

# Televes®

## QUICK PRODUCT GUIDE 2023

NEW FIELD METER

# H3O CRYSTAL

FULL

ALL FEATURES STANDARD

GET 2 OPTIONS FOR FREE!

AND 2 MORE UPON REGISTRATION



Standard features on the FULL model:

The H3oCrystal with metering for  
DVB-S/S2/T/-T2/C and optical fiber

All advanced options:  
WiFi and IPTV analyzer and HEVC display

Accessory kit:  
carrying case, waterproof cover, and 3 m coaxial cable

**TV DISTRIBUTION**

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**DATA COM**

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## CONSIDERATIONS

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### T.OX series:

- In case of modules with CI, it is the responsibility of the concerned person to consult Televes and check compatibility of CAM and card with the module. Simultaneous decryption of services (CAM Pro): If CAM and card allow it.
- The number of modules indicated for supports and enclosures is based solely on the available space; but the number of installable modules may be limited by other restrictions as consumption or temperature.

### Compatibility between tower ranges:

Due to their assembly system, tower ranges 450/550 (systems with union nuts), 450XL (systems with security bolts) and 550ULTRA (system with plates) are not compatible with each other.

### Multiswitches:

- Some ranges of multiswitches include earth bonding bars. Contact us for more information about these references.
- PSU is only included in Quad compatible version.

New

Pack boxed in

TForce Technology

### Integrated protection against LTE:

**LTE790** Channel 60 filtering (790MHz)

**LTE700** Channel 48 filtering (694MHz)

**AUTO LTE** Channel 48/60 filtering  
(automatic switching)



### Identifying colour in product

- |        |           |
|--------|-----------|
| Orange | Graphite  |
| White  | Black     |
| Red    | Violet    |
| Grey   | Aqua blue |

### Packaging type for coaxial cable

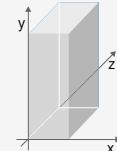
- |              |         |
|--------------|---------|
| Plastic reel | EasyBox |
| Wooden drum  |         |

### CAI Logos

Type 100

Type RG6

**Dimensions:** xyz  
(width x height x depth)



### OLC technology:

The OLC (Optical Level Control) technology, included in some optical products, automatically adjusts the parameters to achieve a constant output level, irrespective of the channel.

### CENELEC standard for cables:

- EN 50117-2-1: Indoor Cable 5...1000MHz
- EN 50117-2-4: Indoor Cable 5...3000MHz
- EN 50117-2-5: Outdoor Cable 5...3000MHz

### Optical fiber cables:

References 231414, 231614 and 231714 are supplied by meter, per customer request.

### Data cables:

Cables and patch cords with copper inner conductor are compatible with PoE/PoE+ (Power Over Ethernet) technology.

### Hospitality:

- Systems that integrate FibreData (GPON) and ArantiaTV require Layer2+ or Layer3 switches.

# TV DISTRIBUTION

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The distribution of radio communication services is the traditional core of our company.





## TV DISTRIBUTION

### TERRESTRIAL ANTENNAS

QUICK PRODUCT GUIDE 2023

Ref.	Description		
<b>INTELLIGENT (WITH BOSSTECH)</b>			
<b>ELLIPSE SERIES</b>			
<b>Ellipse</b>			
148920	Ellipse Terrestrial Antenna UHF [Ch21-48], G 38dBi BOSS ON [Multiple Packing]	TFORCE LTE700	8
148923	Ellipse Terrestrial Antenna UHF [Ch21-48], G 38dBi BOSS ON PSU included 12V-220mA, UK plug [Single Packing]	TFORCE LTE700	1/4
<b>DAT SERIES</b>			
<b>DAT BOSS</b>			
149921	DAT BOSS Terrestrial Antenna UHF [Ch21-48] G 17dBi BOSS OFF, G 42dBi BOSS ON [Single packing]	TFORCE LTE700	1/5
149922	DAT BOSS Terrestrial Antenna UHF [Ch21-48] G 17dBi BOSS OFF, G 42dBi BOSS ON [Multiple packing]	TFORCE LTE700	6
<b>DAT BOSS LR</b>			
149721	DAT BOSS LR Terrestrial Antenna UHF [Ch21-48] G 19dBi BOSS OFF, G 47dBi BOSS ON [Single packing]	TFORCE LTE700	1
<b>NOVA SERIES</b>			
<b>DINOVA BOSS</b>			
144021	DINOVA BOSS Terrestrial Antenna UHF [Ch21-48] G 7dBi BOSS OFF, G 34dBi BOSS ON	TFORCE LTE700	1
144022	DINOVA BOSS Terrestrial Antenna UHF [Ch21-48] G 7dBi BOSS OFF, G 34dBi BOSS ON [Kit with accessories]	TFORCE LTE700	1
144223	DINOVA BOSS MIX Terrestrial Antenna BIII/UHF [Ch5-12/21-48] G 1/6dBi BOSS OFF, G 27/32dBi BOSS ON	TFORCE LTE700	1
144224	DINOVA BOSS MIX Terrestrial Antenna BIII/UHF [Ch5-12/21-48] G 1/6dBi BOSS OFF, G 27/32dBi BOSS ON [Kit with accessories]	TFORCE LTE700	1
<b>CAMPNOVA BOSS</b>			
144521	CAMPNOVA BOSS Terrestrial Antenna FM/BIII/UHF [Ch5-12/21-48] G -2/20/30dBi BOSS ON [Kit with accessories]	TFORCE LTE700	1
<b>OMNINOVA BOSS</b>			
144422	OMNINOVA BOSS Terrestrial Antenna BI/FM/BIII/UHF [Ch3-12/21-48] G 17/16/25/25dBi BOSS ON [Kit with accessories]	TFORCE LTE700	1
<b>INDOOR SERIES</b>			
<b>BEXIA series</b>			
130501	BEXIA Indoor Terrestrial Antenna VHF/UHF [Ch5-12/21-48] G 15/18dBi [USB-microUSB cable included, for 5V powering]	TFORCE LTE700	1/6
<b>INNOVA BOSS</b>			
130220	INNOVA BOSS Indoor Terrestrial Antenna UHF [Ch21-48] G 20dBi [USB-microUSB cable included, for 5V powering]	TFORCE LTE700	1
130320	INNOVA BOSS MIX Indoor Terrestrial Antenna VHF/UHF [Ch5-12/21-48] G 17/20dBi [USB-microUSB cable included, for 5V powering]	TFORCE LTE700	1
<b>MIRA BOSS</b>			
130121	MIRA BOSS Indoor Terrestrial Antenna UHF [Ch21-48] G 18dBi	TFORCE LTE700	1/240



A new concept in DTT antenna that eliminates any interference even in limit of the TV band, combining break-through design and the new generation of TForce with SAW filtering in a 100% stainless mechanical frame.

PSU included:  
intelligence is activated when the antenna is powered.



TForce increases the coverage of a TDT antenna, amplifying almost imperceptible signals and remaining inalterable for very strong signals.

uk.televés.com/tforce



▲ 144021



▲ 149721



▲ 144521



▲ 130501



▲ 130121



**Outdoor performance, indoors**

BEXIA is a DVB-T / T2 indoor antenna with a clean and sleek design, with technology used to achieve the performance of an outdoor antenna. BEXIA does not have to be aligned to the signal, and also impresses with a certain power consumption.



## TV DISTRIBUTION

### TERRESTRIAL ANTENNAS

Televes

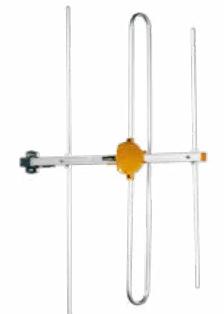
Ref.	Description		
<b>INTELLIGENT (WITH BOSSTECH)</b>			
<b>ACCESSORIES</b>			
<b>Power supply units</b>			
5501	Domestic Power Supply Unit 1i/2o "F": 5...862MHz 12V-220mA (UK Plug)	1	
579401	PicoKom Domestic Power Supply Unit 1i/2o "EasyF": 5...2400MHz 12V-200mA	1/10	
5796	PicoKom Domestic Power Supply Unit 1i/1o "EasyF" SATmix: 5...2400MHz 12V-220mA	1/10	
<b>Domestic amplifiers</b>			
545802	Auto-LTE Domestic Amplifier 1i/(2o+TV) "F": 47...694/790MHz G 20dB Vo 101dB $\mu$ V Auto-Adjustment + Output to a TV Outlet G 11dB + Preamplifier Powering 12V-100mA, UK plug (Blister T1)	AUTOLTE	1/6
545901	Auto-LTE Domestic Amplifier 1i/(2o+TV) "F": 47...694/790MHz G 20dB Vo 101dB $\mu$ V w/USOS + Output to a TV Outlet G 11dB + Preamplifier Powering 12V-100mA	AUTOLTE	1
560521	PicoKom Domestic Amplifier 1i/1o "EasyF": 47...694MHz G 14/20dB Vo 102/105dB $\mu$ V Auto-Adjustment + Preamp.Pow. 12V-150mA	LTE700	1/10
560522	PicoKom Domestic Amplifier 1i/2o "EasyF": 47...694MHz G 10/16dB Vo 98/101dB $\mu$ V Auto-Adjustment + Preamp.Pow. 12V-150mA	LTE700	1/10
560523	PicoKom Domestic Amplifier 1i/(2o+TV) "EasyF": 47...694MHz G 10/16dB Vo 98/101dB $\mu$ V Auto-Adjustment + Preamp.Pow. 12V-150mA	LTE700	1/10
<b>Accessories</b>			
494702	Coaxial Atmospheric Surge Arrestor 90V 0...3GHz	1	
Ref.	Description		
<b>PASSIVE</b>			
<b>VHF AND MIXED</b>			
<b>FM antenna</b>			
1201	FM Terrestrial Antenna 88...108MHz Circular G 1dBi	1/5	
<b>BIII or DAB antenna</b>			
1050	BIII/DAB Terrestrial Antenna 174...240MHz 3 Elements G 8dBi (Single Packing)	1	
105001	BIII/DAB Terrestrial Antenna 174...240MHz 3 Elements G 8dBi (Multiple Packing)	5	
<b>UHF</b>			
<b>L antenna</b>			
112120	L 700 Terrestrial Antenna UHF (Ch21-48) 18 Elements G 13dBi	LTE700	6
112121	L 700 Terrestrial Antenna UHF (Ch21-48) 18 Elements G 13dBi Black	LTE700	6
<b>V Zenit antenna</b>			
149221	V ZENIT Terrestrial Antenna UHF (Ch21-48) G 15dBi (Single packing)	LTE700	1/6
149222	V ZENIT Terrestrial Antenna UHF (Ch21-48) G 15dBi (Multiple packing)	LTE700	9
149223	V ZENIT Terrestrial Antenna UHF (Ch21-48) G 15dBi (Multiple Packing) Black	LTE700	9
Ref.	Description		
<b>MOBILE DATA (LTE)</b>			
<b>4G</b>			
650101	4GNOVA Antenna 4G/LTE 698...960/1700...2700MHz G 7dBi [0.7m Female "N"]		1
650302	Kit: 2x 4G/LTE MIMO Antenna "SMA" 698...960/1700...2700MHz G 1/3,5dBi		1



▲ 5501



▲ 560523



▲ 1050



▲ 112120



▲ 650101



▲ 650302



▲ 149221



## TV DISTRIBUTION

### SATELLITE DISHES

Ref.	Description	
<b>ALUMINIUM OFFSET SATELLITE DISHES</b>		
<b>QSD SERIES</b>		
<b>QSD75</b>		
7902	QSD High Quality Offset Dish 75 Aluminium G 38.5dBi (750x850mm) Orange	1
790202	QSD High Quality Offset Dish 75 Aluminium G 38.5dBi (750x850mm) Graphite	1
790204	QSD High Quality Offset Dish 75 Aluminium G 38.5dBi (750x850mm) White	1
<b>QSD85</b>		
7903	QSD High Quality Offset Dish 85 Aluminium G 39.5dBi (850x950mm) Orange	1
790302	QSD High Quality Offset Dish 85 Aluminium G 39.5dBi (850x950mm) Graphite	1
790304	QSD High Quality Offset Dish 85 Aluminium G 39.5dBi (850x950mm) White	1
<b>ISD SERIES</b>		
<b>630</b>		
793001	ISD Offset Dish 630 Aluminium G 36.2dBi Orange	1
793002	ISD Offset Dish 630 Aluminium G 36.2dBi White	1
793003	ISD Offset Dish 630 Aluminium G 36.2dBi Graphite	1
793011	ISD Offset Dish 630 Aluminium G 36.2dBi Orange (Multiple packing)	10
793012	ISD Offset Dish 630 Aluminium G 36.2dBi White (Multiple packing)	10
793013	ISD Offset Dish 630 Aluminium G 36.2dBi Graphite (Multiple packing)	10
<b>830</b>		
793101	ISD Offset Dish 830 Aluminium G 39dBi Orange	1
793102	ISD Offset Dish 830 Aluminium G 39dBi White	1
793103	ISD Offset Dish 830 Aluminium G 39dBi Graphite	1
793109	ISD Offset Dish 830 Aluminium G 39dBi Graphite (No Televes logo)	1
793111	ISD Offset Dish 830 Aluminium G 39dBi Orange (Multiple packing)	5
793112	ISD Offset Dish 830 Aluminium G 39dBi White (Multiple packing)	5
793113	ISD Offset Dish 830 Aluminium G 39dBi Graphite (Multiple packing)	5
793119	ISD Offset Dish 830 Aluminium G 39dBi Graphite (No Televes logo)	5



▲ 793003



▲ 793002



▲ 793109

ISD without logo

**QSD SERIES**

The long life aluminium dish, quality signal reception for life.

TÜV approved  
(German certifying organization)

Compatibility between supports & dishes						
Ø Support	35	45			60	
Dishes	7393	7349	7371	719202	7576	719201
ISD	✓	✓	✓	✓	✓	✓
QSD	✗	✓	✓	✓	✓	✓
Other typical sizes						
600	✓	✓	✓	✓	✗	✗
800	✓	✓	✓	✓	✓	✓
1000	✗	✗	✗	✓	✓	✓
1100	✗	✗	✗	✗	✓	✓
1300	✗	✗	✗	✗	✓	✓



## TV DISTRIBUTION SATELLITE DISHES

### Ref. Description

#### LNB

##### COAXIAL (RF)

###### Universal

746902	Offset LNB Single (Universal) Hh/Vh/Hl/Vl G 60dB, Grey	1/100
747002	Offset LNB Twin (2 Outputs Hh/Vh/Hl/Vl) G 60dB, Grey	1/50
747102	Offset LNB Quattro Hh-Vh-Hl-Vl G 60dB, Grey	1/50
747202	Offset LNB Quad (4 Outputs Hh/Vh/Hl/Vl) G 60dB, Grey	1/50
7475	Offset LNB Single (Universal) Hh/Vh/Hl/Vl G 60dB	1/100
747701	Offset LNB Quattro Hh-Vh-Hl-Vl G 60dB	1/30
747802	Offset LNB Twin (2 Outputs Hh/Vh/Hl/Vl) G 60dB	1/30
761001	Offset LNB Quad (4 Outputs Hh/Vh/Hl/Vl) G 60dB	1/30
761301	Offset LNB Octo (8 Outputs Hh/Vh/Hl/Vl) G 60dB, Grey	1/30



▲ 747402

**LNB Wideband**  
It captures the entire frequency spectrum of a satellite and transmits it through two outputs (V-H) in a frequency range between 290 and 2340 MHz.

###### WideBand

747402	WideBand LNB (2 Outputs H-V) G 57dB for Overlight solution	1/50
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##### ACCESSORIES

4163	Outdoor Case Grey Large Model Dimensions: External 136x127x45mm Internal 125x97x35mm	1/5
732150	DC Cable "F"- "Jack" Female 0,4m	1
7450	Current Injector 10...2150MHz 1...24Vdc-1.5A	1/20
7485	Line Amplifier 1i/1o "F": UHF/SAT[dc] G -2.5/20dB Vo 112.5dB $\mu$ V	1/10



▲ 7485

### Ref. Description

#### MULTI-SATELLITE MOUNTS

##### FOR QSD SERIES

790901	Multi-feed Support Up to 4 SAT, QSD Dishes Includes: Rail (up to 20°) + 1 LNB Support (Ref.790902)	1/10
790902	LNB Support for QSD Dishes	1/10



▲ 747701



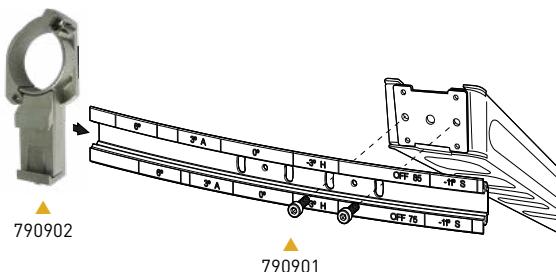
▲ 7450



▲ 7485

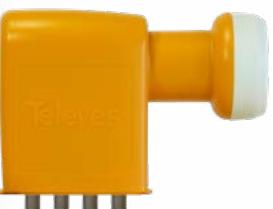
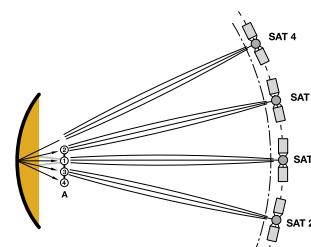


▲ 74802



▲ 790902

▲ 790901



▲ 761001



## TV DISTRIBUTION

### MECHANICAL ACCESSORIES

Ref.	Description	
<b>MASTS</b>		
<b>SCREW MOUNTING</b>		
<b>Zinc+RCP</b>		
3010	Mast Zinc+RCP 3m x Ø 45mm x Thickness 2mm	1
<b>FIXING ACCESSORIES</b>		
4361	Guy Wire Mounting Kit Ø 45mm	1/5
Ref.	Description	
<b>SUPPORTS FOR ANTENNAS</b>		
<b>"L" TYPE</b>		
<b>Zinc+RCP</b>		
7349	"L" Bracket Zinc+RCP Wall Mount 380x350mm / Ø 45mm x Thickness 1.5mm	6
7371	"L" Bracket Zinc+RCP Wall Mount 500x450mm / Ø 45mm x Thickness 2mm	5
7393	"L" Bracket Zinc+RCP Wall Mount 284x194mm / Ø 35mm x Thickness 1.5mm	10
<b>FLOOR MOUNT</b>		
<b>Zinc+RCP</b>		
7576	"T" Bracket Zinc+RCP Ground Mount 750x200mm / Ø 60mm x Thickness 2.9mm	1
<b>"Y" TYPE FOR WALL AND FLOOR</b>		
<b>Galvanized</b>		
719201	"Y" Bracket Galvanized Wall/Ground Mount 551x439mm or 620x247mm / Ø 60mm x Thickness 1.5mm	5
719202	"Y" Bracket Galvanized Wall/Ground Mount 728x473mm or 720x481mm / Ø 45mm x Thickness 1.5mm	1
Ref.	Description	
<b>STEEL CABLES</b>		
2043	Galvanized Steel Wire Ø 2mm	100
3034	Galvanized Steel Wire Ø 4mm	100
3059	Galvanized Steel Wire Ø 5mm	100
306001	Galvanized Steel Wire Ø 6mm	200



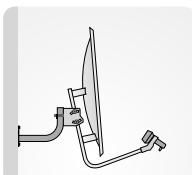
▲ 3010



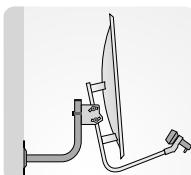
▲ 4361



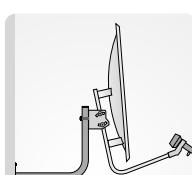
▲ 7393



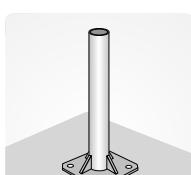
▲ 7393



▲ 7349



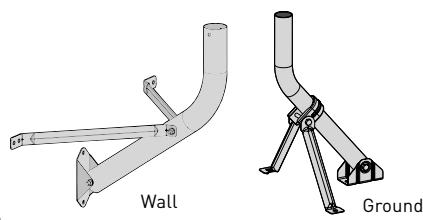
▲ 7371



▲ 7576

**Galvanized brackets**

Ref.	Wall mount	Ground mount
719201	551 x 439 mm	620 x 247 mm
719202	728 x 473 mm	720 x 481 mm



▲ 7576



▲ 719201

**Galvanized steel wires (mm)**

2043	Ø 2mm	Ø 0,6mm	Ø 2mm	Ø 0,6mm
3034	Ø 4mm	Ø 1,3mm	Ø 4mm	Ø 1,3mm
3059	Ø 5mm	Ø 1,6mm	Ø 5mm	Ø 1,6mm
306001	Ø 6mm	Ø 2mm	Ø 6mm	Ø 2mm





## TV DISTRIBUTION TOWERS

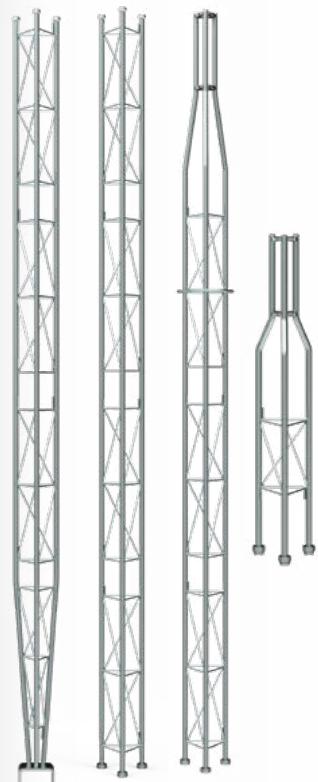
Televes

Ref.	Description	
<b>FOR COMMON USE</b>		
<b>PACK TOWER</b>		
306501	"Pack" Tower Galvanized+Orange 2.2m (Mast and Accessories included)	1/1
<b>180 SE TOWER</b>		
<b>Zinc + RCP</b>		
3014	Upper Section 180 SE Tower Zinc+RCP 1.25m (mast Ømax 46mm)	1
3015	Upper Section 180 SE Tower Zinc+RCP 2.5m, with Wire Ring (mast Ømax 46mm)	1
3017	Middle Section 180 SE Tower Zinc+RCP 2.5m	1
<b>Accessories</b>		
3019	Fixed Embedded Base 180 SE Tower Zinc+RCP	1
3020	Fixed Bolting Base 180 SE Tower Zinc+RCP	1
Ref.	Description	
<b>MULTIFUNCTION</b>		
<b>180 TOWER</b>		
<b>Zinc + RCP</b>		
3021	Upper Section 180 Tower Zinc+RCP 1m (mast Ømax 46mm)	1
3031	Middle Section 180 Tower Zinc+RCP 3m	1
3032	Upper Section 180 Tower Zinc+RCP 3m (mast Ømax 46mm)	1
3037	Lower Section Pivoting 180 Tower Zinc+RCP 3m	1
<b>Zinc + Painting</b>		
303102	Middle Section 180 Tower Zinc+White 3m	1
303202	Upper Section 180 Tower Zinc+White 3m (mast Ømax 46mm)	1
<b>Hot-Dip Galvanizing</b>		
303101	Middle Section 180 Tower H.D.G. 3m	1
303201	Upper Section 180 Tower HDG 3m (mast Ømax 46mm)	1
303701	Lower Section Pivoting 180 Tower HDG 3m	1
<b>Hot-Dip Galvanizing + Painting</b>		
303103	Middle Section 180 Tower HDG+White 3m	1
303203	Upper Section 180 Tower HDG+White 3m (mast Ømax 46mm)	1
<b>Accessories</b>		
3029	Embedded Frame 180 Tower Zinc+RPR for Fixed Base (Ref. 3038xx)	1
3034	Galvanized Steel Wire Ø 4mm	100
3038	Fixed Bolting/Embedded (with frame) Base 180 Tower Zinc+RCP	1
303801	Fixed Bolting/Embedded (with frame) Base 180 Tower HDG	1
303802	Fixed Bolting/Embedded (with frame) Base 180 Tower Zinc+White	1
303803	Fixed Bolting/Embedded (with frame) Base 180 Tower HDG+White	1
3048	Pivoting Embedded Base 180 Tower Zinc+ RCP	1
304801	Pivoting Embedded Base 180 Tower HDG	1
3058	Guy Wire Ring 180/360 Tower Zinc+RCP	20
305801	Guy Wire Ring 180/360 Tower HDG	20

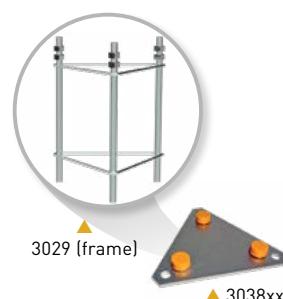


▲ Torre Pack

Compatible with support Ref. 7349.



▲ 180 Sections

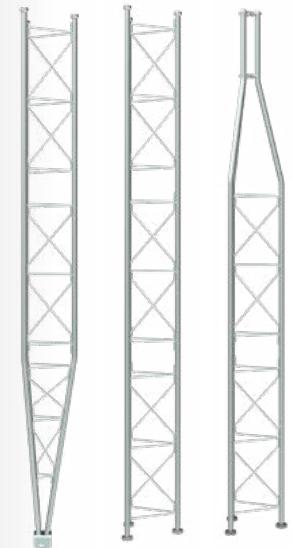


▲ 3048xx

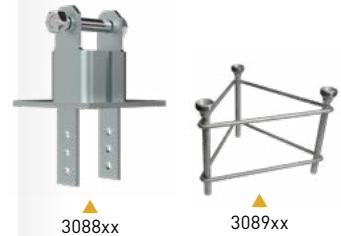


## TV DISTRIBUTION TOWERS

Ref.	Description	
<b>MULTIFUNCTION</b>		
<b>360 TOWER</b>		
<b>Zinc + RCP</b>		
3085	Upper Section 360 Tower Zinc+RCP 3m (mast Ømax 52mm)	1
3086	Lower Section Pivoting 360 Tower Zinc+RCP 3m	1
3087	Middle Section 360 Tower Zinc+RCP 3m	1
<b>Zinc + Painting</b>		
308501	Upper Section 360 Tower Zinc+Red 3m (mast Ømax 52mm)	1
308502	Upper Section 360 Tower Zinc+White 3m (mast Ømax 52mm)	1
308601	Lower Section Pivoting 360 Tower Zinc+Red 3m	1
308602	Lower Section Pivoting 360 Tower Zinc+White 3m	1
308701	Middle Section 360 Tower Zinc+Red 3m	1
308702	Middle Section 360 Tower Zinc+White 3m	1
<b>Hot-Dip Galvanizing</b>		
308503	Upper Section 360 Tower HDG 3m (mast Ømax 52mm)	1
308603	Lower Section Pivoting 360 Tower HDG 3m	1
308703	Middle Section 360 Tower HDG 3m	1
<b>Hot-Dip Galvanizing + Painting</b>		
308504	Upper Section 360 Tower HDG+Red 3m (mast Ømax 52mm)	1
308604	Lower Section Pivoting 360 Tower HDG+Red 3m	1
308605	Lower Section Pivoting 360 Tower HDG+White 3m	1
308704	Middle Section 360 Tower HDG+Red 3m	1
308705	Middle Section 360 Tower HDG+White 3m	1
<b>Accessories</b>		
3058	Guy Wire Ring 180/360 Tower Zinc+RCP	20
305801	Guy Wire Ring 180/360 Tower HDG	20
3059	Galvanized Steel Wire Ø 5mm	100
308001	Fixed Bolting Base 360 Tower HDG	1
3088	Pivoting Embedded Base 360 Tower Zinc+RCP	1
308801	Pivoting Embedded Base 360 Tower HDG	1
3089	Fixed Embedded Base 360 Tower Zinc+RCP	1
308901	Fixed Embedded Base 360 Tower HDG	1
690306	360 Tower Support HDG for 4 Maxi Floodlights	1



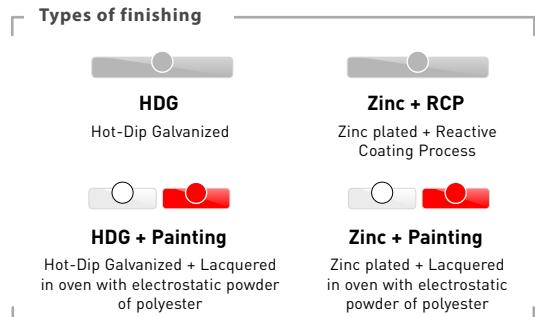
▲ 360 Section



3088xx      3089xx



308001

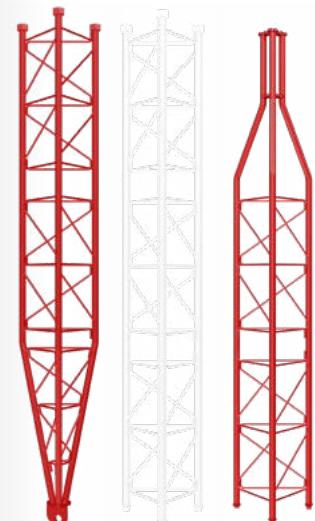




## TV DISTRIBUTION TOWERS

Ref.	Description	
<b>WIND INDUSTRY</b>		
<b>450 TOWER</b>		
<b>Zinc + Painting</b>		
3130	Lower Section Pivoting Reinforced 450 Tower Zinc+Red 3m	● 1
3131	Middle Section 450 Tower Zinc+Red 3m	● 1
313101	Middle Section 450 Tower Zinc+White 3m	○ 1
3132	Middle Section Reinforced 450 Tower Zinc+Red 3m	● 1
313201	Middle Section Reinforced 450 Tower Zinc+White 3m	○ 1
3133	Upper Section 450 Tower Zinc+Red 3m	● 1
<b>Hot-Dip Galvanizing + Painting</b>		
313001	Lower Section Pivoting Reinforced 450 Tower HDG+Red 3m	● 1
313102	Middle Section 450 Tower HDG+Red 3m	● 1
313103	Middle Section 450 Tower HDG+White 3m	○ 1
313202	Middle Section Reinforced 450 Tower HDG+Red 3m	● 1
313203	Middle Section Reinforced 450 Tower HDG+White 3m	○ 1
313301	Upper Section 450 Tower HDG+Red 3m (mast Ømax 62mm)	● 1
<b>Accessories</b>		
306001	Galvanized Steel Wire Ø 6mm	200
312901	Surface Plate 450/550 Tower for Pivoting Base (Refs. 3134xx & 3142xx) Zinc+RCP	● 1
312902	Surface Plate 450/550 Tower for Pivoting Base (Refs. 3134xx & 3142xx) HDG	● 1
3134	Pivoting Embedded/Bolting (with plate) Base 450 Tower Zinc+Red	● 1
313401	Pivoting Embedded/Bolting (with plate) Base 450 Tower H.D.G.+Red	● 1
313501	Fixed Embedded Base 450 Tower Zinc+RCP	● 1
313502	Fixed Embedded Base 450 Tower HDG	● 1
3144	Guy Wire Ring 450/550 Tower Zinc+RCP	● 1
314401	Guy Wire Ring 450/550 Tower HDG	● 1
690307	450 Tower Support HDG for 4 Maxi Floodlights	● 1
690308	450 Tower Support HDG for 6 Maxi Floodlights	● 1
<b>550 TOWER</b>		
<b>Zinc + Painting</b>		
313901	Lower Section Pivoting 550 Tower Zinc+Red 3m	● 1
3140	Middle Section 550 Tower Zinc+Red 3m	● 1
314001	Middle Section 550 Tower Zinc+White 3m	○ 1
3141	Transition Section 550 to 450 Tower Zinc+Red 3m	● 1
<b>Hot-Dip Galvanizing + Painting</b>		
313902	Lower Section Pivoting 550 Tower HDG+Red 3m	● 1
314002	Middle Section 550 Tower HDG+Red 3m	● 1
314003	Middle Section 550 Tower HDG+White 3m	○ 1
314101	Transition Section 550 to 450 Tower HDG+Red 3m	● 1
<b>Accessories</b>		
306001	Galvanized Steel Wire Ø 6mm	200
312901	Surface Plate 450/550 Tower for Pivoting Base (Refs. 3134xx & 3142xx) Zinc+RCP	● 1
312902	Surface Plate 450/550 Tower for Pivoting Base (Refs. 3134xx & 3142xx) HDG	● 1
3142	Pivoting Embedded/Bolting (with plate) Base 550 Tower Zinc+Red	● 1
314201	Pivoting Embedded/Bolting (with plate) Base 550/550XL Tower HDG+Red	● 1
3143	Fixed Embedded Base 550 Tower Zinc+RCP	● 1
314301	Fixed Embedded Base 550 Tower HDG	● 1
3144	Guy Wire Ring 450/550 Tower Zinc+RCP	● 1
314401	Guy Wire Ring 450/550 Tower HDG	● 1

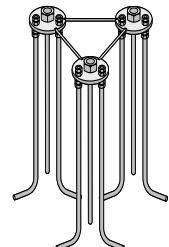
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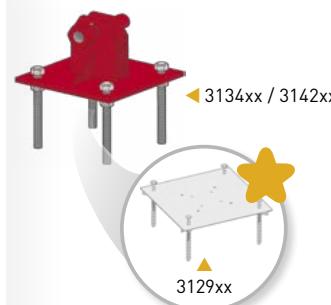
▲ 450 Section



▲ 550 Section



3135xx / 3143xx

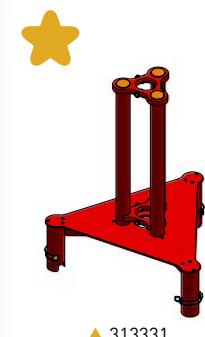
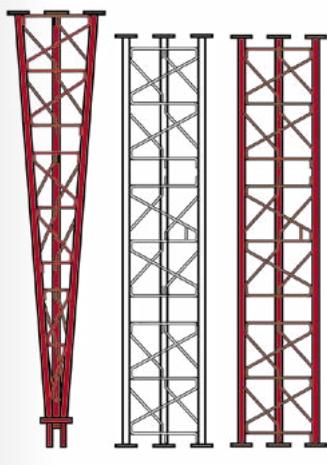
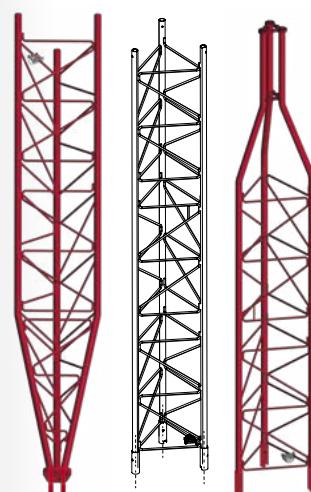


3129xx



## TV DISTRIBUTION TOWERS

Ref.	Description	
<b>WIND INDUSTRY</b>		
<b>450 XL TOWER</b>		
<b>Hot-Dip Galvanizing + Painting</b>		
313011	Lower Section Pivoting Reinforced 450XL Tower HDG+Red 3m	● 1
313112	Middle Section 450XL Tower HDG+Red 3m	● 1
313113	Middle Section 450XL Tower HDG+White 3m	○ 1
313212	Middle Section Reinforced 450XL Tower HDG+Red 3m	● 1
313213	Middle Section Reinforced 450XL Tower HDG+White 3m	○ 1
313311	Upper Section 450XL Tower HDG+Red 3m (mast Ømax 62mm)	● 1
313321	Upper Section 450XL Tower HDG+Red 1m (mast Ømax 62mm)	● 1
313331	Top Mast Holder 450XL Tower HDG+Red 0.5m (mast Ømax 62mm)	● 1
313341	Upper Section 450XL Tower HDG+Red 2m (mast Ømax 62mm)	● 1
<b>Accessories</b>		
312911	Surface Plate 450XL/550XL/550ULTRA Tower for Pivoting Base (Refs. 313412 & 314201/10) HDG	● 1
313412	Pivoting Embedded/Bolting (with plate) Base 450XL Tower HDG+Red	● 1
3144	Guy Wire Ring 450/550 Tower Zinc+RCP	● 1
314401	Guy Wire Ring 450/550 Tower HDG	● 1
314502	Buried Plate 450XL/550XL Tower with Guy Wire Ring HDG 1x1m	● 1
314512	Buried Plate 450XL/550XL Tower with Guy Wire Ring HDG 1.5x1.5m	● 1
314550	Climbing Protection Plate 450XL Tower HDG (3 units)	● 1
<b>550 XL TOWER</b>		
<b>Hot-Dip Galvanizing + Painting</b>		
313820	Upper Section 550XL Reinforced Tower HDG+Red 3m (mast Ømax 62mm)	● 1
313921	Lower Section Pivoting Reinforced 550XL Tower HDG+Red 3m	● 1
314020	Middle Section Reinforced 550XL Tower HDG+Red 3m	● 1
314021	Middle Section Reinforced 550XL Tower HDG+White 3m	○ 1
<b>Accessories</b>		
312911	Surface Plate 450XL/550XL/550ULTRA Tower for Pivoting Base (Refs. 313412 & 314201/10) HDG	● 1
314201	Pivoting Embedded/Bolting (with plate) Base 550/550XL Tower HDG+Red	● 1
3144	Guy Wire Ring 450/550 Tower Zinc+RCP	● 1
314401	Guy Wire Ring 450/550 Tower HDG	● 1
314502	Buried Plate 450XL/550XL Tower with Guy Wire Ring HDG 1x1m	● 1
314512	Buried Plate 450XL/550XL Tower with Guy Wire Ring HDG 1.5x1.5m	● 1
<b>550 ULTRA TOWER</b>		
<b>Hot-Dip Galvanizing + Painting</b>		
313810	Top Mast Holder 550ULTRA Reinforced Tower HDG+Red 0.25m (mast Ømax 62mm)	● 1
313911	Lower Section Pivoting 550ULTRA Reinforced Tower HDG+Red 3m	● 1
314010	Middle Section 550ULTRA Reinforced Tower HDG+Red 3m	● 1
314011	Middle Section 550ULTRA Reinforced Tower HDG+White 3m	○ 1
<b>Accessories</b>		
312911	Surface Plate 450XL/550XL/550ULTRA Tower for Pivoting Base (Refs. 313412 & 314201/10) HDG	● 1
314210	Pivoting Embedded Base 550ULTRA Reinforced Tower HDG+Red	● 1
314401	Guy Wire Ring 450/550 Tower HDG	● 1





## TV DISTRIBUTION FILTERING AND AMPLIFICATION

Televes

Ref.	Description		
<b>LTE FILTERS</b>			
<b>MICROCAVITIES</b>			
403302	Very High Rejection LTE/4G Microcavities Filter (VHR) "F" 5...782MHz VHF/UHF (Ch59) Selective, Indoor	LTE790	1/14
<b>EASYF FORMAT</b>			
405202	High Rejection LTE/5G Filter (HR) "EasyF" 47...694MHz VHF/UHF (Ch48) Outdoor	LTE700	1/10
405203	High Rejection LTE/5G Filter (HR) "EasyF" 47...694MHz VHF/UHF (Ch48) Outdoor (DC Pass)	LTE700	1/10
405220	Very High Rejection LTE/5G Filter (VHR) "EasyF" 47...694MHz VHF/UHF (Ch48) Outdoor (DC Pass)	LTE700	1/10
<b>PLUG-IN FORMAT</b>			
<b>F connector</b>			
403101	Medium Rejection LTE/4G Filter (MR) "F" 470...774MHz UHF (Ch21-58) Indoor	LTE790	10/50
403201	Medium Rejection LTE/5G Filter (MR) "F" 47...694MHz VHF/UHF (Ch48), Indoor (DC Pass)	LTE700	1/10/100
403220	High Rejection LTE/5G Filter (HR) "F" 47...694MHz VHF/UHF (Ch48) Indoor	LTE700	1/10/50
<b>IEC connector</b>			
403210	High Rejection LTE/5G Filter (HR) "IEC" 47...694MHz VHF/UHF (Ch48) Indoor	LTE700	1/10/50
403211	High Rejection LTE/5G Filter (HR) "IEC" 47...694MHz VHF/UHF (Ch48) Indoor (DC Pass)	LTE700	1/10/50
<b>ACCESSORIES</b>			
4163	Outdoor Case Grey Large Model Dimensions: External 136x127x45mm Internal 125x97x35mm		1/5

Ref.	Description		
<b>COMBINERS</b>			
<b>MATV (TERRESTRIAL)</b>			
404010	Mast Triplexer 3i/1o "EasyF": BI/FM-BIII/DAB-UHF[dc]	LTE790	1/10
404011	Mast Triplexer 3i/1o "EasyF": BI/FM-BIII/DAB-UHF[dc], Outdoor Black	LTE790	1/10
404110	Mast Triplexer 3i/1o "EasyF": VHF-UHF[dc]-UHF	LTE790	1/10
<b>SMATV (TERRESTRIAL + SATELLITE)</b>			
740710	Double Combiner [47...790/950...2400MHz[dc]] 3i/2o "F": SAT1-MATV-SAT2 / SAT1+MATV-SAT2+MATV	LTE790	1/10
745210	Combiner MATV-SAT 2i/1o "F": 47..790-950..2400MHz[dc]	LTE790	1/10
745220	Mini-Combiner MATV-SAT 2i/1o "F": 47..790-950..2400MHz[dc]	LTE790	10
<b>ACCESSORIES</b>			
4163	Outdoor Case Grey Large Model Dimensions: External 136x127x45mm Internal 125x97x35mm		1/5
417801	Outdoor Case Black Model for Mini Series Dimensions: External 88x78x39mm Internal 57x47x13mm		1/10

### LTE FILTERS

Attenuate the LTE (4G/5G) signals passing through the antenna towards active devices susceptible of being affected by them.



"EasyF" model

Plug-in model  
("F" or "IEC" connection)

**LTE ADAPTATION,  
All solutions for all cases**



▲ 417801

▲ Mini-mixer [745220]  
57 x 47 x 13 mm

▲ 404010



▲ 740710



▲ 745210



▲ 4163



## TV DISTRIBUTION

### FILTERING AND AMPLIFICATION

QUICK PRODUCT GUIDE 2023

Ref.	Description		
<b>MAST AMPLIFIERS</b>			
<b>SMARTKOM: INTELLIGENT AMPLIFICATION</b>			
★ 531911	SmartKom Intelligent Mast Amplifier with Autoprogramming 4/1o "EasyF": 3x{VHF/UHF}[dc]-FMmix G 45{-1}dB Vo 85dB $\mu$ V. Domestic Power Supply 2i/1o "F" 12V-800mA included, with Bluetooth antenna	LTE700	1
<b>NANOKOM SERIES</b>			
<b>Terrestrial</b>			
561721	NanoKom Mast Amplifier 3i/1o "EasyF": UHF[dc]-UHF-VHFmix G 28-28- (-1.5)dB Vo 108dB $\mu$ V 12...24V Powering (Switchable DC Pass)	LTE700	1/10
561821	NanoKom Mast Amplifier 3i/1o "EasyF": BIII-UHF[dc]-FMmix G 18-28- (-1,5)dB Vo 106/108dB $\mu$ V w/USOS 12...24V Powering (Switchable DC Pass)	LTE700	1/10
<b>Terrestrial and satellite</b>			
561421	NanoKom Mast Amplifier 3i/1o "EasyF": UHF-UHF[dc]-SATmix[dc] G 28-28- (-2.5)dB Vo 108dB $\mu$ V 12...24V Powering (Switchable DC Pass)	LTE700	1/10
561521	NanoKom Mast Amplifier 3i/1o "EasyF": BIII-UHF[dc]-FMmix-SATmix[dc] G 18-28- (-1.5) - (-2.5)dB Vo 106/108dB $\mu$ V w/USOS 12...24V Powering (Switchable DC Pass)	LTE700	1/10
561620	NanoKom Mast Amplifier 3i/1o "EasyF": UHF[dc]-VHFmix-SATmix[dc] G 28- (-1,5) - (-2,5)dB Vo 109dB $\mu$ V w/USOS. 12...24V Powering (Automatic LTE Filter & Switchable DC Pass)	AUTOLTE	1/10
561621	NanoKom Mast Amplifier 3i/1o "EasyF": UHF[dc]-VHFmix-SATmix[dc] G 24- (-1,5) - (-2,5)dB Vo 104dB $\mu$ V w/USOS 12...24V Powering (Switchable DC Pass)	LTE700	1/10
<b>Ref.</b> Description			
<b>DOMESTIC POWER SUPPLY UNITS</b>			
<b>PICOKOM SERIES</b>			
579401	PicoKom Domestic Power Supply Unit 1i/2o "EasyF": 5...2400MHz 12V-200mA	1/10	
5796	PicoKom Domestic Power Supply Unit 1i/1o "EasyF" SATmix: 5...2400MHz 12V-220mA	1/10	
<b>F-CONNECTOR SERIES</b>			
5501	Domestic Power Supply Unit 1i/2o "F": 5...862MHz 12V-220mA (UK Plug)	1	
★ 550210	Domestic Power Supply Unit 2i/1o "F": 47...862/950...2150MHz 12V-800mA, with Bluetooth (for SmartKom)	1	
<b>Ref.</b> Description			
<b>KITS: MAST AMPLIFIER WITH POWER SUPPLY</b>			
<b>NANOKOM SERIES</b>			
<b>Terrestrial and satellite</b>			
567810	NanoKom Mast Amplifier 3i/1o "EasyF": UHF[dc]-VHFmix-SATmix[dc] with USOS + PicoKom PSU 1i/2o "EasyF" 12V-200mA (Refs.561621+579401)	LTE700	1
<b>F-CONNECTOR SERIES</b>			
560202	Mast Amplifier 1i/1o "F": UHF + Domest. PSU 1i/2o "F" 12V-220mA (Ref. 560210 & 5501) Black	LTE790	1
<b>IF-MIX SERIES</b>			
8048	Mast Amplifier 2i/4o "EasyF": UHF/Vmix[dc]-SATmix[dc] + Domest.PSU 1i/2o "F" 12V-220mA (UK Plug) (Ref.535401+5501) Black	1	

**SMARTKOM**Dimensions:  
134 x 125 x 41 mm

Compact and intelligent amplifier with digital channel processing that allows automatic programming and level adjustment simply by pressing a button.

- Filtering, mixing, amplification and level balancing in a single device
- High channel selectivity
- Remote powering through its coaxial output connector (domestic power supply unit included)
- Manual configuration via Bluetooth with a smartphone (ASuite)

▲ Nanokom Series  
90 x 80 x 38 mm▲ Domestic PSU: PicoKom series  
90 x 68 x 28 mm▲ Kit 560202  
(Mast amplifier + Domestic PSU)▲ High-gain Mast Amplifier  
120 x 130 x 40 mm



## TV DISTRIBUTION

### FILTERING AND AMPLIFICATION

Ref.	Description	
<b>DOMESTIC AMPLIFIERS</b>		
<b>PICOKOM SERIES</b>		
<b>MATV (terrestrial)</b>		
560521	PicoKom Domestic Amplifier 1i/1o "EasyF": 47...694MHz G 14/20dB Vo 102/105dB $\mu$ V Auto-Adjustment + Preamp.Pow. 12V-150mA	LTE700 1/10
560522	PicoKom Domestic Amplifier 1i/2o "EasyF": 47...694MHz G 10/16dB Vo 98/101dB $\mu$ V Auto-Adjustment + Preamp.Pow. 12V-150mA	LTE700 1/10
560523	PicoKom Domestic Amplifier 1i/(2o+TV) "EasyF": 47...694MHz G 10/16dB Vo 98/101dB $\mu$ V Auto-Adjustment + Preamp.Pow. 12V-150mA	LTE700 1/10
<b>IEC AND F CONNECTOR SERIES</b>		
<b>MATV (terrestrial)</b>		
545720	Domestic Amplifier 1i/(2o+TV) "IEC": 47...694MHz G 20dB Vo 110dB $\mu$ V + Output to a TV Outlet G 12dB + Preamp.Pow. 12V-100mA (Blister T1)	LTE700 1/8
545802	Auto-LTE Domestic Amplifier 1i/(2o+TV) "F": 47...694/790MHz G 20dB Vo 101dB $\mu$ V Auto-Adjustment + Output to a TV Outlet G 11dB + Preamplifier Powering 12V-100mA, UK plug (Blister T1)	AUTOLTE 1/6
545901	Auto-LTE Domestic Amplifier 1i/(2o+TV) "F": 47...694/790MHz G 20dB Vo 101dB $\mu$ V w/USOS + Output to a TV Outlet G 11dB + Preamplifier Powering 12V-100mA	AUTOLTE 1
552120	Domestic Amplifier 1i/2o "IEC": 47...694MHz G 22dB Vo 104dB $\mu$ V (Blister T1)	LTE700 1/8
552220	Domestic Amplifier 1i/(2o+TV) "F": 47...694MHz G 20dB Vo 106dB $\mu$ V + Output to a TV Outlet G 12dB (Blister T1)	LTE700 1/8
552320	Domestic Amplifier 1i/(4o+TV) "F": 47...694MHz G 16dB Vo 102dB $\mu$ V + Output to a TV Outlet G 12dB (Blister T1)	LTE700 1/8
552740	Domestic Amplifier 1i/1o "IEC": 47...790MHz G 25dB Vo 112dB $\mu$ V (Blister T1)	LTE790 1/8
552840	Domestic Amplifier 1i/(2o+TV) "IEC": 47...790MHz G 20dB Vo 106dB $\mu$ V + Output to a TV Outlet G 12dB (Blister T1)	LTE790 1/8
552940	Domestic Amplifier 1i/(4o+TV) "IEC": 47...790MHz G 16dB Vo 102dB $\mu$ V + Output to a TV Outlet G 11dB (Blister T1)	LTE790 1/8
553120	Domestic Amplifier 1i/6o "F": 47...694MHz G 14dB Vo 95dB $\mu$ V (Blister T1)	LTE700 1/8

Televes

PICOKOM SERIES

easyF

LTE  
700  
READYDimensions:  
90 x 68 x 28 mm▲ Domestic Amplifier:  
"IEC" Connector  
145 x 35 x 45 mm▲ Domestic Amplifier:  
"F" Connector  
145 x 35 x 45 mm



## TV DISTRIBUTION

### FILTERING AND AMPLIFICATION

QUICK PRODUCT GUIDE 2023

Ref.	Description	
<b>LAUNCH AMPLIFIERS</b>		
<b>MINIKOM EASYF SERIES</b>		
<b>MATV (terrestrial)</b>		
562324	MiniKom Amplifier MATV 5i/1o "EasyF": FM-VHF-UHF-21..35-39..48 G 15-[24][34]-[26][36]-[24][34]-[25][35] dB Vo 113-114-116-116-116dB $\mu$ V Preamp.Powering 12V-200mA [Switchable DC Pass]	LTE700 1
562422	MiniKom Amplifier MATV 4i/1o "EasyF": FM-VHF-UHF-UHF G 15-[24][34]-[26][36]-[26][36]dB Vo 113-114-116-116dB $\mu$ V Preamplif.Powering 12V-200mA [Switchable DC Pass]	LTE700 1
562522	MiniKom Amplifier MATV 3i/1o "EasyF": FM-VHF-UHF G 15-[24][34]-[26][36]dB Vo 113-114-116dB $\mu$ V Preamplif.Powering 12V-200mA [Switchable DC Pass]	LTE700 1
<b>SMATV (terrestrial + satellite)</b>		
562621	MiniKom Amplifier MATV+SAT 4i/1o "EasyF": FM-VHF-UHF-SAT G 15-[21][31]-[27][37]-35dB Vo 114-114-115-122dB $\mu$ V Preamplif.Powering 12V-200mA Switchable DC Pass	LTE700 1
<b>MINIKOM F SERIES</b>		
<b>MATV (terrestrial)</b>		
537302	MiniKom Amplifier MATV 1i/1o "F": 47...454/470...862MHz G [20][30]/[28][38]dB Vo 113/116dB $\mu$ V	1
539201	MiniKom Amplifier MATV 4i/1o "F": FM-BIII/DAB-UHF-UHF G 15-[20][30]-[27][37]-[27][37]dB Vo 114-114-117-117dB $\mu$ V 12V-70mA Preamp.Pow.	1
<b>SMATV (terrestrial + satellite)</b>		
5363	MiniKom Amplifier MATV + SAT 2i/1o "F": [47...862]-[950...2150]MHz G -1.5-35..45dB Vo [SAT] 124dB $\mu$ V	1
539620	MiniKom Amplifier MATV + SAT 4i/1o "F": FM-BIII-UHF-FI G 17-35-39-35..41dB Vo 110-113-114-124dB $\mu$ V 12V-70mA Preamplif.Pow.	LTE700 1
<b>SMATV/CATV (return path + terrestrial + satellite)</b>		
5317	MiniKom Amplifier Return Path + MATV + 2SAT 2i/2o "F": [5..30/47..862/950..2150]-[950..2150]MHz G (for 2 outputs) -5/30..33..38dB Vo (MATV/SAT) 118/124dB $\mu$ V	1
531710	MiniKom Amplifier Return Path + MATV + SAT 1i/1o "F": 5..30/47..862/950..2150MHz G -5/35/33..38dB Vo (MATV/SAT) 120/123dB $\mu$ V	1
<b>DTKOM SERIES</b>		
<b>MATV (terrestrial)</b>		
5338	DTKOM Amplifier MATV 1i/1o "F": 47...862MHz G [40][50]dB Vo 123dB $\mu$ V [Remote Powering 12V-50mA]	1
534020	DTKOM Amplifier MATV 3i/1o "F": FM-BIII-UHF G 25-[32][42]-[32][42]dB Vo 123dB $\mu$ V 12V-50mA Preamplif. Powering	LTE700 1
534120	DTKOM Amplifier MATV 5i/1o "F": FM-BIII-21..36-38..48-UHF G 25-[32][42]-[31][41]-[31][41]-[32][42]dB Vo 123dB $\mu$ V 12V-50mA Preamplif. Powering	LTE700 1
534121	DTKOM Amplifier MATV 5i/1o "F": FM-BIII-21..32-36..48-UHF G 25-[32][42]-[31][41]-[31][41]-[32][42]dB Vo 123dB $\mu$ V 12V-50mA Preamplif. Powering	LTE700 1
<b>SMATV/CATV (return path + terrestrial + satellite)</b>		
533501	DTKOM Amplifier Return Path + MATV + SAT 1i/1o "F": 5..65/87..862/950..2150MHz G [-4][28]/[38][50]/42dB Vo 116/123/123dB $\mu$ V	1
5337	DTKOM Amplifier Return Path + MATV + 2SAT 2i/2o "F": [5..65/87..862/950..2150MHz] - [950..2150MHz] G (for 2 outputs) [-5][27]/[30][40]/42dB Vo 115/120/120dB $\mu$ V	1
<b>CATV (return path + terrestrial)</b>		
451203	DTKOM Amplifier Return Path + MATV 1i/1o "F": 5...65/87...1006MHz G [-3][28]/[30][40]dB Vo 118/129dB $\mu$ V	1

**MINIKOM EasyF SERIES**

▲ Amplifiers

Dimensions: 100 x 100 x 50 mm

High efficiency launch / splitband amplifiers, with selectable gain and LTE rejection.

[uk.televés.com/minikom](http://uk.televés.com/minikom)▲ Amplifiers:  
MiniKom "F" Series  
185 x 112 x 70 mm▲ Amplifiers: DTKOM Series  
284 x 140 x 50 mm



## TV DISTRIBUTION FILTERING AND AMPLIFICATION

Ref.	Description	
<b>PROGRAMMABLE AMPLIFIERS</b>		
<b>SMARTKOM</b>		
531920	SmartKom Intelligent Amplifier with Autoprogramming 5i/1o "F": 3x(VHF/UHF)[dc]-Fmmix-Flmix[dc] G 45(-1)(-2)dB Vo 85dB $\mu$ V	LTE700 1
<b>AVANT X</b>		
<b>Avant X Basic</b>		
532103	Avant X Basic with anti-LTE Filter: Programmable Amplifier with Digital Filtering 5i/1o "F", 2 selectable modes: FM-4x(VHF/UHF) ou FM-DAB-3xUHF G 29-75 or 29-72-75dB Vo 122-122 or 122-119-122dB $\mu$ V	T FORCE LTE700 1
532113	Avant X Basic-Sat with anti-LTE Filter: Programmable Amplifier with Digital Filtering 6i/2o "F", 2 selectable modes: FM-4x(VHF/UHF)-SAT or FM-DAB-3xUHF-SAT G 25-71-41 or 25-68-71-41dB Vo 118-118-123 or 118-115-118-123dB $\mu$ V	T FORCE LTE700 1
<b>Avant X Pro</b>		
532123	Avant X Pro with anti-LTE Filter: Programmable Amplifier with Digital Filtering 5i/1o "F", 2 selectable modes: FM-4x(VHF/UHF) ou FM-DAB-3xUHF G 29-75 or 29-72-75dB Vo 122-122 or 122-119-122dB $\mu$ V Autoprogramming, Monitoring and Report PDF	T FORCE LTE700 1
532133	Avant X Pro-Sat with anti-LTE Filter: Programmable Amplifier with Digital Filtering 6i/2o "F", 2 modes: FM-4x(VHF/UHF)-SAT or FM-DAB-3xUHF-SAT G 25-71-41 or 25-68-71-41dB Vo 118-118-123 or 118-115-118-123dB $\mu$ V Autoprogramming, Monitoring and PDF Report	T FORCE LTE700 1
<b>POWER SUPPLY UNITS</b>		
732101	Power Supply Unit 12V-0.8A	1
994903	Avant X Power Supply Unit 12V-1.5A	1

Televes

**SMARTKOM**

Compact and intelligent amplifier with digital channel processing that allows automatic programming and level adjustment simply by pressing a button. It can be powered remotely through the coaxial distribution (output connector) using a domestic PSU or with the MSW distribution trunk lines already powered. It also allows local powering with an external power supply unit (Ref. 732101 recommended).

In addition, thanks to the built-in Bluetooth antenna, manual programming of the amplifier can be done wirelessly using a smartphone or tablet, with the ASuite application.

**AVANT X PROGRAMMABLE HEADEND AMPLIFIER DIGITAL FILTERING AND PROCESSING****A NEW EVOLUTIVE STAGE****DIGITAL PROCESSING TECHNOLOGY IMPLEMENTED ON TERRESTRIAL TV SIGNALS**

Internal filtering against LTE signals (4G/5G)

Compatible with DVB-T DVB-T2

T FORCE TECHNOLOGY Terrestrial signal level always stable and adapted to its optimum value

**UP TO 32 INDIVIDUALLY PROGRAMMABLE FILTERS**

Single channel digital filtering, even for adjacent channels

**DIGITAL PROCESSING OF CHANNELS**

Output channels can be frequency shifted

**AUTOMATIC SIGNAL ADJUSTMENT IN EACH FILTER (AGC)**

And output signal manual regulation

**UHF/VHF DIGITAL FILTERS WITH HIGH SELECTIVITY**

30dB rejection (@ 1MHz)

CHOOSE THE PROGRAMMING MODE YOU WISH....

COMPATIBLE WITH UNIVERSAL PROGRAMMER  
(Ref.7234, not included)**A SIMPLE AND INTUITIVE APPLICATION FOR ANDROID, PC AND MAC**  
USB connection using a OTG cable  
(included in all the Avant X models)**AUTOMATIC PROGRAMMING WITH A SINGLE KEY!**  
(ONLY ON PRO MODEL)



## TV DISTRIBUTION

### FILTERING AND AMPLIFICATION

QUICK PRODUCT GUIDE 2023

Ref. | Description

**SINGLE-CHANNEL AMPLIFICATION****T12 SERIES****Single-channel amplifiers**

509012	T12 Single Channel Amplifier FM/DAB 87,5...108/174..230MHz G 40/48dB Vo115/115dB $\mu$ V	<b>LTE700</b>	1
509812	T12 Single Channel Amplifier High Selectivity UHF 470...862MHz G 50dB Vo 125dB $\mu$ V	<b>LTE700</b>	1

**Power supply unit**

549812	T12 Switch-mode Power Supply Unit 60W 24V-2.5A	1
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Ref. | Description

**COMPLEMENTS****ATTENUATORS**

4005	Adjustable Attenuator "F" 0 to 20dB 5...2200MHz DC Pass	1/10
4315	Adjustable Attenuator "IEC" Ø 9.5mm 1 to 25dB VHF/UHF DC Pass [Bag B1]	1/10

**FILTERS**

4007	Notch Filter "F" UHF (Ch21-69) 1 Channel & 1 Adjustment	1/10
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**LINE AMPLIFIERS**

400620	Line Amplifier UHF 1i/1o "F": 470...694MHz G 13dB Vo 98dB $\mu$ V (Plug-in)	<b>LTE700</b>	1/10
7485	Line Amplifier 1i/1o "F": UHF/SAT[dc] G -2.5/20dB Vo 112.5dB $\mu$ V		1/10

**ELECTRICAL PROTECTION**

494702	Coaxial Atmospheric Surge Arrestor 90V 0...3GHz	1
993810	Earth Bonding Bar 4 Connectors (9x/13x/17x NevoSwitch compatible)	54
993811	Earth Bonding Bar 5 Connectors (5x/9x/13x/17x NevoSwitch compatible)	120

**SUPPORTS AND CABINETS**

5069	Lockable Cabinet 648mm (1 PSU + 14 T12/T05 Modules)	1
5071	Wall Mount 498mm (1 PSU + 7 T.0X Modules or 10 T12/T05 Modules)	1
5072	Lockable Cabinet 498mm (1 PSU + 10 Modules T12/T05)	1
5239	Wall Mount 560mm (1 PSU + 8 T.0X Modules or 12 T12/T05 Modules)	1
5301	19" Rack Frame 484mm 5RU (1 PSU + 7 T.0X Modules or 10 T12/T05 Modules)	1

**ACCESSORIES**

216810	OTG USB C-microUSB B Cable Male-Male 1m Black for Avant X/6 (Bag B2)	● 1
4061	Terminal Load "F" 750hm with DC Blocked	10/200
4071	DC Blocker "F"	10
5074	T12 "F" Connector Link Push Fit Type, 40.8mm	10
7234	Universal Programmer T.0X/T05/AVANT	1



▲ 509812



▲ 549812



▲ 4007



▲ 5301



▲ 494702



▲ 400620



▲ 4315



▲ 494702



▲ 5072



▲ 5069



▲ 993811



## TV DISTRIBUTION PROCESSING HEADENDS

Ref.	Description	
<b>T.0X SERIES</b>		
<b>TRANSMODULATORS: SATELLITE INPUT (SMATV)</b>		
<b>IP output</b>		
565801	T.0X Streamer DVBS/S2-IP CI (Multicast/Unicast, SPTS) Multiplexer: 3 Transponders(2Sat) or 3 Transponders(1Sat+LoopThru) : 32 IP Streams	1
<b>Digital Terrestrial Output</b>		
563101	T.0X Transmodulator DVBS/S2-COFDM (47...862MHz)	1
563301	T.0X Transmodulator DVBS/S2-COFDM CI (47...862MHz)	1
564201	T.0X Transmodulator DVBS/S2-COFDM CI (47...862MHz) Multiplexer: 3 Transponders(2Sat) :1Ch or 3 Transponders(1Sat+LoopThru) :1Ch	1
564301	T.0X Twin Transmodulator DVBS/S2-COFDM CI (47...862MHz) Multiplexer: 3 Transponders(2Sat) :2Ch or 3 Transponders(1Sat+LoopThru) :2Ch	1
<b>Digital Cable Output</b>		
563001	T.0X Twin Transmodulator DVBS/S2-QAM (47...862MHz)	1
564101	T.0X Transmodulator DVBS/S2-QAM CI (47..862MHz) Multiplexer: 3 Transponders(2Sat) :1Ch or 3 Transponders(1Sat+LoopThru) :1Ch	1
564401	T.0X Twin Transmodulator DVBS/S2-QAM CI (47..862MHz) Multiplexer: 3 Transponders(2Sat) :2Ch or 3 Transponders(1Sat+LoopThru) :2Ch	1
564501	T.0X Hexa Transmodulator DVBS/S2-QAM (47...862MHz)	1
<b>TRANSMODULATORS: DIGITAL TERRESTRIAL INPUT (MATV)</b>		
<b>IP output</b>		
565701	T.0X Streamer DVB-T/T2-IP CI (Multicast/Unicast, SPTS) Multiplexer: 4 Channels (DVB-T/T2) : 32 IP Streams	1
<b>Digital Cable Output</b>		
565201	T.0X Twin Transmodulator DVBT/T2-QAM CI (47...862MHz) Multiplexer: 2 Channels (DVB-T/T2) : 2 Channels (DVB-T)	1
<b>ENCODERS: AUDIO/VIDEO INPUT</b>		
<b>Digital Terrestrial or Cable Output</b>		
563822	T.0X Encoder/Modulator Quad, 4i A/V: CVBS - 1Mux: COFDM/QAM (MPEG2/4)	1
563832	T.0X Encoder/Modulator Twin, 2i: HDMI / Component (YPbPr) - 1Mux: COFDM/QAM (MPEG2/4)	1
566001	T.0X Encoder/Modulator Single 1i: HDMI / Component(YPbPr) / CVBS - 1Mux: COFDM/QAM (MPEG2/4) (Standalone support + PSU 18V included)	1
<b>Digital Terrestrial or Cable Output and IP</b>		
563852	T.0X Encoder/Modulator IP Twin (MPEG2/4), 2 Modes: 2i: HDMI / Component(YPbPr) / CVBS - 1Mux: IP/COFDM/QAM 2i: HDMI / Component(YPbPr) / CVBS / IP - 1Mux: COFDM/QAM	1
<b>ENCODERS: AUDIO/VIDEO INPUT AND IP</b>		
<b>Digital Terrestrial or Cable Output</b>		
563852	T.0X Encoder/Modulator IP Twin (MPEG2/4), 2 Modes: 2i: HDMI / Component(YPbPr) / CVBS - 1Mux: IP/COFDM/QAM 2i: HDMI / Component(YPbPr) / CVBS / IP - 1Mux: COFDM/QAM	1
<b>MODULATORS: AUDIO/VIDEO INPUT</b>		
<b>Analogue Output</b>		
5806	T.0X Twin Modulator Analogue A/V-PAL Stereo (VSB 47...862MHz)	1
<b>A/D CHANNEL PROCESSORS</b>		
564901	T.0X Twin Processor Analogue/Digital Channel (47...862MHz)	1

### STREAMERS T.0X IP



Streamers generating an IP encapsulated output from the multiplexing of the services available in:

- Up to 3 different TV SAT transponders: Ref. 565801.
- 4 different DVB-T or DVB-T2 muxes: Ref. 565701.



▲ T.0X Encoders

Generate your own DTT content in High Definition.



▲ 5806



## TV DISTRIBUTION PROCESSING HEADENDS

QUICK PRODUCT GUIDE 2023

Ref.	Description	
<b>T.0X SERIES</b>		
<b>HEADEND CONTROL</b>		
<b>CDC Modules</b>		
5559	T.0X Headend Management Unit CDC IP	1
555911	T.0X Headend Management Control CDC IP/3G	1
<b>AUXILIARY EQUIPMENT</b>		
<b>Amplifier</b>		
5575	T.0X Amplifier Push-Pull 47...862MHz G 44dB Vo 120dB $\mu$ V	1
<b>Power Supply Units</b>		
562802	Power Supply Unit 38.4W 24V-1.6A [T.0X standalone mounting]	1
5629	T.0X Switch-mode Power Supply Unit 120W 24V-5A	1
562910	T.0X Switch-mode Power Supply Unit 60W 24V-2.5A	1
<b>Combiner</b>		
565002	Combiner 7i/1o: 5...1002MHz, 19" Rack Mount, 1RU	2
<b>Supports and enclosures</b>		
5071	Wall Mount 498mm (1 PSU + 7 T.0X Modules or 10 T12/T05 Modules)	1
507203	Lockable Cabinet with Forced Ventilation 448mm (1 PSU + 7 T.0X Modules)	1
507204	Lockable Cabinet with Forced Ventilation 327mm (1 PSU + 4 T.0X Modules)	1
5239	Wall Mount 560mm (1 PSU + 8 T.0X Modules or 12 T12/T05 Modules)	1
5301	19" Rack Frame 484mm 5RU (1 PSU + 7 T.0X Modules or 10 T12/T05 Modules)	1
567401	Standalone Support (1 T.0X Module)	10
<b>Programmer</b>		
7234	Universal Programmer T.0X/T05/AVANT	1
<b>Accessories</b>		
216801	Kit: PC-Module Cable & USB-Serial Adapter. Utilities: TSuite (T.0X, T05)	1
216802	Kit: OTG USB - microUSB B Cable & WiFi Adapter. Utilities: Streamers T.0X WiFi Control	1
4061	Terminal Load "F" 750Ohm with DC Blocked	10/200
4071	DC Blocker "F"	10
422601	Patch Cable for Powering T.0X from T05 0.4m	1/5
494702	Coaxial Atmospheric Surge Arrestor 90V ...3GHz	1
5673	T.0X Blank Plate 50mm - 5RU	1



▲ 5559



▲ 507204

▲ 507203  
(T.0X units not included)

▲ 216802



▲ 555911



▲ 5575



▲ 565002



▲ 5301



## TV DISTRIBUTION OPTICAL FIBER

Televes

Ref.	Description	
<b>T.0X SERIES</b>		
<b>OPTICAL TRANSMITTERS</b>		
<b>Forward path TX</b>		
233306	T.0X Optical Transmitter SMATV 1310nm "SC/APC" Po 6dBm w/o Return Path	1
233311	T.0X Optical Transmitter SMATV 1310nm "SC/APC" Po 10dBm w/o Return Path	1
234305	T.0X Optical Transmitter SMATV 1550nm "SC/APC" Po 5dBm w/o Return Path	1
234801	T.0X Optical Transmitter CATV 1310nm "SC/APC" Po 10dBm w/o Return Path RF Automatic Adjustment and Temperature Stability	1
234811	T.0X Optical Transmitter CATV 1550nm "SC/APC" Po 10dBm w/o Return Path RF Automatic Adjustment and Temperature Stability	1
<b>OPTICAL RECEIVERS</b>		
<b>Forward path RX / Return path TX</b>		
2335	T.0X Optical Receiver SMATV 1200...1600nm "SC/APC" w/o Return Path	1
<b>Return path RX</b>		
234901	T.0X Return Path Optical Receiver [5...300MHz] 1270...1650nm "SC/APC", with AGC	1
<b>AUXILIARY EQUIPMENT</b>		
<b>Amplifiers</b>		
234220	T.0X Optical Amplifier 1i/1o: 1550nm "SC/APC" 20dBm (EDFA Technology)	1
234221	T.0X Optical Amplifier / Multiplexer "SC/APC" 19dBm (EDFA Technology) 2i: 1310/1490nm - 1550nm, 1o: 1310/1490/1550nm	1
234228	T.0X Optical Amplifier / Multiplexer "SC/APC" 20dBm (YEDFA Technology) 9i: 8x1310/1490nm - 1x1550nm, 8o: 8x1310/1490/1550nm	1
<b>Power supply units</b>		
562802	Power Supply Unit 38.4W 24V-1.6A [T.0X standalone mounting]	1
5629	T.0X Switch-mode Power Supply Unit 120W 24V-5A	1
562910	T.0X Switch-mode Power Supply Unit 60W 24V-2.5A	1
<b>Splitters</b>		
2337	T.0X Optical Splitter 1260...1650nm "SC/APC" 2W 4dB	1
2339	T.0X Optical Splitter 1260...1650nm "SC/APC" 4W 7dB	1
234401	T.0X Optical Splitter 1260...1650nm "SC/APC" 8W 10dB	1
234501	T.0X Optical Splitter 1260...1650nm "SC/APC" 16W 14dB	1
234601	T.0X Optical Splitter 1260...1650nm "SC/APC" 32W 17dB	1
<b>Multiplexers (WDM)</b>		
234701	T.0X Optical Multiplexer / Demultiplexer 1i/2o "SC/APC": GPON+RF: Data (1310/1490nm) - TV (1550nm)	1
234702	T.0X Optical Multiplexer / Demultiplexer 1i/2o "SC/APC": RFoG: Uplink (1610nm) - Downlink (1550nm)	1
<b>Mounts and housings</b>		
5071	Wall Mount 498mm (1 PSU + 7 T.0X Modules or 10 T12/T05 Modules)	1
507203	Lockable Cabinet with Forced Ventilation 448mm (1 PSU + 7 T.0X Modules)	1
507204	Lockable Cabinet with Forced Ventilation 327mm (1 PSU + 4 T.0X Modules)	1
5239	Wall Mount 560mm (1 PSU + 8 T.0X Modules or 12 T12/T05 Modules)	1
5301	19" Rack Frame 484mm 5RU (1 PSU + 7 T.0X Modules or 10 T12/T05 Modules)	1
<b>Accessories</b>		
4061	Terminal Load "F" 750hm with DC Blocked	10/200
4071	DC Blocker "F"	10
5673	T.0X Blank Plate 50mm - 5RU	1



5629



562910



▲ 234801/234811



▲ 234221



▲ 234401

▲ 234501



▲ 234701

▲ 234702



## TV DISTRIBUTION

### OPTICAL FIBER

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Ref.	Description	
<b>19" RACK FORMAT</b>		
<b>OPTICAL TRANSMITTERS</b>		
<b>Forward path TX</b>		
769801	Optical Transmitter SMATV 1550nm "SC/APC" Po 5dBm w/o Return Path 19" Rack Mount, 1RU	1
769812	Optical Transmitter CATV 1550nm "SC/APC" Po 6dBm w/o Return Path External modulation and RF Automatic Adjustment (up to 30Km). DOCSIS 3.1 compatible 19" Rack Mount, 1RU	1
769902	Optical Transmitter SMATV 1310nm "SC/APC" Po 6dBm w/o Return Path, 19" Rack Mount, 1RU	1
769903	Optical Transmitter SMATV 1310nm "SC/APC" Po 10dBm w/o Return Path, 19" Rack Mount, 1RU	1
<b>AMPLIFIERS</b>		
769610	Optical Amplifier / Multiplexer "SC/APC" 20dBm (YEDFA Technology) 9i: 8x1310/1490nm - 1x1550nm, 8o: 8x1310/1490/1550nm + Double Power Supply Unit -48Vdc. 19" Rack Mount, 1RU (for OLT)	1
769611	Optical Amplifier / Multiplexer "SC/APC" 20dBm (YEDFA Technology) 33i: 32x1310/1490nm - 1x1550nm, 32o: 32x1310/1490/1550nm + Double Power Supply Unit. 19" Rack Mount, 2RU	1
769612	Optical Amplifier / Multiplexer "SC/APC" 17dBm (YEDFA Technology) 9i: 8x1310/1490nm - 1x1550nm, 8o: 8x1310/1490/1550nm + Double Power Supply Unit -48Vdc. 19" Rack Mount, 1RU (for OLT)	1
769620	Optical Amplifier 1i/1o: 1550nm "SC/APC" 20dBm (EDFA Technology) + Double Power Supply Unit. 19" Rack Mount, 1RU	1
769622	Optical Amplifier 1i/8o: 1550nm "SC/APC" 10dBm (EDFA Technology) + Double Power Supply Unit. 19" Rack Mount, 1RU	1
769623	Optical Amplifier 1i/8o: 1550nm "SC/APC" 20dBm (YEDFA Technology) + Double Power Supply Unit. 19" Rack Mount, 1RU	1
769630	Optical Amplifier / Multiplexer "SC/APC" 20dBm (EDFA Technology) 2i:1x1310/1490nm - 1x1550nm, 1o:1310/1490/1550nm + Double Power Supply Unit. 19" Rack Mount, 1RU	1
769631	Optical Amplifier / Multiplexer "SC/APC" 14dBm (EDFA Technology) 5i:4x1310/1490nm - 1x1550nm, 4o:1310/1490/1550nm + Double Power Supply Unit. 19" Rack Mount, 1RU	1
769632	Optical Amplifier / Multiplexer "SC/APC" 10dBm (EDFA Technology) 9i:8x1310/1490nm - 1x1550nm, 8o:1310/1490/1550nm + Double Power Supply Unit. 19" Rack Mount, 1RU	1
Ref.	Description	
<b>STAND-ALONE INSTALLATION (FIBERKOM SERIES)</b>		
<b>OPTICAL TRANSMITTERS</b>		
<b>Forward path Tx</b>		
238201	FiberKom Optical Transmitter SMATV 1310nm "SC/APC" Po 3dBm w/o Return Path (Remote Powering)	1
Ref.	Description	
<b>OPTICAL NODE SOLUTIONS</b>		
<b>NODES</b>		
<b>Without return path (receiver)</b>		
231201	Outdoor Optical Receiver 1200...1600nm "SC/APC" without Return Path with Amplifier 1o: 87...862/950...2150MHz (Local Powering)	1
231220	Outdoor Optical Receiver 1200...1600nm "SC/APC" without Return Path (1 Fiber) with Amplifier 2o: 40...1006MHz, OLC Technology (Local Powering)	1
<b>MINI-NODES (FIBERKOM SERIES)</b>		
<b>With return path (mini-node)</b>		
238001	FiberKom Optical Mini-node 1200...1600nm "SC/APC" Return Path 1310nm (2 Fibers) with Amplifier 87...1220MHz DOCSIS 3.1 Compatible. OLC Technology (Local Powering)	1
238004	FiberKom Optical Mini-node 1550nm "SC/APC" Return Path 1610nm (1 Fiber) with Amplifier 105...1220MHz DOCSIS 3.1 Compatible. OLC Technology (Remote Powering)	1
238005	FiberKom Optical Mini-node 1550nm "SC/APC" Return Path 1610nm (1 Fiber) with Amplifier 105...1220MHz DOCSIS 3.1 Compatible. OLC Technology (Local Powering)	1
<b>Without return path (mini-receiver)</b>		
238079	FiberKom Optical Mini-receiver 1200...1600nm "SC/APC" without Return Path (1 Fiber) with Amplifier 47...1006MHz, OLC Technology (Local Powering)	1
238101	FiberKom Optical Mini-receiver 1200...1600nm "SC/APC" without Return Path (1 Fiber) with Amplifier 47...1006MHz, OLC Technology (Remote Powering)	1
<b>MICRO-NODES</b>		
<b>Without return path (micro-receiver)</b>		
2311	Domestic Optical Receiver 1200...1600nm "SC/APC" with Amplifier 87...862/950...2400MHz with Automatic Adjustment	1
231110	Domestic Optical Receiver 1200...1600nm "SC/APC" with Amplifier 47...1006MHz, OLC Technology	1
231111	Domestic Optical Receiver 1550nm "SC/APC" with Amplifier 47...1006MHz, OLC Technology	1
<b>ACCESSORIES</b>		
732101	Power Supply Unit 12V-0.8A	1
732150	DC Cable "F"- "Jack" Female 0,4m	1



▲ 769902



▲ 769903



▲ 769632



▲ 238201

▲ Mini-Node: FiberKom Series  
185 x 80 x 35 mm▲ Micro-Node:  
145 x 60 x 35 mm▲ Outdoor Node:  
232 x 140 x 90 mm



## TV DISTRIBUTION OPTICAL FIBER

Televes

Ref.	Description	
<b>TV THROUGH OPTICAL FIBER: OVERLIGHT SERIES (MAX. 64 USERS)</b>		
<b>LNB</b>		
747402	WideBand LNB (2 Outputs H-V) G 57dB for Overlight solution	1/50
<b>AMPLIFIERS</b>		
237561	Overlight WideBand Amplifier 2x2 "F" 1xSat 250...2400MHz G 13dB Vo 118dB $\mu$ V	1
237562	Overlight WideBand Amplifier 2x2 "F" 1xSat 250...2400MHz G 29dB Vo 118dB $\mu$ V	1
<b>OPTICAL TRANSMITTERS</b>		
<b>Indoor TX</b>		
237503	Overlight Optical Transmitter CWDM Indoor "SC/APC" 10dBm 64 users 3i: 2x 290...2340MHz(Sat) - RF(Terr.), 1o: 1310nm(Sat+Terr)	1
237504	Overlight Optical Transmitter CWDM Indoor "SC/APC" 9dBm 64 users 3i: 2x 290...2340MHz(Sat) - RF(Terr.), 1o: 1550nm(Sat+Terr)	1
237505	Overlight Optical Transmitter CWDM Indoor "SC/APC" 9dBm 64 users 3i: 2x 290...2340MHz(Sat) - RF(Terr.), 1o: 1570nm(Sat+Terr)	1
<b>Outdoor TX</b>		
237513	Overlight Optical Transmitter CWDM Outdoor "FC/APC" 10dBm 64 users 3i: 2x 290...2340MHz(Sat) - RF(Terr.), 1o: 1310nm(Sat+Terr)	1
237514	Overlight Optical Transmitter CWDM Outdoor "FC/APC" 9dBm 64 users 3i: 2x 290...2340MHz(Sat) - RF(Terr.), 1o: 1550nm(Sat+Terr)	1
237515	Overlight Optical Transmitter CWDM Outdoor "FC/APC" 9dBm 64 users 3i: 2x 290...2340MHz(Sat) - RF(Terr.), 1o: 1570nm(Sat+Terr)	1
<b>OPTICAL RECEIVERS</b>		
237520	Overlight Optical Receiver dCSS "SC/APC" 1i: 1100...1650nm(Sat+Terr.), 4o: 2x (dCSS/Legacy+Terr.), 2x (Terr.) [SKY version]	1
237523	Overlight Optical Receiver dCSS "SC/APC" 1i: 1100...1650nm(Sat+Terr.), 4o: 2x (dCSS/Legacy+Terr.), 2x (Terr.) + PSU with UK plug (SKY version)	1
237530	Overlight Optical Receiver dCSS "SC/APC" 1i: 1100...1650nm(Sat+Terr.), 4o: (dCSS/Legacy+Terr.) [SKY version]	1
237533	Overlight Optical Receiver dCSS "SC/APC" 1i: 1100...1650nm(Sat+Terr.), 4o: (dCSS/Legacy+Terr.) + PSU with UK plug (SKY version)	1
237540	Overlight Optical Receiver Quattro "SC/APC" FM/DAB/UHF-SAT	1
237550	Overlight Optical Receiver Quad "SC/APC" FM/DAB/UHF-SAT	1
<b>TV THROUGH OPTICAL FIBER (MAX. 32 USERS)</b>		
<b>KIT: LNB AND OPTICAL CONVERTER</b>		
237411	Kit: WideBand LNB + Optical Transmitter "FC/UPC" 8dBm 32 users 1550nm	1
237412	Kit: WideBand LNB + Optical Transmitter "FC/UPC" 8dBm 32 users 1310nm	1
<b>CONVERTERS</b>		
236903	Optical/RF Converter "FC/PC" - "F" Quad FM/DAB/UHF-SAT	1/64
237003	Optical/RF Converter "FC/PC" - "F" Quattro FM/DAB/UHF-SAT	1/60
237201	dCSS Optical/RF Converter GTU "FC/PC" - "F" Twin FM/DAB/UHF-SAT	1
<b>OPTICAL SYSTEMS WITH WDM</b>		
<b>Full SAT + DTT</b>		
237301	Optical Transmitter / Multiplexer: 2i: "FC/PC" 1310/1490nm(Sat) - RF(Terr.), 1o: "SC/APC" 1310/1490/1550nm(Sat/Terr.), 6dBm	1
237302	Optical Transmitter / Multiplexer "SC/APC". 2i: 1310/1490nm(Sat) - RF(Terr.), 1o: 1310/1490/1550nm(Sat/Terr.), 9dBm	1
237320	Optical Receiver / Demultiplexer "SC/APC" (-8...+1dBm) with Satellite Selection Switch. 1i: 1310/1550nm(Sat/Sat+Terr.), 4o: RF(Sat+Terr) Vo 78dB $\mu$ V DIN rail installation	1
<b>Fiber4Sat</b>		
237901	Optical Transmitter / Multiplexer DWDM "SC/APC" 9dBm 5i: 4x 1100...1650nm(Sat) - RF(Terr.), 1o: 1550nm(4xSat+Terr)	1
237902	Optical Transmitter / Multiplexer CWDM "SC/APC" 6dBm 5i: 4x 1100...1650nm(Sat) - RF(Terr.), 1o: 1550nm(4xSat+Terr)	1
237910	Optical Transmitter / Multiplexer Module DWDM "SC/APC" 9dBm 3i: 2x 1100...1650nm(Sat) - RF(Terr.), 1o: 1550nm(2xSat+Terr)	1
237920	Optical Transmitter / Multiplexer CWDM Module "SC/APC" 6dBm 3i: 2x 1100...1650nm(Sat) - RF(Terr.), 1o: 1550nm(2xSat+Terr)	1
<b>WDM Multiplexers</b>		
234755	DWDM Component, Optical Multiplexer / Demultiplexer 1i/4o "FC/PC": 1550,12nm (Ch34) / 1150,92nm (Ch33) / 1551,72nm (Ch32) / 1552,52nm (Ch31)	1
234756	CWDM Component, Optical Multiplexer / Demultiplexer 1i/4o "FC/PC": 1510/1530/1550/1570nm	1
<b>ACCESSORIES</b>		
2354	Simplex F.O. Adapter Single-Mode "FC" Female - "FC" Female	5
2356	Simplex F.O. Adapter Single-Mode "FC" Female - "SC" Female	5
237050	Power Supply Unit 20V-1.2A (for Ref. 237003/236903)	1
732101	Power Supply Unit 12V-0.8A	1
732210	Power Supply Unit 12V-1.5A (UK plug)	1/10
732802	Power Supply Unit 12.5V-2.8A	1

For more information about optical fibre cabling and distribution elements, see the DataCom section.

## OVERLIGHT SERIES

ENHANCED ELECTRONICS AND  
OPTICAL ENGINEERING TO LIGHT  
UP YOUR TV



Satellite and terrestrial TV distribution through a single optical fiber, reducing the number of antennas and devices in the installation without losing the quality of the signal. Ideal to provide TV services to housing estates, blocks of apartments, hotels and campsites, residences, and other FTTx solutions.

- High output level
- Low loss and a balanced end-to-end TV signal
- Optimized electronic design
- Compatible with GPON

[uk.televes.com/overlight](http://uk.televes.com/overlight)



▲ Full DTT + SAT system over optical fibre with WDM





## TV DISTRIBUTION

### MULTISWITCHES

Ref.	Description	
<b>EUROSWITCH SERIES</b>		
<b>5X - 1 SATELLITE</b>		
<b>Multiswitches</b>		
719501	Multiswitch 5x5x4 "F" Terminal/Cascade	TFORCE 1
719502	Multiswitch 5x5x6 "F" Terminal/Cascade	TFORCE 1
719503	Multiswitch 5x5x8 "F" Terminal/Cascade	TFORCE 1
719504	Multiswitch 5x5x12 "F" Terminal/Cascade	TFORCE 1
719505	Multiswitch 5x5x16 "F" Terminal/Cascade	TFORCE 1
719506	Multiswitch 5x5x24 "F" Terminal/Cascade	TFORCE 1
719507	Multiswitch 5x5x32 "F" Terminal/Cascade	TFORCE 1
<b>Accessories</b>		
714508	Amplifier 5x5 "F" MATV/IF G 10/11dB Vo 118dB $\mu$ V	1
714509	Amplifier 5x5 "F" MATV/IF G 27/31dB Vo 114/118dB $\mu$ V	1
<b>9X - 2 SATELLITES</b>		
<b>Multiswitches</b>		
719601	Multiswitch 9x9x8 "F" Terminal/Cascade	TFORCE 1
719602	Multiswitch 9x9x12 "F" Terminal/Cascade	TFORCE 1
719603	Multiswitch 9x9x16 "F" Terminal/Cascade	TFORCE 1
719604	Multiswitch 9x9x24 "F" Terminal/Cascade	TFORCE 1
719605	Multiswitch 9x9x32 "F" Terminal/Cascade	TFORCE 1
<b>Accessories</b>		
719609	Amplifier 9x9 "F" Ret.P/MATV/IF G -/27/31dB Vo 114/118dB $\mu$ V	1
<b>17X - 4 SATELLITES</b>		
<b>Multiswitches</b>		
719801	Multiswitch 17x17x8 "F" Terminal/Cascade	TFORCE 1
719803	Multiswitch 17x17x16 "F" Terminal/Cascade	TFORCE 1
719804	Multiswitch 17x17x24 "F" Terminal/Cascade	TFORCE 1
719805	Multiswitch 17x17x32 "F" Terminal/Cascade	TFORCE 1
<b>Accessories</b>		
719809	Amplifier 17x17 "F" Ret.P/MATV/IF G -/27/31dB Vo 114/118dB $\mu$ V	1
<b>NEVOSWITCH SERIES</b>		
<b>5X - 1 SATELLITE</b>		
<b>Multiswitches</b>		
714501	Multiswitch 5x5x4 "F" Terminal/Cascade	1
714502	Multiswitch 5x5x6 "F" Terminal/Cascade	1
714503	Multiswitch 5x5x8 "F" Terminal/Cascade	1
714504	Multiswitch 5x5x12 "F" Terminal/Cascade	1
714505	Multiswitch 5x5x16 "F" Terminal/Cascade	1
714506	Multiswitch 5x5x24 "F" Terminal/Cascade	1
714507	Multiswitch 5x5x32 "F" Terminal/Cascade	1
<b>Quad multiswitches</b>		
714413	Quad Compatible Multiswitch 5x5x8 "F" Terminal/Cascade (12V-1.5A PSU with UK plug included)	1
714414	Quad Compatible Multiswitch 5x5x12 "F" Terminal/Cascade (12V-1.5A PSU with UK plug included)	1
714415	Quad Compatible Multiswitch 5x5x16 "F" Terminal/Cascade (12V-1.5A PSU with UK plug included)	1
714416	Quad Compatible Multiswitch 5x5x24 "F" Terminal/Cascade (12V-1.5A PSU with UK plug included)	1
714417	Quad Compatible Multiswitch 5x5x32 "F" Terminal/Cascade (12V-1.5A PSU with UK plug included)	1
<b>Accessories</b>		
714508	Amplifier 5x5 "F" MATV/IF G 10/11dB Vo 118dB $\mu$ V	1
714509	Amplifier 5x5 "F" MATV/IF G 27/31dB Vo 114/118dB $\mu$ V	1
714901	Tap 5x5x5 "F" 12dB	1
714902	Tap 5x5x5 "F" 15dB	1
714903	Tap 5x5x5 "F" 20dB	1
714905	Splitter 5x5x5 "F" 4/4dB	1
714906	Tap 5x5x5 "F" 8dB	1
<b>9X - 2 SATELLITES</b>		
<b>Multiswitches</b>		
714601	Multiswitch 9x9x8 "F" Terminal/Cascade	1
714602	Multiswitch 9x9x12 "F" Terminal/Cascade	1
714603	Multiswitch 9x9x16 "F" Terminal/Cascade	1
714604	Multiswitch 9x9x24 "F" Terminal/Cascade	1
714605	Multiswitch 9x9x32 "F" Terminal/Cascade	1

**EUROSWITCH SERIES**

SCALABLE RANGE OF MULTISWITCHES WITH EUROPEAN DESIGN, QUALITY AND MANUFACTURING



Thanks to its great compactness and its optimized electronic design, it presents very low through and tap losses.

In addition, thanks to the **TForce** technology, the device adjusts the output level of the terrestrial signal to optimal values at any times.

[uk.televes.com/euroswitch](http://uk.televes.com/euroswitch)



▲ 719603

**EUROSWITCH / NevoSwitch**

A unique amplifier compatible with both series



▲ 714509



▲ 714413

[uk.televes.com/nevoswitch](http://uk.televes.com/nevoswitch)



## TV DISTRIBUTION

### MULTISWITCHES

#### NEVOSWITCH SERIES

##### 9X - 2 SATELLITES

###### Quad multiswitches

714211	Quad Compatible Multiswitch 9x9x8 "F" Terminal/Cascade (12V-1.5A PSU with UK plug included)	1
714212	Quad Compatible Multiswitch 9x9x12 "F" Terminal/Cascade (12V-1.5A PSU with UK plug included)	1
714213	Quad Compatible Multiswitch 9x9x16 "F" Terminal/Cascade (12V-1.5A PSU with UK plug included)	1
714241	Quad Compatible Multiswitch 9x9x8 "F" Terminal/Cascade	1
714242	Quad Compatible Multiswitch 9x9x12 "F" Terminal/Cascade	1
714243	Quad Compatible Multiswitch 9x9x16 "F" Terminal/Cascade	1
714244	Quad Compatible Multiswitch 9x9x24 "F" Terminal/Cascade	1
714245	Quad Compatible Multiswitch 9x9x32 "F" Terminal/Cascade	1

###### Accessories

714609	Amplifier 9x9 "F" Ret.P/MATV/IF G -/27/31dB Vo 112/119dB $\mu$ V	1
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##### 13X - 3 SATELLITES

###### Multiswitches

714701	Multiswitch 13x13x8 "F" Terminal/Cascade	1
714702	Multiswitch 13x13x12 "F" Terminal/Cascade	1
714703	Multiswitch 13x13x16 "F" Terminal/Cascade	1
714704	Multiswitch 13x13x24 "F" Terminal/Cascade	1
714705	Multiswitch 13x13x32 "F" Terminal/Cascade	1

###### Accessories

714709	Amplifier 13x13 "F" Ret.P/MATV/IF G -/27/31dB Vo 112/119dB $\mu$ V	1
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##### 17X - 4 SATELLITES

###### Multiswitches

714801	Multiswitch 17x17x8 "F" Terminal/Cascade	1
714802	Multiswitch 17x17x12 "F" Terminal/Cascade	1
714803	Multiswitch 17x17x16 "F" Terminal/Cascade	1
714804	Multiswitch 17x17x24 "F" Terminal/Cascade	1
714805	Multiswitch 17x17x32 "F" Terminal/Cascade	1

###### Accessories

714809	Amplifier 17x17 "F" Ret.P/MATV/IF G -/27/31dB Vo 112/119dB $\mu$ V	1
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#### DCSS NEVOSWITCH SERIES

##### 5X - 1 SATELLITE

###### Multiswitches

714101	dCSS Multiswitch 5x5x2 "F" Terminal/Cascade, Switchable Adjustable/Passive Terrestrial (Sky version)	1
714102	dCSS Multiswitch 5x5x4 "F" Terminal/Cascade, Switchable Adjustable/Passive Terrestrial (SKY version)	1
714103	dCSS Multiswitch 5x5x8 "F" Terminal/Cascade, Switchable Adjustable/Passive Terrestrial (SKY version)	1
714104	dCSS Multiswitch 5x5x12 "F" Terminal/Cascade, Switchable Adjustable/Passive Terrestrial (SKY version)	1
714105	dCSS Multiswitch 5x5x16 "F" Terminal/Cascade, Switchable Adjustable/Passive Terrestrial (SKY version)	1

#### POWER SUPPLY UNITS

##### 12V

732101	Power Supply Unit 12V-0.8A	1
732210	Power Supply Unit 12V-1.5A (UK plug)	1/10
732802	Power Supply Unit 12.5V-2.8A	1

##### 18V

732001	Power Supply Unit 18V-2A (NevoSwitch dCSS/EuroSwitch)	1
732010	Power Supply Unit 18V-2A (dCSS NevoSwitch/EuroSwitch, UK plug)	1

#### ACCESSORIES

3821	"Quick F" Male - "F" Male Adapter, Plastic Box	50/500
401001	Interconnection Plate 10 "Quick F" Connectors, 98x56mm	30
401002	Interconnection Plate 8 "Quick F" Connectors, 68x56mm	30
401003	Interconnection Plate 8 "Quick F" Connectors, 68x83mm	30
4174	Set of 5 Colour Coded Leads "Quick F" 260mm	1/50
732150	DC Cable "F" - "Jack" Female 0,4m	1
7450	Current Injector 10...2150MHz 1...24Vdc-1.5A	1/20
993810	Earth Bonding Bar 4 Connectors (9x13x17x NevoSwitch compatible)	54
993811	Earth Bonding Bar 5 Connectors (5x9x13x17x NevoSwitch compatible)	120

Televes



▲ 714701



▲ 714709



▲ 714805



▲ 732802



▲ 4174



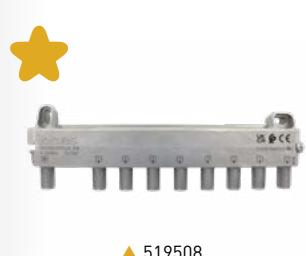
▲ 401001



## TV DISTRIBUTION DISTRIBUTION

QUICK PRODUCT GUIDE 2023

Ref.	Description	
<b>SPLITTERS</b>		
<b>EASYF SERIES</b>		
<b>Terrestrial + satellite</b>		
434103	Mini-Splitter 5...2400MHz "EasyF" 2W 4.5/4.3dB DC Pass All With Outdoor Mounting Case (Blister T1)	● 1/10
434202	Splitter 5...2400MHz "EasyF" 4W 9/7.5dB DC Pass 0-I With Outdoor Mounting Case (Blister T1)	● 1/8
543503	Mini-Splitter 5...2400MHz "EasyF" 2W 4.3/4dB Indoor DC Pass 0-I	10
543603	Mini-Splitter 5...2400MHz "EasyF" 3W 8.5/7.5dB Indoor DC Pass 0-I	10
543702	Splitter 5...2400MHz "EasyF" 4W 9/7.5dB Indoor DC Pass 0-I	10
543802	Splitter 5...2400MHz "EasyF" 5W 10/9.5dB Indoor DC Pass 0-I	10
5469	Splitter 5...2400MHz "EasyF" 6W 11/14dB Indoor DC Pass 0-I	6
5489	Splitter 5...2400MHz "EasyF" 8W 14/16dB Indoor DC Pass 0-I	6
<b>F SERIES</b>		
<b>Terrestrial + Satellite</b>		
519502	Splitter 5...2400MHz "F" 2W 5/4dB Indoor	10
519503	Splitter 5...2400MHz "F" 3W 8/7dB Indoor	10
519504	Splitter 5...2400MHz "F" 4W 9/8dB Indoor	10
519505	Splitter 5...2400MHz "F" 5W 11/10dB Indoor	10
519506	Splitter 5...2400MHz "F" 6W 12/11dB Indoor	10
519508	Splitter 5...2400MHz "F" 8W 15/14dB Indoor	10
<b>ACCESSORIES</b>		
4058	Terminal Load "F" 750hm without DC Blocked	10/200
405802	Terminal Load "F" 750hm without DC Blocked, Plastic Box	200/2000
4061	Terminal Load "F" 750hm with DC Blocked	10/200
4163	Outdoor Case Grey Large Model Dimensions: External 136x127x45mm Internal 125x97x35mm	● 1/5
4177	Outdoor Case Black Small Model Dimensions: External 113x88x35mm Internal 92x66x27mm	● 1/5
417801	Outdoor Case Black Model for Mini Series Dimensions: External 88x78x39mm Internal 57x47x13mm	● 1/10
545501	Face Plate White 93x74x21mm	○ 10



▲ 4058



▲ 4061



▲ 4177



## TV DISTRIBUTION DISTRIBUTION

Televes

Ref.	Description	
<b>TAPS</b>		
<b>EASYF SERIES</b>		
<b>Terrestrial + Satellite</b>		
542503	Mini-Tap 5...2400MHz "EasyF" 2W 12dB Indoor DC Pass I-O (TA - Floor 1)	10
542603	Mini-Tap 5...2400MHz "EasyF" 2W 16dB Indoor DC Pass I-O (A - Floors 2 & 3)	10
542703	Mini-Tap 5...2400MHz "EasyF" 2W 21dB Indoor DC Pass I-O (B - Floors 4...6)	10
542803	Mini-Tap 5...2400MHz "EasyF" 2W 25dB Indoor DC Pass I-O (C - Floors 7...12)	10
544402	Tap 5...2400MHz "EasyF" 4W 12dB Indoor DC Pass I-O (TA - Floor 1)	10
544502	Tap 5...2400MHz "EasyF" 4W 16dB Indoor DC Pass I-O (A - Floors 2 & 3)	10
544602	Tap 5...2400MHz "EasyF" 4W 20dB Indoor DC Pass I-O (B - Floors 4 & 5)	10
544702	Tap 5...2400MHz "EasyF" 4W 25dB Indoor DC Pass I-O (C - Floors 6...8)	10
5492	Tap 5...2400MHz "EasyF" 6W 16dB Indoor DC Pass I-O (TA - Floor 1)	6
5493	Tap 5...2400MHz "EasyF" 6W 20dB Indoor DC Pass I-O (A - Floors 2 & 3)	6
5494	Tap 5...2400MHz "EasyF" 6W 24dB Indoor DC Pass I-O (B - Floors 4 & 5)	6
5610	Tap 5...2400MHz "EasyF" 8W 16dB Indoor DC Pass I-O (TA - Floor 1)	6
5611	Tap 5...2400MHz "EasyF" 8W 22dB Indoor DC Pass I-O (A - Floor 2)	6
<b>F SERIES</b>		
<b>Terrestrial + Satellite</b>		
519322	Tap 5...2400MHz "F" 2W 12dB Indoor	10
519323	Tap 5...2400MHz "F" 2W 16dB Indoor	10
519324	Tap 5...2400MHz "F" 2W 20dB Indoor	10
519325	Tap 5...2400MHz "F" 2W 24dB Indoor	10
519341	Tap 5...2400MHz "F" 4W 8dB Indoor	10
519342	Tap 5...2400MHz "F" 4W 12dB Indoor	10
519343	Tap 5...2400MHz "F" 4W 16dB Indoor	10
519344	Tap 5...2400MHz "F" 4W 20dB Indoor	10
519345	Tap 5...2400MHz "F" 4W 24dB Indoor	10
519362	Tap 5...2400MHz "F" 6W 12dB Indoor	10
519363	Tap 5...2400MHz "F" 6W 16dB Indoor	10
519364	Tap 5...2400MHz "F" 6W 20dB Indoor	10
519365	Tap 5...2400MHz "F" 6W 24dB Indoor	10
519382	Tap 5...2400MHz "F" 8W 14dB Indoor	10
519383	Tap 5...2400MHz "F" 8W 16dB Indoor	10
519384	Tap 5...2400MHz "F" 8W 20dB Indoor	10
519385	Tap 5...2400MHz "F" 8W 24dB Indoor	10
<b>ACCESSORIES</b>		
4058	Terminal Load "F" 750hm without DC Blocked	10/200
405802	Terminal Load "F" 750hm without DC Blocked, Plastic Box	200/2000
4061	Terminal Load "F" 750hm with DC Blocked	10/200
4163	Outdoor Case Grey Large Model Dimensions: External 136x127x45mm Internal 125x97x35mm	<input checked="" type="radio"/> 1/5
4177	Outdoor Case Black Small Model Dimensions: External 113x88x35mm Internal 92x66x27mm	<input checked="" type="radio"/> 1/5
417801	Outdoor Case Black Model for Mini Series Dimensions: External 88x78x39mm Internal 57x47x13mm	<input checked="" type="radio"/> 1/10
545501	Face Plate White 93x74x21mm	<input type="radio"/> 10
Ref.	Description	
<b>OUTLETS</b>		
<b>SCREW-FREE MOUNTING</b>		
<b>Terrestrial + satellite - 3 connectors</b>		
524501	End Outlet Triplexed 5..2400MHz, TV/FM-SAT1-SAT2 1-1.5-1dB with DC Pass	1/10/100
<b>SCREW MOUNTING</b>		
<b>Terrestrial + satellite - 4 connectors</b>		
516110	Quad End Outlet 5...2200MHz, FM-TV-SAT1-SAT2 8-5-3-2.8dB with DC Pass + Back Box + Face Plate	1/10/100
<b>ACCESSORIES</b>		
<b>Terminal loads</b>		
4061	Terminal Load "F" 750hm with DC Blocked	10/200



▲ 544402



▲ 519324



▲ 519363



▲ 524501



▲ 516110





## TV DISTRIBUTION

## COAXIAL CABLES AND CONNECTORS

QUICK PRODUCT GUIDE 2023

Ref.	Description		
<b>CONVENTIONAL COAXIAL CABLES (RG-6)</b>			
<b>TRIPLE SHIELDING - CLASS A++</b>			
<b>CPR B2ca: Copper / copper</b>			
413910	Coaxial Cable SK2020plus LSFH UV Resistant B2ca Class A++ Triple Shielded TSH 18AtC Ø 1.05/4.6/6.9mm White	● ○	100/500
413911	Coaxial Cable SK2020plus LSFH UV Resistant B2ca Class A++ Triple Shielded TSH 18AtC Ø 1.05/4.6/6.9mm White	● ○	250
413912	Coaxial Cable SK2020plus LSFH UV Resistant B2ca Class A++ Triple Shielded TSH 18AtC Ø 1.05/4.6/6.9mm White	● ○	500
<b>CPR Cca: Copper / copper</b>			
414901	Coaxial Cable SK2015plus LSFH UV Resistant Cca Class A++ Triple Shielded TSH 18AtC Ø 1.05/4.6/6.9mm White	● ○	100/500
414902	Coaxial Cable SK2015plus LSFH UV Resistant Cca Class A++ Triple Shielded TSH 18AtC Ø 1.05/4.6/6.9mm White	● ○	250
<b>TRIPLE SHIELDING - CLASS A+</b>			
<b>CPR Dca: Copper / copper</b>			
414002	Coaxial Cable SK2003plus LSFH UV Resistant Dca Class A+ Triple Shielded TSH 18AtC Ø 1.02/4.6/6.70mm Black	● ●	100/500
414003	Coaxial Cable SK2003plus LSFH UV Resistant Dca Class A+ Triple Shielded TSH 18AtC Ø 1.02/4.6/6.70mm Black	● ●	250
414004	Coaxial Cable SK2003plus LSFH UV Resistant Dca Class A+ Triple Shielded TSH 18AtC Ø 1.02/4.6/6.70mm Black	● ●	500
<b>CPR Eca: Copper / copper</b>			
413707	Coaxial Cable SK110plus PVC Eca Class A+ Triple Shielded TSH 18VAtC Ø 1.02/4.6/6.70mm Black	● ●	250
<b>TRIPLE SHIELDING - CLASS A</b>			
<b>CPR Cca: Copper / copper</b>			
414211	Coaxial Cable SK2005plus LSFH UV Resistant Cca Class A Triple Shielded TSH 18AtC Ø 1.00/4.6/6.7mm Black	● ●	250
<b>DOUBLE SHIELDING - CLASS A</b>			
<b>CPR Dca: Copper / copper</b>			
214911	Coaxial Cable TR-165 LSFH UV Resistant Dca Class A 11RtC Ø 1.63/7.2/10.1mm Grey	● ○	250
<b>DOUBLE SHIELDING - CLASS B</b>			
<b>CPR Eca: Copper clad steel/aluminium</b>			
2127	Coaxial Cable CXT-1 PVC Eca 17VAtC.A Ø 1.00/4.7/6.7mm White	● ○	100/500
212702	Coaxial Cable CXT-1 PVC Eca 17VAtC.A Ø 1.00/4.7/6.7mm Black	● ●	250
212703	Coaxial Cable CXT-1 PVC Eca 17VAtC.A Ø 1.00/4.7/6.7mm White	● ○	250
<b>ACCESSORIES</b>			
<b>Dispensers</b>			
212001	Coaxial Cable / Optical Fiber Dispenser, Small model (Plastic drums: Coaxial cable 100m and F.O. 200/300m)	1	
212011	Coaxial Cable / Optical Fiber Dispenser, Large model (Plastic drums: Coaxial cable 250m and F.O. 500/750m)	1	
<b>Fixing</b>			
200101	Velcro Tape for Cables 8m, Width: 20mm, Black (2 units)	●	1
200102	Velcro Flange for Cables, Width: 15mm, Black (10 units)	●	1

Ref.	Description		
<b>DIRECT-BURIED CABLES (RG-11)</b>			
<b>CPR DCA: COPPER / COPPER</b>			
214001	Coaxial Cable 1/2" LSFH UV Resistant Dca Class A 7RtC Ø 2.7/11.5/15.0mm Grey	● ○	500
214911	Coaxial Cable TR-165 LSFH UV Resistant Dca Class A 11RtC Ø 1.63/7.2/10.1mm Grey	● ○	250

▲ 2120xx  
(Cable drum not included)

▲ 214001

CLASS A  
Dca**TRIPLE SHIELDED CABLES**

The Trishield cable provides the greatest immunity against interferences. Its use is specially recommend when trying to avoid interference.



COVERAGE UP TO 82%

SK2020plus (4139xx)  
CLASS A\*\*  
B2ca

An exceptional TSH cable with high screening attenuation, that offers an A++ class.

Additionally, due to its LSFH outer sheath, it complies with the requirements for CPR class B2ca, so it has a very low fire hazard.

SK2015plus (4149xx)  
CLASS A\*\*  
CcaSK2003plus (4140xx)  
CLASS A+  
Dca

CAI type 100 approved cable

SK110plus (413707)  
CLASS A+  
Eca

CAI type 100 approved cable

SK2005plus (414211)  
CLASS A  
Cca

CAI type RG6 approved cable

CXT-1 (2127xx)  
CLASS B  
EcaTR-165 (214911)  
CLASS A  
Dca



## TV DISTRIBUTION

## COAXIAL CABLES AND CONNECTORS

Televes

References	413910 413911 413912	414901 414902	414002 414003 414004	413707
Type	SK2020plus A++	SK2015plus A++	SK2003plus A+	SK110plus A+
Euroclass	B2ca	Cca	Dca	Eca
Inner Conductor	Ø mm Material Res. Max. Ohm/Km	1.05 Cu 22	1.05 Cu 22	1.02 Cu 22
Dielectric	Ø mm Material	4.7 PEE	4.7 PEE	4.6 PEE
Over Lapped Foil	Material	B	B	B
Braid	Material Res. Max. Ohm/Km	CuSn 11	CuSn 11	CuSn 15
2 <sup>nd</sup> shielding foil	Nc x Ns x Ø	24x7x0.1	24x7x0.1	24x7x0.1
Anti-migrating Film	Coverage %	82	82	82
Petro-Jelly		No	No	No
Outer sheath	Ø mm Material	6.9 LSFH UV Resistant	6.9 LSFH UV Resistant	6.7 LSFH UV Resistant
Spark Test	VAC	3000	3000	3000
Minimum bending radius	mm	34.5	34.5	33.5
Shielding Min. @1GHz	dB	105	105	95
Capacitance	pF/m	54	54	54
Impedance	Ohm	75	75	75
Transfer impedance	mOhm/m	0.9	0.9	2.5
Max. (5-30MHz)				2.5
Velocity ratio	%	84	84	84
Attenuations (dB/m)				
	5	0.02	0.02	0.02
	47	0.05	0.05	0.05
	54	0.05	0.05	0.05
	90	0.06	0.06	0.06
	200	0.09	0.09	0.09
	500	0.14	0.14	0.14
	698	0.17	0.17	0.16
	800	0.18	0.18	0.18
	862	0.19	0.19	0.19
	950	0.20	0.20	0.20
	1000	0.21	0.21	0.21
	1220	0.23	0.23	0.22
	1350	0.25	0.25	0.25
	1750	0.28	0.28	0.28
	2050	0.30	0.30	0.31
	2150	0.31	0.31	0.32
	2200	0.32	0.32	0.32
	3000	0.36	0.36	0.36
Frequency (MHz)				

References	414211	214911	214001	2127 212702 212703
Type	SK2005plus A	TR-165 A	1/2" A	CXT-1 B
Euroclass	Cca	Dca	Dca	Eca
Inner Conductor	Ø mm Material Res. Max. Ohm/Km	1.00 Cu 22	1.63 Cu 9	2.70 Cu 3,2
Dielectric	Ø mm Material	4.6 PEE	7.2 PEE	11.5 PEE
Over Lapped Foil	Material	B	D	C
Braid	Material Res. Max. Ohm/Km	CuSn 14	Cu 7	Cu 7
2 <sup>nd</sup> shielding foil	Nc x Ns x Ø	16x7x0.1	16x8x0.1	24x8x0.1
Anti-migrating Film	Coverage %	60	77	77
Petro-Jelly		Yes	No	No
Outer sheath	Ø mm Material	6.7 LSFH UV Resistant	10.1 LSFH UV Resistant	15.0 LSFH UV Resistant
Spark Test	VAC	3000	8000	8000
Minimum bending radius	mm	33.5	50.0	75.0
Shielding Min. @1GHz	dB	85	85	85
Capacitance	pF/m	54	53	55
Impedance	Ohm	75	75	75
Transfer impedance	mOhm/m	5.0	5.0	5.0
Max. (5-30MHz)				15.0
Velocity ratio	%	84	84	82
Attenuations (dB/m)				
	5	0.02	0.01	0.01
	47	0.05	0.03	0.02
	54	0.05	0.03	0.02
	90	0.06	0.04	0.02
	200	0.09	0.06	0.03
	500	0.14	0.09	0.06
	698	0.17	0.10	0.07
	800	0.18	0.11	0.07
	862	0.19	0.12	0.08
	950	0.20	0.12	0.08
	1000	0.21	0.13	0.08
	1220	0.23	0.14	0.09
	1350	0.25	0.15	0.10
	1750	0.28	0.18	0.12
	2050	0.30	0.19	0.13
	2150	0.31	0.20	0.14
	2200	0.32	0.20	0.14
	3000	0.36	0.24	0.16
Frequency (MHz)				

Sheath	Enviroment
PVC	Indoor
PE	Outdoor
LSFH	Special (Low Smoke Free of Halogen)

Over Lapped Foil composition Environment	
B	Aluminium+Polyester
C	Copper+Polyester
D	Aluminium+Polypropylene+Aluminium

Other abbreviations	
PE	Polyethylene
PEE	Foam Polyethylene
PVC	Polyvinyle Chlorhidre
AI	Aluminium
Cu	Copper
CCS	Copper Clad Steel
CuSn	Tinned Copper



## TV DISTRIBUTION

## COAXIAL CABLES AND CONNECTORS

QUICK PRODUCT GUIDE 2023

Ref.	Description		
<b>EXTENSION CORDS</b>			
<b>WITH TRIPLE SHIELDING CABLE</b>			
3850	Coaxial Cable Lead "F" Compression 280mm White	<input type="radio"/>	20/500
385001	Coaxial Cable Lead "F" Compression 330mm White	<input type="radio"/>	20/500
385002	Coaxial Cable Lead "F" Compression 390mm White	<input type="radio"/>	20/240
385003	Coaxial Cable Lead "F" Compression 500mm White	<input type="radio"/>	20/100
385004	Coaxial Cable Lead "F" Compression 430mm White	<input type="radio"/>	20/240
3851	Coaxial Cable Lead "F" Compression 1.5m White (Bag B0)	<input type="radio"/>	1/30
385101	Coaxial Cable Lead "F" Compression 3m White (Bag B0)	<input type="radio"/>	1/20
385102	Coaxial Cable Lead "F" Compression 5m White (Bag B0)	<input type="radio"/>	1/15
3852	Coaxial Cable Lead "IEC" Male-Female Compression 1.5m White (Bag B0)	<input type="radio"/>	1/30
385201	Coaxial Cable Lead "IEC" Male-Female Compression 3m White (Bag B0)	<input type="radio"/>	1/20
385202	Coaxial Cable Lead "IEC" Male-Female Compression 5m White (Bag B0)	<input type="radio"/>	1/15
3853	Coaxial Cable Lead "F" Compression - "Quick F" "PRO EasyF" 1.5m White (Bag B0)	<input type="radio"/>	1/30
385301	Coaxial Cable Lead "F" Compression - "Quick F" "PRO EasyF" 3m White (Bag B0)	<input type="radio"/>	1/20
385302	Coaxial Cable Lead "F" Compression - "Quick F" "PRO EasyF" 5m White (Bag B0)	<input type="radio"/>	1/15
3854	Coaxial Cable Lead "F" - "IEC" Female Compression 1.5m White (Bag B0)	<input type="radio"/>	1/30
385401	Coaxial Cable Lead "F" - "IEC" Female Compression 3m White (Bag B0)	<input type="radio"/>	1/20
385402	Coaxial Cable Lead "F" - "IEC" Female Compression 5m White (Bag B0)	<input type="radio"/>	1/15
385501	Coaxial Cable Lead "F" Compression - "IEC" Female "PRO EasyF" 3m White (Bag B0)	<input type="radio"/>	1/20
3856	Coaxial Cable Lead "F" - "IEC" Male Compression 1.5m White (Bag B0)	<input type="radio"/>	1/30
385601	Coaxial Cable Lead "F" - "IEC" Male Compression 3m White (Bag B0)	<input type="radio"/>	1/20
385602	Coaxial Cable Lead "F" - "IEC" Male Compression 5m White (Bag B0)	<input type="radio"/>	1/15
385701	Coaxial Cable Lead "F" Compression - "IEC" Male "PRO EasyF" 3m White (Bag B0)	<input type="radio"/>	1/20
3858	Coaxial Cable Lead "IEC" Male Compression - "IEC" Female "PRO EasyF" 1.5m White (Bag B0)	<input type="radio"/>	1/30
385801	Coaxial Cable Lead "IEC" Male Compression - "IEC" Female "PRO EasyF" 3m White (Bag B0)	<input type="radio"/>	1/20
385802	Coaxial Cable Lead "IEC" Male Compression - "IEC" Female "PRO EasyF" 5m White (Bag B0)	<input type="radio"/>	1/15
<b>WITH DOUBLE SHIELDING CABLE</b>			
431001	Coaxial Cable Lead "IEC" Ø 9.5mm Elbowed Shielded Male-Female 1,5m Grey (Blister T1)	<input checked="" type="radio"/>	1/8
431002	Coaxial Cable Lead "IEC" Ø 9.5mm Elbowed Shielded Male-Female 2,5m Grey (Blister T1)	<input checked="" type="radio"/>	1/8



CLASS A\*\*



▲ 3851



▲ 3856



▲ 3858



▲ 431001



**TV DISTRIBUTION****SET TOP BOXES AND DOMESTIC ACCESSORIES**

QUICK PRODUCT GUIDE 2023

Ref.	Description	
<b>SET TOP BOXES</b>		
<b>SATELLITE TV</b>		
717402	Satellite Digital Set-top Box FTA DVB-S/S2 (S/PDIF + SCR1/2)	1/10
<b>MODULATORS</b>		
585301	Modulator DVB-T 1i: HDMI - 1 Mux{174...230/470...862MHz}: CODFM (MPEG-4). With 2xUSB, HDMI pass-through and Remote Management	1
<b>A/V AND IR SENDERS</b>		
<b>WIRELESS A/V AND IR SENDERS</b>		
716701	Digidom Transmitter + Receiver HDMI 5GHz	1/5
<b>WIRELESS IR SENDERS</b>		
721903	Digidom Universal Transmitter, Remote Control Extender, 8 Channels	1/50
723703	Digidom Universal Transmitter + Receiver, Remote Control Extender, 8 Channels	1/30
<b>HDMI DISTRIBUTION</b>		
<b>CABLE LEADS</b>		
494501	HDMI Cable Male-Male 1.5m Black (Blister T1)	● 1/8
494502	HDMI Cable Male-Male 3m Black (Blister T2)	● 1/10
494503	HDMI Cable Male-Male 5m Black (Blister T2)	● 1/10
494505	HDMI Cable Male-Male 1.5m Black (Bag)	● 1/100



▲ 717402



▲ 716701



▲ 723703



▲ 494501



## TV DISTRIBUTION

### PROFESSIONAL EQUIPMENT

Televes

Ref. | Description

**FIELD STRENGTH METERS****H30 SERIES****H30+ & H30D+**

593901	H30+: DVB-C	1
593902	H30D+: DVB-C + DOCSIS 3.1	1
593905	H30D+ FULL: DVB-C + DVBT/T2 + DOCSIS 3.1 + WiFi Analyzer + IPTV Analyzer + HEVC display (Carrying Case and Coaxial Cable Lead included)	1

**H30FLEX**

593301	H30FLEX: DVB-S/S2 + DVB-T	1
593302	H30FLEX: DVB-S/S2 + DVB-T/T2	1
593303	H30FLEX: DVB-S/S2 + DVB-C	1
593304	H30FLEX: DVB-S/S2 + DVB-T/T2 + DVB-C	1
593311	H30FLEX: DVB-S/S2/T (Carrying Case and Coaxial Cable Lead included)	1
593312	H30FLEX: DVB-S/S2/T/T2 (Carrying Case and Coaxial Cable Lead included)	1
593313	H30FLEX: DVB-S/S2/C (Carrying Case and Coaxial Cable Lead included)	1
593314	H30FLEX: DVB-S/S2/T/T2/C (Carrying Case and Coaxial Cable Lead included)	1

**H30Evolution**

593501	H30Evolution: DVB-S/S2 + DVB-T (Smartphone Armband included)	1
593502	H30Evolution: DVB-S/S2 + DVB-T/T2 (Smartphone Armband included)	1
593503	H30Evolution: DVB-S/S2 + DVB-C (Smartphone Armband included)	1
593504	H30Evolution: DVB-S/S2 + DVB-T/T2 + DVB-C (Smartphone Armband included)	1
593505	H30Evolution FULL: Full DVB (-S/S2 + -T/T2 + -C) + IPTV Option + WiFi 2,4/5 GHz Option + HEVC display + Coaxial Cable Lead + Carrying Case (Smartphone Armband included)	1
593511	H30Evolution: DVB-S/S2/T (Carrying Case, Coaxial Cable Lead and Smartphone Armband included)	1
593512	H30Evolution: DVB-S/S2/T/T2 (Carrying Case, Coaxial Cable Lead and Smartphone Armband included)	1
593513	H30Evolution: DVB-S/S2/C (Carrying Case, Coaxial Cable Lead and Smartphone Armband included)	1
593514	H30Evolution: DVB-S/S2/T/T2/C (Carrying Case, Coaxial Cable Lead and Smartphone Armband included)	1

**H30D+**

ALL THE FUNCTIONS YOU NEED,  
ALSO IN CATV CABLE SYSTEMS

The H30D+ is a lightweight, compact and robust equipment that includes a full range of tools and functionalities to successfully perform installation, maintenance and troubleshooting tasks in both analogue networks and digital networks with DVB-C channels. It stands out for incorporating advanced DOCSIS 3.1 measurements, automatic monitoring of the desired channel, double-check connectivity and the information about QAM channel program content, among other powerful functions.

[h30plus.televes.com](http://h30plus.televes.com)

**H30FLEX**

All the functions you need in your hand



[h30flex.televes.com](http://h30flex.televes.com)

[uk.televes.com/h30flex](https://www.youtube.com/televes)

**H30 EVOLUTION**

[h30evolution.televes.com](http://h30evolution.televes.com)

[uk.televes.com/h30evolution](https://www.youtube.com/televes)



## TV DISTRIBUTION PROFESSIONAL EQUIPMENT

QUICK PRODUCT GUIDE 2023

Ref.	Description	
<b>FIELD STRENGTH METERS</b>		
<b>H30 SERIES</b>		
<b>H30Crystal</b>		
593601	H30Crystal: DVB-S/S2 + DVB-T, F.O. (Smartphone Armband included)	1
593602	H30Crystal: DVB-S/S2 + DVB-T/T2, F.O. (Smartphone Armband included)	1
593603	H30Crystal: DVB-S/S2 + DVB-C, F.O. (Smartphone Armband included)	1
593604	H30Crystal: DVB-S/S2 + DVB-T/T2 + DVB-C, F.O. (Smartphone Armband included)	1
593605	H30Crystal FULL: Full DVB (-S/S2 + -T/T2 + -C), F.O. + IPTV Option + WiFi 2,4/5 GHz Option + HEVC display + Coaxial Cable Lead + Carrying Case (Smartphone Armband included)	1
593621	H30Crystal: DVB-S/S2 + DVB-T, Selective F.O. (Smartphone Armband included)	1
593622	H30Crystal: DVB-S/S2 + DVB-T/T2, Selective F.O. (Smartphone Armband included)	1
593624	H30Crystal: DVB-S/S2 + DVB-T/T2 + DVB-C, Selective F.O. (Smartphone Armband included)	1
593625	H30Crystal FULL: Full DVB (-S/S2 + -T/T2 + -C), Selective F.O. + IPTV Option + WiFi 2,4/5 GHz Option + HEVC display + Coaxial Cable Lead + Carrying Case (Smartphone Armband included)	1
<b>Options</b>		
5909	Calibration of Spectrum Analyzer (Certificate Included)	1
593231	Option DVB-T	1
593232	Option DVB-T2 (DVB-T required)	1
593233	Option DVB-C	1
593234	Option dCSS	1
593235	Option Extended Terrestrial Input to 120dB $\mu$ V	1
593236	Option Analogue A/V Display (Format Adapters and Protective Sleeve included)	1
593250	Option WiFi Analyzer (2,4/5GHz)	1
593251	Option IPTV Analyzer	1
593252	Option HEVC Display	1
<b>Accessories</b>		
593201	Protective Sleeve	1
593202	Replacement Battery	1
593203	Power Supply Unit 12V - 2A All Plugs	1
593205	Ports Protector	1
593239	Carrying Case	1
994101	Car Lighter-type 12V Charger adapter Cable, 1.5m	1/10



▲ 593239



▲ 593205



### ALL THE FUNCTIONS YOU NEED, ALSO IN FIBRE OPTICS

The H30Crystal expands H30 series of portable and compact meters by bringing strong efficiency in optic measurements. Its ability to analyse fibre-optic networks, along with all the features of previous models, makes this equipment a versatile and comprehensive tool for today's professional technicians, who are used to working with several telecommunication network technologies.

[h30crystal.televes.com](http://h30crystal.televes.com)
[uk.televes.com/h30crystal](https://uk.televes.com/h30crystal)


▲ 593201

	H30FLEX	H30EVOLUTION	H30CRYSTAL
Multi-standard customizable	✓	✓	✓
Frequency range	Return P: 5-50 MHz Terrestrial: 50-880 MHz Satellite: 250-2400 MHz	- ✓ ✓ (up to 2200MHz)	- ✓ ✓
Screen	2.8" TFT 400 - 240 full color	2.8" TFT 400 - 240 full color	2.8" TFT 400 - 240 full color
Multi-screen with touch control on mobile device	-	✓	✓
Smartphone armband	-	✓	✓
2,4 / 5GHz WiFi connectivity	-	✓	✓
WiFi analyzator	-	✓ (*)	✓ (*)
Bluetooth connectivity	-	✓	✓
Ethernet interface	✓	✓	✓
USB interface	USB (A-type)	USB (A-type)	USB (A-type)
Optical measures	-	-	✓
Guided satellite pointing	-	✓	✓
IPTV analyzator	-	✓ (*)	✓ (*)
LNB Wideband compatible	-	✓	✓
HEVC displaying	on the meter on the mobile device	- ✓ (*)	- ✓ (*)
Terrestrial input level to 120dB $\mu$ V	✓ (**)	✓ (**)	✓ (**)
dCSS compatible	✓ (**)	✓ (**)	✓ (**)
Management interface access (datalogs, channel plan...)	Ethernet cable	Wireless (WiFi/Bluetooth) Ethernet cable	Wireless (WiFi/Bluetooth) Ethernet cable
Dimensions	175x100x52 mm	175x100x52 mm	175x100x52 mm
Weight	510 g.	510 g.	550 g.
Color	Black & White	Black & Grey	Light & dark grey

\* According to reference | \*\* Free activation of the options with the meter registration



## TV DISTRIBUTION PROFESSIONAL EQUIPMENT

Ref.	Description	
<b>FIELD STRENGTH METERS</b>		
<b>MOSAIQ6</b>		
<b>Meters</b>		
596101	MOSAIQ6: DVB-T/T2 + DVB-S/S2/SX + DVB-C, CI, F.O. (Carrying Bag included)	1
596102	MOSAIQ6: DVB-T/T2 + DVB-S/S2/SX + DVB-C, CI, F.O. (Carrying Case included)	1
596105	MOSAIQ6 Advance: DVB-T/T2/S/S2/SX/C, CI, F.O., WiFi Analyzer, Analogue Measures, DAB/DAB+, 4K UHD (Carrying Bag included)	1
596111	MOSAIQ6: DVB-T/T2 + DVB-S/S2/SX + DVB-C, CI, Selective F.O. Interface [CWDM Filter] (Carrying Bag included)	1
596112	MOSAIQ6: DVB-T/T2 + DVB-S/S2/SX + DVB-C, CI, Selective F.O. Interface (Carrying Case included)	1
596115	MOSAIQ6 Advance: DVB-T/T2/S/S2/SX/C, CI, Selective F.O. Interface [CWDM Filter], WiFi Analyzer, Analogue Measures, DAB/DAB+, 4K UHD (Carrying Bag included)	1
<b>Options</b>		
596201	Option GPS Drive Test	1
596202	Option WiFi Analyzer (2,4/5GHz)	1
596203	Option Analogue Measures	1
596204	Option DAB/DAB+	1
596205	Option 4K - Ultra High Definition (UHD)	1
<b>Accessories</b>		
596210	Stand-alone, field replaceable battery	1
596211	Carrying Bag	1
596212	Adapter "N" Male - "F" Female	1
596213	Screen Protector	1
596214	Carrying Case	1



▼ 596211



▼ 596210



▲ 596210

## Centralized management of field meters



Mycloud is the measurement portal that centralizes the management of all your MOSAIQ6 meters in Televes cloud through a unique interface accessible from any device.

More information: [mycloud.televes.com](http://mycloud.televes.com)

**Televes**

**MOSAIQ6**



Portable meter with high performance and high accuracy for professional installers.

### THE POWER OF USER EXPERIENCE

#### 6 SCREENS IN 1

Thanks to its configurable interface, you choose which widgets (up to 6) you want to simultaneously display in the 8" high resolution screen. Check the installation status at a glance.

#### A TRUE TOUCH SCREEN

This new interface has been designed and also programmed to take full advantage of a touch screen with touch gestures (tap, double tap, long press, drag, spread or pinch). Only in this way is it possible to operate so easily a meter with so many performances.

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## TV DISTRIBUTION PROFESSIONAL EQUIPMENT

QUICK PRODUCT GUIDE 2023

Ref.	Description	
<b>SIGNAL GENERATORS</b>		
<b>IF SIMULATOR</b>		
4008	SAT Simulator 950...2150MHz	1
<b>TRIPLE LIGHT SOURCE</b>		
2340	OPS3L Triple Light Source (1310, 1490 & 1550nm)	1
<b>NOISE GENERATOR</b>		
593001	SAT Simulator and Noise Generator 5...3000MHz	1
Ref.	Description	
<b>OPTICAL FIBER</b>		
<b>FUSION KITS</b>		
<b>Electric arc splice</b>		
232105	F.O Kit: Arc Fusion Splicer + Stripper + Cleaver + Power adapter + Spare set of electrodes + Tweezers + Carrying Case	1
<b>Mechanical splice</b>		
2341	F.O Kit: Connector & Mechanical Splice + Stripper [Ref. 2324] + Cleaver [Ref. 232301] + Cleaning Tools	1
<b>TOOLS</b>		
2322	Fiber Mechanical Splicer	1
232301	Cleaver of Fiber Optics	1
232310	Kevlar® Scissors for Optical Fibers	1
2324	Precision Stripper for Optical Fibers	1
2325	Round cable stripper for multifiber cables, data cables and coaxial cables	1
232910	Cleaner for Fiber Optic Connectors	1
<b>ACCESSORIES</b>		
2327	Splicing Protection Sleeve 60mm for FO fusion	200
232701	Splicing Protection Sleeve 43mm for FO fusion	200
232702	Splicing Protection Enclosure 101mm for FO fusion	100
232710	F.O. Cleaning Kit: 50 isopropyl alcohol Wipes + 25 Sticks	1
232753	Dry F.O. Cleaning wipes - 280 pcs/box	1/60
2328	Fiber Mechanical Splice	10
2329	Connector of Fiber Optics "SC/APC" (with mounting tool)	10



▲ 4008



▲ 2340



▲ 593001



▲ 2341



▲ 232702



▲ 2329



▲ 2324



▲ 232910



▲ 2322



▲ 232105



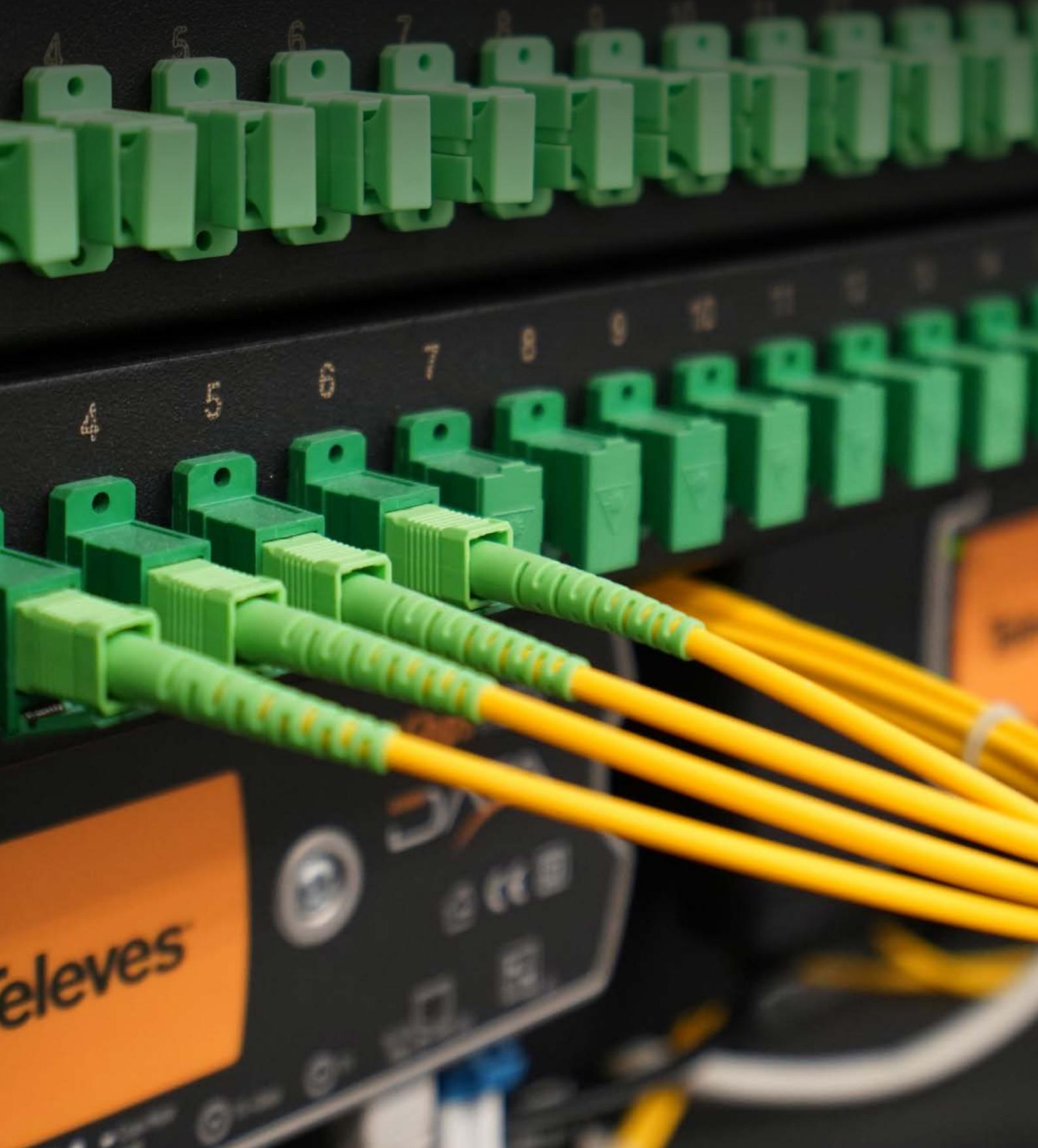
▲ 232301

Class 1M laser product

**Televes**  
**DATA COM**

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Networking and structured cabling products and solutions for data networks in commercial, hospitality and residential environments, aimed at the professional installer and integrator.




**DATACOM**  
**OPTICAL FIBER**

Ref. | Description

**CABLES AND PATCH-CORDS****MULTI-FIBER****Tight buffer 250µm**

231414	FK16 Multi-fiber Cable 16 Single-mode Fibers Indoor/Outdoor UV Resistant LSFH Dca	1
231415	FK16 Multi-fiber Cable 16 Single-mode Fibers Indoor/Outdoor UV-resistant LSFH Dca	2000
231614	FK24 Multi-fiber Cable 24 Single-mode Fibers Indoor/Outdoor UV Resistant LSFH Dca	1
231615	FK24 Multi-fiber Cable 24 Single-mode Fibers Indoor/Outdoor UV-resistant LSFH Dca	2000
231714	FK48 Multi-fiber Cable 48 Single-mode Fibers Indoor/Outdoor UV Resistant LSFH Dca	1
231715	FK48 Multi-fiber Cable 48 Single-mode Fibers Indoor/Outdoor UV-resistant LSFH Dca	2000

**4 FIBERS****Tight buffer 250µm**

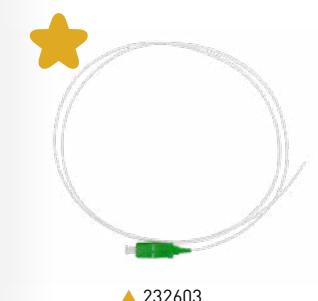
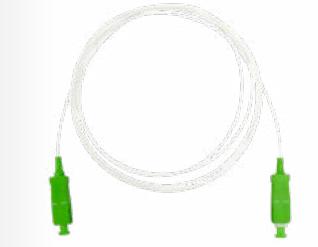
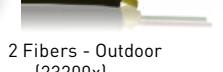
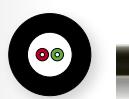
★ 231942	FK4 Fiber Cable 4 single-mode Fibers Indoor LSFH Cca	500/1500
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**2 FIBERS****Tight buffer 900µm**

231901	FK2 Fiber Cable 2 Single-mode Fibers Indoor LSFH Dca	300/1500
231902	FK2 Fiber Cable 2 Single-mode Fibers Indoor LSFH Dca	750
231905	FK2 Fiber Cable 2 Single-mode Fibers Indoor LSFH Dca	3000
232001	FK2 Fiber Cable 2 Single-mode Fibers Outdoor LSFH UV Resistant Dca	200/1000
232002	FK2 Fiber Cable 2 Single-mode Fibers Outdoor LSFH UV Resistant Dca	500
232005	FK2 Fiber Cable 2 Single-mode Fibers Outdoor LSFH UV Resistant Dca	3000

**PRE-TERMINATED PATCH CORDS****With SC/APC connectors**

★ 230801	Kit: Pigtail (900µm) F.O.Patch Cords Single-mode Indoor LSFH "SC/APC" 1m (24 units, various colours)	1
232602	F.O.Patch Cord Single-mode Indoor LSFH "SC/APC" 2m. Convertible to Pigtail (900µm)	25
★ 232603	Pigtail (900µm) F.O.Patch Cord Single-mode Indoor LSFH "SC/APC" 1m	25
★ 232610	F.O.Patch Cord Single-mode Indoor LSFH Dca "SC/APC" 5m	1
232611	F.O.Patch Cord Single-mode Indoor LSFH Dca "SC/APC" 10m	1
232612	F.O.Patch Cord Single-mode Indoor LSFH Dca "SC/APC" 15m	1
★ 232613	F.O.Patch Cord Single-mode Indoor LSFH Dca "SC/APC" 20m	1
232614	F.O.Patch Cord Single-mode Indoor LSFH Dca "SC/APC" 25m	1
★ 232615	F.O.Patch Cord Single-mode Indoor LSFH Dca "SC/APC" 30m	1
232616	F.O.Patch Cord Single-mode Indoor LSFH Dca "SC/APC" 40m	1
232621	F.O.Patch Cord Single-mode Indoor LSFH "SC/APC" 2m (Bag B4)	1/10
232623	F.O.Patch Cord Single-mode Indoor LSFH "SC/APC" 0.5m (Bag B4)	1/20
232626	F.O.Patch Cord Single-mode Indoor LSFH "SC/APC" 1m (Bag B4)	1/20
★ 232650	F.O.Duplex Patch Cord Single-mode Indoor LSFH Dca "SC/APC" 5m	1
★ 232651	F.O.Duplex Patch Cord Single-mode Indoor LSFH Dca "SC/APC" 10m	1
232652	F.O.Duplex Patch Cord Single-mode Indoor LSFH Dca "SC/APC" 15m	1
★ 232653	F.O.Duplex Patch Cord Single-mode Indoor LSFH Dca "SC/APC" 20m	1
232654	F.O.Duplex Patch Cord Single-mode Indoor LSFH Dca "SC/APC" 25m	1
232656	F.O.Duplex Patch Cord Single-mode Indoor LSFH Dca "SC/APC" 40m	1
232657	F.O.Duplex Patch Cord Single-mode Indoor LSFH Dca "SC/APC" 55m	1

**F.O. CABLES***Fiber's tight buffer Ø 250µm**Fiber's tight buffer Ø 900µm*


**DATA COM  
OPTICAL FIBER**
**Televes**

Ref. | Description

**CABLES AND PATCH-CORDS****PRE-TERMINATED PATCH CORDS****With SC/PC connectors**

★ 230901	Pigtail (900µm) F.O.Patch Cord Multi-mode OM3 Indoor LSFH "SC/PC" 2m	● 1
★ 230911	Pigtail (900µm) F.O.Patch Cord Multi-mode OM4 Indoor LSFH "SC/PC" 2m	● 1
★ 230920	F.O. Duplex Patch Cord Multi-mode OM3 Indoor LSFH "SC/PC" 2m	● 1
★ 230930	F.O. Duplex Patch Cord Multi-mode OM4 Indoor LSFH "SC/PC" 2m	● 1

**With LC/APC connectors**

★ 230608	Pigtail (900µm) F.O.Patch Cord Single-mode Indoor LSFH "LC/APC" 1m	● 1
★ 230802	Kit: Pigtails (900µm) F.O.Patch Cords Single-mode Indoor LSFH "LC/APC" 1m (24 units, various colours)	1
★ 232683	F.O.Patch Cord Single-mode Indoor LSFH "SC/APC" 3m	● 1

**With LC/UPC connectors**

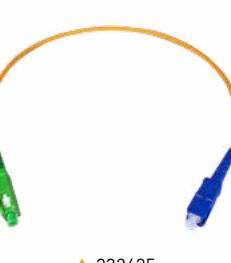
★ 230609	Pigtail (900µm) F.O.Patch Cord Single-mode Indoor LSFH "LC/UPC" 1m	○ 1
232662	F.O.Duplex Patch Cord Single-mode Indoor LSFH "LC/UPC" 2m	● 1
232672	F.O.Patch Cord Single-mode Indoor LSFH "LC/UPC" 2m	● 1

**With LC/PC connectors**

230601	F.O.Patch Cord Multi-mode OM3 Indoor LSFH "LC/PC" 2m. Convertible to Pigtail (900µm)	● 1
230622	F.O.Duplex Patch Cord Multi-mode OM3 Indoor LSFH "LC/PC" 2m	● 1
★ 230912	Pigtail (900µm) F.O.Patch Cord Multi-mode OM4 Indoor LSFH "LC/PC" 2m	● 1
★ 230932	F.O.Duplex Patch Cord Multi-mode OM4 Indoor LSFH LC/PC 2m	● 1

**Adapter cords**

★ 230921	F.O.Duplex Patch Cord Multi-mode OM3 Indoor LSFH "LC/PC-SC/PC" 2m	● 1
★ 230931	F.O.Duplex Patch Cord Multi-mode OM4 Indoor LSFH "LC/PC-SC/PC" 2m	● 1
232622	F.O.Patch Cord Single-mode Indoor LSFH "SC/APC-SC/UPC" 0.2m	● 1
232624	F.O.Patch Cord Single-mode Indoor LSFH "SC/APC-FC/UPC" 2m (Bag B4)	● 1/10
232625	F.O.Patch Cord Single-mode Indoor LSFH "SC/APC-SC/UPC" 0.4m	● 1
232627	F.O.Patch Cord Single-mode Indoor LSFH "SC/APC-LC/UPC" 2m	● 1
★ 232628	F.O.Patch Cord Single-mode Indoor LSFH "LC/APC-SC/APC" 2m	● 1




**DATACOM  
OPTICAL FIBER**

Ref. | Description

**CABLES AND PATCH-CORDS****ACCESSORIES****Adapters**

233203	Simplex F.O. Adapter Single-Mode "SC/APC" Female - "SC/APC" Female, with Auto-blocking Cap, Plastic Box	25
233210	Duplex F.O. Adapter Single-Mode "SC/APC" Female - "SC/APC" Female, with Auto-blocking Cap	20/1000
233211	Duplex F.O. Adapter Multi-Mode "SC" Female - "SC" Female	20
233212	Duplex F.O. Adapter Single-Mode "LC" Female - "LC" Female, Plastic Box	25
233213	Duplex F.O. Adapter Multi-Mode "LC" Female - "LC" Female, Plastic Box	25
2354	Simplex F.O. Adapter Single-Mode "FC" Female - "FC" Female	5
2356	Simplex F.O. Adapter Single-Mode "FC" Female - "SC" Female	5

**Dispensers**

212001	Coaxial Cable / Optical Fiber Dispenser, Small model (Plastic drums: Coaxial cable 100m and F.O. 200/300m)	1
212011	Coaxial Cable / Optical Fiber Dispenser, Large model (Plastic drums: Coaxial cable 250m and F.O. 500/750m)	1

**Fixing**

200101	Velcro Tape for Cables 8m, Width: 20mm, Black [2 units]	● 1
200102	Velcro Flange for Cables, Width: 15mm, Black [10 units]	● 1



▲ 233203



▲ 233210



▲ 233211



▲ 233212



▲ 233213

▲ 2120xx  
(Cable drum not included)


**DATACOM  
OPTICAL FIBER**

Ref.	Description	
<b>OPTICAL DISTRIBUTION</b>		
<b>SPLITTERS</b>		
<b>SC/APC connection</b>		
233710	Optical Splitter 1250...1650nm "SC/APC" 2W 4dB	1/10
233910	Optical Splitter 1250...1650nm "SC/APC" 4W 7dB	1/10
234410	Optical Splitter 1250...1650nm "SC/APC" 8W 10dB	1
234510	Optical Splitter 1250...1650nm "SC/APC" 16W 14dB	1
234610	Optical Splitter 1250...1650nm "SC/APC" 32W 17dB	1
<b>FC/UPC connection</b>		
235701	Optical Splitter 1250...1650nm "FC/UPC" 2W 4dB	1
235901	Optical Splitter 1250...1650nm "FC/UPC" 4W 7dB	1
236001	Optical Splitter 1250...1650nm "FC/UPC" 8W 10.1dB	1
<b>SPLITTERS (PLC)</b>		
233750	Optical Splitter, PLC Component, 1260...1650nm "SC/APC" 2W 4dB	1
233950	Optical Splitter, PLC Component, 1260...1650nm "SC/APC" 4W 7dB	1
234450	Optical Splitter, PLC Component, 1260...1650nm "SC/APC" 8W 10dB	1
234550	Optical Splitter, PLC Component, 1260...1650nm "SC/APC" 16W 14dB	1
234650	Optical Splitter, PLC Component, 1260...1650nm "SC/APC" 32W 17dB	1
<b>ATTENUATORS</b>		
<b>SC/APC connection</b>		
236410	Optical Attenuator 1310/1550nm "SC/APC" 2dB	1
236411	Optical Attenuator 1310/1550nm "SC/APC" 5dB	1
236412	Optical Attenuator 1310/1550nm "SC/APC" 10dB	1
236413	Optical Attenuator 1310/1550nm "SC/APC" 15dB	1
<b>FC/UPC connection</b>		
2364	Optical Attenuator 1310/1550nm "FC/UPC" 5dB	5
2365	Optical Attenuator 1310/1550nm "FC/UPC" 10dB	5
2366	Optical Attenuator 1310/1550nm "FC/UPC" 15dB	5
<b>MULTIPLEXERS (WDM)</b>		
234740	WDM Module Optical Multiplexer/Demultiplexer 1i/2o "SC/APC": GPON+RF: Data (1310/1490nm) - TV (1550nm)	1

Televes





Ref.	Description	
<b>OPTICAL DISTRIBUTION</b>		
<b>PATCH BOXES</b>		
231502	F.O. Patch/Splitting Box 2 to 4 Outs ("SC/APC" Female - Female adapters included)	1
231520	F.O. Patch Box 2 to 4 Outs: 2 Pre-terminated Dca Fibers of 15m on one end with dispenser box ("SC/APC" Female - Female adapters included)	1
231521	F.O. Patch Box 2 to 4 Outs: 2 Pre-terminated Dca Fibers of 25m on one end with dispenser box ("SC/APC" Female - Female adapters included)	1
231522	F.O. Patch Box 2 to 4 Outs: 2 Pre-terminated Dca Fibers of 40m on one end with dispenser box ("SC/APC" Female - Female adapters included)	1
231523	F.O. Patch Box 2 to 4 Outs: 2 Pre-terminated Dca Fibers of 55m on one end with dispenser box ("SC/APC" Female - Female adapters included)	1
231524	F.O. Patch Box 2 to 4 Outs: 2 Pre-terminated Dca Fibers of 70m on one end with dispenser box ("SC/APC" Female - Female adapters included)	1
231525	F.O. Patch Box 2 to 4 Outs: 2 Pre-terminated Dca Fibers of 85m on one end with dispenser box ("SC/APC" Female - Female adapters included)	1
231526	F.O. Patch Box 2 to 4 Outs: 2 Pre-terminated Dca Fibers of 100m on one end with dispenser box ("SC/APC" Female - Female adapters included)	1
231530	F.O. Patch Box 4 Outs: 4 Pre-terminated Cca Fibers of 15m on one end with dispenser box ("SC/APC" Female - Female adapters included)	1
231531	F.O. Patch Box 4 Outs: 4 Pre-terminated Cca Fibers of 25m on one end with dispenser box ("SC/APC" Female - Female adapters included)	1
231532	F.O. Patch Box 4 Outs: 4 Pre-terminated Cca Fibers of 40m on one end with dispenser box ("SC/APC" Female - Female adapters included)	1
231533	F.O. Patch Box 4 Outs: 4 Pre-terminated Fca Fibers of 55m on one end with dispenser box ("SC/APC" Female - Female adapters included)	1
231534	F.O. Patch Box 4 Outs: 4 Pre-terminated Cca Fibers of 70m on one end with dispenser box ("SC/APC" Female - Female adapters included)	1
231535	F.O. Patch Box 4 Outs: 4 Pre-terminated Cca Fibers of 85m on one end with dispenser box ("SC/APC" Female - Female adapters included)	1
231536	F.O. Patch Box 4 Outs: 4 Pre-terminated Cca Fibers of 100m on one end with dispenser box ("SC/APC" Female - Female adapters included)	1
231540	F.O. Patch Box 2 to 4 Outs: 2 Pre-terminated Dca Fibers of 15m on one end ("SC/APC" Female - Female adapters included)	1
231541	F.O. Patch Box 2 to 4 Outs: 2 Pre-terminated Dca Fibers of 25m on one end ("SC/APC" Female - Female adapters included)	1
231542	F.O. Patch Box 2 to 4 Outs: 2 Pre-terminated Dca Fibers of 40m on one end ("SC/APC" Female - Female adapters included)	1
231543	F.O. Patch Box 2 to 4 Outs: 2 Pre-terminated Dca Fibers of 55m on one end ("SC/APC" Female - Female adapters included)	1
<b>OUTLETS/KEYSTONES</b>		
233230	Keystone Module for F.O. Adapter "SC" Simplex or "LC" Duplex Female, Plastic Box	25/250
233231	F.O. Outlet: Keystone Module + Adapter "SC / APC" Female with Internal Shutter, Plastic Box	20/200
233232	F.O. Rosette + Simplex Adapter "SC/APC" Female with Internal Shutter	5
233240	F.O. Outlet Kit:Keystone Module + Adapter "SC / APC" Female with Internal Shutter + Patch Cord Single-mode Pre-terminated LSFH Dca 10m	10
233241	F.O. Outlet Kit:Keystone Module + Adapter "SC / APC" Female with Internal Shutter + Patch Cord Single-mode Pre-terminated LSFH Dca 15m	8
233242	F.O. Outlet Kit:Keystone Module + Adapter "SC / APC" Female with Internal Shutter + Patch Cord Single-mode Pre-terminated LSFH Dca 25m	6




**DATA COM  
COPPER SOLUTIONS**

Ref. | Description

**CABLES AND PATCH-CORDS****CATEGORY 7A****Copper (Cu)**

219202	Data Cable DK7000A S/FTP Cat 7A Dca Cu 23AWG LSFH Ø 7,7mm White		500
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**CATEGORY 7****Copper (Cu)**

219102	Data Cable DK7000 S/FTP Cat 7 Cca Cu 23AWG LSFH Ø 7,4mm White		500
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**CATEGORY 6A****Copper (Cu)**

219302	Data Cable DK6000A U/FTP Cat 6A Cca Cu 23AWG LSFH Ø 6,9mm White		500
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219312	Data Cable DK6000A U/UTP Cat 6A Cca Cu 23AWG LSFH Ø 7,3mm Violet		500
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219322	Data Cable DK6000A F/UTP Cat 6A Dca Cu 23AWG LSFH Ø 7,3mm Violet		500
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**CATEGORY 6****Copper (Cu)**

212101	Data Cable DK6000 F/UTP Cat 6 Dca Cu 23AWG LSFH Ø 7,2mm Violet		500
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212201	Data Cable DK6000 U/UTP Cat 6 Fca Cu 23AWG PE Ø 6,2mm White		305
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2123	Data Cable DK6000 U/UTP Cat 6 Dca Cu 23AWG LSFH Ø 6,2mm Violet		305
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212302	Data Cable DK6000 U/UTP Cat 6 Dca Cu 23AWG LSFH Ø 6,2mm Violet		1000
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212305	Data Cable DK6000 U/UTP Cat 6 Dca Cu 23AWG LSFH Ø 6,2mm White		500
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212310	Data Cable DK6000 U/UTP Cat 6 Dca Cu 24AWG LSFH Ø 6,0mm White		305
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212330	Data Cable DK6000 U/UTP Cat 6 Cca Cu 23AWG LSFH Ø 6,1mm White		500
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**CATEGORY 5E****Copper (Cu)**

219602	Data Cable DK5000E U/UTP Cat 5E Eca Cu 24AWG LSFH Ø 5,5mm Grey		305
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219701	Data Cable DK5000E U/UTP Cat 5E Fca Cu 24AWG PE Ø 5,5mm Black		305
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**Televes**

▲ 219202

CAT 7A  
Dca

▲ 219102

CAT 7  
Cca

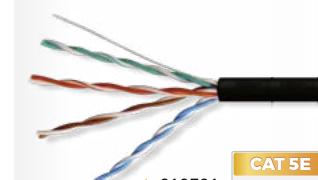
▲ 219302

CAT 6A  
Cca

▲ 212330

CAT 6  
Cca

▲ 212101

CAT 6  
Dca

▲ 219701

CAT 5E  
Fca

References	219202	219102	219302	219312	219322	212330	212101	2123 212302 212305	212310	212201	219602	219701
Type	S/FTP	S/FTP	U/FTP	U/UTP	F/UTP	U/UTP	F/UTP	U/UTP	U/UTP	U/UTP	U/UTP	U/UTP
Category	7A	7	6A	6A	6A	6	6	6	6	6	5E	5E
Euroclass	Dca	Cca	Cca	Cca	Dca	Cca	Dca	Dca	Dca	Fca	Eca	Fca
Conductor	Ø mm	0.58	0.55	0.55	0.55	0.54	0.55	0.55	0.51	0.55	0.50	0.50
Conductor Type	Material	Cu	Cu	Cu	Cu	Electrolytic Cu						
Conductor isolation	AWG	23	23	23	23	23	23	23	24	23	24	24
Conductor isolation	Ø mm	1.43	1.30	1.30	1.10	1.14	0.99	1.14	1.02	0.92	0.95	0.95
Filler	Material	PE	PE	PE	PE	PE						
Shielding foil	Material	A	A	A	No	A	No	A	No	No	No	No
Outer shielding braid	Material	CuSn	CuSn	No	No	No	No	No	No	No	No	No
Ground cable	Ø mm	No	No	0,4	No	0,4	No	No	No	No	No	No
Ground cable	Material	No	No	CuSn	No	CuSn	No	No	No	No	No	No
Outer sheath	Ø mm	7.7	7.4	6.9	7.3	7.3	6.1	7.2	6.2	6.0	6.2	5.5
Outer sheath	Material	LSFH	LSFH	PE	LSFH	PE						
Thickness (mm)	0.70	0.70	0.70	0.50	0.50	0.60	0.60	0.50	0.52	0.55	0.60	0.60
Rip cord	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spark test	VAC	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Nominal impedance	Ohm	100	100	100	100	100	100	100	100	100	100	100
Max. conductor resistance	Ohm/Km	93.8	93.8	93.8	93.8	93.8	93.8	117.0	117.0	117.0	117.0	117.0
Nominal speed	%	79	79	79	72	72	72	72	72	72	69	69

Over Lapped Foil composition Environment

Other abbreviations

A Aluminium + Polyester

Cu Copper

CuSn Tinned copper

CCS Copper Clad Steel


**DATACOM**  
**COPPER SOLUTIONS**

QUICK PRODUCT GUIDE 2023

Ref.	Description	
<b>CABLES AND PATCH-CORDS</b>		
<b>PATCH-CORDS</b>		
<b>Category 6A</b>		
209101	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 0.5m Grey (Bag B0)	<input type="radio"/> 1
209102	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 1m Grey (Bag B0)	<input type="radio"/> 1
209103	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 2m Grey (Bag B0)	<input type="radio"/> 1
209104	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 3m Grey (Bag B0)	<input type="radio"/> 1
209105	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 5m Grey (Bag B0)	<input type="radio"/> 1
209111	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 0.5m Grey	<input type="radio"/> 10
209112	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 1m Grey	<input type="radio"/> 10
209113	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 2m Grey	<input type="radio"/> 10
209114	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 3m Grey	<input type="radio"/> 10
209115	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 5m Grey	<input type="radio"/> 10
<b>Category 6</b>		
209001	Patch-cord RJ45 U/UTP Cat 6 Cu PVC 0,5m White (Bag B0)	<input type="radio"/> 1
209002	Patch-cord RJ45 U/UTP Cat 6 Cu PVC 1m White (Bag B0)	<input type="radio"/> 1
209003	Patch-cord RJ45 U/UTP Cat 6 Cu PVC 2m White (Bag B0)	<input type="radio"/> 1
209004	Patch-cord RJ45 U/UTP Cat 6 Cu PVC 3m White (Bag B0)	<input type="radio"/> 1
209005	Patch-cord RJ45 U/UTP Cat 6 Cu PVC 5m White (Bag B0)	<input type="radio"/> 1
209011	Patch-cord RJ45 U/UTP Cat 6 Cu LSFH 0,5m White	<input type="radio"/> 10
209012	Patch-cord RJ45 U/UTP Cat 6 Cu LSFH 1m White	<input type="radio"/> 10
209013	Patch-cord RJ45 U/UTP Cat 6 Cu LSFH 2m White	<input type="radio"/> 10
209014	Patch-cord RJ45 U/UTP Cat 6 Cu LSFH 3m White	<input type="radio"/> 10
209015	Patch-cord RJ45 U/UTP Cat 6 Cu LSFH 5m White	<input type="radio"/> 10
209301	Patch-cord RJ45 U/UTP Cat 6 Cu LSFH 0,3m White	<input type="radio"/> 1
<b>ACCESSORIES</b>		
200101	Velcro Tape for Cables 8m, Width: 20mm, Black (2 units)	<input checked="" type="radio"/> 1
200102	Velcro Flange for Cables, Width: 15mm, Black (10 units)	<input checked="" type="radio"/> 1



▲ 209101



▲ 209111



▲ 209004



▲ 200101



▲ 200102



▲ 209015


**DATA COM  
COPPER SOLUTIONS**

Ref.	Description	
<b>CONNECTORS</b>		
<b>CATEGORY 6A</b>		
209921	Data Connector RJ45 UTP Cat 6A Female. Wing-nut assembly type, Plastic Box	10
209922	Data Connector RJ45 UTP Cat 6A Male, Plastic Box	50
209923	Data Connector RJ45 FTP Cat 6A Female. Grip assembly type, Plastic Box	10
209924	Data Connector RJ45 FTP Cat 6A Male with Blue Protective Sleeve. Grip assembly type	25
<b>CATEGORY 6</b>		
209901	Data Connector RJ45 UTP Cat 6 Female 90°/180°. Assembly with/without Tool, Plastic Box	15
209902	Data Connector RJ45 UTP Cat 6 Male, Plastic Box	50
209903	Data Connector RJ45 FTP Cat 6 Female. Grip assembly type, Plastic Box	10
209904	Data Connector RJ45 FTP Cat 6 Male, Plastic Box	50
209905	Data Connector RJ45 UTP Cat 6 Female. Wing-nut assembly type, Plastic Box	10
209906	Data Connector RJ45 UTP Cat 6 Male Pass-Through, Plastic Box	50
209961	Data Connector RJ45 UTP Cat 6 Male with White Protective Sleeve, Plastic Box	25
209962	Data Connector RJ45 UTP Cat 6 Male with Grey Protective Sleeve, Plastic Box	25
<b>KITS</b>		
209401	Kit – Carrying case which includes: 50xRJ45 UTP Cat 6 Male connectors [ref. 209902], 15xRJ45 UTP Cat 6 Female connectors [ref. 209901], 1xCrimping tool [ref. 209801] and 10xVelcros flange [ref. 200102]	1
209402	Kit – Carrying case which includes: 150xRJ45 male connectors Cat6 UTP pass through [ref. 209906], 1xAutomatic crimping tool for male connectors pass through and non-pass through [ref. 209802] and 10xVelcros flange [ref. 200102]	1
Ref.	Description	
<b>TOOLS</b>		
209801	Crimping Tool for RJ45/RJ11/RJ12 and 4P4C/4P2C Male Connectors	1
209802	Crimping Tool with Automatic Cutting for pass-through and non-pass through RJ45 Male Connectors	1
209811	Termination Tool for RJ45 Female Connectors	1
2145	Professional Cable Stripper for Coaxial Cable and Data Cable	10
2162	Cable Stripper for Coaxial Cable and Data Cable (Bag B2)	1
2174	Professional Tool for Data Cable Mounting	1/20
2325	Round cable stripper for multifiber cables, data cables and coaxial cables	1
Ref.	Description	
<b>DATA DISTRIBUTION</b>		
<b>PATCH BOXES</b>		
546501	Passive Multiplexer "RJ45" Cat 6 1 Male - 9 Females, with 0.3m LSFH Lead	1
<b>OUTLETS/ROSETTES</b>		
209910	Data Terminal Box/Rosette with 1 UTP Cat 6 Female RJ45 Connector	5



Comparative video of a connectorization with and without a mounting tool.





## Ref. | Description

**19" RACKS****RACKS****600x450mm**

533105	19" Rack Cabinet 6RU (+2RU extra). Glazed Door and Accessible from the side. Dimensions: 600x370x450mm. Wall/Ground Mount (Disassembled)	1
533106	19" Rack Cabinet 6RU (+2RU extra). Glazed Door and Accessible from the side. Dimensions: 600x370x450mm. Wall/Ground Mount	1
533107	19" Rack Cabinet 8RU (+2RU extra). Glazed Door and Accessible from the side. Dimensions: 600x460x450mm. Wall/Ground Mount (Disassembled)	1
533108	19" Rack Cabinet 8RU (+2RU extra). Glazed Door and Accessible from the side. Dimensions: 600x460x450mm. Wall/Ground Mount	1
533112	19" Rack Cabinet 13RU (+2RU extra). Glazed Door and Accessible from the side. Dimensions: 600x682x450mm. Wall/Ground Mount (Disassembled)	1/1
533113	19" Rack Cabinet 13RU (+2RU extra). Glazed Door and Accessible from the side. Dimensions: 600x682x450mm. Wall/Ground Mount	1
533114	19" Rack Cabinet 15RU (+2RU extra). Glazed Door and Accessible from the side. Dimensions: 600x771x450mm. Wall/Ground Mount (Disassembled)	1
533115	19" Rack Cabinet 15RU (+2RU extra). Glazed Door and Accessible from the side. Dimensions: 600x771x450mm. Wall/Ground Mount	1



▲ 533105/06



▲ 533107/08



▲ 533112/13



▲ 533114/15



In case of references that are supplied disassembled

REF.	N.º RU	MOUNTING	Max. LOAD CAPACITY (kg)	SUPPLY	LOCK	CABLE GUIDE	WITH PERFORATION	LEGS INCLUDED AND WHEEL COMPATIBLE	COMPATIBLE FAN
533105	6 + 2RU	Wall and ground	60	Disassembled	Basic, Front	Horizontal	-	-	533174
533106	6 + 2RU	Wall and ground	60	Assembled	Basic, Front	Horizontal	-	-	533174
533107	8 + 2RU	Wall and ground	60	Disassembled	Basic, Front	Horizontal	-	-	533174
533108	8 + 2RU	Wall and ground	60	Assembled	Basic, Front	Horizontal	-	-	533174
533112	13 + 2RU	Wall and ground	60	Disassembled	Basic, Front	Horizontal	-	-	533174
533113	13 + 2RU	Wall and ground	60	Assembled	Basic, Front	Horizontal	-	-	533174
533114	15 + 2RU	Wall and ground	60	Disassembled	Basic, Front	Horizontal	-	-	533174
533115	15 + 2RU	Wall and ground	60	Assembled	Basic, Front	Horizontal	-	-	533174
533118	18RU	Ground	1.000	Assembled	Professional, Front and Rear	-	-	✓	533175
533122	22RU	Ground	1.000	Assembled	Professional, Front and Rear	-	-	✓	533175
533127	27RU	Ground	1.000	Assembled	Professional, Front and Rear	-	-	✓	533175
533132	32RU	Ground	1.000	Assembled	Professional, Front and Rear	-	-	✓	533175
533134	32RU	Ground	1.000	Assembled	Professional, Front and Rear	-	-	✓	533175
533137	37RU	Ground	1.000	Assembled	Professional, Front and Rear	-	-	✓	533175
533139	37RU	Ground	1.000	Assembled	Professional, Front and Rear	-	-	✓	533176
533142	42RU	Ground	1.000	Assembled	Professional, Front and Rear	-	-	✓	533176
533144	42RU	Ground	1.000	Assembled	Professional, Front and Rear	Vertical	-	✓	533176
533145	42RU	Ground	1.000	Assembled	Professional, Front and Rear	Vertical	✓	✓	533176
533146	42RU	Ground	1.000	Assembled	Professional, Front and Rear	Vertical	✓	✓	To Be Consulted
533147	42RU	Suelo	1.000	Assembled	Professional, Front and Rear	Vertical	-	✓	To Be Consulted

All: CE Marking | IP20 Code | RAL 9004


**DATACOM**  
**RACKS AND CABINETS**

Ref.	Description	
<b>19" RACKS</b>		
<b>RACKS</b>		
<b>600x600mm</b>		
533118	19" Rack Cabinet 18RU. Glazed Door and Accessible from the side. Dimensions: 600x942x600mm. Ground Mount	1
533122	19" Rack Cabinet 22RU. Glazed Door and Accessible from the side. Dimensions: 600x1120x600mm. Ground Mount	1
533127	19" Rack Cabinet 27RU. Glazed Door and Accessible from the side. Dimensions: 600x1342x600mm. Ground Mount	1
533132	19" Rack Cabinet 32RU. Glazed Door and Accessible from the side. Dimensions: 600x1564x600mm. Ground Mount	1
533137	19" Rack Cabinet 37RU. Glazed Door and Accessible from the side. Dimensions: 600x1787x600mm. Ground Mount	1
<b>600x800mm</b>		
533134	19" Rack Cabinet 32RU. Glazed Door and Accessible from the side. Dimensions: 600x1570x800mm. Ground Mount	1
533139	19" Rack Cabinet 37RU. Glazed Door and Accessible from the side. Dimensions: 600x1790x800mm. Ground Mount	1
533142	19" Rack Cabinet 42RU. Glazed Door and Accessible from the side. Dimensions: 600x2010x800mm. Ground Mount	1
<b>800x800mm</b>		
533144	19" Rack Cabinet 42RU. Glazed Door and Accessible from the side. Dimensions: 800x2010x800mm. Ground Mount	1
533145	19" Rack Cabinet 42RU. Perforated doors (double front, single rear) and Accessible from the side. Dimensions: 800x2010x800mm. Ground Mount	1
<b>800x1000mm</b>		
533146	19" Rack Cabinet 42RU. Perforated doors (double front, single rear) and Accessible from the side. Dimensions: 800x2010x1000mm. Ground Mount	1
533147	19" Rack Cabinet 42RU. Glazed Door and Accessible from the side. Dimensions: 800x2010x1000mm. Ground Mount	1
<b>Rack frames</b>		
533101	Rack frame from 10" to 19" 8RU. Wall or perforated plate installation	1



▲ 533118



▲ 533122



▲ 533127



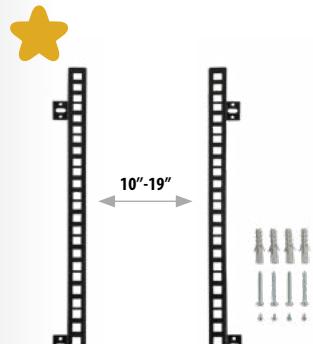
▲ 533132



▲ 533137



▲ 533144



▲ 533101


**DATACOM**  
**RACKS AND CABINETS**

QUICK PRODUCT GUIDE 2023

Ref.	Description	
<b>19" RACKS</b>		
<b>PANELS</b>		
<b>Patch panels</b>		
533150	Panel for Rack 19" 1RU, Up to 24 "F" connectors	1
533151	Panel for Rack 19" 1RU, Up to 24 "RJ45" connectors. UTP compatible	1
533153	Panel for Rack 19" 1RU, Up to 2x7 "F" connectors (suitable for T.OX modules)	1
533180	Patch Panel for Rack 19" 1RU, With 24 "RJ45" Cat 6 UTP connectors	1
533181	Patch Panel for Rack 19" 1RU, With 24 "RJ45" Cat 6A FTP connectors	1
533183	Panel for Rack 19" 1RU, Up to 24 "SC" Duplex or "LC" Quad connectors	1
533187	Panel for Rack 19" 1RU, Up to 24 "RJ45" connectors with cable holder. UTP/FTP compatible	1
<b>Organizing panels</b>		
533158	Cable Management Panel for Rack 19" 1RU, 5 Rings of 80mm	1
533159	Cable Management Panel for Rack 19" 1RU, 1 Hole with Brush Strip	1
533160	Cable Management Panel for Rack 19" 1RU, Front Cover	1
533186	DIN Rail Panel for Rack 19" 3RU, 24 Poles	1
<b>Blank panels</b>		
533161	Blank Panel for Rack 19" 1RU	1
533162	Blank Panel for Rack 19" 2RU	1
<b>TRAYS AND SPLICING BOXES</b>		
533152	Splice Box for Rack 19" 1RU, Up to 24 "SC" Simplex or "LC" Duplex connectors (Depth 226mm)	1
533157	Splice Box for Rack 19" 2RU, Up to 48 "SC" Simplex or "LC" Duplex connectors (Depth 226mm)	1
533168	Sliding Tray for Rack 19" 1RU (compatible with 450/600mm deep racks). Depth: 350mm. Sliding length: 225mm	1
533169	Sliding Tray for Rack 19" 1U (compatible with 800/1000mm deep racks). Depth: 550mm. Sliding length: 390mm	1
533182	Splice Box for Rack 19" 1RU, Up to 24 "SC" Duplex or "LC" Quad connectors (Depth 226mm)	1
533185	Fixed tray for Rack 19" 2RU (Depth 350mm)	1
533201	LGX rack mount for Rack 19" 1RU, Up to 3 LGX modules	1
533202	Duplex F.O. module single-mode pre-terminated 6xSC/APC	1
533203	Duplex F.O. module multi-mode pre-terminated 6xSC-SC	1
533204	Duplex F.O. module single-mode pre-terminated 8xLC-LC	1
533205	Duplex F.O. module multi-mode pre-terminated 8xLC-LC	1
<b>VENTILATION</b>		
533005	Thermostat with NO Contact 0...60°C for Rack 19"	1
533174	Individual Top Fan for Rack 19", 195m3/h	1
533175	Top Tray with 2 Fans for Rack 19" and 600mm depth, 390m3/h	1
533176	Top Tray with 4 Fans for Rack 19" and 800mm depth, 780m3/h	1
<b>POWER SUPPLY</b>		
533010	SAI/UPS 1600VA/1000W ECO 8 IEC C13 Outputs	1
533011	19" Rack Support for UPS (Ref.533010), 2U	1
<b>ACCESSORIES</b>		
533170	Screw Kit for Rack 19": Screw with washer and nut (50 units). Plastic Box	1
533171	Kit for Rack 19": 4 Wheels and Screws. Wheels compatible with 18U racks or larger.	1
533172	Rubber cap for splice box - "SC" Simplex or "LC" Duplex	24
533173	Side door lock for 19" Rack, with 2 keys	1



▲ 533181



▲ 533187



▲ 533186



▲ 533159



▼ 533182



▲ 533157



▲ 533176



▲ 533010



▲ 533011

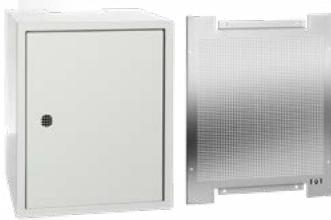


▲ 533001



## **DATACOM RACKS AND CABINETS**

Ref.	Description	
<b>HEADEND CABINETS</b>		
<b>CABINETS</b>		
5749	Outdoor Lockable Cabinet (IP66 Standard), Dimensions: 600x380x210mm	1
5893	Indoor Lockable Cabinet with Mounting Plate, Dimensions: 300x400x200mm	1
589301	Indoor Lockable Cabinet with Mounting Plate, Dimensions: 400x400x200mm	1
589302	Indoor Lockable Cabinet with Mounting Plate, Dimensions: 400x600x200mm	1
589303	Indoor Lockable Cabinet with Mounting Plate, Dimensions: 600x600x200mm	1
589304	Indoor Lockable Cabinet with Mounting Plate, Dimensions: 600x800x200mm	1
<b>PERFORATED PLATES</b>		
5894	Perforated Mounting Plate 300x400mm, Distance from the wall 19mm	1/15
589401	Perforated Mounting Plate 400x400mm, Distance from the wall 19mm	1/15
589402	Perforated Mounting Plate 400x600mm, Distance from the wall 19mm	1/10
Ref.	Description	
<b>ENCLOSURES</b>		
<b>FIBER SPLITTING ENCLOSURES</b>		
231301	Splitting Terminal Enclosure for F.O., Indoor (Up to 16 fibers)	1
231302	Splitting Terminal Enclosure for F.O., Indoor (Up to 48 fibers)	1
231303	Splitting Terminal Enclosure for F.O., Indoor and Outdoor (Up to 24 fibers)	1
231304	Ultra-Compact Splitting Terminal Enclosure for F.O., Indoor (Up to 12 fibers)	1
231305	Extension Frame for Ultra-Compact Splitting Terminal Enclosure for F.O. (+12 fibers)	1
231310	Splitting Terminal Enclosure for F.O., Indoor (Up to 8 fibers)	1
233002	Main Terminal Enclosure for F.O., Indoor (Up to 48 "SC" Simplex or "LC" Duplex connectors)	1
233003	Stackable Main Enclosure for F.O., Indoor (Up to 48 "SC" Simplex or "LC" Duplex connectors)	1
<b>NETWORK ENCLOSURES</b>		
546601	Closed Main Terminal Enclosure for Data/Coaxial/Fiber Distribution (Up to 48 connections)	1
546610	Open Main Terminal Panel for Data/Coaxial/Fiber Distribution (Up to 24 connections)	1
546701	Data/Coaxial/Fiber Network Terminal Enclosure with Flexible Front Frame	1
546702	Data/Coaxial/Fiber Network Terminal Enclosure	1
546801	Network Enclosure for Data/Coax/Fiber (450x450x150)	1
<b>ACCESSORIES</b>		
233013	F.O. Organizer for enclosure REF.233003	1
233230	Keystone Module for F.O. Adapter "SC" Simplex or "LC" Duplex Female, Plastic Box	25/250
233231	F.O. Outlet: Keystone Module + Adapter "SC / APC" Female with Internal Shutter, Plastic Box	20/200
533210	F.O. Organizer for splice box	1
546620	Coaxial Adapter Support "F" Female - "F" Female, for Panels (Refs. 546602 and 546610)	10

**Televes**

▲ 5893



▲ 231303



▲ 231304



▲ 233003



▼ 546610



▼ 546801

## **HDMI DISTRIBUTION**

Ref.	Description	
<b>CABLES</b>		
494501	HDMI Cable Male-Male 1.5m Black (Blister T1)	● 1/8
494502	HDMI Cable Male-Male 3m Black (Blister T2)	● 1/10
494503	HDMI Cable Male-Male 5m Black (Blister T2)	● 1/10
494505	HDMI Cable Male-Male 1.5m Black (Bag)	● 1/100



▲ 494501



# DATACOM

## NETWORKING

## Ref. | Description

**NETWORK ELECTRONICS****ROUTERS**

769110	Network Manager: Router and Firewall, 4x Gb Ethernet	1
769111	Network Manager: Router and Firewall, 6x Gb Ethernet + 2x SFP	1
769121	Router 12x Gb Ethernet + 4x SFP, 36 core 19" Rack Mount, 1U	1
769122	Router 13x Gb Ethernet, 4 core, 19" Rack Mount, 1U	1

**SWITCHES****Managed**

768150	Industrial Ethernet Switch L2+: 8x Gb Ethernet (PoE+, 240W) + 2x SFP (1 Gbps), -40...+75°C (without PSU)	1
769140	Ethernet Switch L2+: 8x Gb Ethernet (PoE+, 130W) + 2x SFP (1 Gbps)	1
769141	Ethernet Switch L2+: 24x Gb Ethernet (PoE+, 370W) + 4x SFP (1 Gbps)	1
769144	Ethernet Switch L2+: 24x Gb Ethernet + 4x SFP (1 Gbps)	1
769145	Ethernet Switch L2+: 48x Gb Ethernet + 6x SFP+ (10 Gbps)	1
769147	Ethernet Switch L2+: 8x Gb Ethernet + 2x SFP (1 Gbps)	1
769148	Ethernet Switch L3: 48x Gb Ethernet + 6x SFP+ (10Gbps)	1

**Unmanaged**

768110	Ethernet Switch L2, Unmanaged: 5x 10/100/1000 Mbps	1
768111	Ethernet Switch L2, Unmanaged: 8x 10/100/1000 Mbps	1
768112	Ethernet Switch L2, Unmanaged: 8x Gb Ethernet (Long range PoE+, 120W) + 2x Gb Ethernet	1
768121	Industrial Ethernet Switch L2, Unmanaged: 8x 10/100/1000 Mbps, -40...+75°C (without PSU)	1
<b>MEDIA CONVERTERS</b>		
769150	SFP Media Converter 1GbE, 2 MMF [LC], 850nm, 500m	1
769210	SFP Media Converter 1GbE for switches 76914x and network manager 769111 2 SMF "LC/UPC", 1310nm	1
769212	Kit: 2 SFP Media Converters 1GbE for switches 76914x and network manager 769111, SMF "LC/UPC", 1310+1490nm	1
769215	RJ45-SFP Media Converter SMF/MMF, SFPs 769210/2 compatible	1
769216	RJ45-F.O. Media Converter SMF, TX: 1310nm, RX: 1550nm	1
769217	RJ45-F.O. Media Converter SMF, TX: 1550nm, RX: 1310nm	1
769412	SFP+ Media Converter 10GbE for OLT modules 7694xx and switches 76914x, 2 SMF "LC/UPC"	1

## Ref. | Description

**WIFI ACCESS POINTS****WAVEDATA SERIES****WaveData Access Points**

769001	Indoor Wireless Access Point WaveData: 1x Ethernet WAN (PoE), 1x Ethernet LAN, 1x USB 3.0, WLAN b/g/n/ac (option Low Power WiFi)	1
769002	Indoor Wireless Access Point WaveData: 1x F.O. SFP, 1x Ethernet LAN, 1x USB 3.0, WLAN b/g/n/ac (option Low Power WiFi)	1
769011	Outdoor Wireless Access Point WaveData: 1x Ethernet WAN (PoE), 1x Ethernet LAN, 1x USB 3.0, WLAN b/g/n/ac	1

**Accessories**

640301	Wall Mount for CoaxData/CoaxBox/WaveBox	1
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## Ref. | Description

**MANAGEMENT AND MONITORING**

769030	WaveBox device: Managing and monitoring the WaveData network	1
769112	Network Manager: Hotspot, 4x Gb Ethernet	1



▲ 769110



▲ 769111



▲ 769141



▲ 769148



▲ 768110



▲ 768111



▲ 769011



▲ 769215



▲ 769216



▲ 769001


**DATA COM  
PROFESSIONAL EQUIPMENT**
**Televes**

Ref.	Description	
<b>OPTICAL FIBER</b>		
<b>FUSION KITS</b>		
<b>Electric arc splice</b>		
232105	F.O Kit: Arc Fusion Splicer + Stripper + Cleaver + Power adapter + Spare set of electrodes + Tweezers + Carrying Case	1
<b>Mechanical splice</b>		
2341	F.O Kit: Connector & Mechanical Splice + Stripper (Ref. 2324) + Cleaver (Ref. 232301) + Cleaning Tools	1
<b>SIGNAL GENERATORS</b>		
2340	OPS3L Triple Light Source (1310, 1490 & 1550nm)	1
<b>TOOLS</b>		
2322	Fiber Mechanical Splicer	1
232301	Cleaver of Fiber Optics	1
232310	Kevlar® Scissors for Optical Fibers	1
2324	Precision Stripper for Optical Fibers	1
2325	Round cable stripper for multifiber cables, data cables and coaxial cables	1
<b>ACCESSORIES</b>		
2327	Splicing Protection Sleeve 60mm for FO fusion	200
232701	Splicing Protection Sleeve 43mm for FO fusion	200
232702	Splicing Protection Enclosure 101mm for FO fusion	100
232710	F.O. Cleaning Kit: 50 isopropyl alcohol Wipes + 25 Sticks	1
232753	Dry F.O. Cleaning wipes - 280 pcs/box	1/60
2328	Fiber Mechanical Splice	10
2329	Connector of Fiber Optics "SC/APC" {with mounting tool}	10
232910	Cleaner for Fiber Optic Connectors	1



▲ 2341



▲ 2340



▲ 2322



▲ 232702

▲ 2329

▲ 2324

▲ 232310



▲ 232301



▲ 232105



▲ 232910



# DATA COM

## PROFESSIONAL EQUIPMENT

QUICK PRODUCT GUIDE 2023

Ref.	Description	
<b>FIELD STRENGTH METERS</b>		
<b>H30CRYSTAL</b>		
<b>Meters</b>		
593601	H30Crystal: DVB-S/S2 + DVB-T, F.O. (Smartphone Armband included)	1
593602	H30Crystal: DVB-S/S2 + DVB-T/T2, F.O. (Smartphone Armband included)	1
593603	H30Crystal: DVB-S/S2 + DVB-C, F.O. (Smartphone Armband included)	1
593604	H30Crystal: DVB-S/S2 + DVB-T/T2 + DVB-C, F.O. (Smartphone Armband included)	1
593605	H30Crystal FULL: Full DVB (-S/S2 + -T/T2 + -C), F.O. + IPTV Option + WiFi 2,4/5 GHz Option + HEVC display + Coaxial Cable Lead + Carrying Case (Smartphone Armband included)	1
593621	H30Crystal: DVB-S/S2 + DVB-T, Selective F.O. (Smartphone Armband included)	1
593622	H30Crystal: DVB-S/S2 + DVB-T/T2, Selective F.O. (Smartphone Armband included)	1
593624	H30Crystal: DVB-S/S2 + DVB-T/T2 + DVB-C, Selective F.O. (Smartphone Armband included)	1
593625	H30Crystal FULL: Full DVB (-S/S2 + -T/T2 + -C), Selective F.O. + IPTV Option + WiFi 2,4/5 GHz Option + HEVC display + Coaxial Cable Lead + Carrying Case (Smartphone Armband included)	1
<b>Options</b>		
593231	Option DVB-T	1
593232	Option DVB-T2 (DVB-T required)	1
593233	Option DVB-C	1
593234	Option dCSS	1
593235	Option Extended Terrestrial Input to 120dB $\mu$ V	1
593236	Option Analogue A/V Display (Format Adapters and Protective Sleeve included)	1
593250	Option WiFi Analyzer (2,4/5GHz)	1
593251	Option IPTV Analyzer	1
593252	Option HEVC Display	1
<b>Accessories</b>		
593201	Protective Sleeve	1
593202	Replacement Battery	1
593203	Power Supply Unit 12V - 2A All Plugs	1
593205	Ports Protector	1
593239	Carrying Case	1
994101	Car Lighter-type 12V Charger adapter Cable, 1.5m	1/10
<b>MOSAIQ6</b>		
<b>Meters</b>		
596101	MOSAIQ6: DVB-T/T2 + DVB-S/S2/SX + DVB-C, CI, F.O. (Carrying Bag included)	1
596102	MOSAIQ6: DVB-T/T2 + DVB-S/S2/SX + DVB-C, CI, F.O. (Carrying Case included)	1
596105	MOSAIQ6 Advance: DVB-T/T2/S/S2/SX/C, CI, F.O., WiFi Analyzer, Analogue Measures, DAB/DAB+, 4K UHD (Carrying Bag included)	1
596111	MOSAIQ6: DVB-T/T2 + DVB-S/S2/SX + DVB-C, CI, Selective F.O. Interface (CWDM Filter) (Carrying Bag included)	1
596112	MOSAIQ6: DVB-T/T2 + DVB-S/S2/SX + DVB-C, CI, Selective F.O. Interface (Carrying Case included)	1
596115	MOSAIQ6 Advance: DVB-T/T2/S/S2/SX/C, CI, Selective F.O. Interface (CWDM Filter), WiFi Analyzer, Analogue Measures, DAB/DAB+, 4K UHD (Carrying Bag included)	1
<b>Options</b>		
596201	Option GPS Drive Test	1
596202	Option WiFi Analyzer (2,4/5GHz)	1
596203	Option Analogue Measures	1
596204	Option DAB/DAB+	1
596205	Option 4K - Ultra High Definition (UHD)	1
<b>Accessories</b>		
596210	Stand-alone, field replaceable battery	1
596211	Carrying Bag	1
596212	Adapter "N" Male - "F" Female	1
596213	Screen Protector	1
596214	Carrying Case	1

**H30 CRYSTAL**

FULL VERSION



▲ 593605



▲ 593239

**MOSAIQ6**  
ADVANCE

ANALOGUE MEASURES



DAB/DAB+

ULTRA HIGH DEFINITION  
4K

WIFI ANALYZER

▲ 596105



▲ 596214


**DATACOM  
TELEPHONY (VOIP)**

Ref.	Description	
<b>IP PBX</b>		
770146	VOIP PBX Phone System (up to 50 simultaneous calls)	1
770147	VOIP PBX Phone System (up to 200 simultaneous calls)	1
<b>GATEWAYS</b>		
770401	RDSI Gateway with 2 BRI ports (4 channels) and 2 10/100 Base-T Ethernet ports	1
770402	RDSI Gateway with 4 BRI ports (8 channels) and 2 10/100 Base-T Ethernet ports	1
<b>TERMINALS</b>		
<b>IP</b>		
770101	Wi-Fi Terminal with dual-band Wi-Fi support 802.11a/b/g/n, 2 SIP accounts, 2 lines, 2.4" colour LCD screen	1
770110	IP Terminal with 1 SIP account, 3 XML keys, Backlit LCD screen, Black	1
770120	PoE IP Terminal with 2 SIP accounts, 3 XML keys, Backlit LCD screen, Black	1
770130	PoE Operator IP Terminal with 6 SIP accounts, 12 line keys, 5 XML keys, 4.3" colour LCD screen, Black	1
770150	Extension Module for Operator IP Terminal with 20 programmable keys, 2 navigation keys, LCD screen, Black	1
<b>ANALOGUES</b>		
770301	Analogue Terminal with 4 direct keys for one touch connection, Black	<input checked="" type="radio"/> 1
770302	Analogue Terminal with 4 direct keys for one touch connection, White	<input type="radio"/> 1
770303	Compact Analogue Terminal, Black	<input checked="" type="radio"/> 1
770304	Compact Analogue Terminal, White	<input type="radio"/> 1

**Televes**

▲ 770146



▲ 770147



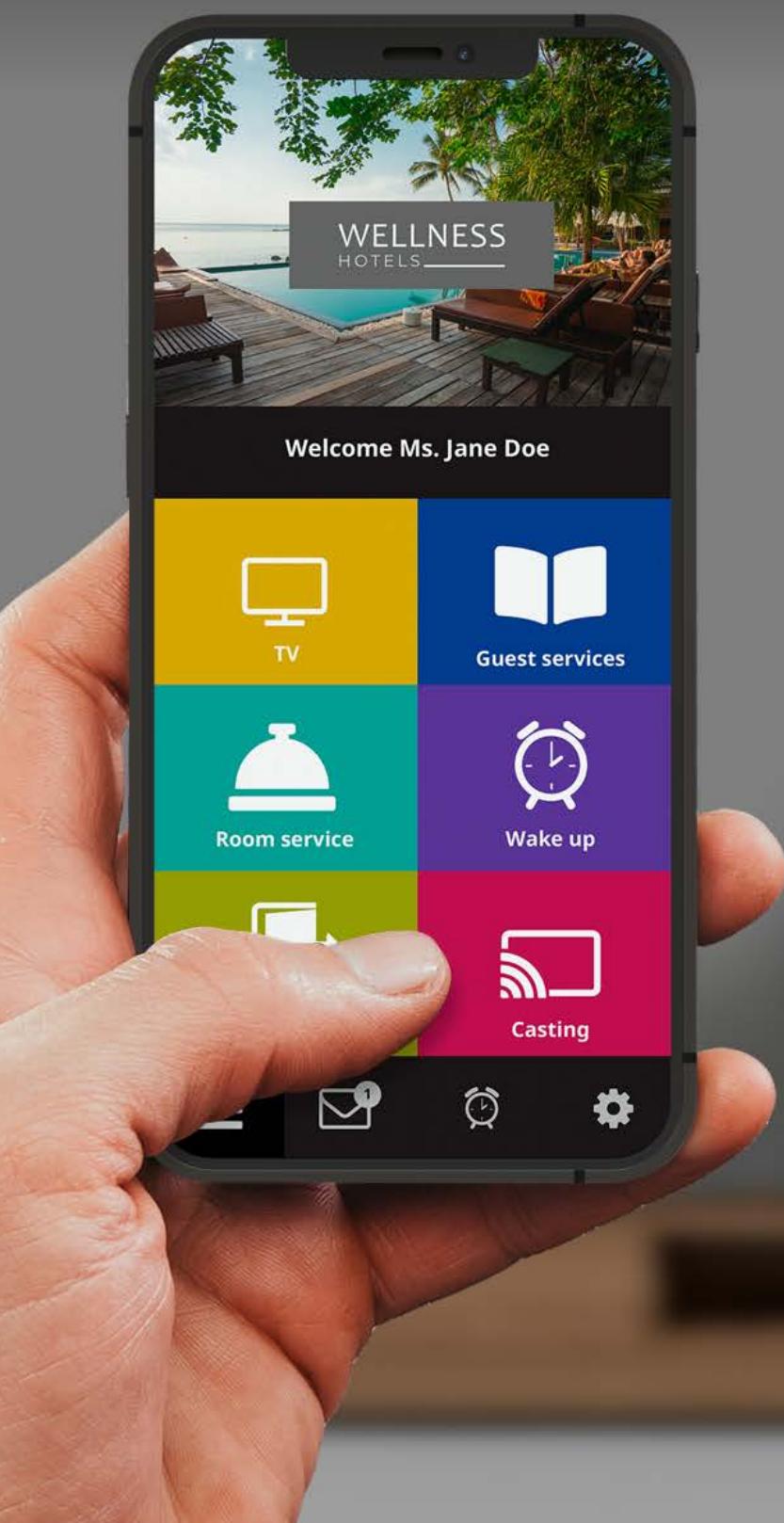
▲ 770120



▲ 770302

# HOSPITALITY

Efficient and ubiquitous internet access in a high capability multiservice network infrastructure.





## HOSPITALITY FIBREDATA SERIES (GPON)

Televes

Ref.	Description	
<b>GPON HEADENDS</b>		
<b>OLT MODULES</b>		
769401	OLT512: 8x PON + 4x Gb Ethernet + 4x 10GbEthernet/Gb Ethernet (Up to 512 users) AC/DC Adapter included	1
769403	OLT512EVO: 8x PON + 4x SFP+ 10Gb Ethernet + 4x Gb Ethernet (Up to 512 users) Two Hot-swappable Redundant Embedded Power Supplies included	1
769420	Modular OLT3072, for 3 16x PON cards and 2x 10Gb switch cards, (Up to 3072 users) AC/DC Adapter included	1
769421	2x 10Gb Switch Card (for OLT3072, Ref. 769420)	1
769422	16x PON Card (for OLT3072, Ref. 769420)	1
<b>POWER SUPPLY UNIT</b>		
769601	Double Power Supply Unit -48Vdc. 19" Rack Mount, 1RU (for OLT)	1
<b>MEDIA CONVERTERS (SFP)</b>		
769410	SFP Media Converter GPON B+ 1GbE for OLT modules 7694xx, 1 Fiber "SC/UPC", 1490nm	1
769411	SFP Media Converter 1GbE for OLT modules 7694xx, "RJ45"	1
769412	SFP+ Media Converter 10GbE for OLT modules 7694xx and switches 76914x, 2 SMF "LC/UPC"	1
769413	SFP Media Converter GPON C+ 1GbE for OLT modules 7694xx, 1 Fiber "SC/UPC"	1
769414	SFP Media Converter GPON C+ 1GbE for OLT512EVO, 1 Fiber "SC/UPC"	1
Ref.	Description	
<b>GPON MONITORING</b>		
769130	Server + Monitoring Software Tool + Licences	1
769131	Monitoring Software Tool + Licences	1
769132	Lite Server + Monitoring Software Tool + Licences (up to 128 devices)	1

**OLT512EVO**

SPECIALY DESIGNED FOR HOSPITALITY ENVIRONMENTS



▼ OLT512EVO

The OLT512EVO headend has been developed at Televes to meet the needs of the hotelier. This advanced solution offers all the advantages of GPON technology, allowing "Quad Play" services to be modeled and adapted to the hotel's catalogue of offerings.

- Full management of network elements with minimum restrictions
- Accurate operation even in the most demanding Hospitality environments
- High performance without the need to purchase numerous additional devices



▲ 769132



▲ 769601



▲ 769412



## HOSPITALITY

## FIBREDATA SERIES (GPON)

Ref.	Description	
<b>VIDEO OVERLAY HEADENDS</b>		
<b>OPTICAL TRANSMITTERS</b>		
234305	T.OX Optical Transmitter SMATV 1550nm "SC/APC" Po 5dBm w/o Return Path	1
234811	T.OX Optical Transmitter CATV 1550nm "SC/APC" Po 10dBm w/o Return Path RF Automatic Adjustment and Temperature Stability	1
769801	Optical Transmitter SMATV 1550nm "SC/APC" Po 5dBm w/o Return Path 19" Rack Mount, 1RU	1
769812	Optical Transmitter CATV 1550nm "SC/APC" Po 6dBm w/o Return Path External modulation and RF Automatic Adjustment (up to 30Km). DOCSIS 3.1 compatible 19" Rack Mount, 1RU	1
<b>AMPLIFIERS / MULTIPLEXERS</b>		
234220	T.OX Optical Amplifier 1i/1o: 1550nm "SC/APC" 20dBm (EDFA Technology)	1
234221	T.OX Optical Amplifier / Multiplexer "SC/APC" 19dBm (EDFA Technology) 2i: 1310/1490nm - 1550nm, 1o: 1310/1490/1550nm	1
234228	T.OX Optical Amplifier / Multiplexer "SC/APC" 20dBm (YEDFA Technology) 9i: 8x1310/1490nm - 1x1550nm, 8o: 8x1310/1490/1550nm	1
769610	Optical Amplifier / Multiplexer "SC/APC" 20dBm (YEDFA Technology) 9i: 8x1310/1490nm - 1x1550nm, 8o: 8x1310/1490/1550nm + Double Power Supply Unit -48Vdc. 19" Rack Mount, 1RU (for OLT)	1
769611	Optical Amplifier / Multiplexer "SC/APC" 20dBm (YEDFA Technology) 33i: 32x1310/1490nm - 1x1550nm, 32o: 32x1310/1490/1550nm + Double Power Supply Unit. 19" Rack Mount, 2RU	1
769612	Optical Amplifier / Multiplexer "SC/APC" 17dBm (YEDFA Technology) 9i: 8x1310/1490nm - 1x1550nm, 8o: 8x1310/1490/1550nm + Double Power Supply Unit -48Vdc. 19" Rack Mount, 1RU (for OLT)	1
769620	Optical Amplifier 1i/1o: 1550nm "SC/APC" 20dBm (EDFA Technology) + Double Power Supply Unit. 19" Rack Mount, 1RU	1
769622	Optical Amplifier 1i/8o: 1550nm "SC/APC" 10dBm (EDFA Technology) + Double Power Supply Unit. 19" Rack Mount, 1RU	1
769623	Optical Amplifier 1i/8o: 1550nm "SC/APC" 20dBm (YEDFA Technology) + Double Power Supply Unit. 19" Rack Mount, 1RU	1
769630	Optical Amplifier / Multiplexer "SC/APC" 20dBm (EDFA Technology) 2i:1x1310/1490nm - 1x1550nm, 1o:1310/1490/1550nm + Double Power Supply Unit. 19" Rack Mount, 1RU	1
769631	Optical Amplifier / Multiplexer "SC/APC" 14dBm (EDFA Technology) 5i:4x1310/1490nm - 1x1550nm, 4o:1310/1490/1550nm + Double Power Supply Unit. 19" Rack Mount, 1RU	1
769632	Optical Amplifier / Multiplexer "SC/APC" 10dBm (EDFA Technology) 9i:8x1310/1490nm - 1x1550nm, 8o:1310/1490/1550nm + Double Power Supply Unit. 19" Rack Mount, 1RU	1
<b>POWER SUPPLY UNIT</b>		
5629	T.OX Switch-mode Power Supply Unit 120W 24V-5A	1
<b>OPTICAL SPLITTERS</b>		
2337	T.OX Optical Splitter 1260...1650nm "SC/APC" 2W 4dB	1
2339	T.OX Optical Splitter 1260...1650nm "SC/APC" 4W 7dB	1
234401	T.OX Optical Splitter 1260...1650nm "SC/APC" 8W 10dB	1
234501	T.OX Optical Splitter 1260...1650nm "SC/APC" 16W 14dB	1
234601	T.OX Optical Splitter 1260...1650nm "SC/APC" 32W 17dB	1



▲ 234305



▲ 769801



▲ 234228



▲ 769612



▲ 2337



▲ 769622



▲ 769630

**T.OX: FIBRE OPTIC AMPLIFIERS****Why use them?**

- Amplifiers optimised for **SKY Q** Applications
- Range of 1, 8 and 32 outputs
- Capability to feed thousands of points
- T.OX 19" Rack Mount which optimise space and it allows an easy and quick install
- Highest performance with 1550nm Technology
- High output power up to 20dBm
- Peace of mind in your Fibre IRS installations

**> 1-Output EDFA Optical Amplifier**

Ref.234220

-10 to + 10dBm range  
Based on EDFA  
(Erbium Doped Fibre)

**> 1-Output YEDFA Optical Amplifier**

Ref.234221

-10 to + 10dBm range  
Based on YEDFA  
(Erbium and Ytterbium Doped Fibre)

**Equipped with WDM**  
for the multiplexing of RF Overlay  
with GPON signals



▲ 234401



## HOSPITALITY FIBREDATA SERIES (GPON)

Ref. Description

### SUBSCRIBER EQUIPMENT

#### ONT/ONU

769507	Basic ONU Module: 1x Gb Ethernet	1
769509	Hospitality PoE(30W) ONT Module: 4x Gb Ethernet + 2x FXS, RF Overlay	1
769514	Hospitality WiFi AC ONT Module: 4x Gb Ethernet + 2x FXS, WLAN b/g/n/ac, RF Overlay	1
769520	SPF ONU Module: GPON	1

Ref. Description

### OPTICAL MICRO-RECEIVER

231111	Domestic Optical Receiver 1550nm "SC/APC" with Amplifier 47...1006MHz, OLC Technology	1
237330	Optical Receiver / Demultiplexer "SC/APC" (-5...+2dBm) 1: 1310/1490/1550nm[GPON/TV], 2: 1310/1490nm[GPON] - RF[1TV: Terr./Sat] Vo 58/49dBuV	1



▲ 769520

#### ONT SFP Adapter

This device is intended to be connected to the network device to extend the GPON deployment in existing access network for the subscribers.

#### Technical Characteristics: ONT+ONU



References	769514	769509	769507
Models	HOSPITALITY WIFI AC	HOSPITALITY PoE	BASIC
RF Overlay	✓	✓	✗
WiFi (802.11 b/g/n) (2x2) 2.4	✓	✗	✗
WiFi (802.11 b/g/n/ac) (4x4) 2.4/5	✓	✗	✗
USB	1	2	✗
FXS Ports	2	2	✗
ETH 10/100/1000BASE-T Ports	4	4 [PoE - 30W]*	1
NAT/NAPT	✓	✓	✗
Firewall	✓	✓	✗
VPN pass-through	✓	✓	✗
PPPoE Terminal	✓	✓	✗
OMCI	✓	✓	✗
TR-069	✓	✓	✗
CLI	✓	✓	✗
WebGUI	✓	✓	✗

\* Ref. 769509: The PoE ports of this ONT can be configured in two ways, 1 port of up to 30W of power, or 4 ports of up to 6.49W of power each



▲ 231111



▲ 237330

For more information about optical fibre cabling and distribution elements, see the DataCom section.



## HOSPITALITY NETWORKING

Ref. | Description

### NETWORK ELECTRONICS

#### ROUTERS

769110	Network Manager: Router and Firewall, 4x Gb Ethernet	1
769111	Network Manager: Router and Firewall, 6x Gb Ethernet + 2x SFP	1
769120	Router 12x Gb Ethernet + Configuration of services 19" Rack Mount, 1U	1
769121	Router 12x Gb Ethernet + 4x SFP, 36 core 19" Rack Mount, 1U	1
769122	Router 13x Gb Ethernet, 4 core, 19" Rack Mount, 1U	1



▲ 769111

#### SWITCHES

##### Managed

768150	Industrial Ethernet Switch L2+: 8x Gb Ethernet (PoE+, 240W) + 2x SFP (1 Gbps), -40...+75°C (without PSU)	1
769140	Ethernet Switch L2+: 8x Gb Ethernet (PoE+, 130W) + 2x SFP (1 Gbps)	1
769141	Ethernet Switch L2+: 24x Gb Ethernet (PoE+, 370W) + 4x SFP (1 Gbps)	1
769144	Ethernet Switch L2+: 24x Gb Ethernet + 4x SFP (1 Gbps)	1
769145	Ethernet Switch L2+: 48x Gb Ethernet + 6x SFP+ (10 Gbps)	1
769147	Ethernet Switch L2+: 8x Gb Ethernet + 2x SFP (1 Gbps)	1
769148	Ethernet Switch L3: 48x Gb Ethernet + 6x SFP+ (10Gbps)	1



▲ 769140



▲ 769144

##### Unmanaged

768110	Ethernet Switch L2, Unmanaged: 5x 10/100/1000 Mbps	1
768111	Ethernet Switch L2, Unmanaged: 8x 10/100/1000 Mbps	1
768112	Ethernet Switch L2, Unmanaged: 8x Gb Ethernet (Long range PoE+, 120W) + 2x Gb Ethernet	1
768121	Industrial Ethernet Switch L2, Unmanaged: 8x 10/100/1000 Mbps, -40...+75°C (without PSU)	1
<b>MEDIA CONVERTERS</b>		
769150	SFP Media Converter 1GbE, 2 MMF (LC), 850nm, 500m	1
769210	SFP Media Converter 1GbE for switches 76914x and network manager 769111 2 SMF "LC/UPC", 1310nm	1
769212	Kit: 2 SFP Media Converters 1GbE for switches 76914x and network manager 769111, SMF "LC/UPC", 1310+1490nm	1
769215	RJ45-SFP Media Converter SMF/MMF, SFPs 769210/2 compatible	1
769216	RJ45-F.O. Media Converter SMF, TX: 1310nm, RX: 1550nm	1
769217	RJ45-F.O. Media Converter SMF, TX: 1550nm, RX: 1310nm	1
769412	SFP+ Media Converter 10GbE for OLT modules 7694xx and switches 76914x, 2 SMF "LC/UPC"	1



▲ 769148



▲ 769215

#### Compatibility between the SPFs and the different Ethernet and GPON equipment

Compatible products	769520	769210	769212	769410	769411	769412	769413	769150	831503	831505	831506
Ethernet Switches: 769140, 769141, 769144, 769145, 769147, 769148	✓	✓	✓	✗	✗	✓*	✗	✓	✓	✗	✗
Router 769111	✗	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗
IPTV Switches: 831401, 831402, 831403, 831406, 831426	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
OLT GPON Modules: 769401, 769403, 769420, 769421, 769422	✗	✗	✗	✓	✓	✓	✓	✓	✗	✗	✗
Media Converter 769215	✗	✓	✓	✗	✗	✗	✗	✓	✗	✗	✗
WaveData 769002	✗	✓	✓	✗	✗	✗	✗	✓	✗	✗	✗
CoaxData Modem 769202	✗	✓	✗	✗	✗	✗	✗	✓	✗	✗	✗

\* Compatible with Ethernet switches with SFP+ ports: 769145 or 769148.



## HOSPITALITY NETWORKING

Ref.	Description	
<b>WIFI ACCESS POINTS</b>		
<b>WAVEDATA SERIES</b>		
<b>WaveData Access Points</b>		
769001	Indoor Wireless Access Point WaveData: 1x Ethernet WAN (PoE), 1x Ethernet LAN, 1x USB 3.0, WLAN b/g/n/ac (option Low Power WiFi)	1
769002	Indoor Wireless Access Point WaveData: 1x F.O. SFP, 1x Ethernet LAN, 1x USB 3.0, WLAN b/g/n/ac (option Low Power WiFi)	1
769011	Outdoor Wireless Access Point WaveData: 1x Ethernet WAN (PoE), 1x Ethernet LAN, 1x USB 3.0, WLAN b/g/n/ac	1
<b>Accessories</b>		
640301	Wall Mount for CoaxData/CoaxBox/WaveBox	1
Ref.	Description	
<b>MANAGEMENT AND MONITORING</b>		
768801	DataBox device: Managing and monitoring platform for WaveData, CoaxData and Networking devices	1
769030	WaveBox device: Managing and monitoring the WaveData network	1
769112	Network Manager: Hotspot, 4x Gb Ethernet	1

## DATA OVER CABLE SYSTEM

Ref.	Description	
<b>COAXDATA SERIES (HOMEPLUG AV)</b>		
<b>GIGABIT 1GBPS</b>		
<b>MANAGEMENT</b>		
769330	CoaxBox device: Managing and monitoring the CoaxData network	1
<b>ACCESSORIES</b>		
640301	Wall Mount for CoaxData/CoaxBox/WaveBox	1
769210	SFP Media Converter 1GbE for switches 76914x and network manager 769111 2 SMF "LC/UPC", 1310nm	1
769212	Kit: 2 SFP Media Converters 1GbE for switches 76914x and network manager 769111, SMF "LC/UPC", 1310+1490nm	1
769220	Diplexer Filter 2i/1o "F": LPF[2...68MHz] - HPF[87...2150MHz]	1/10



▲ 769201



▲ 769301



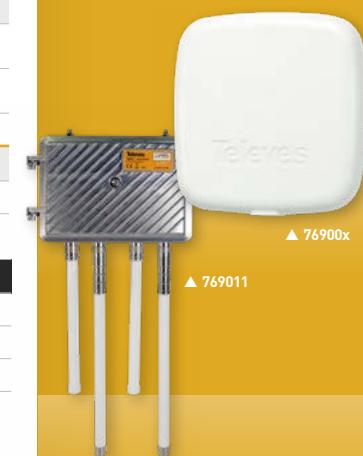
▲ 769210



▲ 769212

**Televes**

## WAVEDATA SERIES



▲ 769011

## WIRELESS ACCESS POINT

WaveData AP provides a high-performance wireless mobility solution for establishments with medium / high density.

The ref. 769002 includes a port for SFP modules, which allows to extend the switching functionality over fibre optic cables.

## DATABOX



▼ 768801

The DataBox device is designed for the management and monitoring of network project devices, as headends, switches, routers, ONTs, in addition to the WaveData series and CoaxData series, among others.

- Centralized monitoring on a single platform
- It allows rapid detection of failures and errors in the network
- SNMP protocol integrated
- Logs and statistics consultation
- Alert management



## HOSPITALITY INTERACTIVE SERVICES

Ref.	Description	
<b>IPTV HEADENDS</b>		
<b>T.OX SERIES</b>		
<b>Streamers</b>		
565701	T.OX Streamer DVB-T/T2-IP CI [Multicast/Unicast, SPTS] Multiplexer: 4 Channels (DVB-T/T2) : 32 IP Streams	1
565801	T.OX Streamer DVBS/S2-IP CI [Multicast/Unicast, SPTS] Multiplexer: 3 Transponders(2Sat) or 3 Transponders(1Sat+LoopThru) : 32 IP Streams	1
<b>Encoders</b>		
563852	T.OX Encoder/Modulator IP Twin (MPEG2/4), 2 Modes: 2i: HDMI / Component(YPbPr) / CVBS - 1Mux: IP/COFDM/QAM 2i: HDMI / Component(YPbPr) / CVBS / IP - 1Mux: COFDM/QAM	1
831816	Kit T.OX Corporate Channel: Nemesis DS Player (Ref. 831815) + T.OX HDMI-IP Encoder (Ref. 563852) + Power Supply Unit (Ref. 582802)	1
<b>Auxiliary Equipment</b>		
216802	Kit: OTG USB - microUSB B Cable & WiFi Adapter. Utilities: Streamers T.OX WiFi Control	1
5301	19" Rack Frame 484mm 5RU (1 PSU + 7 T.OX Modules or 10 T12/T05 Modules)	1
5629	T.OX Switch-mode Power Supply Unit 120W 24V-5A	1
<b>COMPACT HE-21 IPTV HEADEND</b>		
<b>HE-21 Chassis</b>		
831010	4U Chassis	1
831011	4U Chassis with Redundant Power Supply	1
831012	1U Chassis	1
<b>Input Modules</b>		
831111	DVB-S/S2 Quad Input	1
831114	DVB-T/T2 Quad Input	1
831115	DVB-T/T2 Dual Input	1
831123	DVB-S/S2/T/T2/C/ISDB-T Dual Input with Dual CI	1
<b>Optional Items</b>		
831119	Corporate Channel License	1

### STREAMERS T.OX IP



▲ 565801 ▲ 565701

Streamers generating an IP encapsulated output from the multiplexing of the services available in:

- Up to 3 different TV SAT transponders: Ref. 565801.
- 4 different DVB-T or DVB-T2 muxes: Ref. 565701.



▲ 563852



CORPORATE CHANNEL

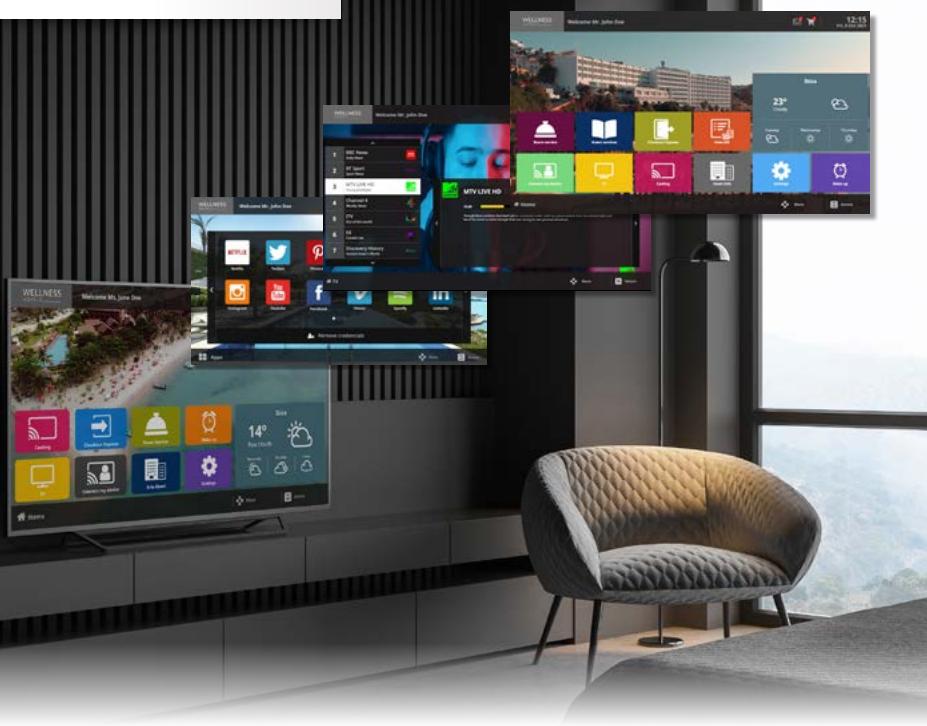
CORPORATE CHANNEL



▲ 831816



## ARANTIA.TV



## IPTV AND INTERACTIVE TV

**Arantia TV** includes all the services needed to respond to its customers' requirements within a simple IPTV platform in all kinds of projects, including hotels, hospitals, operators, companies and residential buildings. Indeed, it provides additional new tools in order to enhance business operations.

- **New multi-screen Middleware:**
  - STB Nemesis V2 Middleware, LG, Samsung and Philips televisions\*.
  - Apps for iOS and Android devices\*.
- Third party systems integration:
  - Property Management Systems,
  - NO/NC Alarm Systems.
- **Multiple Interactive Services:**
  - Television, Video on Demand, News, Messages, Check Expenses, Information Services, Booking & Shopping, Surveys...
- Integration with Arantia DS (Digital Signage) and ArantiaCast (content sharing on the TV from mobile devices via Chromecast).
- A powerful system management tool:
  - Allows managing all the existing functionalities and includes a complete and intuitive user friendly interface design tool.
- Customizable user interface, according to the requirements of every project and even every room within the same project.

\* Check compatible TV models.

Ref.	Description	
<b>ITV HEADEND (INTERACTIVE TELEVISION)</b>		
<b>MIDDLEWARE</b>		
83031801	Arantia TV Middleware up to 50 Users	1
83032003	Arantia TV Middleware up to 100 Users	1
83032103	Arantia TV Middleware up to 499 Users	1
83032203	Arantia TV Middleware up to 750 Users	1
83032303	Arantia TV Middleware up to 1000 Users	1
83032403	Arantia TV Middleware up to 2200 Users	1
83032503	Arantia TV Middleware Lite up to 1000 Users	1
<b>LICENCES</b>		
830319	Arantia TV Set-Top Box License	1
830510	Arantia TV Compatible Television License (LG, Samsung, Philips)	1
<b>VOD SERVERS</b>		
830311	VOD Server 20 Streams 1TB SAS	1
83031201	VOD Server 95 Streams 500GB (1.2TB) SAS	1
83031203	VOD Server 95 Streams 1TB (2.4TB) SAS	1
<b>NPVR SERVERS</b>		
830401	nPVR Server 20 Streams 1TB SAS	1
830402	nPVR Server 95 Streams 500GB (1.2TB) SAS	1
830403	nPVR Server 95 Streams 1TB (2.4TB) SAS	1
<b>CONNECT MYDEVICE</b>		
100003	ArantiaTV Application - Connect My Device	1



▲ 83031801



▲ 83032003



License



▲ 830319



▲ 830311

## ARANTIA TV APPLICATION

**Connect My Device** is an advanced mobile application that the guest can use in order to connect to the room television through the hotel Wi-Fi network.

Available for iOS and Android, Arantia TV application allows an easily interactive television operation from your mobile device.



▲ 100003



## HOSPITALITY

### INTERACTIVE SERVICES

Ref.	Description	
<b>ITV PERSONALIZATION</b>		
<b>PERSONALIZATION ITEMS AND ADDITIONAL OPTIONS</b>		
830110	Alarm Monitor Device	1
830501	Property Management System Integration License (server needed)	1
830502	Guest User Interface (GUI) personalization	1
830506	TV NO/NC Alarm System Integration	1
830508	Property Management System Integration HW Gateway	1
830509	Property Management System Integration Gateway - License for Room	1
★ 830511	Property Management System Adapter Interface License	1
980103	Arantia TV User Interface Customization (1 hour)	1
<b>ITV ROOM EQUIPMENT</b>		
<b>SET-TOP BOX</b>		
830108	Nemesis V2 Set-Top Box	1
830130	Nemesis V2 Kit: Set-Top Box + IR/RF Remote Control + Power Supply	1
<b>ACCESSORIES</b>		
830207	LG/Samsung Remote Control	1
830216	IR Universal (TV) and RF (STB Nemesis V2) Remote Control	1
830218	Power Supply Unit for Nemesis V2 Set-Top Box (All plugs)	1
830219	Nemesis V2 Set-Top Box TVI Extension - Samsung	1
830220	Nemesis V2 Set-Top Box TVI Extension - LG	1
830221	Wall Mount for Nemesis V2 Set-Top Box	1
<b>ITV ACCESSORIES</b>		
<b>RACKS AND ACCESSORIES</b>		
831301	19" Rack 27U (Mounted & Adjusted)	1
831303	19" Rack 42U (Mounted & Adjusted)	1
831304	19" Rack 22U (Mounted & Adjusted)	1
831311	Rack Rails for HE-21	1
<b>ROUTER AND UPS</b>		
831404	VPN Router	1
831701	UPS and rack 19" support (Installation Kit for rack 19")	1
<b>SWITCHES</b>		
831401	Ethernet Switch L3 IPTV: 24x Gb Ethernet + 4x SFP+ (10Gbps), more than 400 viewing points (ArantiaTV configuration included)	1
831402	Ethernet Switch L2 IPTV: 24x Fast Ethernet + 4x SFP (1Gbps)	1
831403	Ethernet Switch L2 IPTV: 48x Fast Ethernet + 4x SFP (1Gbps)	1
831426	Ethernet Switch L2+ IPTV: 24x Gb Ethernet + 4x SFP (1Gbps), up to 80 viewing points (ArantiaTV configuration included)	1
<b>TRANSCEIVERS</b>		
831503	Transceiver for IPTV switches 8314xx, 1000SX, MMF (Multi-Mode Fiber) "LC"	1
831505	Transceiver for IPTV switches 8314xx, 1000T RJ-45	1
831506	Transceiver for IPTV switches 8314xx, 1000LX, SMF (Single-Mode Fiber) "LC"	1

**STB NEMESIS V2**

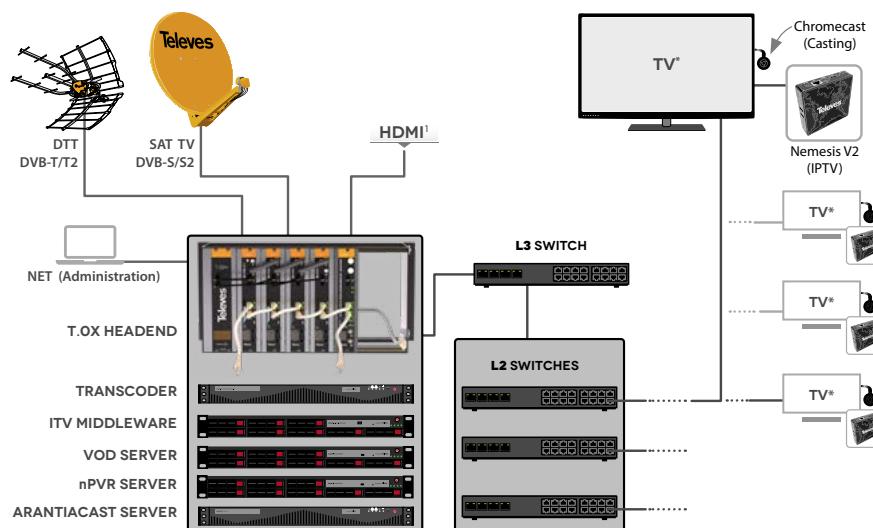
Powerful Set-Top-Box designed to deploy interactive services specifically designed and developed to serve the hospitality environment.

Based on the AOSP (Android Open Source Project) with a complete management tool and an intuitive user application, it is the perfect choice to offer information and entertainment services.

- MPEG2, MPEG4-AVC / H264 decoding capabilities.
- Remote management and monitoring.
- Accessories: Power supply 10W (5V/2A) and remote control (Bluetooth and IR).



▲ 830130

▼ Rack 27U  
(Mounted and adjusted)**Arantia TV: Main System Components**

This diagram includes the main System Architecture components.

Input systems such as the T.OX, MDW Server, Multiscreen Transcoder, the IP distribution network and the end user devices like the Nemesis V2 STB's, TV's and players for IPTV reception, digital signage with Arantia DS or advanced interactive services with Arantia TV.

T.OX streamers support DRM ProIdiom.

1. The HDMI input allows the inclusion in the system of audio and video streams from HDMI sources such as encoders, PCs, and others.

Compatible TVs:



## HOSPITALITY STREAMING EXPERIENCE

Televes

### ARANTIA CAST

**Over 2000 apps available**  
[\[chromecast.com/apps\]](http://chromecast.com/apps)

ArantiaCast solution powered by Chromecast  
Android, iOS and ChromeOS compatible

### STREAMING EXPERIENCE

The complete contents of the mobile devices on the Hotel TV set.

**ArantiaCast** is a casting system that allows each user in a multiuser environment, such as hotels, to have its own exclusive associated device. Without any login or password, and with automatic disconnection when the guest checks out through the hotel's PMS.

- The system allows the advanced remote monitoring of the installed devices.
- The Chromecast installation on the television sets is carried out in an unobtrusive and safe way.
- Streaming will only be allowed on the television set of the guest's own room.
- It includes the option to customise the contents of the Chromecast welcome screen, allowing the hotel to include its own brand in the system.
- The system includes a section of usage statistics in the configuration tool.
- Disconnection from the system takes place on check.
- Content streaming on the hotel's television set, just like home.
- Secure system that guarantees the guests' privacy.
- Compatible with any television set equipped with an HDMI connector.
- Over 2,000 applications available for Casting (Netflix, HBO, YouTube, etc.)
- Multiple mobile devices can be connected to the same room's Chromecast.

Ref.	Description	
<b>ARANTIACAST</b>		
<b>ARANTIACAST SERVER</b>		
831410	ArantiaCast Server	1
<b>CHROMECAST DEVICE</b>		
831411	ArantiaCast Kit: Pre-configured Chromecast + Anti-theft Box and Cable	1
831412	License for Chromecast Device	1
831414	ArantiaCast Server SW Warranty Extension (annual per Chromecast Device)	1



▲ 831410



▲ 831411

**Stream** your favourite content from your personal device straight to the TV in three easy steps

1 **CONNECT** to the Wi-Fi:  
Hotel-WiFi

2 **SCAN** this QR code:  
or  
VISIT [local.arantia.com](http://local.arantia.com)  
and enter the code:  
12345ABC

3 **TAP** the casting icon in your  
cast-enabled app and enjoy!

Room 212



## HOSPITALITY

### DIGITAL SIGNAGE

Ref. | Description

**DIGITAL SIGNAGE CLOUD****DS PLAYERS**

831801	DS Totem with Vertical Display	1
831811	DS SYNC Annual License	1
831812	Nemesis DS Player	1
831815	Nemesis DS Player - T.OX 19" Rack Mounting	1
831830	Nemesis DS Player Wi-Fi (EU PSU included)	1

**ACCESSORIES**

830208	Power Supply Unit for STB (UK plug)	1
830213	STB TVI Extension - Samsung	1
830215	STB TVI Extension - LG	1

Ref. | Description

**LOCAL DIGITAL SIGNAGE****DS SERVER**

831805	Arantia DS Server up to 150 Users	1
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**DS PLAYERS**

831801	DS Totem with Vertical Display	1
831812	Nemesis DS Player	1
831815	Nemesis DS Player - T.OX 19" Rack Mounting	1
831830	Nemesis DS Player Wi-Fi (EU PSU included)	1

**ACCESSORIES**

830208	Power Supply Unit for STB (UK plug)	1
830213	STB TVI Extension - Samsung	1
830215	STB TVI Extension - LG	1



▲ 831801



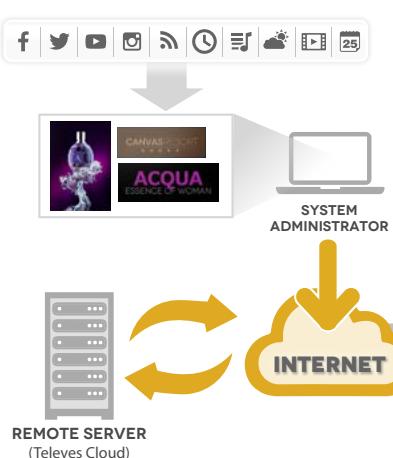
▲ 831830



▲ 831805

**ARANTIA.DS: Cloud based & in-house Server based operation modes**

Arantia DS offers two operation modes through a Cloud based or an in-house Server based architecture:

**CLOUD BASED ARANTIA DS:**

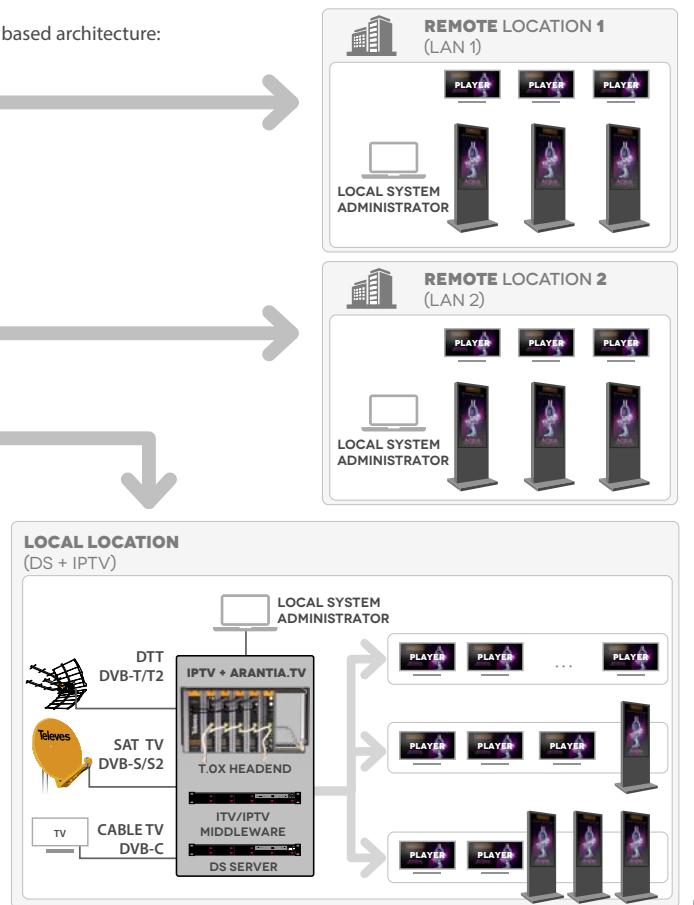
The core DS management application is hosted inside Televes Cloud infrastructure and the distributed DS Players access to it from any place with Internet access.

**This architecture is perfect** for distributed DS systems with some DS Players in different locations.

**IN-HOUSE SERVER BASED ARANTIA DS:**

The core DS management application and the DS Players are located in the same local area network.

**This architecture is perfect** for DS systems where the number of DS Players located in the same local network is high.




**HOSPITALITY**  
**EXPAND TV**

Ref.	Description	
<b>TRANSCODER</b>		
832201	Transcoder/Streamer Live	1
832204	Transcoder/Streamer Live Plus	1



▲ 832201

**TELEPHONY (VOIP)**

Ref.	Description	
<b>SUBSCRIBER EQUIPMENT</b>		
<b>ONT/ONU</b>		
769509	Hospitality PoE(30W) ONT Module: 4x Gb Ethernet + 2x FXS, RF Overlay	1
769514	Hospitality WiFi AC ONT Module: 4x Gb Ethernet + 2x FXS, WLAN b/g/n/ac, RF Overlay	1
769520	SPF ONU Module: GPON	1
<b>IP PBX</b>		
770146	VOIP PBX Phone System (up to 50 simultaneous calls)	1
770147	VOIP PBX Phone System (up to 200 simultaneous calls)	1
<b>GATEWAYS</b>		
770401	RDSI Gateway with 2 BRI ports (4 channels) and 2 10/100 Base-T Ethernet ports	1
770402	RDSI Gateway with 4 BRI ports (8 channels) and 2 10/100 Base-T Ethernet ports	1
<b>TERMINALS</b>		
<b>IP</b>		
770101	Wi-Fi Terminal with dual-band Wi-Fi support 802.11a/b/g/n, 2 SIP accounts, 2 lines, 2.4" colour LCD screen	1
770110	IP Terminal with 1 SIP account, 3 XML keys, Backlit LCD screen, Black	1
770120	PoE IP Terminal with 2 SIP accounts, 3 XML keys, Backlit LCD screen, Black	1
770130	PoE Operator IP Terminal with 6 SIP accounts, 12 line keys, 5 XML keys, 4.3" colour LCD screen, Black	1
770150	Extension Module for Operator IP Terminal with 20 programmable keys, 2 navigation keys, LCD screen, Black	1
<b>ANALOGUES</b>		
770301	Analogue Terminal with 4 direct keys for one touch connection, Black	<input checked="" type="radio"/> 1
770302	Analogue Terminal with 4 direct keys for one touch connection, White	<input type="radio"/> 1
770303	Compact Analogue Terminal, Black	<input checked="" type="radio"/> 1
770304	Compact Analogue Terminal, White	<input type="radio"/> 1



▲ 832204



▲ 770146



▲ 770147



▲ 770120



▲ 770302

## DO IT YOURSELF

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Telecommunications products designed for the non-specialized user who needs to carry out a simple reform or installation at home. Characterized by being simple to use or install, and by having an explanatory and visually attractive packaging, ready to be displayed on the point of sale shelf.





## DO IT YOURSELF TERRESTRIAL ANTENNAS

Ref.	Description		
<b>INTELLIGENT: OUTDOOR SERIES</b>			
<b>ELLIPSE SERIES</b>			
148923	Ellipse Terrestrial Antenna UHF [Ch21-48], G 38dBi BOSS ON PSU included 12V-220mA, UK plug (Single Packing)	TFORCE LTE700	1/4
<b>DAT SERIES</b>			
149721	DAT BOSS LR Terrestrial Antenna UHF [Ch21-48] G 19dBi BOSS OFF, G 47dBi BOSS ON (Single packing)	TFORCE LTE700	1
149921	DAT BOSS Terrestrial Antenna UHF [Ch21-48] G 17dBi BOSS OFF, G 42dBi BOSS ON (Single packing)	TFORCE LTE700	1/5
<b>DINOVA BOSS</b>			
144022	DINOVA BOSS Terrestrial Antenna UHF [Ch21-48] G 7dBi BOSS OFF, G 34dBi BOSS ON (Kit with accessories)	TFORCE LTE700	1
144224	DINOVA BOSS MIX Terrestrial Antenna BIII/UHF [Ch5-12/21-48] G 1/6dBi BOSS OFF, G 27/32dBi BOSS ON (Kit with accessories)	TFORCE LTE700	1
<b>OMNINOVA BOSS</b>			
144422	OMNINOVA BOSS Terrestrial Antenna BI/FM/BIII/UHF [Ch3-12/21-48] G 17/16/25/25dBi BOSS ON (Kit with accessories)	TFORCE LTE700	1
<b>CAMPNOVA BOSS</b>			
144521	CAMPNOVA BOSS Terrestrial Antenna FM/BIII/UHF [Ch5-12/21-48] G -2/20/30dBi BOSS ON (Kit with accessories)	TFORCE LTE700	1
Ref.	Description		



▲ Ellipse



▲ DiNova BOSS



▲ CampNova BOSS

## SET TOP BOXES AND DOMESTIC ACCESSORIES

Ref.	Description		
<b>SET TOP BOXES</b>			
<b>SATELLITE TV</b>			
717402	Satellite Digital Set-top Box FTA DVB-S/S2 [S/PDIF + SCR1/2]		1/10
Ref.	Description		
<b>MODULATORS</b>			
585301	Modulator DVB-T 1i: HDMI - 1 Mux[174...230/470...862MHz]: CODFM (MPEG-4). With 2xUSB, HDMI pass-through and Remote Management		1
Ref.	Description		
<b>A/V AND IR SENDERS</b>			
<b>WIRELESS A/V AND IR SENDERS</b>			
716701	Digidom Transmitter + Receiver HDMI 5GHz		1/5
<b>WIRELESS IR SENDERS</b>			
721903	Digidom Universal Transmitter, Remote Control Extender, 8 Channels		1/50
723703	Digidom Universal Transmitter + Receiver, Remote Control Extender, 8 Channels		1/30



▲ BEXIA



▲ 130121



▲ 716701



▲ 723703



▲ 717402



## DO IT YOURSELF

## FILTERING AND AMPLIFICATION

QUICK PRODUCT GUIDE 2023

Ref.	Description		
<b>DOMESTIC AMPLIFIERS</b>			
<b>IEC-CONNECTOR SERIES</b>			
545720	Domestic Amplifier 1i/(2o+TV) "IEC": 47...694MHz G 20dB Vo 110dB $\mu$ V + Output to a TV Outlet G 12dB + Preamp.Pow. 12V-100mA (Blister T1)	LTE700	1/8
552120	Domestic Amplifier 1i/2o "IEC": 47...694MHz G 22dB Vo 104dB $\mu$ V (Blister T1)	LTE700	1/8
552740	Domestic Amplifier 1i/1o "IEC": 47...790MHz G 25dB Vo 112dB $\mu$ V (Blister T1)	LTE790	1/8
552840	Domestic Amplifier 1i/(2o+TV) "IEC": 47...790MHz G 20dB Vo 106dB $\mu$ V + Output to a TV Outlet G 12dB (Blister T1)	LTE790	1/8
552940	Domestic Amplifier 1i/(4o+TV) "IEC": 47...790MHz G 16dB Vo 102dB $\mu$ V + Output to a TV Outlet G 11dB (Blister T1)	LTE790	1/8
<b>F-CONNECTOR SERIES</b>			
545802	Auto-LTE Domestic Amplifier 1i/(2o+TV) "F": 47...694/790MHz G 20dB Vo 101dB $\mu$ V Auto-Adjustment + Output to a TV Outlet G 11dB + Preamplifier Powering 12V-100mA, UK plug (Blister T1)	AUTOLTE	1/6
552220	Domestic Amplifier 1i/(2o+TV) "F": 47...694MHz G 20dB Vo 106dB $\mu$ V + Output to a TV Outlet G 12dB (Blister T1)	LTE700	1/8
552320	Domestic Amplifier 1i/(4o+TV) "F": 47...694MHz G 16dB Vo 102dB $\mu$ V + Output to a TV Outlet G 12dB (Blister T1)	LTE700	1/8
553120	Domestic Amplifier 1i/6o "F": 47...694MHz G 14dB Vo 95dB $\mu$ V (Blister T1)	LTE700	1/8
Ref.	Description		
<b>ATTENUATORS</b>			
<b>PLUG-IN FORMAT: IEC CONNECTOR</b>			
4315	Adjustable Attenuator "IEC" Ø 9.5mm 1 to 25dB VHF/UHF DC Pass (Bag B1)		1/10



▲ 553120



▲ 4315

## DISTRIBUTION

Ref.	Description		
<b>SPLITTERS</b>			
<b>EASYF SERIES</b>			
<b>MINI-SPLITTER</b>			
434103	Mini-Splitter 5...2400MHz "EasyF" 2W 4.5/4.3dB DC Pass All With Outdoor Mounting Case (Blister T1)	●	1/10
434202	Splitter 5...2400MHz "EasyF" 4W 9/7.5dB DC Pass 0-1 With Outdoor Mounting Case (Blister T1)	●	1/8



▲ 434103



▲ 434202



## DO IT YOURSELF

### CABLES AND CONNECTORS

Televes

Ref.	Description	
<b>COAXIAL</b>		
<b>TRIPLE SHIELDING EXTENSION CORDS (TSH)</b>		
3851	Coaxial Cable Lead "F" Compression 1.5m White (Bag B0)	<input type="radio"/> 1/30
385101	Coaxial Cable Lead "F" Compression 3m White (Bag B0)	<input type="radio"/> 1/20
385102	Coaxial Cable Lead "F" Compression 5m White (Bag B0)	<input type="radio"/> 1/15
3852	Coaxial Cable Lead "IEC" Male-Female Compression 1.5m White (Bag B0)	<input type="radio"/> 1/30
385201	Coaxial Cable Lead "IEC" Male-Female Compression 3m White (Bag B0)	<input type="radio"/> 1/20
385202	Coaxial Cable Lead "IEC" Male-Female Compression 5m White (Bag B0)	<input type="radio"/> 1/15
3853	Coaxial Cable Lead "F" Compression - "Quick F" "PRO EasyF" 1.5m White (Bag B0)	<input type="radio"/> 1/30
385301	Coaxial Cable Lead "F" Compression - "Quick F" "PRO EasyF" 3m White (Bag B0)	<input type="radio"/> 1/20
385302	Coaxial Cable Lead "F" Compression - "Quick F" "PRO EasyF" 5m White (Bag B0)	<input type="radio"/> 1/15
3854	Coaxial Cable Lead "F" - "IEC" Female Compression 1.5m White (Bag B0)	<input type="radio"/> 1/30
385401	Coaxial Cable Lead "F" - "IEC" Female Compression 3m White (Bag B0)	<input type="radio"/> 1/20
385402	Coaxial Cable Lead "F" - "IEC" Female Compression 5m White (Bag B0)	<input type="radio"/> 1/15
385501	Coaxial Cable Lead "F" Compression - "IEC" Female "PRO EasyF" 3m White (Bag B0)	<input type="radio"/> 1/20
3856	Coaxial Cable Lead "F" - "IEC" Male Compression 1.5m White (Bag B0)	<input type="radio"/> 1/30
385601	Coaxial Cable Lead "F" - "IEC" Male Compression 3m White (Bag B0)	<input type="radio"/> 1/20
385602	Coaxial Cable Lead "F" - "IEC" Male Compression 5m White (Bag B0)	<input type="radio"/> 1/15
385701	Coaxial Cable Lead "F" Compression - "IEC" Male "PRO EasyF" 3m White (Bag B0)	<input type="radio"/> 1/20
3858	Coaxial Cable Lead "IEC" Male Compression - "IEC" Female "PRO EasyF" 1.5m White (Bag B0)	<input type="radio"/> 1/30
385801	Coaxial Cable Lead "IEC" Male Compression - "IEC" Female "PRO EasyF" 3m White (Bag B0)	<input type="radio"/> 1/20
385802	Coaxial Cable Lead "IEC" Male Compression - "IEC" Female "PRO EasyF" 5m White (Bag B0)	<input type="radio"/> 1/15
<b>DOUBLE SHIELDING EXTENSION CORDS</b>		
431001	Coaxial Cable Lead "IEC" Ø 9.5mm Elbowed Shielded Male-Female 1,5m Grey (Blister T1)	<input checked="" type="radio"/> 1/8
431002	Coaxial Cable Lead "IEC" Ø 9.5mm Elbowed Shielded Male-Female 2,5m Grey (Blister T1)	<input checked="" type="radio"/> 1/8
<b>ACCESSORIES</b>		
2162	Cable Stripper for Coaxial Cable and Data Cable (Bag B2)	1
<b>DATA</b>		
<b>PATCH-CORDS</b>		
209001	Patch-cord RJ45 U/UTP Cat 6 Cu PVC 0,5m White (Bag B0)	<input type="radio"/> 1
209002	Patch-cord RJ45 U/UTP Cat 6 Cu PVC 1m White (Bag B0)	<input type="radio"/> 1
209003	Patch-cord RJ45 U/UTP Cat 6 Cu PVC 2m White (Bag B0)	<input type="radio"/> 1
209004	Patch-cord RJ45 U/UTP Cat 6 Cu PVC 3m White (Bag B0)	<input type="radio"/> 1
209005	Patch-cord RJ45 U/UTP Cat 6 Cu PVC 5m White (Bag B0)	<input type="radio"/> 1
209101	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 0.5m Grey (Bag B0)	<input checked="" type="radio"/> 1
209102	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 1m Grey (Bag B0)	<input checked="" type="radio"/> 1
209103	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 2m Grey (Bag B0)	<input checked="" type="radio"/> 1
209104	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 3m Grey (Bag B0)	<input checked="" type="radio"/> 1
209105	Patch-cord RJ45 S/FTP Cat 6A Cu LSFH 5m Grey (Bag B0)	<input checked="" type="radio"/> 1
<b>OPTICAL FIBER</b>		
<b>PRE-TERMINATED PATCH CORDS</b>		
232621	F.O.Patch Cord Single-mode Indoor LSFH "SC/APC" 2m (Bag B4)	<input checked="" type="radio"/> 1/10
232623	F.O.Patch Cord Single-mode Indoor LSFH "SC/APC" 0.5m (Bag B4)	<input checked="" type="radio"/> 1/20
232624	F.O.Patch Cord Single-mode Indoor LSFH "SC/APC-FC/UPC" 2m (Bag B4)	<input checked="" type="radio"/> 1/10
232626	F.O.Patch Cord Single-mode Indoor LSFH "SC/APC" 1m (Bag B4)	<input checked="" type="radio"/> 1/20
<b>AUDIO/VIDEO</b>		
<b>HDMI</b>		
494501	HDMI Cable Male-Male 1.5m Black (Blister T1)	<input checked="" type="radio"/> 1/8
494502	HDMI Cable Male-Male 3m Black (Blister T2)	<input checked="" type="radio"/> 1/10
494503	HDMI Cable Male-Male 5m Black (Blister T2)	<input checked="" type="radio"/> 1/10
494505	HDMI Cable Male-Male 1.5m Black (Bag)	<input checked="" type="radio"/> 1/100



## MECHANICAL ACCESSORIES

Ref.	Description	
<b>MAST MOUNTING</b>		
4361	Guy Wire Mounting Kit Ø 45mm	1/5

**GENERAL**

**1.** These general conditions of sale of **TELEVES UK LIMITED**. (Registered Number 2280583) and address at Unit 11 Hill Street Industrial Estate, Cwmbran, Gwent, NP44 7PG, (**hereinafter, the "Seller"**), shall apply to any offer made by the Seller and to any contract of sale concluded by the Seller with any Buyer, whether an individual or a legal entity (**hereinafter, the "Buyer"**).

**2.** Any sale made by the Seller shall be expressly conditioned to the Buyer's full acceptance of these terms and conditions, as well as to the Buyer's waiver of its own general conditions of purchase. The Buyer is considered to have accepted these general conditions of sale and waived its own when an order is placed.

**3.** The Buyer acknowledges that these general conditions of sale have been validly placed at his disposal by the Seller prior to the conclusion of the contract of sale and that he has received a copy thereof.

**4.** Placing an order implies the full and unreserved acceptance of each one of the terms of these general conditions of sale by the Buyer, as well as their validity and efficacy, except when mandatory regulations applicable to consumer relations provide otherwise.

**1. OFFER AND EXECUTION OF THE CONTRACT**

**1.1.** The applicable prices are those indicated in the quotation, offer or proforma provided by the Seller or, in its absence, those contained in the Seller's price list in force on the date of the order's receipt.

**1.2.** The offers will be subject to acceptance during the period stipulated in them by the Seller and, in the event that no period has been stipulated, during a period of thirty (30) calendar days from the date of the offer. Without prejudice to the foregoing, the Seller may withdraw or revoke its offers at any time before it is accepted by the Buyer.

**1.3.** The information contained in the product catalogue, website, as well as in any other oral or written communication of the Seller is merely indicative and shall not be binding. Such information is subject to modification, without prior notice, and the Seller shall not be liable for any error or omission contained therein. The Seller reserves the right, without prior notice, to discontinue products, make design or specification changes as part of its product improvement programme or as a method of assisting product availability.

**1.4.** The sale and purchase shall be deemed to be definitively perfected with the acceptance of the quotation, offer, proforma or tariff catalogue by the Buyer, by placing the corresponding order, once expressly acknowledged by the Seller by e-mail or by any other written means.

**1.5.** Orders, once confirmed by the Seller, cannot be subject to total or partial cancellation, modification or delay by the Buyer, except with the express consent of the Seller and, in any case, after payment of all the expenses incurred as a result. In the event of cancellation, the Seller reserves the right to charge the Buyer the difference existing between the sale price initially applicable to the products of the order and the price in force at the time of cancellation.

**2. PRICE AND TERMS OF PAYMENT**

**2.1.** The applicable prices shall be those indicated in the quotation, offer or proforma provided by the Seller or, in its absence, those contained in the Seller's price list in force on the date of the order's receipt. The prices published in the Seller's price list, quotation, offer or proforma do not include V.A.T. or other taxes payable by the Buyer, nor any other expenses and/or commissions, including bank charges, incurred in order to make the payment of the price effective, which are exclusively for the responsibility of the

Buyer. The Seller may modify the price list at any time. Any modification of the price list shall not affect any pending orders which will continue to be subject to the prices in force on the date on which the order was accepted.

**2.2.** The terms of payment will be established, in each case, by mutual agreement between the Buyer and the Seller. The Buyer may pay the price for each order, as agreed between the Parties, by bank transfer, irrevocable and confirmed documentary credit, stand-by letter of credit as agreed with the Seller, as well as by any other means of payment expressly accepted by the Seller.

**2.3.** In those cases in which it is applicable, payments will be subject to the Late Payment of Commercial Debts Act, 1998, or any other regulation that replaces it. Under no circumstances may the maximum payment periods laid out in this regulation be exceeded. Any late payment shall entitle the Seller to claim from the Buyer the outstanding price plus the interest accrued according to the aforementioned Late Payment of Commercial Debts Act 1998.

**2.4.** The breach of the payment obligations of the Buyer will entitle the Seller to opt between terminating the contract, with the corresponding compensation for damages; or to claim payment of the outstanding price with the mentioned accrued interest. The payment of interest shall be not conditioned to prior notice to the Buyer.

**3. DELIVERY AND SHIPMENT**

**3.1.** The delivery periods indicated in the order by the Buyer will always be merely indicative. The seller shall seek performance in good faith, any possible delays shall not entitle the Buyer to cancel the order, or to claim liability, or penalties of any kind, unless otherwise has been expressly accepted by the Seller. Indicatively, the delivery of the orders will be carried out on the terms agreed, but in no case will the delivery date be an essential condition of the contract.

**3.2.** Unless otherwise agreed in writing, the goods shall be delivered under Incoterm Free Carrier (FCA) - "name placed" - (Incoterms 2020).

**3.3.** As soon as the Seller places the goods at the disposal of the Buyer, the Buyer shall assume all risks related to the possession, care, and use of the products in accordance with the aforementioned Incoterm and shall also be liable, from that moment, for any damage that the aforementioned products may cause.

**3.4.** In the event that the Buyer does not take possession of the goods on the agreed delivery term, the delivery shall also be deemed to have been made, and the Buyer shall bear the risk (deterioration, breakdown and definitive loss) and shall pay all the expenses (including storage, insurance and handling) arising from the non-delivery attributable to the Buyer.

**3.5.** In the event that the Buyer does not take possession of the goods on the agreed delivery term or postpones it unilaterally, the Seller shall be entitled from that time to invoice the full price of the goods on the understanding that delivery has taken place.

**3.6.** The Seller is entitled to deliver the purchased goods in one or more instalments. When several orders had been placed by the same Buyer, each of them will be considered an independent contract, so that the breach of one of them will not affect the others.

**3.7.** Regardless of the applicable Incoterm regime, and unless otherwise agreed in the quotation, offer, proforma or any other contractual document, the Buyer shall bear all costs necessary and accrued for the provision of the goods ordered by the Buyer, and in particular the costs of packaging, transport, including handling and unloading, insurance and customs, including export and import costs, which shall be charged to the Buyer as a supplementary charge on the price of the goods.

#### 4. RESERVATION OF TITLE

**4.1.** The Seller reserves full ownership of the goods delivered to the Buyer until the price is fully paid.

**4.2.** A breach of the payment obligation by the Buyer will entitle the Seller to recover the possession of the goods delivered, as well as to use the sums paid by the Buyer as price of the contract, to compensate any damages derived from the breach of the contract.

**4.3.** In the event that the products have been transformed or integrated into other equipment, the Seller may retain the processed products or the equipment into which the products have been incorporated as a guarantee until the price has been fully paid. The Buyer undertakes to mention this reservation to third parties who may be affected by it and, in particular, to those to whom it delivers, by whatever title, the product covered by the contract.

#### 5. RETURNS

**5.1.** The Seller does not accept returns of orders already served, unless otherwise specified in the specific conditions agreed between the Seller and the Buyer or in those cases where the goods have apparent defects, provided that the defects have been communicated in writing to the Seller within ten (10) calendar days from the date of delivery of the goods, and the Seller has ascertained the existence of defects and the responsibility thereof.

**5.2.** Returns or shipments to the Seller's facilities, whether for replacing the goods purchased under the contract, or to pay for them, must always be made at the Buyer's expense, enclosing the sales invoice. The return of the defective product to the Seller shall be made by the Buyer to the corresponding customs office under the "temporary export" regime, keeping all the documentation relating to said export, especially the export SAD document, in order to enable its eventual re-importation under the same customs regime.

**5.3.** No return will be admitted that has not been previously authorised by the Seller; once authorised, the Buyer shall have a maximum period of fifteenth (15) calendar days to make it effective.

#### 6. GUARANTEE

**6.1.** Unless otherwise provided in the offer or specific conditions agreed, the Seller undertakes to remedy any malfunction of the products caused by a defect in the design, materials or manufacture for a period of 1 year (but if the Buyer is considered to be a "final consumer", according to the applicable consumer legislation, the guarantee period will be the established in the national legislation). Batteries shall only have a guarantee of 6 months from the date of purchase of the goods. In any case, the mandatory legal guarantees imposed by the legislation of the States applicable to the Contract of Sale and Purchase shall be complied by TELEVES UK LIMITED. This guarantee shall never apply to the software, or the services commercialised by the Seller. The guarantees applicable to software and services shall be those specifically delivered with them.

**6.2.** The Seller's guarantee shall not apply if: I. The products have not been transported, stored, maintained, connected, installed, initiated, or used in a proper way and within the electrical values and operating range (input voltage, ambient temperature, IP protection rating...) required by the instructions of the Seller, and particularly those indicated in the user guides, packaging, technical datasheets, and any other documentation accompanying the products or delivered with them, as well as in prescriptions or technical safety and maintenance standards in force in the country in which the goods are intended to be used; or II. The malfunction or lack of conformity results from the normal wear and tear derived from the use of the products according to the aforementioned technical instructions or prescriptions. III. The malfunction or lack of conformity results from specific materials, com-

ponents or designs imposed by the Buyer, disregarding whether they have been approved or not by the Seller; or IV. The Buyer carries out any form of repair or replacement of the products. The Buyer carries out any repairs or alterations to the Goods, including changes to previously defined configurations and additions or connections of third-party products, without the prior express authorisation of the Seller; or V. The malfunction or lack of conformity is due to a cause not attributable to the Seller, particularly when it has its origin in: a) Discoloration, corrosion, degradation, deterioration resulting from the product's exposure to any animal, environmental or vegetable substance or waste matter, oil derivatives, radiation, acid rain, pollution or contamination due to any other element; b) Exposure to fire, water, snow, rain, humidity, or fluids, unless it is indicated in the product's technical specifications that it is adequate and resistant to such weather conditions; c) Force majeure events, such as, among others, fires, natural and atmospheric events, earthquakes, floods, electric storms, lightning, chemical and biological events, war, warlike events, accidents, vandalism, terrorist attacks, or damages due to the influence of people or animals; d) Any failure or incident in the electric or communications networks, such as cuts, fluctuations or surges that exceed the limits laid out in the product's technical documentation or within the applicable laws and regulations.

**6.3.** Unless an imperative rule to the contrary is applicable, the option to repair or replace a defective element corresponds exclusively to the Seller and will not change the starting date of the guarantee period of the order, which will continue to be the remaining time of the period indicated in section 6.1, or a six (6) months term from the date of dispatch to the Buyer, whichever is longer. In the event that the reparation or replacement is unfeasible, or its cost is disproportionate, the Seller shall replace the product for another product of equal or superior characteristics.

**6.4.** The above guarantee shall be automatically excluded if the Buyer carries out any type of repair or modification to the products without the express authorisation of the Seller.

**6.5.** Any guarantee on accessories to the goods such as packaging and other components which accompany the goods but which are not integral parts of the goods is excluded.

**6.6.** All units of the Seller's lighting products with defects in their LED parts and chips are excluded from this guarantee, provided that their failure rate is less than 15%, and it does not affect the functioning of the application for which the products were designed. Regarding these products the guarantee is limited only to those which do not exceed 4.200 operating hours/year under ambient temperature of less than those contained in the product's technical documentation.

**6.7.** The efficacy of this guarantee and its duration are conditioned to the previous access of a representative or authorised technician from the Seller to the products to check the alleged malfunction or lack of conformity. Claims against this guarantee must be carried out in the prescribed manner indicated in the Repair Form or any equivalent document. Claims must at least include the following information: I. Identification of the product affected by the malfunction or lack of conformity. II. Date of purchase and/or installation and the corresponding invoices. III. Detailed description of the detected malfunction or lack of conformity. IV. In the case of lighting products, number and rate of installation failures. V. In the case of lighting products, application, operating hours and switching cycles. Defective product/s must be shipped in its/their original packaging with all its/their parts and components in the manner and within the terms indicated by the Seller. The shipment shall be made at the Buyer's expense, and shall also be returned at the Buyer's expense.

**6.8.** In the event that the Seller decides that the product is free from defects or lacks of conformity and therefore does not need to be repaired or replaced according to the terms of this guarantee, the Seller may charge on the Buyer its inspection and claims management costs, as well as the price of the reparation or replacement, provided that one of these options is requested by the Buyer.

**6.9.** Notwithstanding the statutes of limitations that apply to the remedies available for the Buyer under this guarantee, the Buyer, in any event, must give notice of the malfunction or lack of conformity to the Seller within thirty (30) calendar days from the date in which the Buyer become aware of it.

## 7. LIABILITY

**7.1.** The contractual liability of the Seller shall be limited, in any case, to a maximum amount equivalent to 10% of the price of the contract under which the claim has arisen. Under no circumstances will the Seller be liable before the Buyer, nor before third parties related to it, for loss of profit, loss of income, downtime costs or, in general, for losses of any kind or indirect damages which the Buyer may suffer as a result of the late delivery or non-delivery or defective delivery of the goods.

**7.2.** The limitation of liability contained in this clause shall prevail over any limitation contained in any other contractual document which is contradictory or inconsistent with this clause unless such provision limits the Seller's liability to a greater extent.

**7.3.** The Buyer waives the Seller's liability for any and all claims by third parties for damage caused by or in connection with any of the goods delivered by the Seller, including claims brought against the Seller as producer of the goods pursuant to any agreement on product liability, unless such damage is due to the Seller's wilful misconduct or gross negligence.

**7.4.** In no event shall national rules imposing punitive damages apply to the contracts governed by these terms.

## 8. FORCE MAJEURE

The Seller will not be liable before the Buyer in any way, nor will it be deemed to be in breach of the Contract, for delay in performance or failure to perform its obligations under the Contract, if such delay or failure is due to or arises from an event of Force Majeure. Force Majeure will be interpreted as any cause beyond the Seller's control and responsibility area, which cannot be foreseen and/or avoided or the effects of which could not have been reasonably foreseen. Force Majeure shall be considered to be, among others, general strikes in the sector, riots, mutinies or wars, natural and atmospheric phenomena, legislative and administrative decisions, as well as pandemic situations, as well as the inability to procure materials or items necessary for the performance of the Contract. In the event of force majeure, the Seller may, at its sole option, delay performance or cancel part or all of the order without any liability for the Seller and without prejudice to the Buyer's obligation to pay for any goods actually delivered.

## 9. COMPLIANCE, CODE OF ETHICS AND SALES RESTRICTIONS

**9.1.** The Buyer undertakes to comply with the regulations of the legal system applicable from each moment, in particular the national and international rules and regulations relating to the protection of human rights established in the United Nations Global Compact, the abolition of forced and child labour, the elimination of discrimination, anti-corruption, competition, labour, occupational health and safety and environmental responsibility regulations. It also declares that it is aware of and complies with the Regulatory Compliance Programme, CSR and Code of Ethics of the TELCOR Group of which the Seller is a member. The breach of any of the above obligations by the Buyer will entitle the Seller to terminate the contract, without prior notice and to claim any damages caused.

**9.2.** Neither the Buyer nor its customers shall sell, offer for sale, transfer or make offers for the sale of the goods to any country subject to any export restrictions and/or embargo of any kind which may affect the goods which

are the subject of the sale. In particular, under no circumstances may the goods sold and/or exported, nor any of their parts, pieces or components, be re-exported, directly or indirectly, to States in respect of which the EU has adopted measures of embargo or prohibition of sale or export in respect of products of the same nature.

## 10. INTELLECTUAL PROPERTY

**10.1.** The goods purchased may contain software, the use of which shall be governed by the terms and conditions of the respective licences accompanying the software. The Buyer has the non-exclusive right to use the software for the sole purpose of using the purchased goods. To the extent that the software includes Open Source Software ("OSS"), the Seller shall provide the applicable OSS licence terms and conditions which shall prevail over these general terms. Details of any third-party software and OSS included in the goods being sold is available in the software documentation (SW Declaration).

**10.2.** The intellectual property of the offer and the information attached thereto of the goods subject to sale, as well as of the elements, drawings or software belong to the Seller or its suppliers, and therefore their use by the Buyer for purposes other than the completion of the order, as well as their total or partial copying or transfer to third parties is expressly prohibited.

**10.3.** Use of the Seller's registered trademarks. All the distinctive signs included in the goods covered by this Contract and in any document or web site of reference are registered and unregistered trademarks owned by the Seller. Unless otherwise agreed in writing, the Buyer is not authorised to use the Seller's trademarks and accordingly shall not reproduce, display or otherwise use any distinctive signs without the Seller's prior written permission. In the event that the Buyer is interested in using any of the brands owned by the Seller, either in promotional materials, advertising or marketing of the goods purchased, he must expressly request it and receive prior authorisation from the Seller, for which it will be necessary to fill in the form Request for authorisation to use a brand. The use of the brands owned by the Seller must be carried out in all cases in accordance with the terms and conditions established in the Policy for the use of the Seller's commercial brands, accessible via the following link: [uk.televes.com/identity-guidebook](http://uk.televes.com/identity-guidebook). This clause applies equally to the Buyer of the Buyer and to any other subsequent buyers or sub-buyers, in the event of resale of the purchased goods. Failure to comply with this provision is deemed a breach of contract, notwithstanding the Seller's right to exercise, cumulatively, any other actions aimed at protecting its intellectual property rights to which it could be entitled.

## 11. PROJECTS AND SOLUTIONS

In the event that the offer or sale involves products of the Seller which require specific adaptation or customisation to suit the needs of the Buyer or which may require installation by the Seller or specific studies to guarantee their adaptation to a specific environment (hereinafter, "Projects or Solutions"), the following conditions shall also apply.

**11.1.** The Buyer, in order for the offer to be adjusted to its needs, must provide the Seller with all the characteristics, functionalities and installation conditions of the required solution prior to making the offer.

**11.2.** The Seller may specify in the offer, in the event that the sale does not take place, the cost to be paid by the Buyer for studies or reports carried out for the purpose of implementing the solution. Unless otherwise agreed, the offer does not include the installation of the solution at the Buyer's premises.

**11.3.** The Buyer shall co-operate as required by the Seller to enable the implementation of the solution in the agreed manner and time. If necessary, it is the Buyer's responsibility to obtain licences, permits and authorisations for

the implementation of the solution. If the solution cannot be implemented within the agreed period for reasons attributable to the Buyer, the Seller may invoice the Buyer for all additional expenses incurred as a result of the delay caused by the Buyer. Scheduled dates and deadlines shall also be reasonably extended.

**11.4.** The Buyer must follow the instructions given by the Seller for the proper functioning of the installed solution and, in particular, must regularly install all Software Updates published for repairing errors and vulnerabilities and/or for improving the software functionalities.

**11.5.** For Projects and Solutions, the starting date of the aforementioned guarantee shall be calculated from the date on which the project has been delivered or received or, where applicable, from the date on which the products have been made available to the Buyer.

**11.6.** The aforementioned guarantee shall not apply when the defective functioning of the solution is due to materials, components or designs supplied or imposed by the Buyer.

**11.7.** When a contract includes Projects or solutions, the Seller shall be entitled to invoice 50% of the total amount of the price at the time of placing the order, as an advance payment.

## 12. INFORMATION ON PERSONAL DATA PROTECTION

**Party responsible:** TELEVES UK LIMITED.

**Purpose:** to manage registrations, cancellations, orders, discounts, debt collection, compensations and customer objectives based on the maintenance of the contractual relationship.

**Legitimation:** Execution of the purchase sale contract and maintenance of commercial relations. TELEVES UK LIMITED shall not make international transfers of your personal data and, in particular, to States that do not have an adequate level of protection in accordance with the decisions of the European Commission.

**Recipients:** Companies of TELEVÉS CORPORATION GROUP (which may be found in the data protection policy). Data processors inside and outside the EU. Public bodies for compliance with legal obligations.

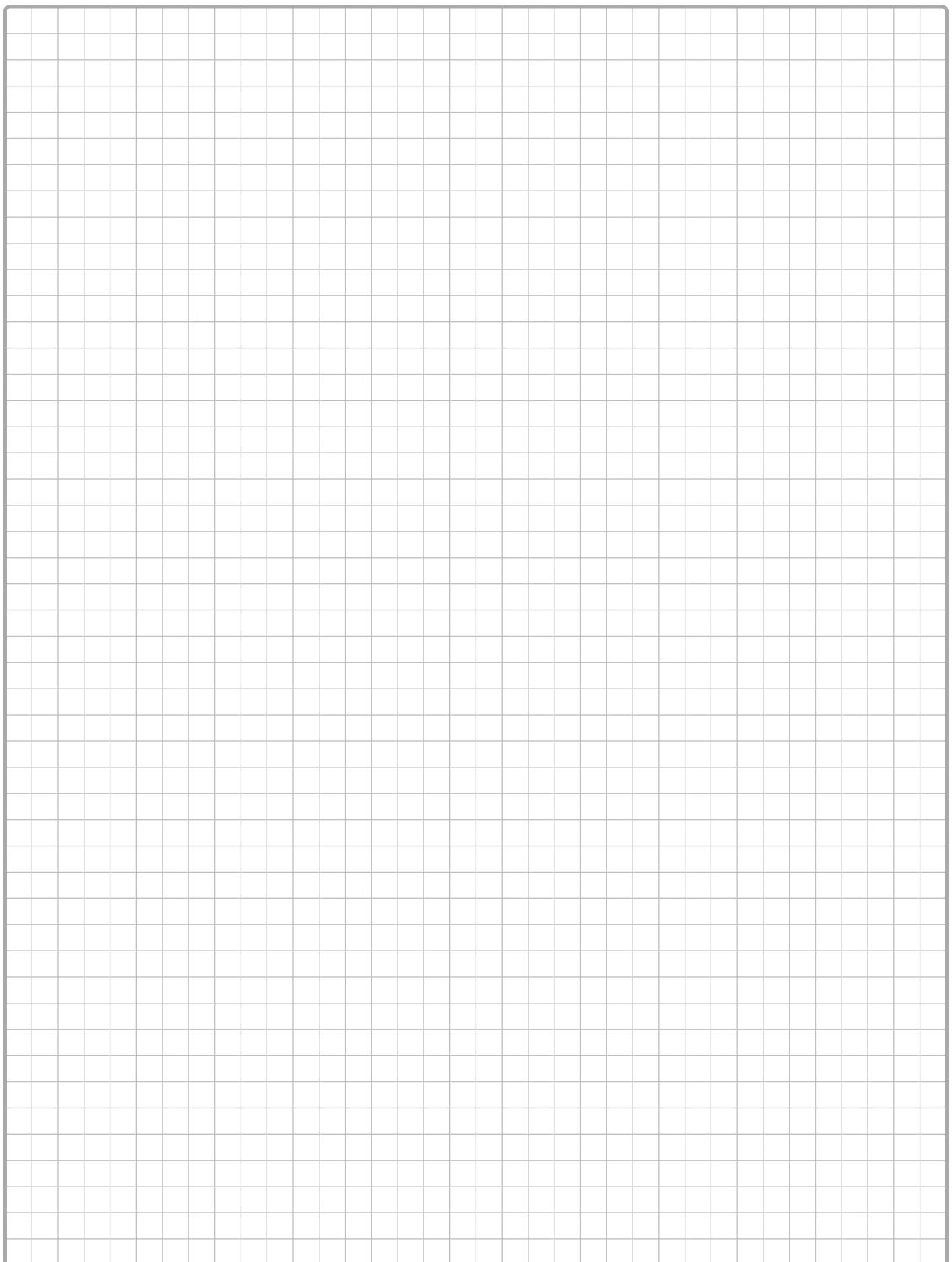
**Rights:** Rights to access, rectify, cancel and oppose the processing of your data, as well as other rights attributed to you by applicable national regulations and additional information that you may check in the **Data Protection Policy: [uk.televes.com/data-protection-policy](http://uk.televes.com/data-protection-policy)**. You may exercise the rights you are entitled to as the owner of the personal data being processed by sending a communication to dpo@televescorporation.com, attaching a document proving your identity and providing the details necessary to process your request.

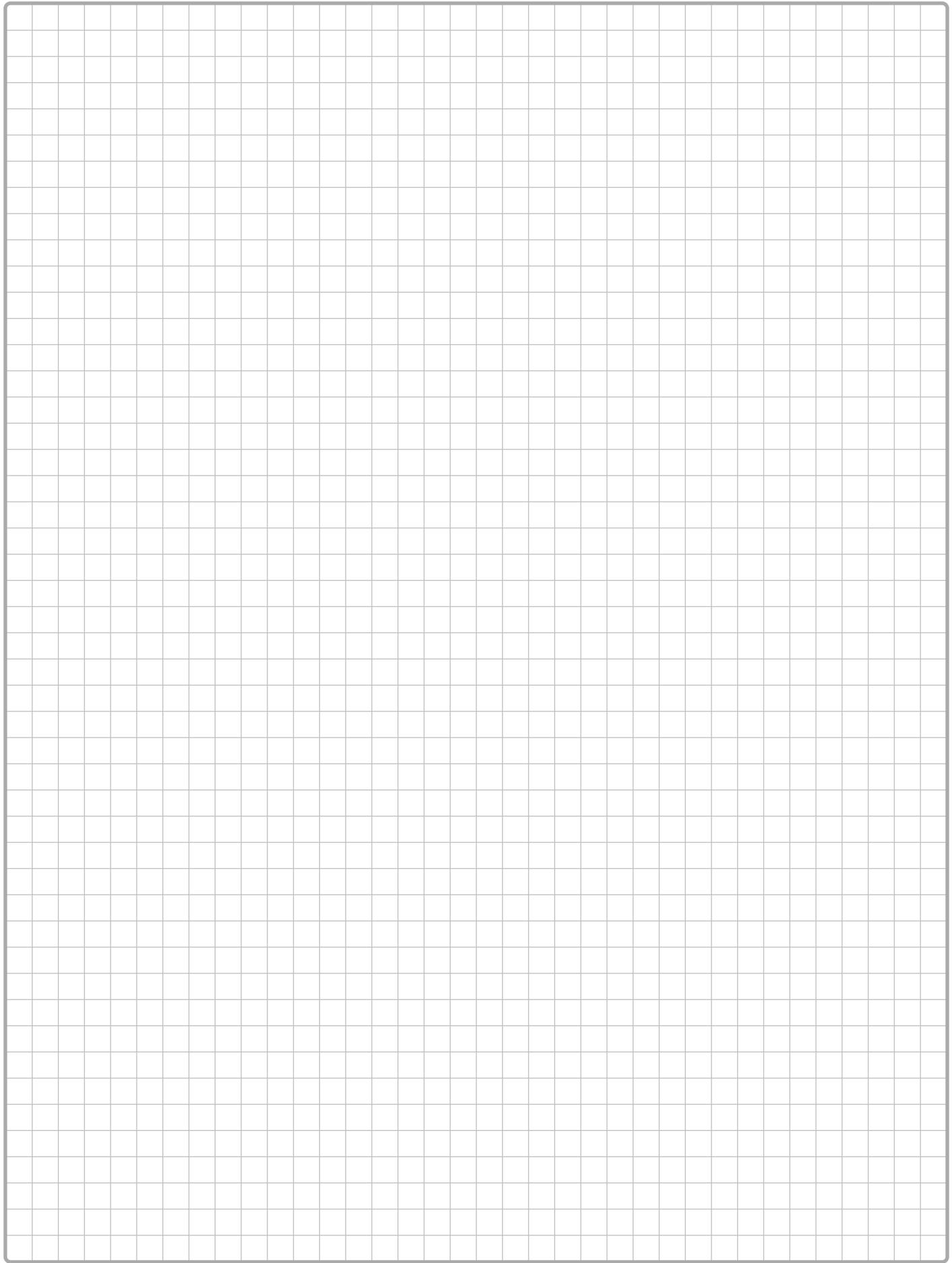
## 13. LAW AND JURISDICTION

The relations between the parties arising from this contract are governed by English Law. The Buyer and the Seller expressly and formally submit themselves, for any question arising from the fulfilment and execution of the contractual relationship to the Courts and Tribunals of the Seller address, with express waiver of their own territorial jurisdiction, except for those jurisdictions which, according to the law applicable to the contract, cannot be waived, all this without prejudice to the right of the Seller to bring any legal proceedings in any other competent jurisdiction.

## 14. LANGUAGE

These general conditions of sale have been drawn up in Spanish and English. In the event of any discrepancy between the two versions, the Spanish version shall prevail.





**TELEVES UNITED KINGDOM LTD**

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(UNITED KINGDOM)

51° 38' 34.8144" N, 3° 1' 23.88" W

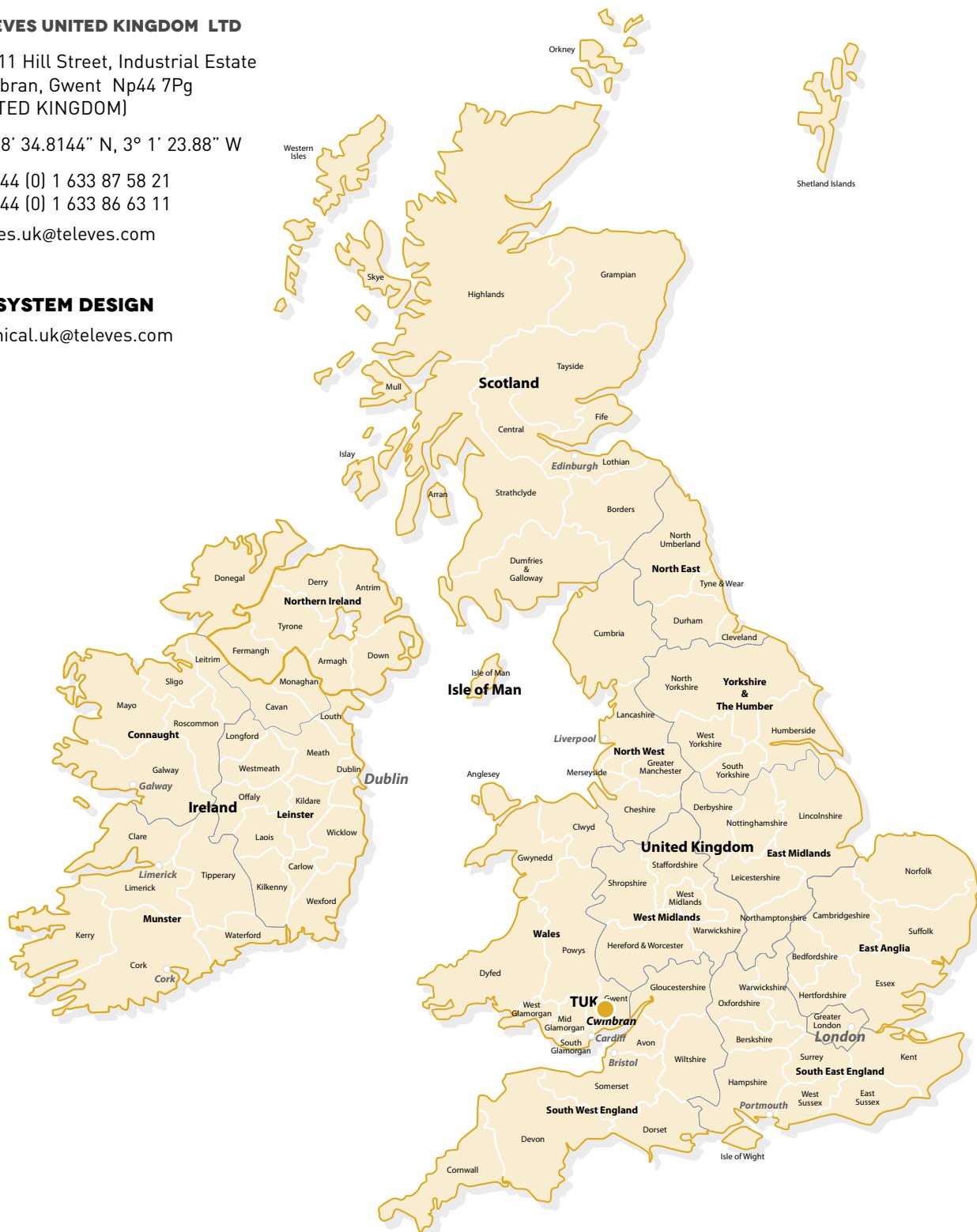
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