

Televes®

NEW
PRODUCT
GUIDE **2018**

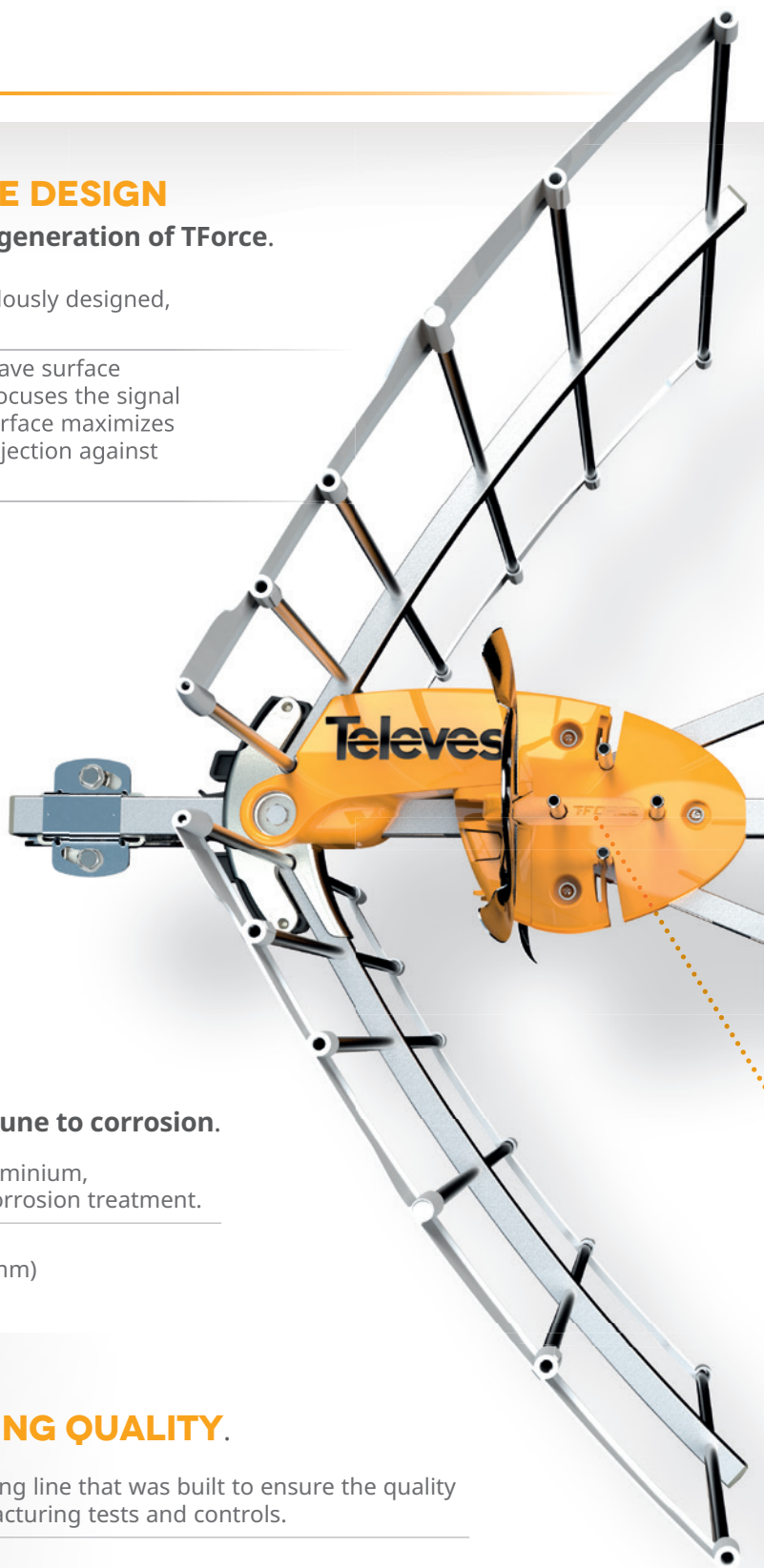
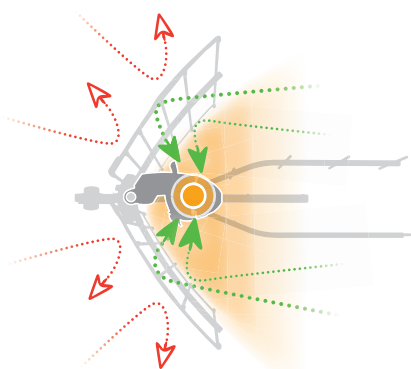


ELLIPSE ANTENNA

You will be captivated by the **INNOVATIVE DESIGN**
to get the most out of the new generation of TForce.



- The inimitable aesthetics, meticulously designed, show the passion for detail.
- Optimized reception: the concave surface created by curved reflectors focuses the signal on the dipole. The convex surface maximizes screening, increasing the rejection against interferences.



You will be surprised by **THE MECHANICS**,
completely immune to corrosion.

- Manufactured with oxidation-resistant materials: aluminium, stainless steel, and Zamak reinforced with an anti-corrosion treatment.
- Reduced dimensions and extremely lightweight, without sacrificing performance (555 x 685 x 820 mm)

You will be satisfied with **fully controlled**
MANUFACTURING QUALITY.

- Produced in a new automated manufacturing line that was built to ensure the quality of the product by means of specific manufacturing tests and controls.

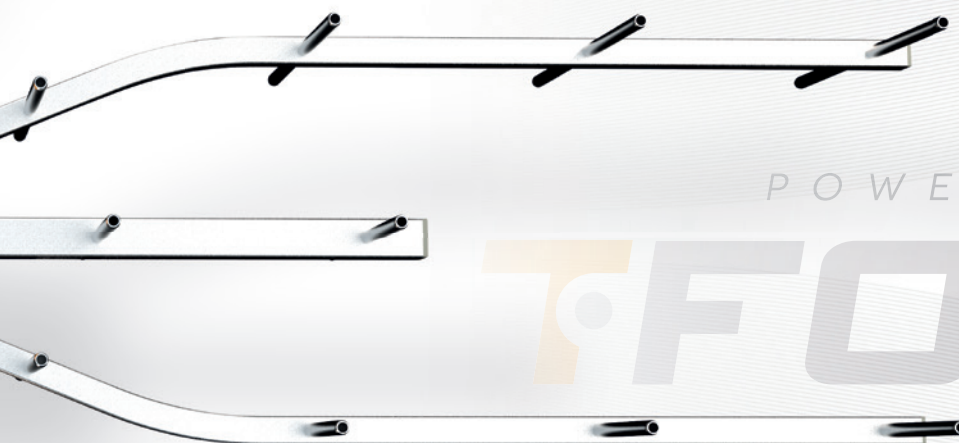
You will benefit from **THE MOUNTING EXPERIENCE**, **3 STEPS**
in just 3 easy steps.

- Without tools.
- A robust and permanent fixation system.
- An ergonomic core structure to make the coaxial cable connection easier.

Ellipse

MADE FOR THE FUTURE

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



POWERED BY

TFORCE

You will be reassured by the **INTELLIGENT ELECTRONICS** designed to ensure service both at installation time and in the future.



- The exclusive technology of **the new generation of TForce**, which has evolved in the DTT emitter design, makes Ellipse the antenna with the wider DTT coverage area, as it is capable of receive the signal either too far or too close to the transmitter.
- Always the best possible output level thanks to the BOSS-Tech system, which makes of it a smart antenna capable of adapting to any situation.
- The high-rejection SAW (*Surface Acoustic Wave*) filter suppresses interference and protects the reception against future sources of problems caused by changes in the environment.
- Low power consumption in intelligent mode.
- Without giving up on a passive antenna with an excellent frequency response: in favourable reception conditions, not powering the intelligence could be enough.



BOSS-Tech:
Balanced Output Signal System

dCSS NEVOSWITCH

A MULTISWITCH HAS NEVER BEEN SO CLEVER

A new and innovative multiswitch implementing dCSS technology.

This 5 wire cascadable multiswitch supports SCR I (EN50494) and SCR II (EN 50607) standards and legacy mode, making the multiswitch compatible with any existing or new set top box. With 4 satellite inputs (Quattro) and terrestrial input, this range offers a 2 or 4 user outputs, with up to 16 user bands each.



DCFLEX functionality

This exclusive functionality gives the product **complete control and flexibility to power the multiswitch from anywhere in the system**. The installer will have complete freedom to choose how to power the multiswitch and will be able to choose

the best to suit a particular scenario. This versatility is achieved via a switch (DC LINK) that can be used to isolate or not, from a DC point of view, the multiswitch from the cascade.

■ **MULTIPLE POWERING OPTIONS:** directly from a PSU, receiver outputs or line power through the satellite inputs or outputs. Moreover, you could choose to line power only the terrestrial side (TForce) of the multiswitch through the terrestrial inputs or outputs of the multiswitch.

■ **IT CAN BE EASILY ADDED TO AN EXISTING SYSTEM:** you just need to connect a power supply to the multiswitch and isolate it from the power on the cascade (flick the DC link switch). The power of the existing system will pass through the multiswitch unaltered and the dCSS NevoSwitch will only draw power from its own power supply. This will avoid any possible problems created by adding a new dCSS NevoSwitch to an existing system.

■ **INCREASED SAFETY FOR THE SET TOP BOXES** connected to the multiswitch, as these are completely isolated from the power in the cascade, avoiding potential issues with the power in the system affecting the end user equipment.

■ **WIDE POWERING RANGE:** with voltages from 10V to 20V making it compatible with most of the systems out there.

■ **ECO MODE:** a multiswitch powered directly from its own power supply can reduce its power consumption to zero when the set top boxes are turned off*.

HOW DOES THE DCFLEX FUNCTIONALITY WORK?

It can be controlled through the following switches:

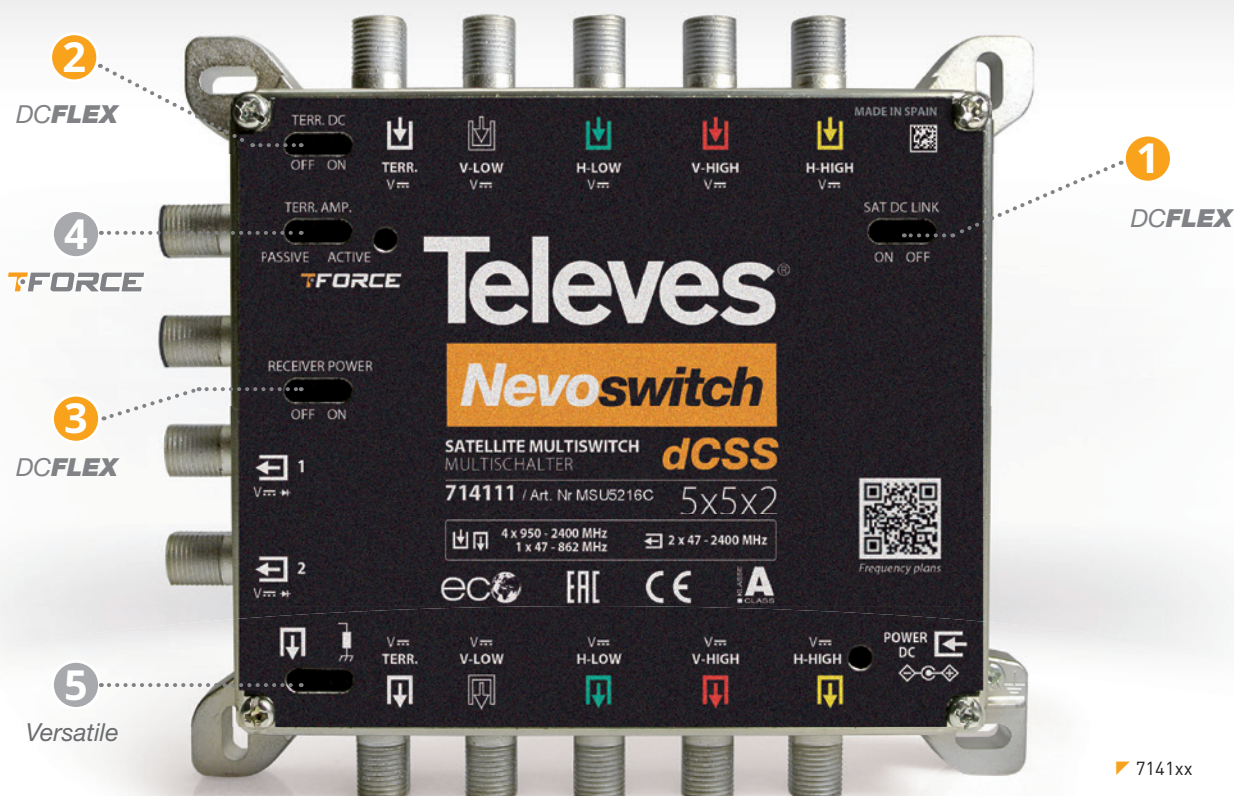
① **SAT DC LINK SWITCH (ON/OFF)** it isolates or connects the power of the multiswitch to the power available from the cascade (satellite legs).

OFF (isolated from the cascade): The MSW is powered locally (power supply) or from the user output without adding or drawing power from the cascade.

ON (connected to the cascade): The MSW can add or draw (in the case that needs powering) current from the cascade.

② **TERR. DC SWITCH (ON/OFF):** it controls if the multiswitch is connected via DC with the terrestrial cascade, generally to line power masthead amplifiers or a BOSS antenna.

③ **RECEIVER POWER SWITCH (ON/OFF):** it controls the DC pass from the user outputs towards the multiswitch. You can power the device from the dCSS set top box (if there is enough power available) or a current injector.



7141xx



The dCSS NevoSwitch also incorporates the innovative TForce technology, based on MMIC components and developed exclusively by Televes. TForce offers an **intelligent terrestrial level adjustment**.

- 4 You can activate it or not by means of a switch making the multiswitch **ACTIVE OR PASSIVE ON TERRESTRIAL**.
 - In active mode, the MSW automatically adjust the terrestrial output level to the **OPTIMUM LEVEL**.
 - In addition, this optimum level is kept balanced **IN EVERY USER OUTPUT** through the dCSS cascade.

MORE FEATURES:

- ✓ **Compatible** with existing Televes NevoSwitch and also with the non-Televes IRS systems.
- ✓ **Chassis made of Zamak**: improved screening attenuation.
- 5 ✓ **Versatile**: The same MSW can be configured as cascade or stand-alone with the flick of a switch.
- ✓ **Small size and compact design**.
- ✓ **European** quality and design, 100% manufactured and verified in our robotized lines.

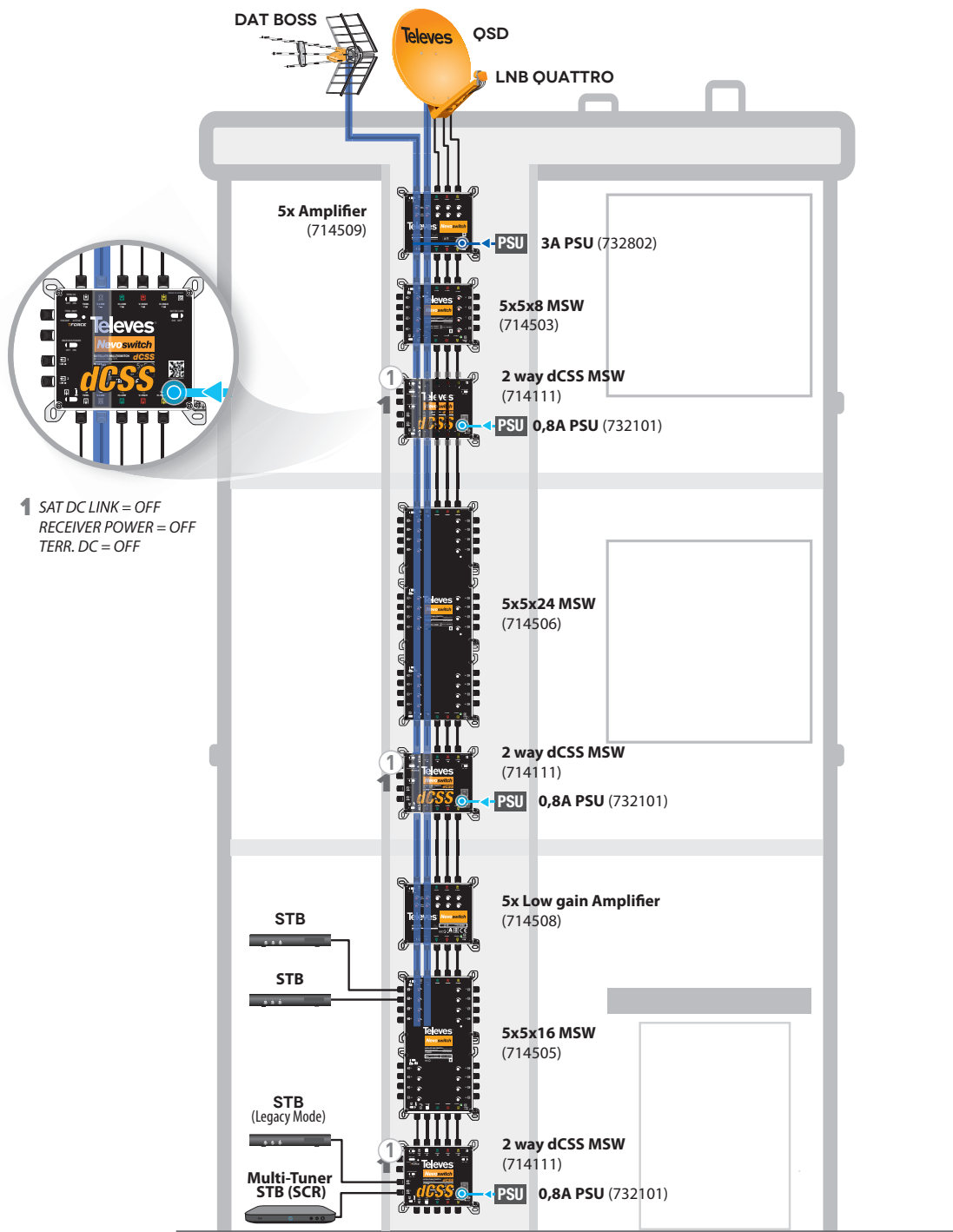
dCSS NEVOSWITCH

A MULTISWITCH HAS NEVER BEEN SO CLEVER

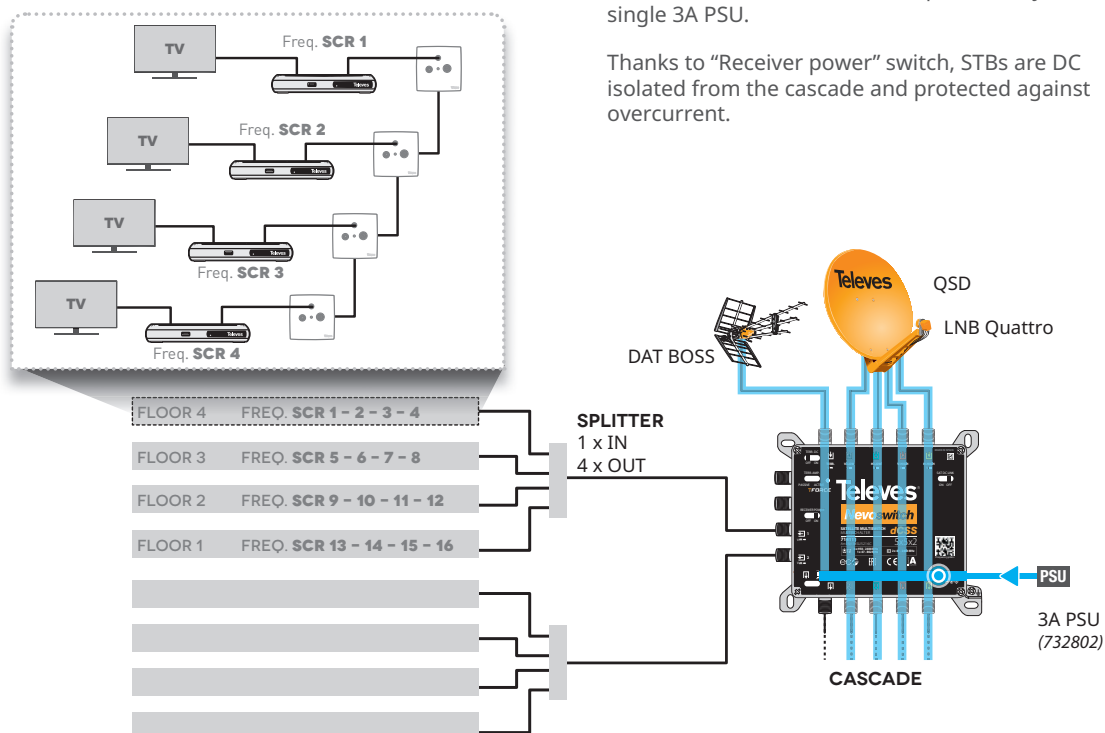
ADDITION TO EXISTING CASCADE SYSTEM

The 3A PSU powers the whole existing system (V-Low and Terrestrial).

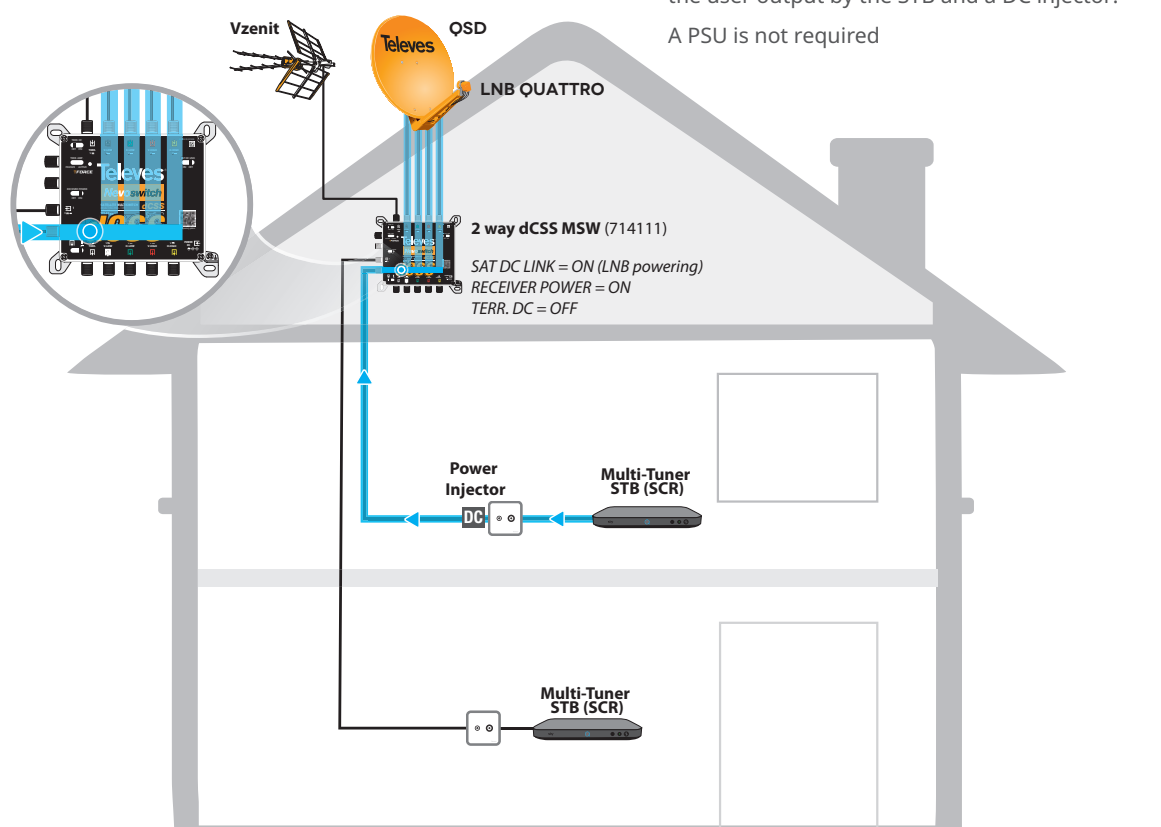
Each added dCSS multiswitch is powered by its own 0.8A PSU, without interfering with the cascade current.



FULL dCSS CASCADE SYSTEM.



A DOMESTIC dCSS APPLICATION



AVANT X: PROGRAMMABLE HEADEND AMPLIFIER

DIGITAL FILTERING AND PROCESSING

DVB-T2



■ UP TO 32 INDIVIDUALLY PROGRAMMABLE FILTERS

Single channel digital filtering.

■ DIGITAL PROCESSING OF CHANNELS

Output channels can be frequency shifted.

■ AUTOMATIC SIGNAL ADJUSTMENT

Output signal regulation in each filter.

■ AUTO-LTE FILTERING

Automatic detection of the LTE signal type to adapt its internal filters.

■ DVB-T & DVB-T2

Compatible with channels of both standards.

■ UHF/VHF DIGITAL FILTERS WITH HIGH SELECTIVITY 25dB rejection (@ 1MHz).

■ A NEW SIZE EVEN LIGHTER AND MORE COMPACT (225x120x55mm).

■ CHASSIS MADE OF ZAMAK Improved screening attenuation.

■ LTE READY WITH “SAW” FILTERS The best selectivity and stability.

A FULL PRODUCT RANGE ADAPTED TO YOUR REQUIREMENTS

REF. DESCRIPTION

AVANT X BASIC

| | | | |
|--------|------------------|--|--------------|
| 532101 | AvantX Basic | (FM-VHF/UHF-VHF/UHF-VHF/UHF-VHF/UHF) | TERR. |
| 532111 | AvantX Basic SAT | (FM-VHF/UHF-VHF/UHF-VHF/UHF-VHF/UHF-SAT) | TERR. & SAT. |

AVANT X PRO Auto-programming, VHF & UHF monitoring

| | | | |
|--------|----------------|--|--------------|
| 532121 | AvantX Pro | (FM-VHF/UHF-VHF/UHF-VHF/UHF-VHF/UHF) | TERR. |
| 532131 | AvantX Pro SAT | (FM-VHF/UHF-VHF/UHF-VHF/UHF-VHF/UHF-SAT) | TERR. & SAT. |

CHOOSE THE PROGRAMMING MODE YOU WISH



BACKWARDS COMPATIBLE

Via your current universal programmer or your PC.



ASUITE



A simple and intuitive application for Android and PC.
USB connection (OTG cable)



PDF Report generation *



AUTOMATIC PROGRAMMING

The amplifier will self scan its VHF/UHF inputs and will automatically allocate filters to the channels found*

AND ALSO:

- Affordable consumption.
- LED displays show both unit and signal status.
- High output power (up to 122dBuV).
- Mixed terrestrial inputs: VHF + UHF.
- Two power supply modes on the SAT input: local or remote.
- Antenna or mast amplifiers automatically powered through the inputs (12V).

GET ADDITIONAL FEATURES WITH PRO VERSION

- **Auto-programming:** the DVB-T/T2 channel detection (by level and quality) in VHF/UHF inputs allows to automatically allocate each mux in a filter.
- **Channel monitoring** with DVB-T/T2 parameters: identification, level, CNR, CBER (DVB-T) or PER (DVB-T2)*.
- Get an installation report in PDF using ASuite application.

* PRO Version

DIMOD: MULTI-STANDARD HD ENCODER / MODULATOR

GENERATE REAL HIGH DEFINITION DVB-T/C CHANNELS

The DiMod single encoder/modulator, with a domestic design, generates a **digital multiplex from one high definition audio/video source**. The digital multiplex can be also configured either as DVB-T (DTT channel) or as DVB-C to use in cable TV networks.



585401

It is configurable with a **smartphone, tablet or PC wirelessly** with an user friendly embedded web interface.

- Perfect synchronisation between audio and video.
- Real HD: original source not downscaled.
- Resolution up to 1080p (60Hz), the output follows input resolution.
- Output video encoding: MPEG-2 or MPEG-4 (H.264).
- Output modulation COFDM or QAM.
- High output level with no need for extra amplification.
- USB for playing video files and firmware update.
- Energy efficient due to its low power consumption.
- Monitorisation of the device and the signal through LEDs on the unit (input, output, temperature, WiFi...).
- Integrated input RF loop through.



Wall mounting is possible using an special support (Ref. 640301)

FOUR SATELLITE SINGLE FIBRE SYSTEM

A FULL FOUR SATELLITES IN A SET-TOP BOX

Distribution system of **four satellites and DTT** in a **single optical fiber using DWDM** (Dense Wavelength Division Multiplexing).

The output optical power allows a higher splitting ratio (**1:256**) than the state-of-the-art CWDM solutions and it is also compatible with video overlay of **GPON deployment**.



237901

4SAT TRANSMITTER (Tx)

It receives four different satellite signals from four optical LNBs and also a terrestrial RF signal, transmitting a single optical output with all the services.

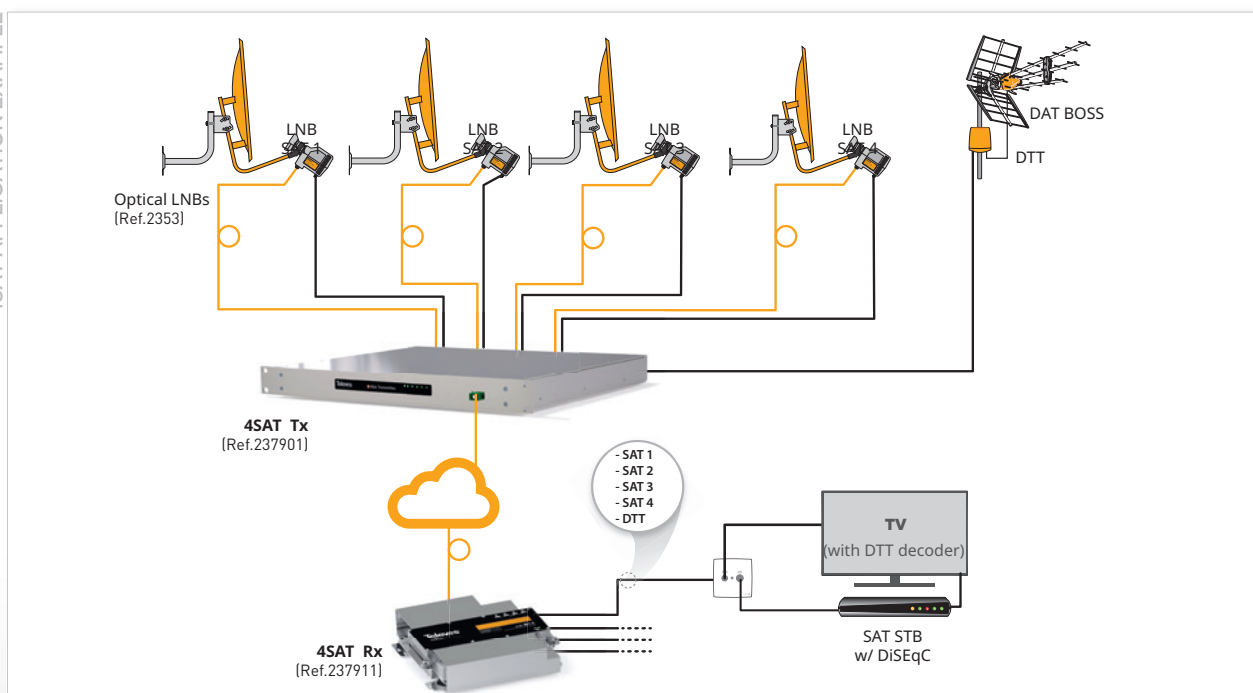
4SAT RECEIVER (Rx)

It receives a single optical input from the 4SAT Tx, and offers 4 RF user outputs with the four satellite and terrestrial services.



237911

4SAT APPLICATION EXAMPLE



SK2020PLUS COAXIAL CABLE

OUTSTANDING FEATURES & HIGH PERFORMANCE IN CASE OF FIRE

The **triple shielded SK2020plus cable** was specially designed to meet the most stringent requirements in terms of shielding and safety in case of fire, or release of hazardous substances during regular operation or product dismantling.

According to the European classification defined in the Construction Products Regulation (CPR), SK2020plus cable is a **B2ca-type cable** - one of the top cable categories - given its performance and fire resistance.

- Very low fire hazard: B2ca Euroclass, with outstanding levels of smoke emission (s1a), acidity (a1), and fall of inflamed particles (d1).
- Class A++: 130 dB typical screening efficiency, transfer impedance below 0.9 mΩ.
- Copper braid (98%) with 82% coverage.
- Triple shielding: equipped with a second Al/pet foil.
- LSFH outer sheath, highly resistant to fire and ultraviolet radiation.
- LTE Ready: immune to cell phone interference.



| Ref. | Logic Ref. | Packing |
|--------|----------------|---------|
| 413910 | SK2020PLUS | 100m |
| 413911 | SK2020/250PLUS | 250m |
| 413912 | SK2020PLUS-T | 500m |

All the Televes' coaxial cables are marked in 3 distinct areas in terms of CPR compliance: on the cable itself, on the reel, and on the box.



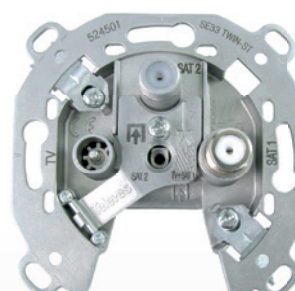
Televes supervises all the quality parameters of each wound meter of Trishield cable in its own premises.

2 SAT END OUTLET: CLASS A SCREENING

FM/TV-SAT1-SAT2

End outlet for **terrestrial and satellite signal (up to 2)** with two inputs (FM/TV/SAT1 and SAT2).

- The inner conductor has a fast and secure crimp. It is inserted and fixed by pressure, although with a fastening equivalent to a screw.
- Conical guide, "F" connector type, to introduce in a simple way the inner conductor.
- Tilting and self-opening clamp with full opening. Its surface is serrated with three lines for a perfect fixation to the braid.
- Chassis with rounded edges to avoid cuts.
- Screening Class A.



524501

H30FLEX: HANDHELD METER CUSTOMIZABLE MULTI STANDARD

A **pocket size** meter which allows you to customize upgrade choice with downloadable **software under licence**.

Choose the standards you're actually going to measure and only pay for the features you need.

H30FLEX The standard you need in a single equipment.

Great measurements performance, including a digital real-time spectrum analyzer, constellation and echo diagrams, datalogs...



AFFORDABLE, HIGH QUALITY MEASUREMENT EQUIPMENT:

- Multi Standard, ready to take measurements on the DVB-S/S2 satellite band and DVB-T/T2 and DVB-C terrestrial band channels.
- Accuracy and speed: Real-time digital processing.
- Fast & Automatic channel auto-scan with parameters autodetection (system scan).
- High contrast screen for bright sunlight.

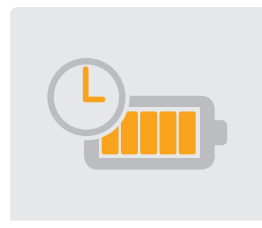
ALL THE FUNCTIONS YOU NEED IN YOUR HAND



RUGGED AND LIGHT-WEIGHT
ABSOLUTE RELIABILITY
AND PROTECTION IN AN EASY
TO CARRY FORMAT



ERGONOMIC HANDHELD DESIGN
USER-FRIENDLY INTERFACE



LONG BATTERY RUNTIME
WITH POWER-SAVING MODES



MADE IN TELEVES
YOUR QUALITY WARRANTY

| REF. | DESCRIPTION |
|--------|---|
| 593301 | H30FLEX with DVB-S/S2 and DVB-T |
| 593302 | H30FLEX with DVB-S/S2 and DVB-T/T2 |
| 593303 | H30FLEX with DVB-S/S2 and DVB-C |
| 593304 | H30FLEX with DVB-S/S2, DVB-T/T2 and DVB-C |

| OPTIONS |
|-------------------|
| 593231 DVB-T |
| 593232 DVB-T/T2 |
| 593233 DVB-C |
| 593234 dCSS (SCR) |



MOSAIQ6

A PORTABLE METER FOR PROFESSIONAL USERS

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.

ULTRA-FAST SPECTRUM ANALYSER

Due to its rapidity, accuracy, and a full range of features, it is the most obvious result of our real time digital processing engineering.

ERGONOMICS

With a robust design and satisfactory dimensions (220 x 260 x 65mm), this meter offers an optimized shape to maximize the effectiveness of movement.

Every menu and button is accessible with one single hand.

ALWAYS READY

A new battery system allows to change the meter's battery during the field work.

Don't worry about the load, two batteries give a sufficient operating range for a full work day.

EFFICIENT MANAGEMENT

The MOSAIQ6 cloud repository is available to keep your meter always updated.

It also offers the comprehensive management of your meter (or meters), like downloading measurements, managing the channel plans, configuration, etc.

Its high performance and high accuracy makes MOSAIQ6 the perfect tool for professional installers.

MORE INFORMATION:

STANDARDS:

Radio: FM

Terrestrial: DVB-T & DVB-H, DVB-T2 & DVB-T2 Lite, ISDB-T/Tb

Satellite: DVB-S & DVB-S2 (multi-stream), 8PSK & DSS

Cable: DVB-C, QAM (Annex A, B, C)

FIBER-OPTIC INTERFACE (also selective version)

ADVANCED FEATURES:

RF measurements, professional spectrum analyser, quality parameters, link margin, constellation, echoes, LTE interference detection, scan.

SELECTABLE OPTIONS:

GPS Drive Test, Wi-Fi 5GHz, measuring of analogue channels, DAB / DAB+



Bound by technology

Televes Corporation is at the heart of a group of technological companies representing global leadership in design and development of equipment for all types of telecom infrastructures in cities, buildings and homes.

Televes Corporation groups more than 20 companies all geared toward a common objective: design, develop and manufacture in Spain the best equipment and solutions for the telecom infrastructure industry worldwide.

Televes Corporation reaches over 100 countries directly through its 11 international subsidiaries (España, Portugal, France, United Kingdom, United Arab Emirates, Italia, United States, Deutschland, China, Polska, Russia, Scandinavia) and through an extensive network of professional distributors.