Televes®

INDEX

dCSS SOLUTIONS

dCSS NEVOSWITCH

A MULTISWITCH HAS NEVER BEEN SO CLEVER

A new and innovative multiswitch implementing dCSS technology and compatible with Sky UK's SkyQ.

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.

DC**FLEX** 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 terrestial 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.

■ **INCREASE 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*.

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.

* For this to happen the multiswitch must be isolated from the cascade and the terrestrial must be set to passive

② **DCFLEX**

④ **TFORCE**

③ **DCFLEX**

① **DCFLEX**

⑤ *Versatile*

↗ 714101

TFORCE TECHNOLOGY

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
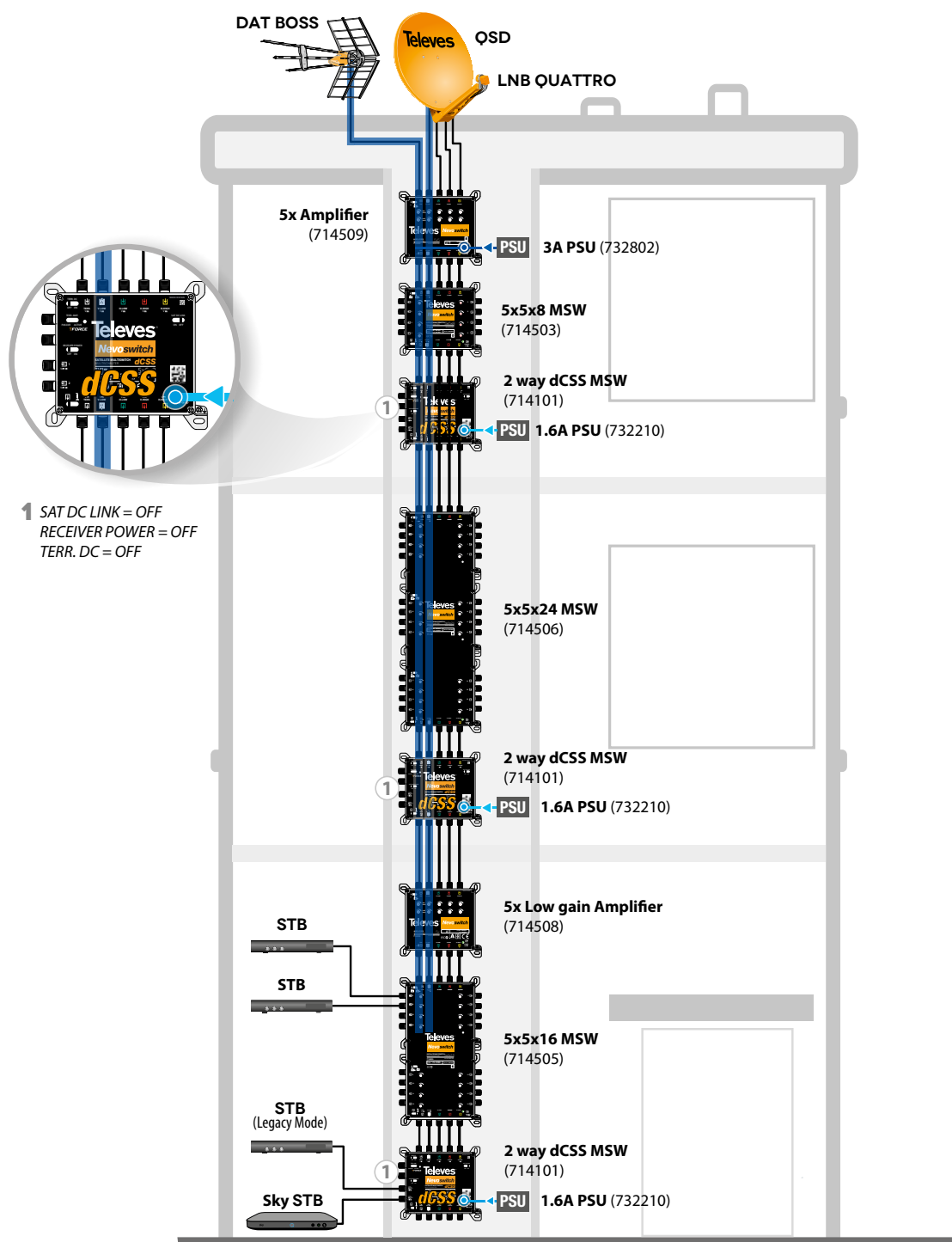
dCSS SOLUTIONS

dCSS APPLICATION EXAMPLES

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 1.6A PSU, without interfering with the cascade current.

DAT BOSS

QSD

LNB QUATTRO

5x Amplifier (714509)

PSU — **3A PSU** (732802)

5x5x8 MSW (714503)

2 way dCSS MSW (714101)

PSU — **1.6A PSU** (732210)

1 *SAT DC LINK = OFF*
RECEIVER POWER = OFF
TERR. DC = OFF

5x5x24 MSW (714506)

2 way dCSS MSW (714101)

PSU — **1.6A PSU** (732210)

5x Low gain Amplifier (714508)

STB

STB

5x5x16 MSW (714505)

STB (Legacy Mode)

Sky STB

2 way dCSS MSW (714101)

PSU — **1.6A PSU** (732210)

DAT BOSS

QSD

LNB QUATTRO

①

2 way dCSS MSW
(714101)

PSU **3A PSU** (732802)

②

2 way dCSS MSW
(714101)

1 *SAT DC LINK = ON*
RECEIVER POWER = OFF
TERR. DC = ON

2 *SAT DC LINK = ON*
RECEIVER POWER = OFF
TERR. DC = OFF

②

2 way dCSS MSW
(714101)

②

2 way dCSS MSW
(714101)

②

②

2 way dCSS MSW
(714101)

STB
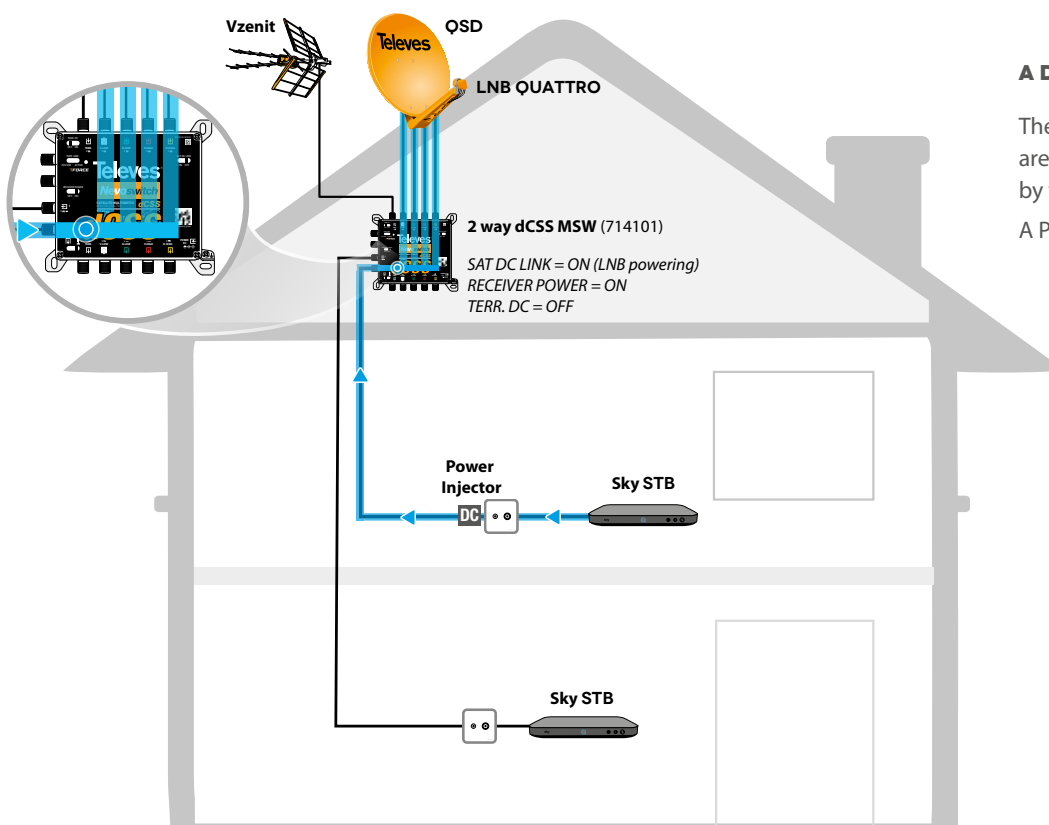(Legacy Mode)

2 way dCSS MSW
(714101)

Sky STB

FULL dCSS CASCADE SYSTEM.

The cascade of multiswitches is powered by a single 3A PSU.

Thanks to "Receiver power" switch, STBs are DC isolated from the cascade and protected against overcurrent.

The dCSS multiswitch supports Sky STBs and also standard STBs (legacy mode).

Vzenit

QSD

LNB QUATTRO

2 way dCSS MSW (714101)

SAT DC LINK = ON (LNB powering)
RECEIVER POWER = ON
TERR. DC = OFF

Power Injector

Sky STB

DC

Sky STB

A DOMESTIC dCSS APPLICATION.

The LNB and dCSS multiswitch are powered from the user output by the STB and a DC injector.

A PSU is not required

FOUR SATELLITE SINGLE FIBRE SYSTEM

ADD SATELLITES TO AN EXISTING FIBRE SYSTEM

Distribution system of four satellites and DTT in a single optical fibre using DWDM (Dense Wavelength Division Multiplexing). The high output optical power allows a greater splitting ratio (1:256) than the state-of-the-art CWDM solutions and it is also compatible with video overlay of GPON deployment.
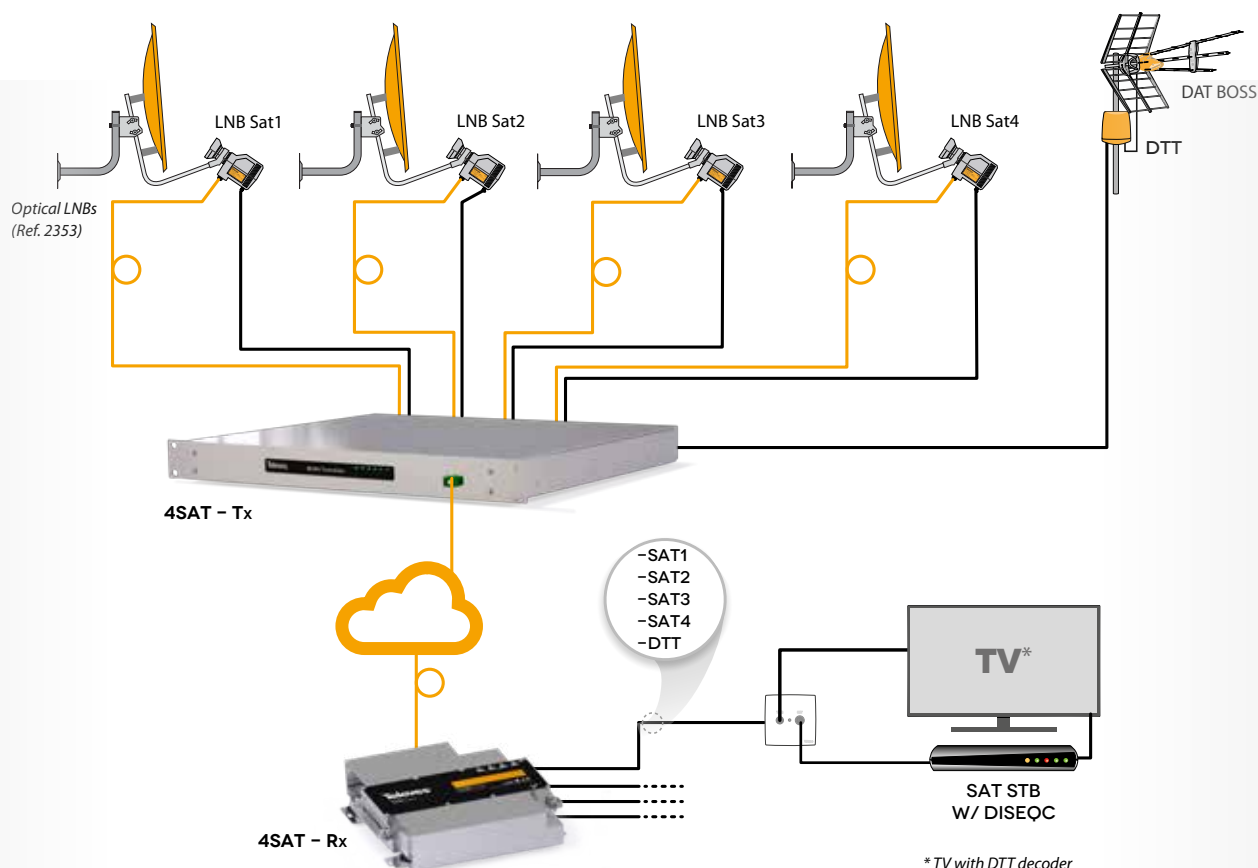

▲ 237901

▲ 237911

4SAT TRANSMITTER (Tx)

It receives four different satellite signals from four optical LNBs and also a terrestrial RF signal, combining everything in a single optical output containing the four satellites and terrestrial feeds.

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.

LNB Sat1   LNB Sat2   LNB Sat3   LNB Sat4   DAT BOSS

DTT

Optical LNBs
(Ref. 2353)

4SAT – Tx

−SAT1
−SAT2
−SAT3
−SAT4
−DTT

TV*

4SAT – Rx

SAT STB
W/ DISEQC

* TV with DTT decoder

FTTH TRANSMITTER AND RECEIVER

TRANSMIT SATELLITE AND DTT USING WAVELENGTH DIVISION MULTIPLEXING TECHNOLOGY

Distribution of the complete DTT lineup and a whole satellite in a single optical fibre. The system is compatible with GPON deployments and in the reception side, it permits to capitalize the system by making it easy to use legacy or dCSS multiswitches.

The system is compatible with GPON deployments and on the reception side, it allows you to capitalize the system on using legacy or dCSS multiswitches.

Using a different wavelength for DTT and satellite reduces the distortions that could particularly affect DTT in densily occupied UHF spectrums.


237301

237311

FTTH TRANSMITTER (Tx)

The device converts the DTT feed into optical satellite signal (1310nm) as input. The device converts DTT into optical (1550nm transmitter), and is multiplexed (WDM) with the satellite input signal (1310nm). The output is an optical signal in a single fibre, with satellite and terrestrial in the 2nd and 3rd transmission window.

FTTH RECEIVER (Rx)

It receives a satellite and terrestrial optical signal (1310 / 1550nm) and it is demultiplexed (WDM). The terrestrial signal (1550nm) is converted to RF (F connector output) and the satellite signal is available in an optical SC/APC output (1310nm).
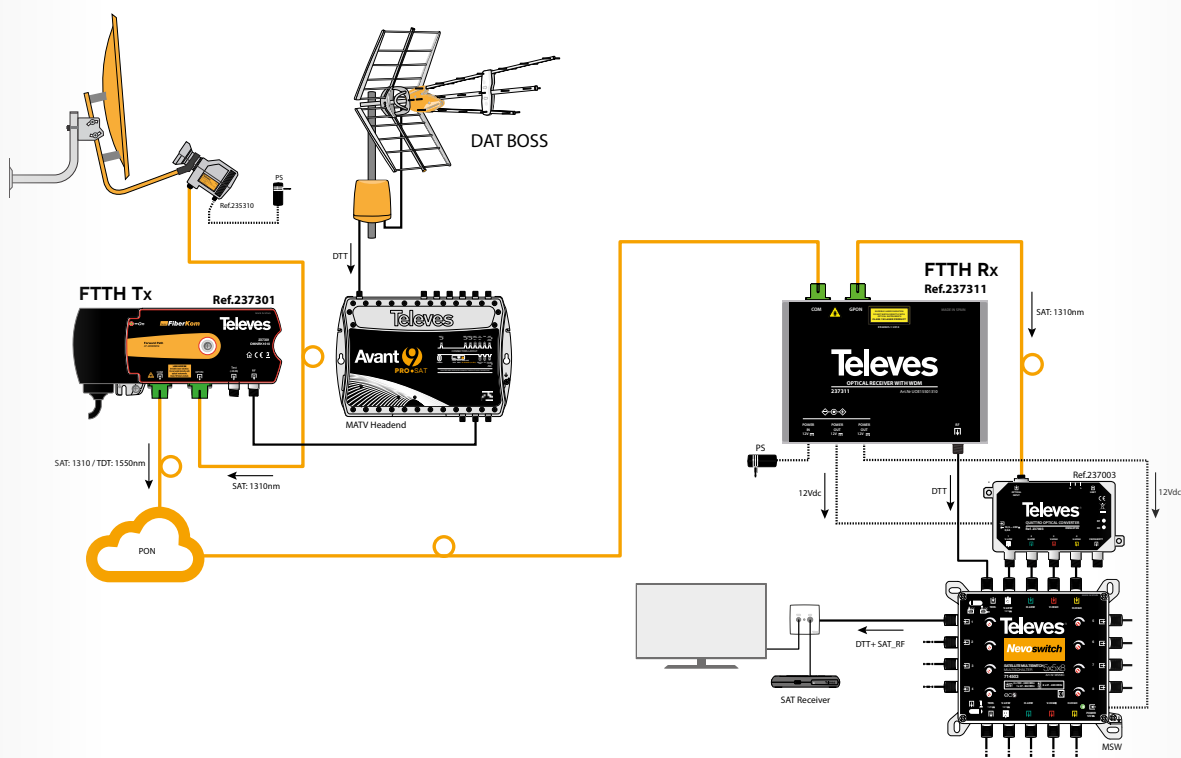
FIBRE OPTICS

FUSION SPLICERS

HANDHELD SPLICER KIT

A splice in 7 seconds. Easy to carry thanks to its small weight and dimensions. Its **interface is very user friendly and intuitive**, all actions can be performed with just 3 buttons.

It **automatically detects problems** before the splice is done as it **measures the angles** in which the fibre has been cut (maybe pointing at a fault with the cleaver) and **faults** with the fibre (usually dust).

It will also **make sure the splice has been correctly done** by checking the spliced fibre **by pulling and measuring the optical losses**.

- ☑ Alignment of the fibre for cladding
- ☑ Start the splicing process automatically once the cover is closed
- ☑ Calibration by insertion of one fibre
- ☑ Automatically clean the electrodes
- ☑ Saving a log with the information of the splice that can be afterwards exported to a different format
- ☑ Up to 60 splices/protection sleeve heating from a single full battery charge and possibility of re-charging battery whilst using the splicer

▲ 232130

PROFESSIONAL SPLICER KIT

A perfect splice in 8 seconds. It incorporates **SIX alignment motors** to work in different axis during the fusion.

Its transport case has made with high durability ABS, also it can be used as **a work surface**. The protection bumper made in high quality and density rubber provides **high resistance to impacts**. Definitely designed for **harsh environments** like strong winds, waterproof and adverse environmental conditions. Furthermore, it prevents dust from the splicer area guaranteeing a **high-quality process**.

It **automatically detects problems** before the splice is done as it **measures the angles** in which fibre has been cut (maybe pointing at a fault with the cleaver) and **faults** with the fibre (usually dust).

It will also **make sure the splice has been correctly done** by checking the spliced fibre by **pulling** and **measuring optical losses**.

- ☑ Core alignment system
- ☑ Starts the splicing process automatically once the cover is closed
- ☑ Calibration automatically adjusted due to altitude and pressure changes
- ☑ Calibration according to fibre type
- ☑ Close the cover and the splicing process starts automatically
- ☑ Splice data and images can be exported to a Datalog
- ☑ Up to 250 splices/protection sleeve heating with a full load battery. Keep working in charge mode.
- ☑ Each one of the high precision engines have a stepper condition with a permanent magnet and a reduction ratio box to provide maximum precision.
- ☑ 3.7" LCD screen (640x480) with automatic picture rotation
- ☑ Automatically activated ventilation by temperature sensor.
- ☑ Device automatic check via user menu.
- ☑ Configurable ECO mode (standby and automatic shutdown).

▲ 232103

MEASURING EQUIPMENT

Televes

NEW MEASUREMENT EQUIPMENT

CUSTOMIZABLE MULTI STANDARD HANDHELD METER

H30FLEX

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...

A00399

AFFORDABLE, HIGH QUALITY MEASUREMENT EQUIPMENT:

- ☑ Multi Stardard, 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

FIRST IN THE WORLD WITH DIGITAL PROCESSING | MPEG

CONSTELLATION DISPLAY | SPECTRUM ANALYZER

| 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)

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

ERGONOMIC HANDHELD DESIGN
USER-FRIENDLY INTERFACE
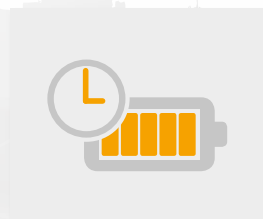
LONG BATTERY RUNTIME
WITH POWER-SAVING MODES

MADE IN TELEVES
YOUR QUALITY WARRANTY

PROGRAMMABLE HEADEND AMPLIFIER

BEYOND YOUR EXPECTATIONS

Avant 9

- ☑ **A new size lighter and more compact** (273 x 203 x 57 mm)
- ☑ **UHF filters with more selectivity**: 30dB rejection to adjacent channel
- ☑ **Save energy**: Up to 25% less power consumption than previous models
- ☑ **Chassis made of ZAMAK**: Improved screening attenuation

▲ 5320xx

### CHOOSE THE PROGRAMMING MODE YOU WISH

BACKWARDS COMPATIBLE AND STILL PROGRAMMABLE VIA YOUR CURRENT UNIVERSAL PROGRAMMER OR YOUR PC

A Suite

PROGRAMMABLE VIA AN ANDROID APP FOR SMARTPHONES AND TABLETS
Use your mobile phone as a working tool to program your Avant

AUTO PROGRAMMING
With the new Autoscan functionality the amplifier will automatically scan its UHF inputs and allocate the muxes found to filters*

PDF Report generation *
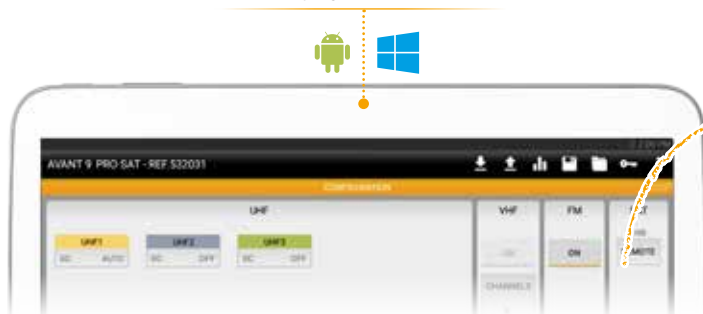
A FULL PRODUCT RANGE ADAPTED TO YOUR REQUIREMENTS

REF.	DESCRIPTION	
AVANT 9 BASIC	**2xUHF**	
532001	Avant9 Basic (FM-VHF-MATV-UHF-UHF)	TERR.
532011	Avant9 Basic SAT (FM-VHF-MATV-UHF-UHF-FI)	TERR. & SAT.
AVANT 9 PRO	**3xUHF, auto-programming, VHF & UHF monitoring**	
532021	Avant9 Pro (FM-VHF-MATV-UHF-UHF-UHF)	TERR.
532031	Avant9 Pro SAT (FM-VHF-MATV-UHF-UHF-UHF-FI)	TERR. & SAT.

MORE ABOUT
THE AUTO-PROGRAMMING FUNCTION

A00398

AND ALSO:

- ☑ Up to 10 programmable filters from 1 to 7 channels
- ☑ Output signal automatic adjustment
- ☑ LTE Ready
- ☑ High output power
- ☑ Led displays show both unit and signal status
- ☑ Two power supply modes on the SAT input: local or remote
- ☑ Antenna or masthead amplifiers automatically powered through the inputs (12V)

* (PRO VERSION)

BE READY
FOR THE UPCOMING
700MHz CLEARANCE

LTE 700 READY

The path initiated with the deployment of the first Digital Dividend will take a step further with the development of the 700MHz clearance a process which will establish the technical conditions for the allocation of the 700 MHz band (channels 48 - 60) in the EU to continue increasing the advanced mobile phone services and mobile Internet.

Televes has started developing a complete range of products specifically designed to reject the LTE interference over DTT services, now up to channel 48. All these products will carry Televes' LTE700 Ready stamp.

The map included here shows when the different areas of the UK will see the change happen. The programme is currently scheduled to finish in April 2020, subject to review in 2017.
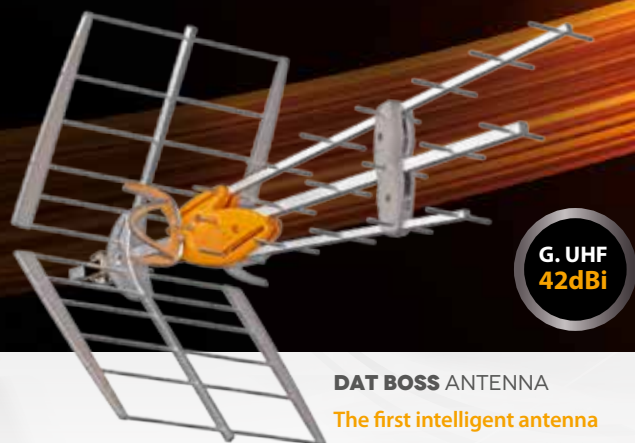
- 🟣 Q3/Q4 2017
- 🟢 Q1/Q2 2018
- 🔴 Q3/Q4 2018
- 🟠 Q1/Q2 2019
- 🔵 Q3/Q4 2019
- 🟡 Q3/Q4 2020

Map labels:
- BRESSAY Q3 2017
- KEELYLAND HILL Q3 2017
- RUMSTER FOREST Q3 2017
- EITSHAL Q3 2017
- ROSEMARKIE Q3 2017
- KNOCKMORE Q3 2017
- DURRIS Q3 2018
- TOROSAY Q4 2017
- ANGUS Q4 2019
- BLACK HILL Q3 2018
- CRAIGKELLY Q4 2018
- DARVEL Q3 2018
- SELKIRK Q3 2019
- CHATTON Q4 2019
- LIMAVADY Q3 2019
- PONTOP PIKE Q4 2019
- CALDBECK Q3 2019
- DIVIS Q3 2019
- BROUGHER MOUNTAIN Q3 2019
- BILSDALE Q4 2019
- ISLE OF MAN Q2 2020
- WINTER HILL Q2 2020
- EMLEY MOOR Q1 2020
- BELMONT Q1 2020
- LLANDDONA Q4 2018
- MOEL Y PARC Q1 2019
- WALTHAM Q1 2020
- THE WREKIN Q1 2018
- BLAENPLWYF Q4 2018
- TACOLNESTON Q2 2018
- SUTTON COLDFIELD Q1 2018
- SANDY HEATH Q2 2018
- RIDGE HILL Q1 2018
- PRESELY Q4 2018
- CARMEL Q3 2019
- SUDBURY Q3 2018
- WENVOE Q2 2019
- OXFORD Q2 2018
- CRYSTAL PALACE Q1 2018
- BLUEBELL HILL Q3 2018
- HANNINGTON Q2 2018
- MIDHURST Q4 2019
- DOVER Q4 2019
- HUNTSHAW CROSS Q2 2019
- MENDIP Q2 2019
- ROWRIDGE Q2 2018
- HEATHFIELD Q3 2018
- STOCKLAND HILL Q1 2019
- CARADON HILL Q2 2019
- BEACON HILL Q1 2019
- REDRUTH Q2 2019
- FREMONT POINT Q1 2019

DAT BOSS

BE READY FOR THE UPCOMING 700MHz CLEARANCE

T FORCE TECHNOLOGY

G. UHF 42dBi

IF THE DAT BOSS CAN'T RECEIVE IT, NOTHING CAN!

DAT BOSS ANTENNA
The first intelligent antenna

DAT BOSS MIX ANTENNA
A combined antenna for UHF and Band III reception

G. UHF 41dBi

G. BIII 36,5dBi

DATBOSS SERIES WITH TFORCE TECHNOLOGY: 700MHz FILTERING

The BOSS Tech system automatically **controls the level of the received signal** (either very high or very low) in order to always ensure an optimal output level. Its new design with TForce technology, makes this intelligent device even more versatile.

- ■ **HIGH DYNAMIC RANGE**:
  it allows you to receive high-quality TV in a variety of critical situations, from areas where signals are very weak to installations with high reception levels.

- ■ **DTT COVERAGE ENHANCEMENT**:
  up to 27% higher than older models.

- ■ **A MORE STABLE RECEPTION**:
  it supports signal variations or fading with no effect on the TV installation.

- ■ **OPTIMAL C/N**:
  thanks to a noise figure by 1.2dB that respects the received signal quality.

- ■ **VERY HIGH GAIN**:
  TForce increases the gain of the antenna in 13dB, in UHF and III Band.
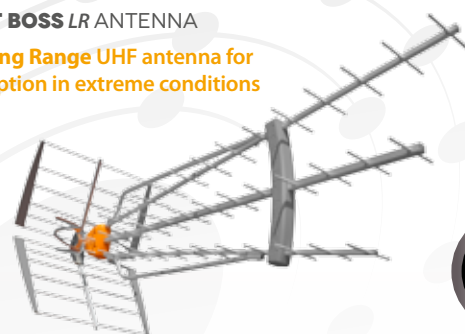
DAT BOSS *LR* ANTENNA
A Long Range UHF antenna for reception in extreme conditions
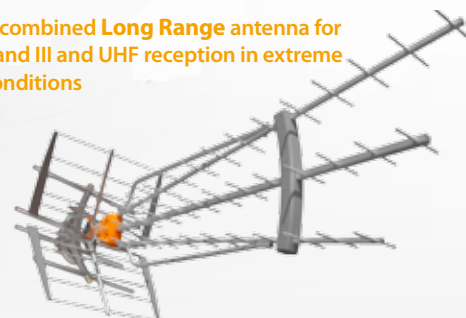
G. UHF 44dBi

DAT BOSS *MIX LR* ANTENNA
A combined Long Range antenna for Band III and UHF reception in extreme conditions

G. UHF 43dBi

G. BIII 36,5dBi

V ZENIT ANTENNAS 700MHz FILTERING

THE EXCELLENT COMPROMISE BETWEEN SIZE AND PERFORMANCE

VZenit antenna for DTT reception, incorporates a filter with **an optimal rejection in bands above channel 48**, maintaining its flat response in the pass band (channels 21-48). Mechanically, it stands out for its robustness and the quality of their metallic structure that guarantees and exceptional performance against vibration and adverse weather conditions.

☑ Made of aluminium of high quality to guarantee a long life

☑ A quick and secure assembly system for the reflectors

☑ 10 elements dihedral angled reflector

☑ Integrated balun in the fully shielded junction box that prevents the impulse noise of DTT signals

149221/22

1492321
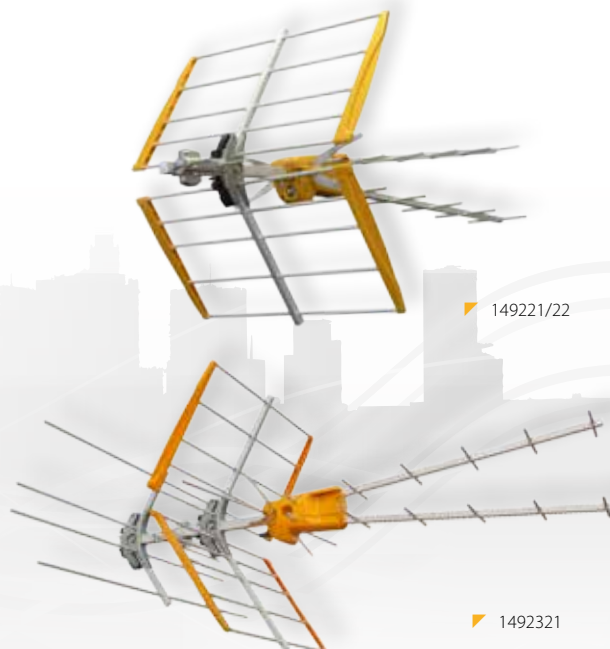
LTE 700 FILTER

A high rejection (HR) filter which pass-band ends at the channel 48 (694MHz).

☑ high isolation between ports

☑ Minimum insertion losses

☑ Stability of performance through time and weather conditions

With an *"EasyF"* connection, this filter offers the most reliable and quick connection.

☑ Reduces the installation time by 50%

☑ Built-in system: no extra connectors required

LTE 700 READY

▲ 405202

Televes®

NEW PRODUCT **2017**