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Televes Overlight Series Optical Transmitters

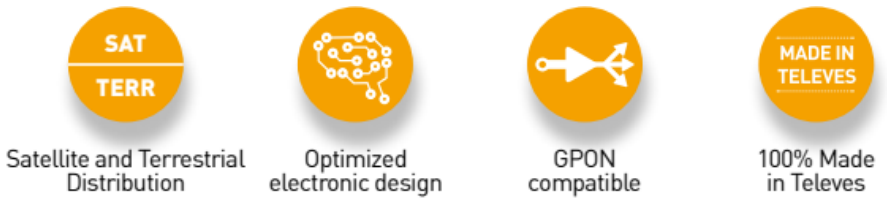
Specifications

- Product Series: Overlight Series
- Edition: April 2025
- Features: Enhanced electronics and optical engineering for TV distribution over fibre optics
- Compatibility: GPON compatible
- Manufactured by: Televes

SATELLITE AND TERRESTRIAL TV DISTRIBUTION OVER FIBRE OPTICS

With the Overlight series you will get an integrated TV installation with all the services through a single optical fibre, reducing the number of antennas and devices in the installation without losing the quality of the terrestrial and satellite TV signal.

Thanks to the low losses of the fibre and the high distribution rate, it is possible to provide TV services to housing estates, blocks of apartments, hotels and campsites, residences, and other FTTx solutions.



Why choose Overlight

- The Overlight series is suitable for all types of FTTx installations, such as residential

areas, leisure and entertainment areas, hotels, campgrounds and residences.

- With a high output level and a splitting ratio of 64 users, it is capable of reaching large collective installations.
- It allows the option of optical amplification to increase the number of users up to a maximum of 512 while mantaining signal quality.
- Suitable for a number of solutions and technologies such as dCSS.
- Satellite and terrestrial distribution is carried out through a single optical fibre, which reduces installation costs and materials.
- Optimized electronic performance resulting in low loss and a balanced end-to-end TV signal for all DTT services and up to 4 full satellites.
- It includes both outdoor and indoor installation options for greater flexibility in deployment.
- Compatible with GPON deployments, to incorporate TV services in the Hospitality sector.
- 100% European design, quality and manufacture.

Advantages of fibre optics

- Enables deployments with minimal attenuation and maximum performance, even over long distances.
- Unlike coaxial cables, it does not suffer electromagnetic interference.
- Offers great flexibility for the installer and users.
- Allows reduction in the size of the infrastructure and simplifies maintenance tasks.
- Longer lifespan compared to structured cable.
- Technology prepared for future services.

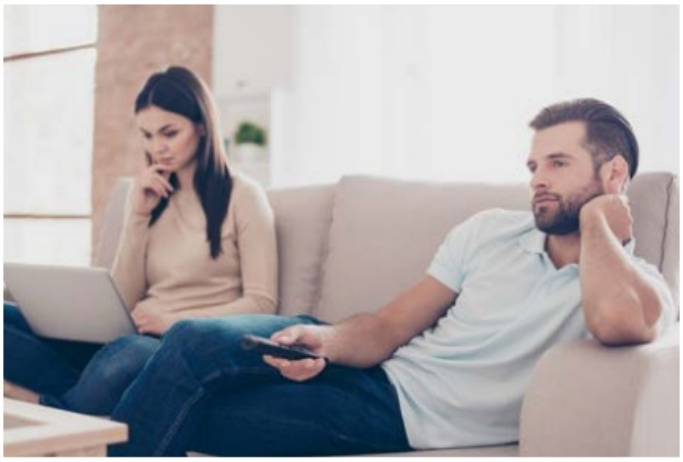
Benefits for the installer

- Considerable savings in installation times compared to structured cable.
- Systems with low levels of interference.
- Simplification of maintenance tasks and network operations.
- High security wiring against fires.
- Material and labour cost savings.
- Installation free of noise, distortion and interference in the TV transmission.

Benefits for owners and end users

- Low maintenance costs.
- Safe infrastructure that guarantees a low risk of fire.

- Discreet installation without aesthetic disturbances.
- Long lasting technology ready for the services of the future.



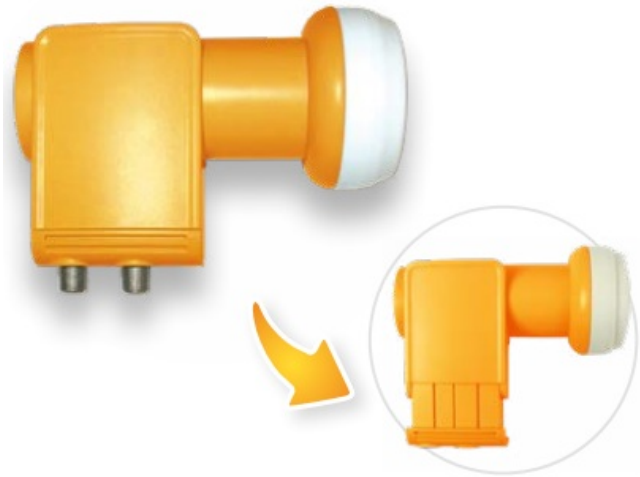
Solution products

LNB WideBand 2 outputs: V/H

Ref. 747402

Wideband LNB converter, characterized by a single local oscillator.

It captures the entire frequency spectrum of a satellite and transmits them through two otputs (V-H) in a frequency range between 290 and 2340 MHz.



REF.	DESCRIPTION	EAN 13
747402	**Wideband LNB (2 Outputs H-V) G 57dB for Overlight solution**	8424450251133

LNB WIDEBAND

LNB WIDEBAND	**Ref.**	**747402**

Frequency range	GHz	10.7…12.75
Output frequency range	MHz	290…2340
L.O. frequency 22KHz	GHz	10.41
Gain	dB	57
Noise figure	dB	0.3
L.O. stability	MHz	-1.5…1.5
Polarities discrimination	dB	> 20
Phase noise (@10 KHz)	dBc	-80
Powering	Vdc	10.5…21
Max. current	mA	100
Impedance	Ω	75
Connectors		“F” Female
LNB-bracket diameter	mm	40
Operating temperature	°C	-40…60

WIDEBAND AMPLIFIERS

Ref. 237561/62

Compact WideBand amplifiers for the distribution of satellite signals. These devices amplify the signal received from the LNB and are responsible for compensating the

losses of the coaxial cable in the Overlight installation. Equipped with 2 (H/V) WideBand inputs and 2 (H/V) WideBand outputs (250-2400 MHz).

They receive power from the Overlight transmitter through the output connectors.

Optionally, an external power supply can be used via the jack connector.

Indoor use.

REF.	DESCRIPTION	EAN 13
237561	**Overlight WideBand Amplifier G 13dB 1xSat 250...2400MHz**	8424450271766
237562	**Overlight WideBand Amplifier G 29dB 1xSat 250...2400MHz**	8424450271759

WIDEBAND AMPLIFIERS

WIDEBAND AMPLIFIERS	**Ref.**	**237561**	**237562**
Number of inputs		2	
Number of outputs		2	
Bands		SAT	

Frequency range	MHz	250…2400	
Output level EN60728-3 IMD 3 2tones -35dB	dBµV	118	
Gain	dB	13	29
Gain adjustment range	dB	0…13	
Slope regulation	dB	0…12	
Isolation	dB	> 25	
Powering	Vdc	12…18	
DC pass through SAT line	mA	500	
Max current (@12V)	mA	110	150
Max current (@18V)	mA	73	100
Max. power consumption	W	1.32	1.8
Protection index		20	
Weight	g	381	
Dimensions (xyz)	mm	137 x 120 x 30	

CWDM OPTICAL TRANSMITTERS

(indoor)

Ref 237503/04/05/06/07

CWDM optical transmitters specifically designed for indoor installation.

These devices receive the satellite signal from the outputs of a Wideband RF LNB and terrestrial band and send it to up to 64 users without the need for amplification, through a single fibre output (“SC/APC” connection).

Thanks to the different options offered with wavelengths of 1510, 1530, 1550 or 1570

nm, the system allows the transmission of up to 4 full satellites through a single optical fibre.

An external power supply and adapter cable are included to provide power through the dedicated “F” connector.

REF.	DESCRIPTION	EAN 13
237503	**Optical transmitter indoor with optical output at 1310nm and 10dBm optical power**	8424450271858
237504	**Optical transmitter indoor with optical output at 1550nm and 9dBm optical power**	8424450271872
237505	**Optical transmitter indoor with optical output at 1570nm and 9dBm optical power**	8424450272077
237506	**Optical transmitter indoor with optical output at 1510nm and 9dBm optical power**	8424450286470
237507	**Optical transmitter indoor with optical output at 1530nm and 9dBm optical power**	8424450286487

OPTICAL TRANSMITTERS	**Ref.**	**237503**			**237504**			**237505**			**237506**			**237507**		
Inputs/Bands	Type	TERR	V	H	TERR	V	H	TERR	V	H	TERR	V	H	TERR	V	H
Frequency range	MHz	47…694	290…2340		47…694	290…2340		47…694	290…2340		47…694	290…2340		47…694	290…2340	

Input level	dBµV	83…95	70…85	83…95	70…85	83…95	70…85	83…95	70…85	83…95	70…85
Powering per inputs	Vdc	11.7…17.7	–	11.7…17.7	–	11.7…17.7	–	11.7…17.7	–	11.7…17.7	–
Max. Current pass	mA	500	–	500	–	500	–	500	–	500	–
Max. current pass total inputs	mA	720									
Impedance	Ω	75									
Laser	Type	MQW-DFB uncooled									
Wavelength	nm	1310		1550		1570		1510		1530	
Optical output power	dBm	10		9		9		9		9	
RF connectors	Type	“F” Female									
Optical connectors	Type	SC/APC									
Powering	Vdc	12…18									

Max. power consumption	W	5.6
Current consumption	mA	<430
Operating temperature	ºC	-5…45
Weight	g	400
Dimensions (xyz)	mm	137 x 123 x 45

PSU		
PSU input voltage	Vac	100…240
Max. PSU current input	mA	600
PSU output voltage	Vdc	12
Max PSU output current	A	1.5
Weight	g	145
Dimensions (xyz)	mm	95 x 35 x 88

(outdoor)

Ref.237513/14/15/16/17

CWDM optical transmitters specifically designed for outdoor installation, at a minimum

distance from the LNB . These devices receive the satellite signal from the outputs of a Wideband RF LNB and terrestrial band and send it to up to 64 users without the need for amplification, through a single fibre output (“FC/APC” connection).

Thanks to the different options offered with wavelengths of 1510, 1530, 1550 or 1570 nm, the system allows the transmission of up to 4 full satellites through a single optical fibre.

They include a protective case for its outdoor installation (IP22). An external power supply and adapter cable are included to provide power through the dedicated “F” connector.

REF.	DESCRIPTION	EAN 13
237513	Optical transmitter outdoor with optical output at 1310nm and 10dBm optical power	8424450271865
237514	Optical transmitter outdoor with optical output at 1550nm and 9dBm optical power	8424450271889
237515	Optical transmitter outdoor with optical output at 1570nm and 9dBm optical power	8424450272084
237516	Optical transmitter outdoor with optical output at 1510nm and 9dBm optical power	8424450286500
237517	Optical transmitter outdoor with optical output at 1530nm and 9dBm optical power	8424450286517

OPTICAL TRANSMITTERS

OPTICAL TRANSMITTERS	Ref.	237513	237514	237515	237516	237517

Inputs/Bands	Type	TERR	V	H	TERR	V	H	TERR	V	H	TERR	V	H	TERR	V	H
Frequency range	MHz	47…694	290…2340		47…694	290…2340		47…694	290…2340		47…694	290…2340		47…694	290…2340	
Input level	dBµV	83…95	70…85		83…95	70…85		83…95	70…85		83…95	70…85		83…95	70…85	
Powering per inputs	Vdc	11.7…17.7	–		11.7…17.7	–		11.7…17.7	–		11.7…17.7	–		11.7…17.7	–	
Max. Current pass	mA	500	–		500	–		500	–		500	–		500	–	
Max. current pass total inputs	mA	720														
Impedance	Ω	75														
Laser	Type	MQW-DFB uncooled														
Wavelength	nm	1310			1550			1570			1510			1530		
Optical output power	dBm	10			9			9			9			9		

RF connectors	Type	“F” Female
Optical connectors	Type	FC/APC
Powering	Vdc	12…18
Max. power consumption	W	5.6
Current consumption	mA	<430
Operating temperature	ºC	-5…45
Weight	g	400
Dimensions (xyz)	mm	137 x 123 x 45

PSU		
PSU input voltage	Vac	100…240
Max. PSU current input	mA	600
PSU output voltage	Vdc	12
Max PSU output current	A	1.5

Weight	g	145
Dimensions (xyz)	mm	95 x 35 x 88

OPTICAL RECEIVERS

Ref. 237640/50/23/33

Optical receivers are in charge of capturing the optical TV signal (1200…1600nm) sent by the transmitters in order to process it and recover the original satellite and terrestrial TV signals. Depending on the type of services to be received, four models are available:

- Ref. 237640: Overlight Quattro Optical Receiver:
  It provides 4 RF outputs with Quattro mode: one of the four TVSAT polarity and band combinations is provided on each connector. Power is supplied through the multiswitch.
- Ref. 237650: Overlight Quad Optical Receiver:
  It provides 4 RF outputs with Quad mode: the four polarities and bands are provided on each connector. Power is supplied through the receiver (STB).
- Ref. 237623: Overlight dCSS Optical Receiver with 2 dCSS/Legacy output: It provides 4 RF outputs: 2 for SKY services and terrestrial TV, and 2 for terrestrial TV. External power supply included.
- Ref. 237633: Overlight dCSS Optical Receiver with 4 dCSS/Legacy output: It provides SKY services and terrestrial TV through its 4 RF outputs. External power supply included.

REF.	DESCRIPTION	EAN 13
237640	**Optical Receiver Quattro**	8424450319284
237650	**Optical Receiver Quad**	8424450319291
237623	**Optical Receiver dCSS 2 Outputs SKY (PSU with UK plug included)**	8424450317440
237633	**Optical Receiver dCSS 4 Outputs SKY (PSU with UK plug included)**	8424450319277

OPTICAL RECEIVERS

OPTICAL RECEIVERS	**Ref.**	**237640**		**237650**		**237623**		**237633**	
Inputs/Bands	Type	TERR	Legacy	TERR	Legacy	TERR	dCSS/Legacy	TERR	dCSS/Legacy

Number of outputs		1	4	4	4	4	2	4	4
Output level	dBµV	79…83	64…71	69…73	64…71	69…73	80/64…71	69…73	80/64…71
Output frequency range	MHz	87…694	950…2150	87…694	950…2150	87…694	950…2150	87…694	950…2150
Impedance	Ω	75							
Wavelength	nm	1200…1600							
Optical device	Type	InGaAs pin photodiode							
Optical input level	dBm	-13…-6							
RF Connectors	Type	F “Female”							
Optical Connectors	Type	SC/APC							
Powering	Vdc	12…18							
Max. current consumption (@12V)	mA	750				550		750	
Max. current (@18V)	mA	570		530		410		530	
Operating temperature	ºC	-5…+45							

Weight	g	670	360	670
Dimensions (xyz)	mm	149 x 130 x 43	125 x 91 x 30	149 x 130 x 43

PSU			
PSU input voltage	Vac		100…240
PSU output voltage	Vdc		12
Max PSU output current	A		1,5
Weight	g		164
Dimensions (xyz)	mm		96 x 43 x 60

These measurements are conditioned to the use of an Overlight transmitter.

ACCESSORIES

REF.	DESCRIPTION	EAN 13
OPTICAL MULTIPLEXERS AND DEMULTIPLEXERS		
234750	CWDM Optical Multiplexer "SC/APC" 4 inputs: 1510/1530/1550/1570 nm - 1 output + PSU, 1RU	8424450286494
234758	CWDM Optical Demultiplexer "SC/APC" 1 input, 4 outputs: 1570/1550/1530/1510 nm	8424450305980

OPTICAL SPLITTERS

233 710	Optical Splitter 1250…1650nm “SC/APC” 2D 4dB	8424450255681
233 910	Optical Splitter 1250…1650nm “SC/APC” 4D 7dB	8424450255698
234 410	Optical Splitter 1250…1650nm “SC/APC” 8D 10dB	8424450255704
234 510	Optical Splitter 1250…1650nm “SC/APC” 16D 14dB	8424450256015
234 610	Optical Splitter 1250…1650nm “SC/APC” 32D 17dB	8424450276778

PRE-TERMINATED PATCH CORDS

232 610	F.O. Patch Cord Single-mode Indoor LSFH Dca “SC/APC” 5m	8424450265598
232 611	F.O. Patch Cord Single-mode Indoor LSFH Dca “SC/APC” 10m	8424450222904
232 612	F.O. Patch Cord Single-mode Indoor LSFH Dca “SC/APC” 15m	8424450222911
232 613	F.O. Patch Cord Single-mode Indoor LSFH Dca “SC/APC” 20m	8424450265604
232 614	F.O. Patch Cord Single-mode Indoor LSFH Dca “SC/APC” 25m	8424450222928
232 615	F.O. Patch Cord Single-mode Indoor LSFH Dca “SC/APC” 30m	8424450265611
232 616	F.O. Patch Cord Single-mode Indoor LSFH Dca “SC/APC” 40m	8424450222935

ADAPTER CABLES

ADAPTER CABLES		
236127	F.O. Patch Cord Armoured Single-mode Outdoor LSFH UV Resistant SC/APC-FC/APC 25m	8424450323670
236128	F.O. Patch Cord Armoured Single-mode Outdoor LSFH UV Resistant SC/APC-FC/APC 50m	8424450323663

OPTICAL ATTENUATORS

236 410	Optical Attenuator 1310/1550nm “SC/APC” 2dB	8424450190449
236 411	Optical Attenuator 1310/1550nm “SC/APC” 5dB	8424450190456
236 412	Optical Attenuator 1310/1550nm “SC/APC” 10dB	8424450190463
236 413	Optical Attenuator 1310/1550nm “SC/APC” 15dB	8424450256022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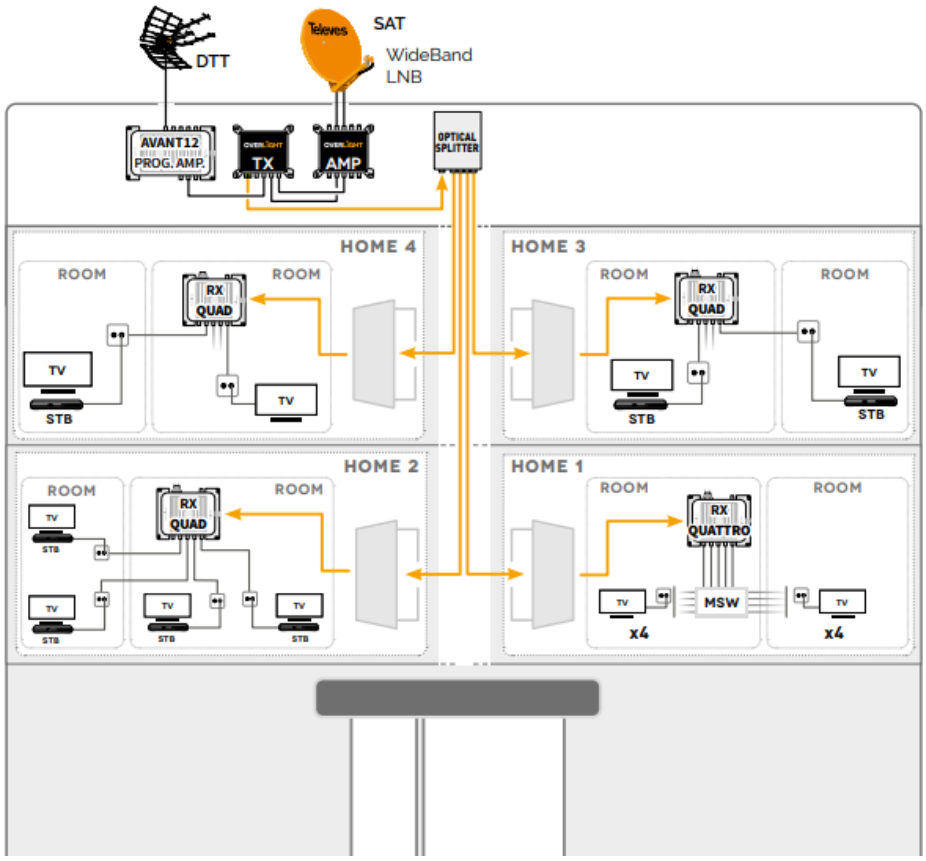
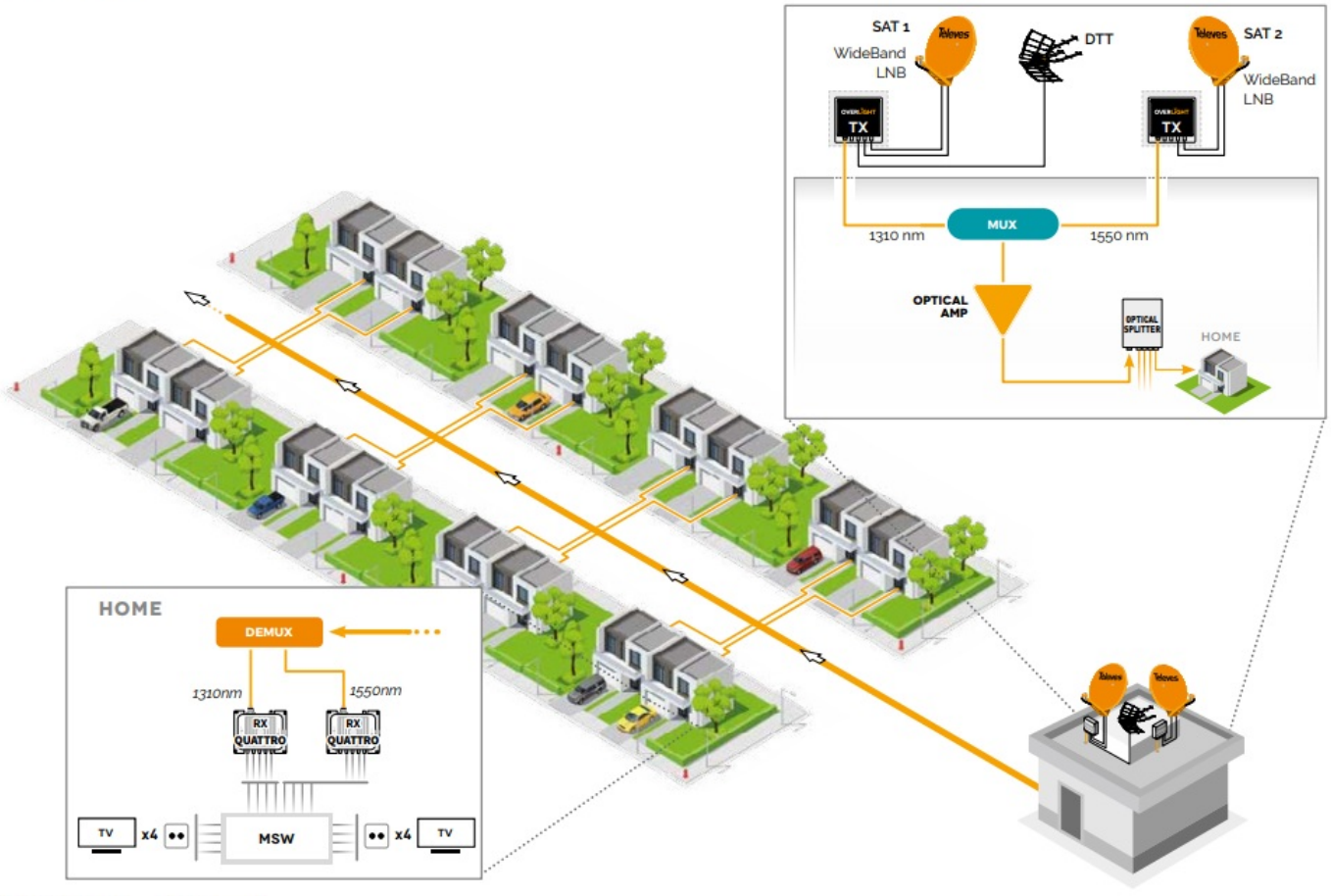
FTTH: **PRIVATE BUILDING**

(DTT + 1 SAT)



FTTH: **RESIDENTIAL AREA**

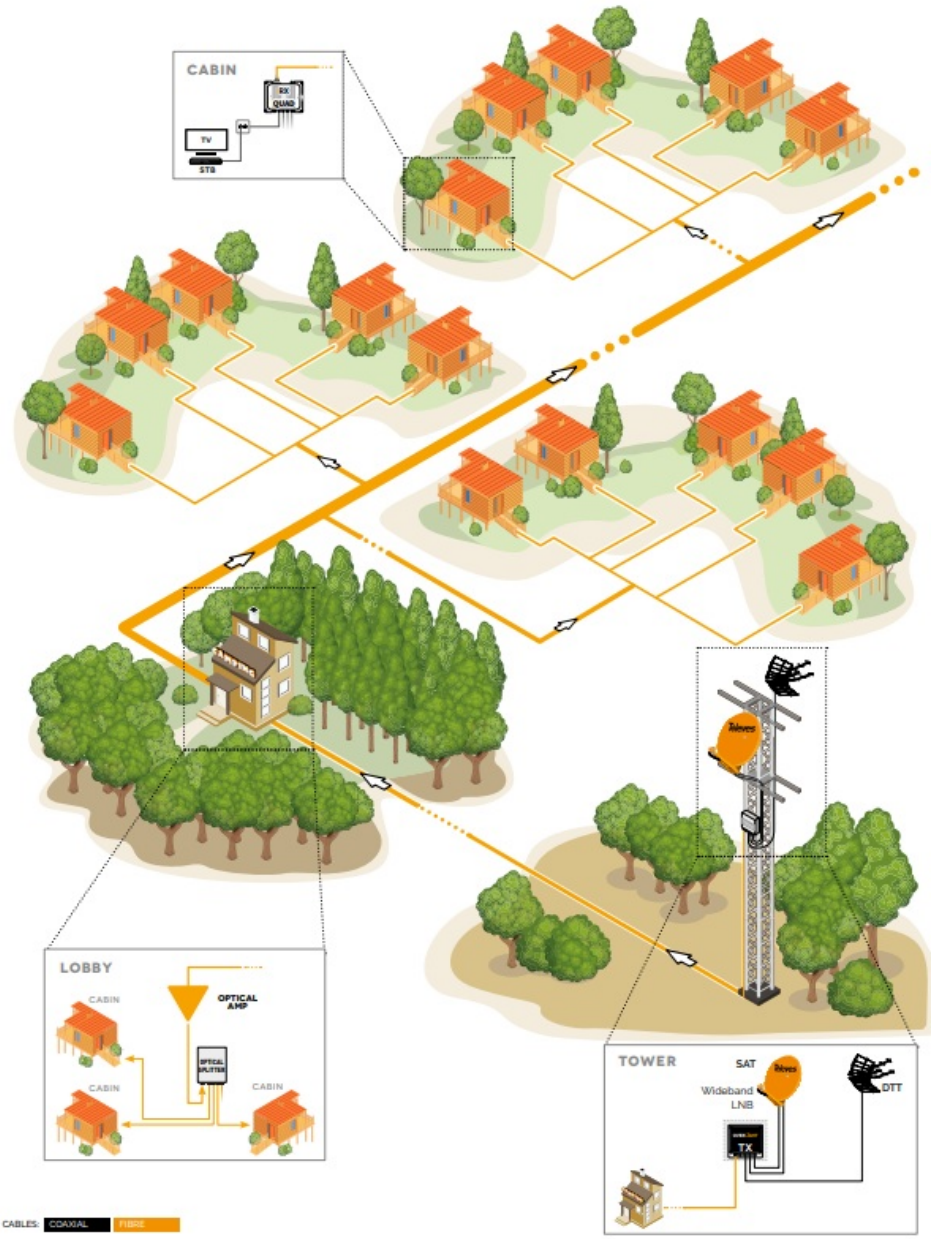
(DTT + 2 SAT)



CABLES: COAXIAL FIBRE

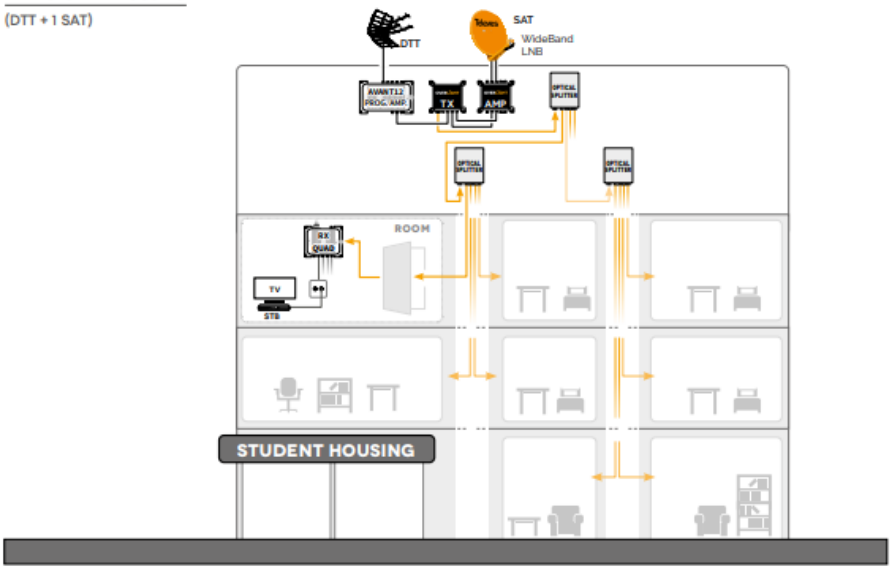
FTTH: **CAMPSITE** (OUTDOOR INSTALLATION)

(DTT + 1 SAT)



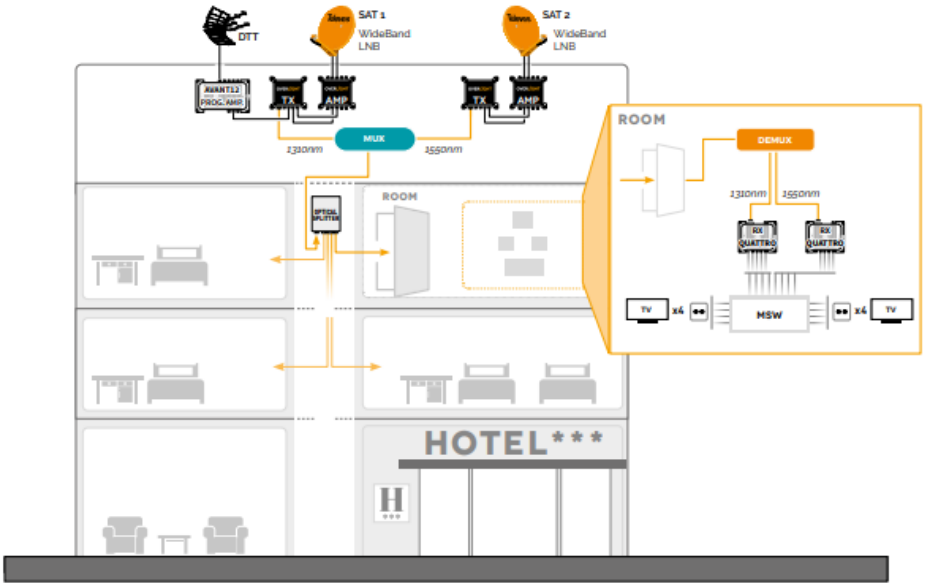
FTTR: **STUDENT HOUSING**

(DTT + 1 SAT)



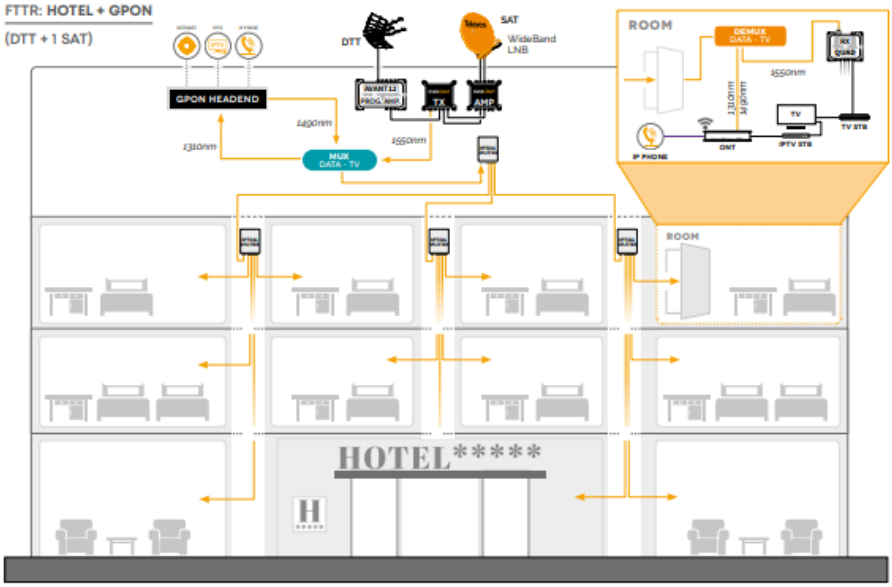
FTTR: **HOTEL**

(DTT + 2 SAT)



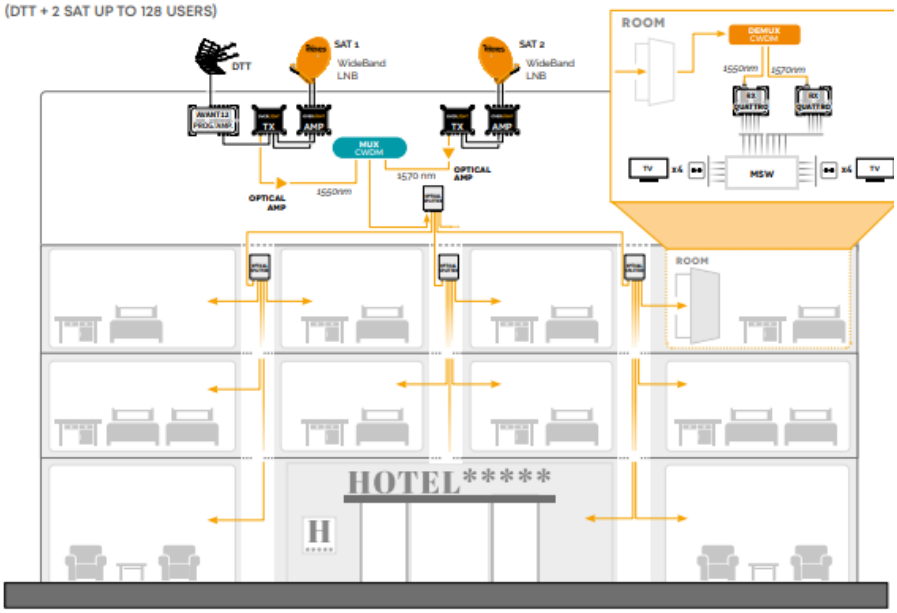
FTTR: **HOTEL + GPON**

(DTT + 1 SAT)



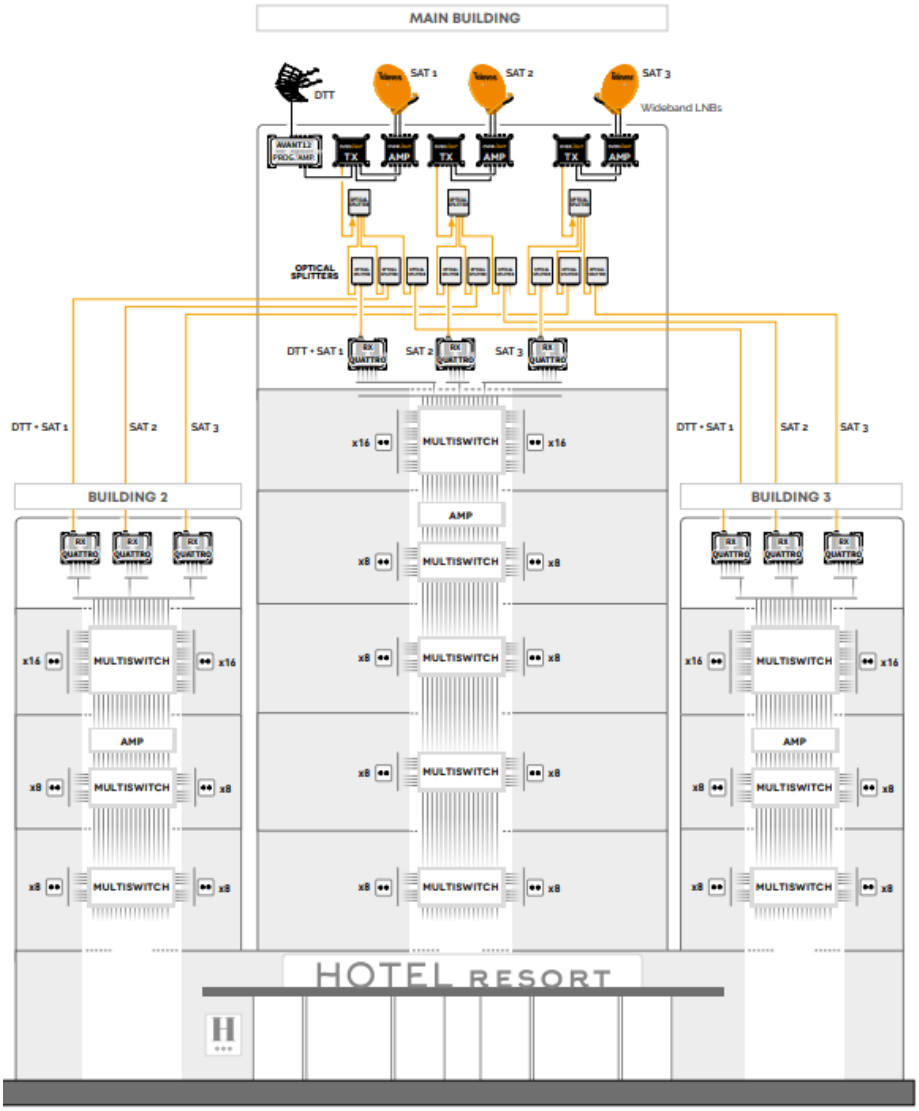
FTTR: **HOTEL**

(DTT + 2 SAT UP TO 128 USERS)

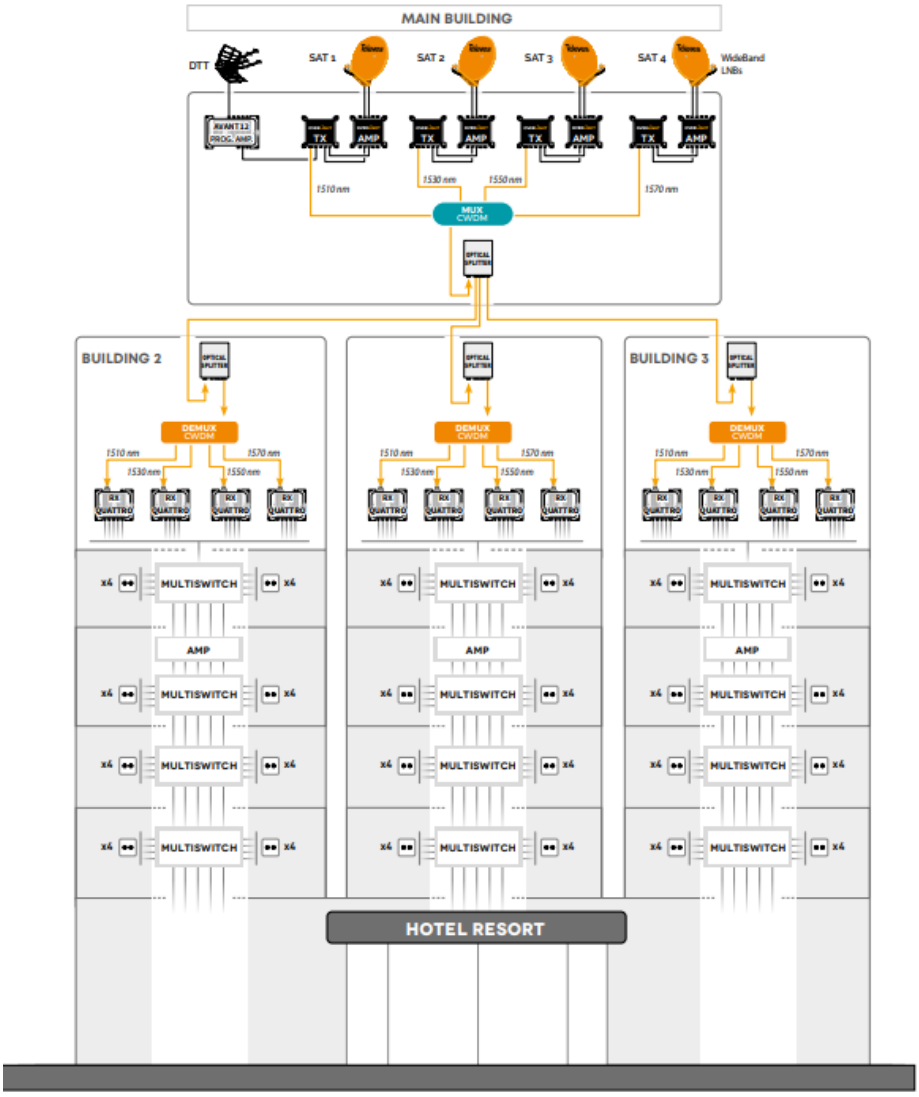


FTTB: **HOTEL COMPLEX**

(DTT + 3 SAT)



FTTB: HOTEL COMPLEX
(DTT + 4 SAT)



More information at:

en.televes.com/overlight

www.televescorporation.com | www.televes.com

FAQ

- **Why choose Overlight?**

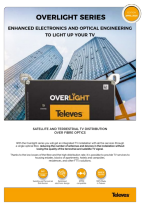
  The Overlight series provides an integrated TV installation with high-quality TV signals over fibre optics, reducing the need for multiple antennas and devices.
- **What are the advantages of fibre optics in TV distribution?**

  Fibre optics offer low losses and high distribution rates, ensuring reliable TV services

for various setups.

- **What are the benefits for installers and end users?**
  Installers benefit from easy installation and maintenance, while end users enjoy high-quality TV services for the future.

Documents / Resources

	Televes Overlight Series Optical Transmitters [pdf] Owner's Manual 747402, Overlight Series Optical Transmitters, Overlight Series, Optical Transmitters, Transmitters

References

- en.televes.com/overlight
- User Manual

747402, Optical Transmitters, OVERLIGHT Series, Overlight Series Optical Transmitters, Televes, Transmitters

Televes

—Previous Post
Televes H30Evolution Spectrum Analyzer Owner's Manual

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