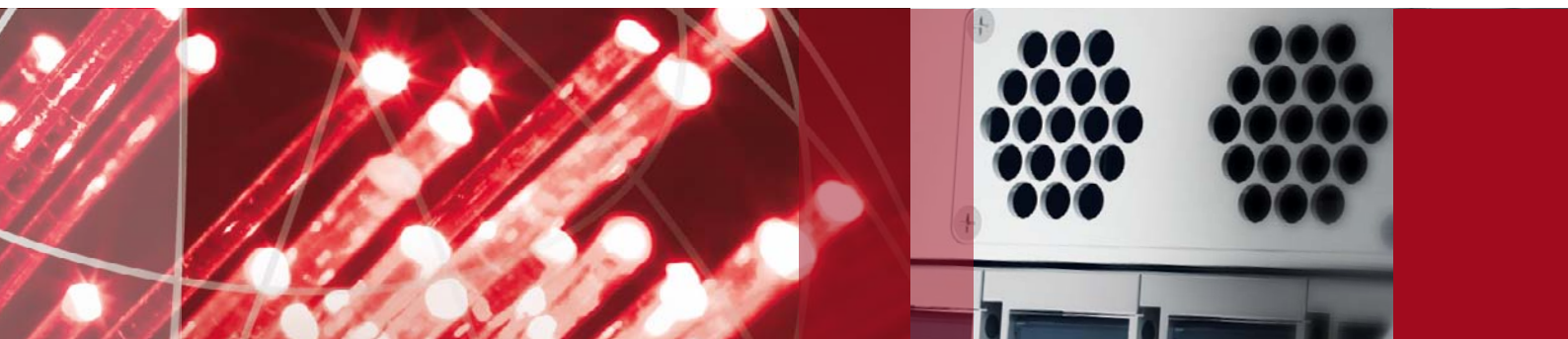
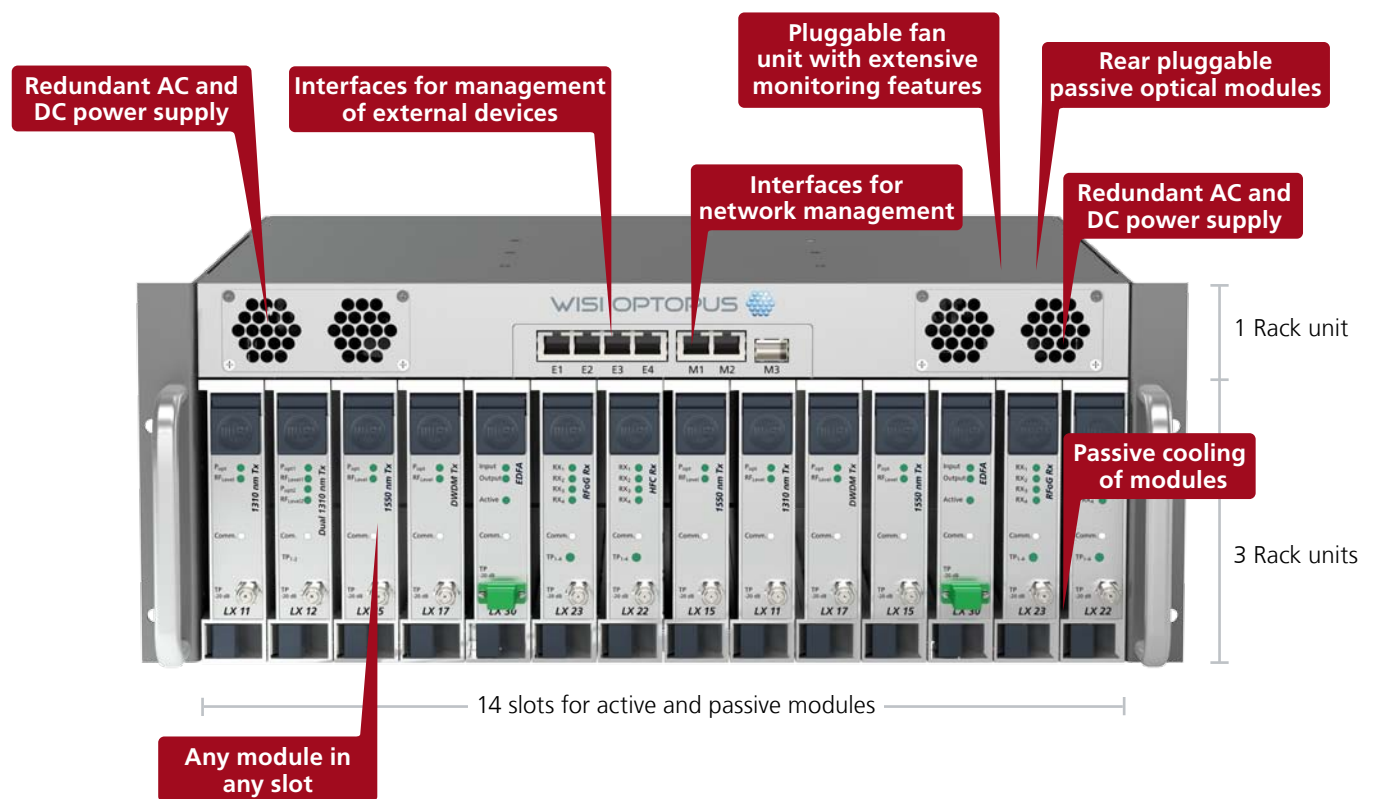
The WISI optical platform Optopus is a highly flexible and high density platform for all kinds of analog optical networks. The system is used in any network such as HFC, RF over Glass or RF Overlay in FTTx applications.

Optopus is designed to meet the high requirements and reliability necessary for today's networks. State-of-the-art features such as redundant AC and DC power supplies, pluggable fan units and advanced management features meet the carrier-grade demands of telecommunication and cable operators.

The Optopus platform allows to mount any module into any slot thus giving the possibility for individual configuration depending on the desired applications.

With its 14 slots in a 3+1 rackunit chassis it utilises up to 28 transmitters, 56 receivers or a mixture of both including power supply and management unit.

Optopus is the system of choice for every operator enabling powerful, flexible and cost efficient optical access networks.



# System Advantages

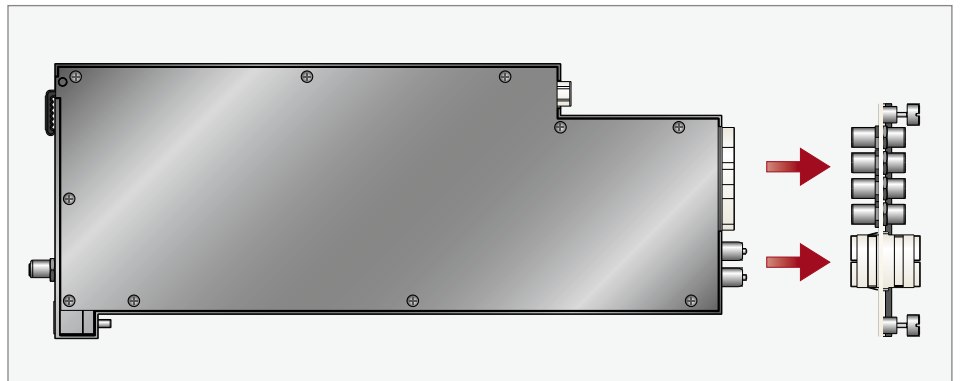
## Full Modular Concept

The modular concept of Optopus allows every application mix in a single system. Modules can be inserted or exchanged during operation thus simplifying extension and reducing maintenance outages.



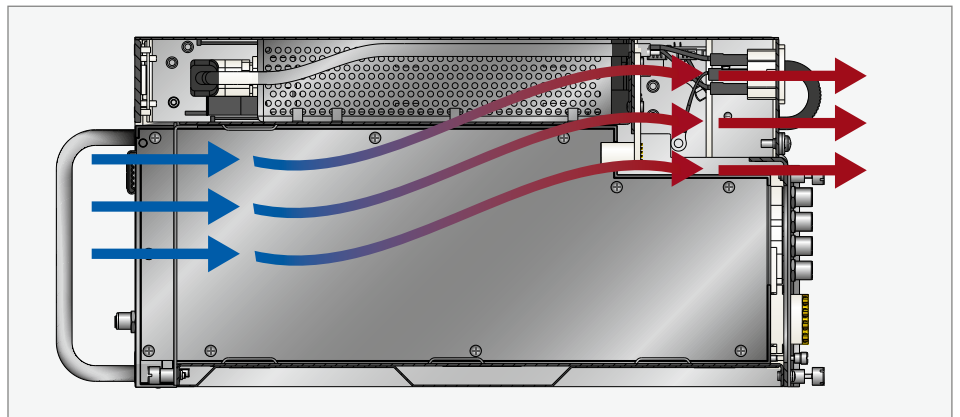
## Passive Backplate

The passive backplate system allows exchange of modules during operation without re-cabling. The system therefore reduces maintenance outages significantly.



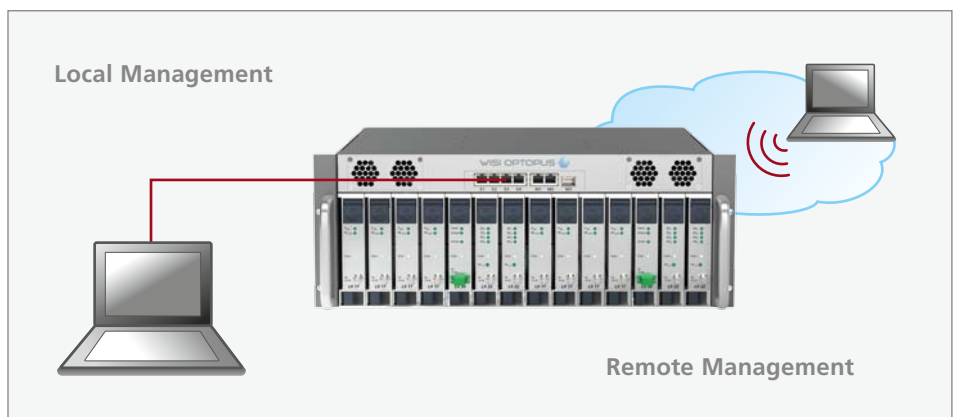
## Passive Module Cooling

The cooling and ventilation system of Optopus is designed to prolong the operating lifetime of modules. The equipment uses a passive cooling without active fans or ventilation holes in the modules.



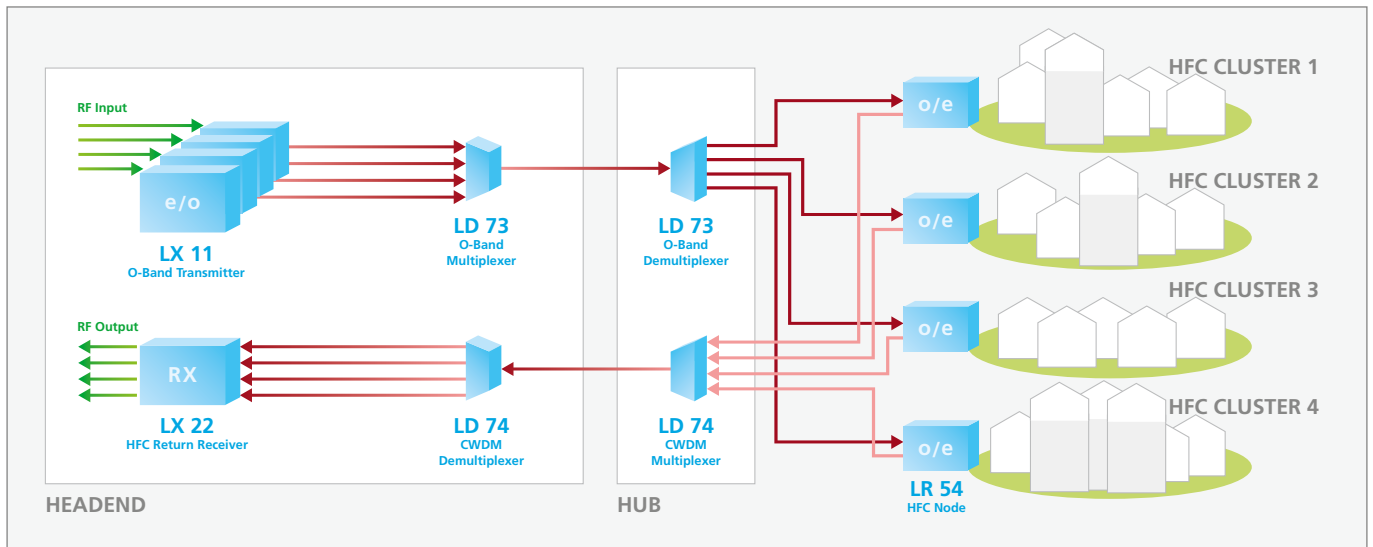
## Advanced Management Features

The system offers comprehensive local and remote monitoring features for each and every module. Supervision and operation is realized using state-of-the-art SNMP features and/or a web interface.



# Cable Network Applications

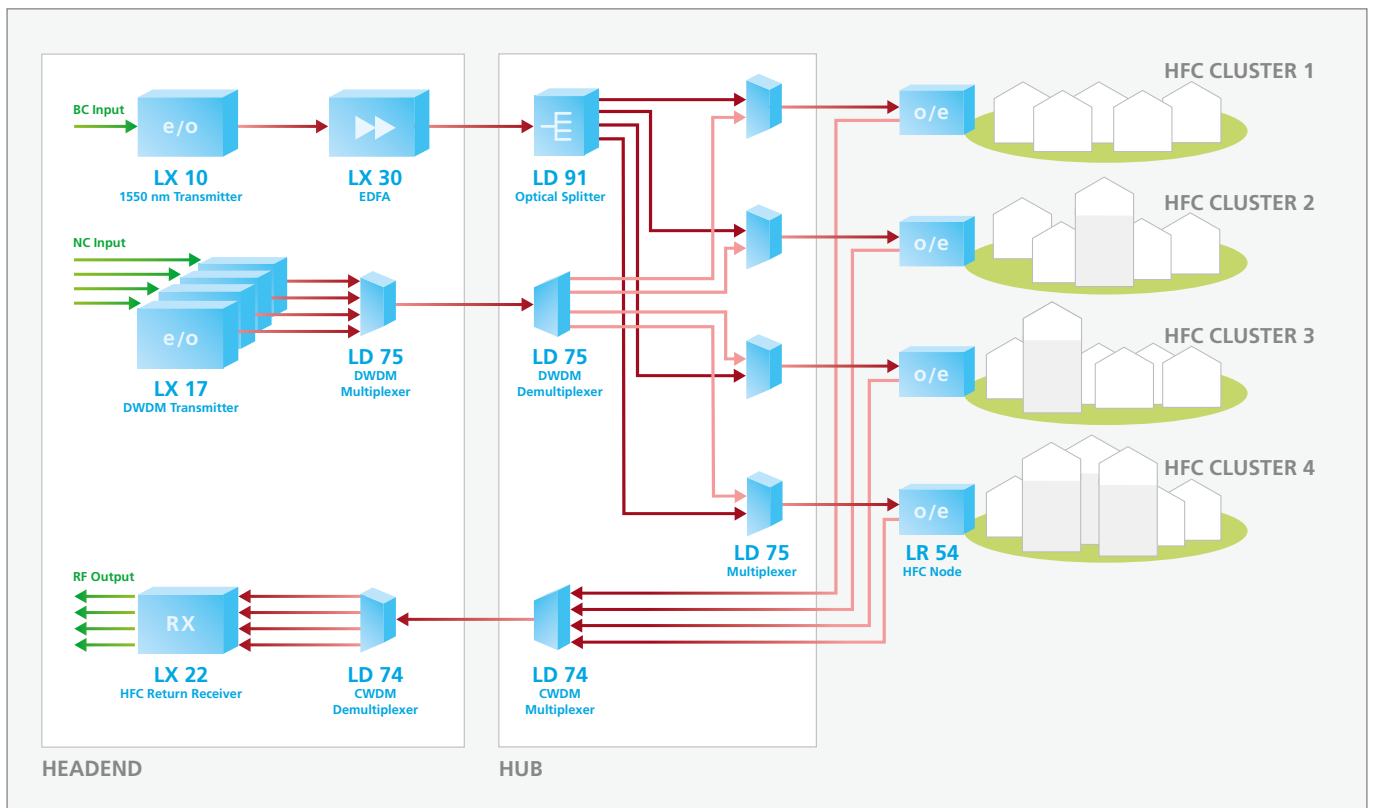
## HFC Cluster Splitting



Optopus includes the full range of transmitters, return receivers and optical passives for every HFC application. Also, using O-Band WDM technology with the fullband

transmitters LX 11 it is possible to reduce HFC cluster sizes without deployment of additional fiber, reducing the cost of a bandwidth increase significantly.

## DWDM Broadcast/Narrowcast

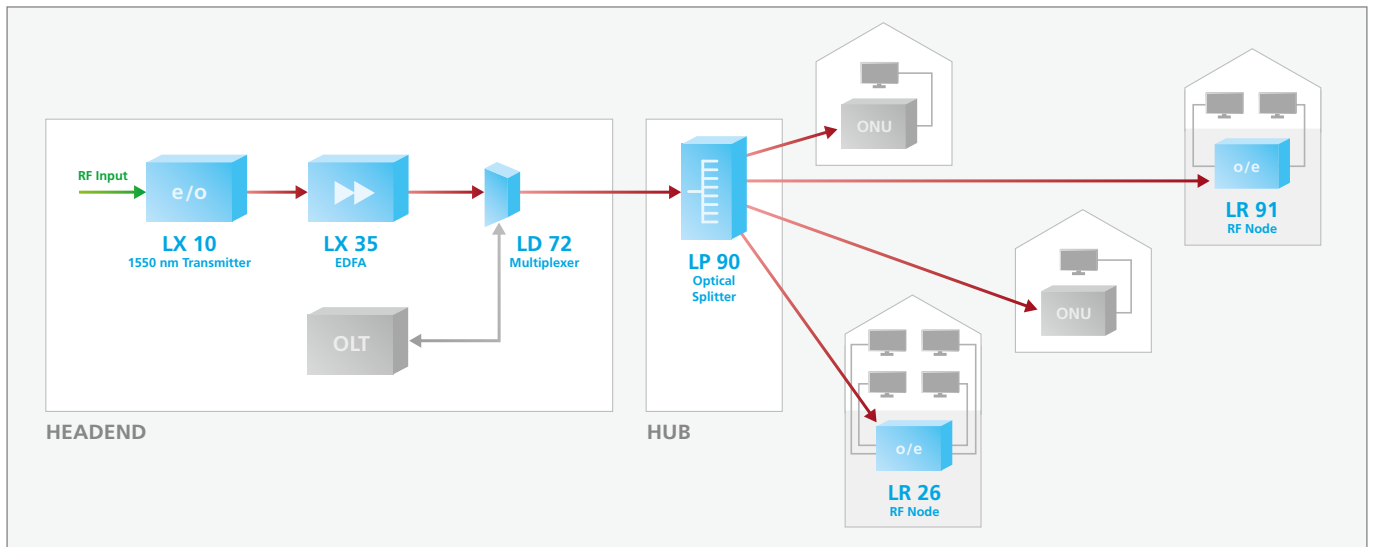


State-of-the-art broadcast/narrowcast applications using DWDM transmission for the narrowcast are a strength of Optopus. Broadcast services are transmitted over long distance links using external modulated transmitters LX 10,

while the narrowcast uses the DWDM transmitters LX 17. Both signals are terminated in a fibernode, which may use CWDM upstream technology.

# FTTx Applications

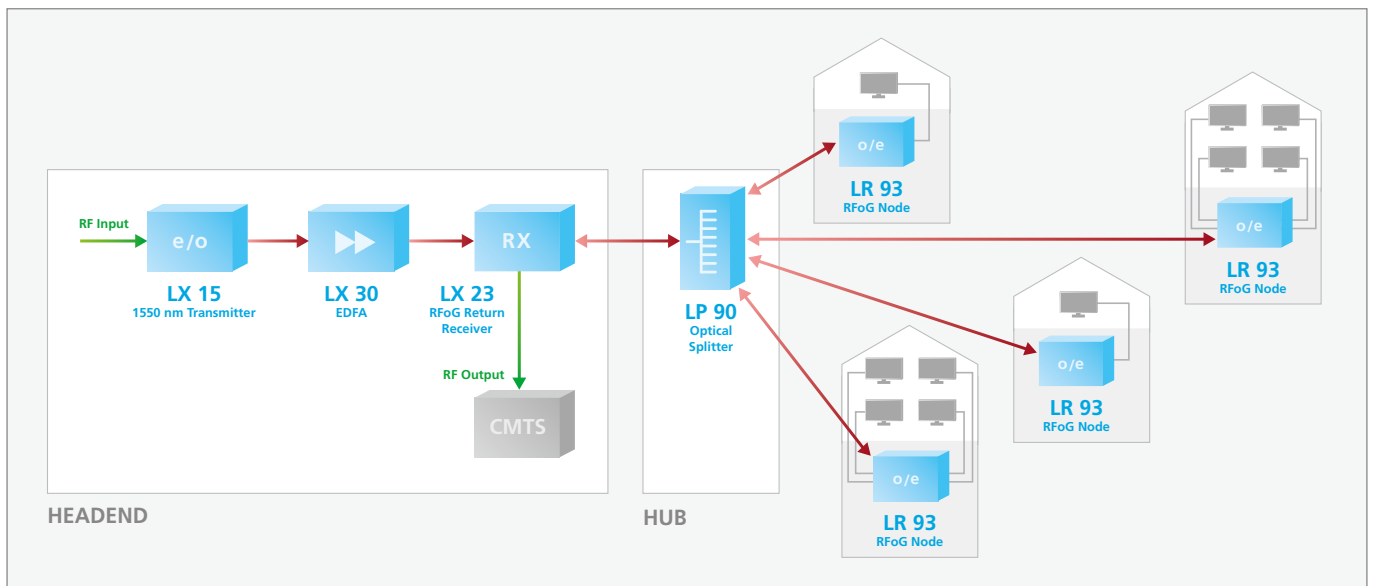
## RF Overlay



Offering broadcast TV services in today's FTTx networks is easily realized using 1550 nm transmitters together with high power EDFAs. The Optopus product family includes external modulated

transmitters LX 10 and very high power EDFAs LX 37 for large scale deployments. For smaller networks a variant with direct modulated LX 15 transmitter is also possible.

## RF over Glass



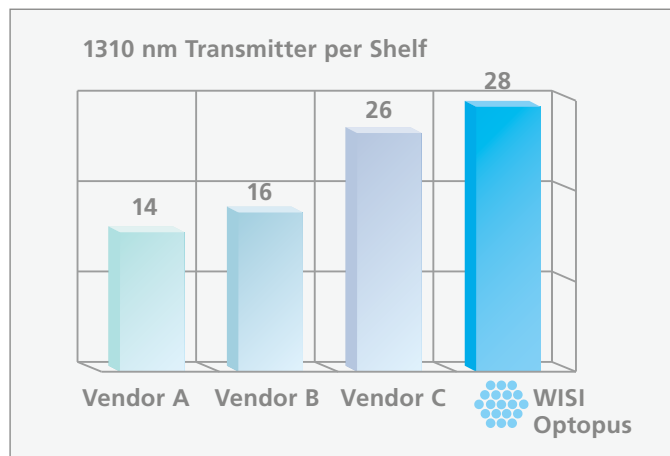
Optopus includes the components for RF over Glass networks, the cable operators' choice for FTTx applications. Depending on the size of network and distances to cover, Optopus offers a range of external or direct modulated transmitters and high power EDFAs. The RF over Glass receiver LX 23 with its very low noise receivers ensures optimization of the network even in challenging topologies.



# High Density System

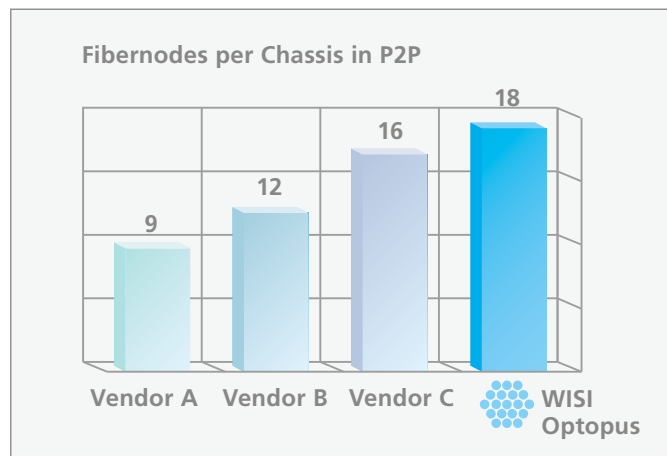
## Up to 100 % more 1310 Transmitters per Chassis

The 14 slots of the Optopus chassis can be fully equipped with high density dual transmitters, allowing 28 different downstream segments from one single chassis.



## Doubling the Number of connected Fibernodes

The high density modules allow to connect up to 18 fibernodes in Point-to-Point architecture, using 9 dual transmitters and 5 quattro return path receivers modules.

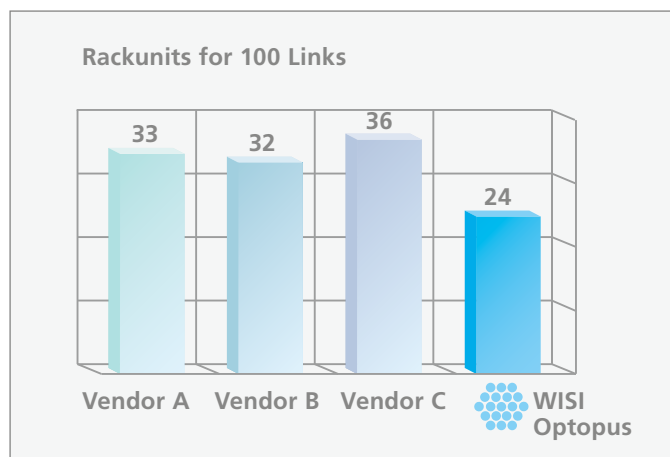


Calculation with dual 1310 transmitter and quattro return path receiver

# Reducing Operational Cost

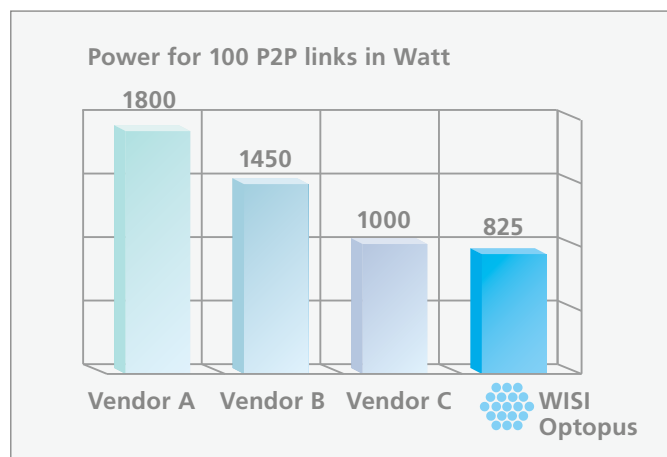
## Less Space necessary for the same Application

The Optopus system needs less space for deployments compared to other products. This reduces the cost of deployment, sparing and rack space lease.



## Extremely low Power Consumption

Total cost of ownership is reduced due to the focus on reduced power consumption modules, saving cost for energy and air conditioning.



Calculation with dual 1310 transmitter and quattro return path receiver

# Optopus Modules



## Transmitter Modules

- 1310 nm + O-Band broadcast transmitter LX 11
- 1310 nm broadcast dual transmitter LX 12
- CWDM dual return path transmitter LX 13
- 1550 nm broadcast transmitter LX 15
- DWDM narrowcast transmitter LX 17



## Optical Receivers

- Downstream receiver LX 21
- Quattro upstream HFC receiver LX 22
- Quattro upstream RFoG receiver LX 23

## Optical Amplifiers

- Optical amplifier EDFA LX 30
- 1x or 2x 14.0 dBm
- 1x or 2x or 4x 17.5 dBm
- 1x or 2x 21.0 dBm



# Stand Alone Units

## External Modulated Transmitter



- FTTx, long haul or SAT-IF transmitter LX 10
- Stand-alone or integrated operation together with LX 50
- Narrow line width and very low RIN

## High Power EDFA



- High performance erbium doped amplifier LX 35
- Stand-alone or integrated operation together with LX 50
- Integrated WDM filter option for FTTx applications

# Optical Passives and Accessories



LP 30



LP 40



LP 90

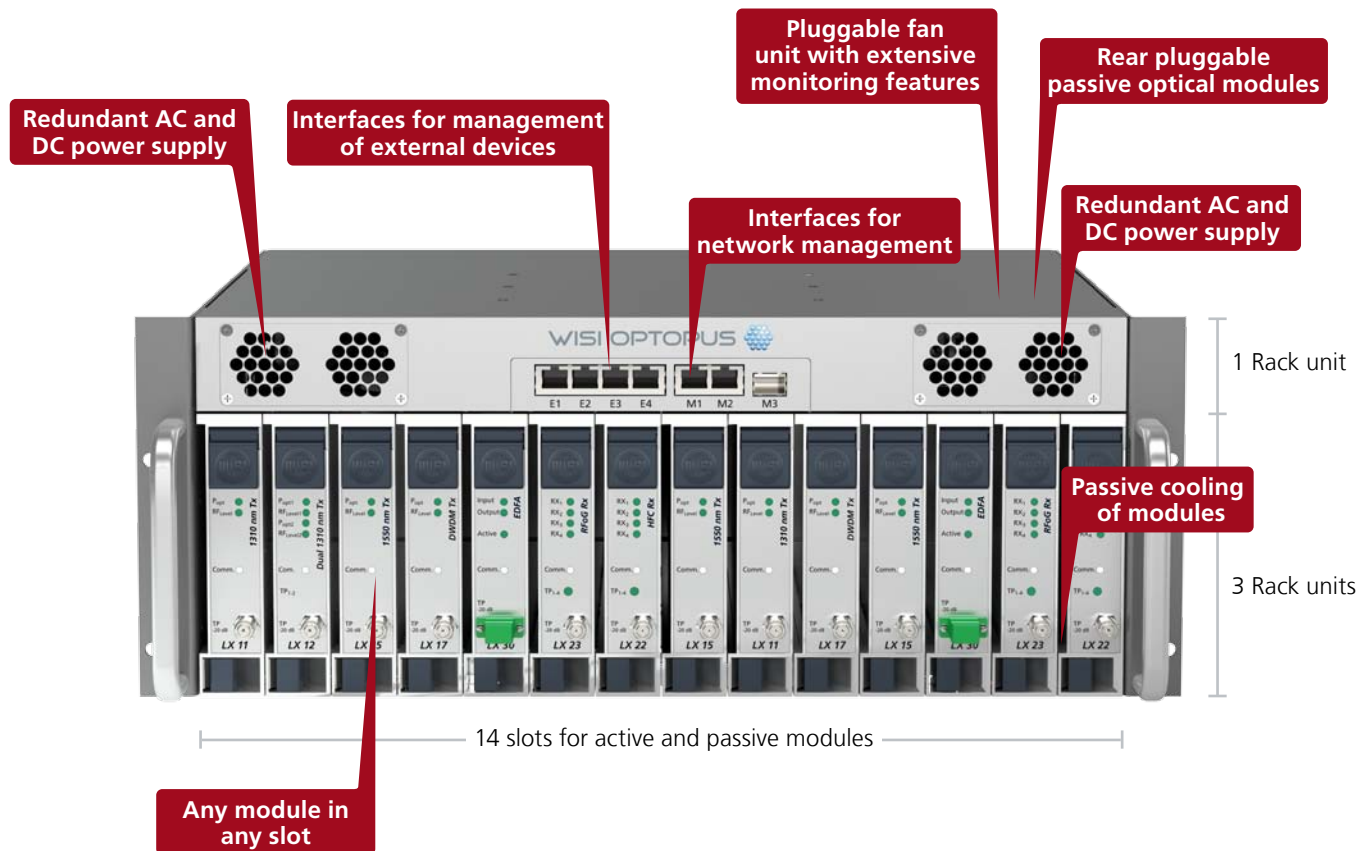
- LP 30 Fiber Management Unit
- LP 40 Mounting Frame for LD Modules
- LP 90 Optical Splitter with 8, 16, 32 or 64 outputs

## Multiplexer and Filter for mounting in LX 50 or LP 40

- LD 73 O-Band Multiplexer
- LD 74 CWDM Multiplexer
- LD 75 DWDM Multiplexer
- LD 9x Optical Splitter 1x2, 1x3 or 1x4
- Other variants on request



## At a Glance



- Full modular concept allows every application mix
- Hot swappable modules simplify upgrades
- Passive backplate reduces maintenance outages
- Redundant power supplies guarantee system availability
- Dust-free passive module cooling enlarges module lifetime
- Advanced management features for easy installation and operation

**HYPEX LIMITED**  
 Unit7, Manor House Business Park  
 97 Manor Farm Road  
 Wembley HA0 1BN  
 UNITED KINGDOM  
 Phone: +44 208 810 5885  
 Fax: +44 208 810 8184  
 E-mail: sales@hypexuk.com  
 Internet: www.hypex.co.uk

