

# MOSAIQ<sub>6</sub>

HIGH-PERFORMANCE, HIGH-ACCURACY PORTABLE FIELD STRENGTH METER  
FOR PROFESSIONAL USERS



**THE POWER OF USER EXPERIENCE**

**Televes®**

# THE POWER OF USER EXPERIENCE

MOSAIQ6 IS A NEW HIGH-PERFORMANCE PORTABLE METER EQUIPPED WITH ADVANCED FUNCTIONS AND A HIGH MEASURING ACCURACY.

All of it in the most automated and intuitive way available in the market, thanks to the tactile interface and the gesture commands.

MOSAIQ6 provides technicians with a powerful tool, capable of measuring, analysing, and diagnosing return channel, radio, DAB and DAB+, television, optical fibre, Wi-Fi or IPTV signals, no matter how complex the scenario.

MOSAIQ6 is equipped with an ultra-fast high-resolution spectrum analyser, which, together with the echo-analysis functionalities, allows the display of any significant aspect of the signal.



## AN ACTUAL TOUCH SCREEN

This new interface was designed and programmed to take full advantage of the touch gestures (tap, double-tap, long press, swipe, drag, pinch or spread). The only means to work as easily with a very high-performance meter.

# HIGH-PERFORMANCE, HIGH-ACCURACY PORTABLE FIELD STRENGTH METER FOR PROFESSIONAL USERS



**TAP**  
(TAP):  
Perform a quick tap  
with one finger



**DOUBLE-TAP**  
(DOUBLE TAP):  
Perform two quick  
consecutive  
taps with one finger



**DRAG**  
(DRAG):  
Drag  
(long slide) with a  
single finger



**SWIPE**  
(SWIPE):  
Short slide  
with a single  
finger



**PINCH**  
(PINCH/SPREAD):  
Pinch/spread  
two fingers  
on the screen



**LONG PRESS  
+ DRAG**  
(LONG PRESS +  
DRAG):  
Hold and drag from  
one side to another

# CUSTOM DISPLAY

## MOSAIC MODE DISPLAY



USER  
CONFIGURABLE  
WIDGETS

TV\*

Displays the contents of  
the channel being  
demodulated.

SERVICES\*

Displays the transponder  
or MUX services' occupancy  
in graphical format, as a  
pie chart.

MEASURE-  
MENTS\*

Displays measurements'  
information. Furthermore,  
the letter "i" is  
superimposed in the title,  
to display information  
about the parameters.

SPECTRUM\*

Displays the signal's spectrum (20  
MHz for terrestrial, 50 MHz for  
satellite) with automatic  
parameters (attenuation, RBW,  
etc.)

CONSTELLA-  
TION  
\*\*\*

Displays signal's  
constellation.

ECHOES\*\*

Displays the echo  
response for the  
demodulated channel

MER/  
CARRIER\*\*

Displays MER as a  
function of frequency.

ERROR  
PACKETS\*

Measures the number of  
error packets and displays  
temporal information about  
the periods when errors  
appeared.

### 6 WIDGETS ON 1 SCREEN:

The equipment allows the configuration of the measurement screens to display.

This not only makes all the information available to fully characterize a TV channel, but allows the user to decide which information is most relevant.

Modifying the widgets displayed on the screen is as easy as clicking on the orange arrow on the top right side and select the desired functionality on the drop-down menu.

Accessing the details is as easy as double-clicking on each image.

\* All standards \*\* Only DVB-T and DVB-T2 \*\*\*All standards except for DAB and DAB+



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### SIMULTANEOUS DISPLAY OF ALL CHANNELS:



### 4 WIDGETS ON 1 SCREEN:

Perfect for channel's spectrum representation at the bottom section.

The configuration of spectrum functionalities, echoes and MER/carrier can be performed in this area.

Besides TV representation, this display mode is used in the **radio analyser**, both for FM and DAB/DAB+ signals.

All channels in the spectrum can be measured on the same screen (frequency, power, C/N) with additional parameters such as TILT or attenuation. Furthermore, the *Learning Plan* function can be accessed for automatic channel generation.



## ADVANCED FUNCTIONALITY

### ULTRA-FAST SPECTRUM ANALYSER

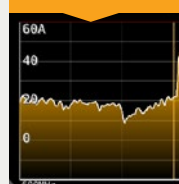
Professional spectrum analyser with ultra-fast digital processing (sweep time < 10 ms) and high dynamic range (> 50 dB).

Equipped with advanced functions for the detection and analysis of signals in the 5 MHz to 3,300 MHz (waterfall, event triggers, markers, user configurable RBW and VBW, etc.).

### MOSAIQ6 MAKES IT POSSIBLE TO CAPTURE INTERFERING SIGNALS, AS FAST AS THEY MAY BE



### WATERFALL

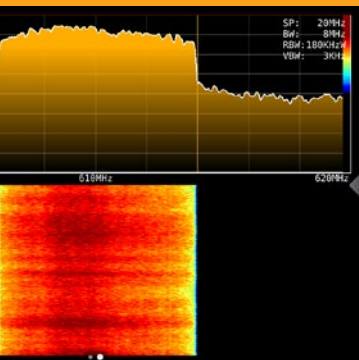


Signal graphic displays signal levels turning on the time axis. Short signal interference can be observed without the need for a spectrum.

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Y

## FALL



display in both time and frequency. (see figure). The perfect tool for interference or fading analysis, which would be difficult by only resorting to the

## MULTISTANDARD



These are definitely two essential tools to ensure the correct reception of a signal. The constellation diagram is essential to help detect the presence of noise, phase jitter, interference and other potential problems that could impact the signal quality by reducing MER. The echo graphic display allows echo detection in DVB-T/T2 terrestrial signal reception, which could severely degrade BER measurement.

## CONSTELLATION AND ECHOES

A single meter is capable of analysing and measuring analogue and digital signals, both on the terrestrial and the satellite bands (**FM, IPTV, optical fibre, Wi-Fi, DVB-T/T2, DVB-C Annex A, B, and C, and DVB-S/S2/S2X**). Furthermore, the **DAB and DAB+** analysis can be included as an option.



## ADVANCED FUNCTIONALITY

### LTE CHECK



It analyses the impact of the LTE signal on the DTT channels, and detects whether the use of filters is required. Furthermore, it allows spectrum simulation upon the introduction of the LTE filter recommended by the meter itself. A list of filters is displayed for the user to choose the one that best fits his/her requirements.

### OPTICAL MEASUREMENTS



Once the optical fibre input enabled, and thanks to the optical receiver (whether selective or not), optical attenuation measuring can proceed for three wavelengths (1310 nm, 1490 nm, and 1550nm) and their powers, as does RFoG installation analysis.

### IPTV

Allows the demodulation and analysis of IPTV signals (both Unicast and Multicast), display but also allows the analysis of the signal by displaying the total bit rate and the total bandwidth information for each service. It also displays the bit rate for both audio and video. In addition, specific protocols can be analysed, such as *UDP Payload Bitrate*, *IP payload bitrate*, and *Pack*.

### GPS OPTION FOR COVERAGE ANALYSIS



Ref. 596201 (optional). With the GPS option, measurements can be displayed on a map at the very same spot where they were actually taken, thus facilitating coverage analysis. Accessing the details is as easy as double-clicking on each image.



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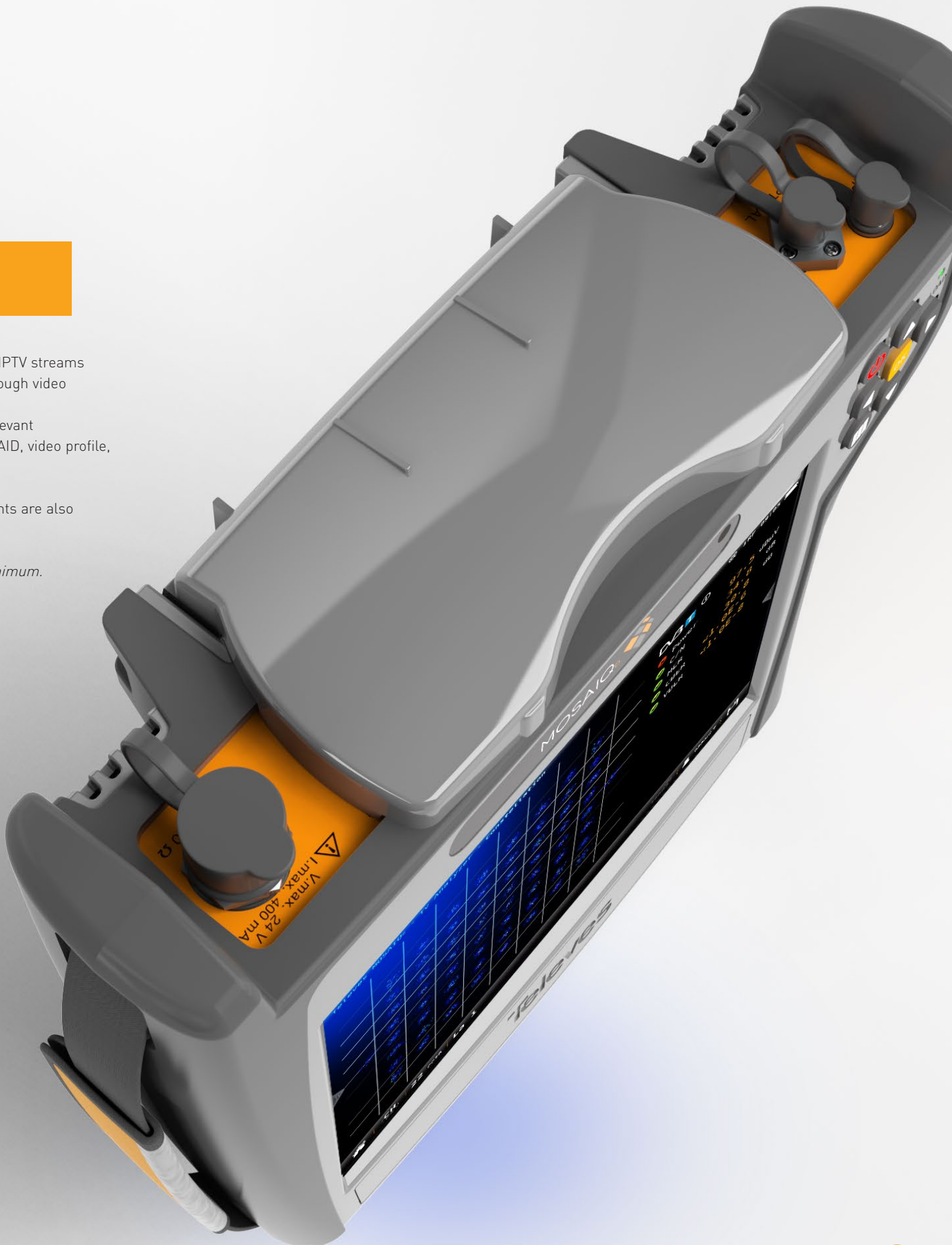


d analysis of IPTV streams  
not only through video

e and the relevant  
SID, VPID, AID, video profile,

measurements are also

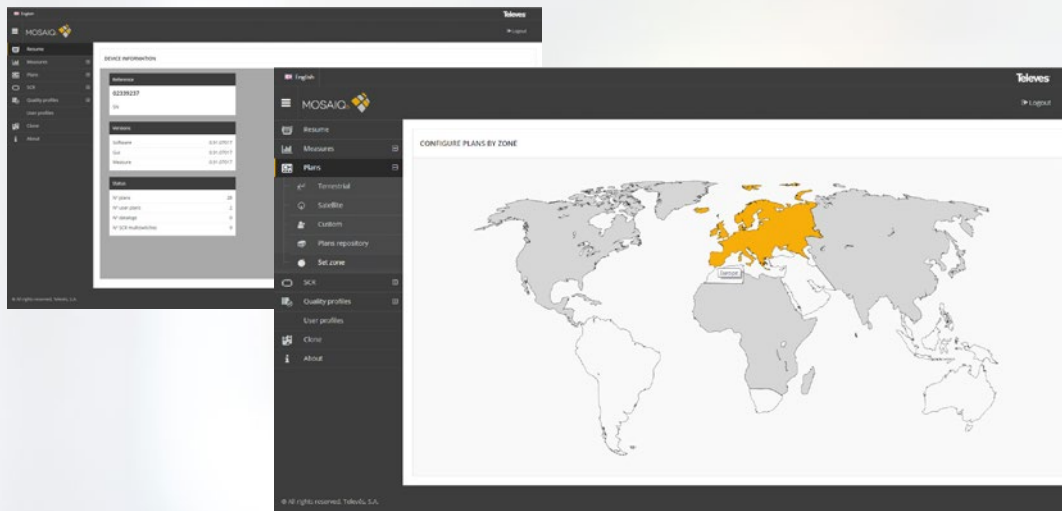
,  
et arrival minimum.



# EFFICIENT MANAGEMENT

## WEB INTERFACE, BOTH LOCALLY AND REMOTELY ACCESSIBLE:

This web tool allows the management of MOSAIQ6 using a PC: managing the performed measurements, modifying areas and channel plans, editing quality profiles, changing SCR lists, and executing clones.



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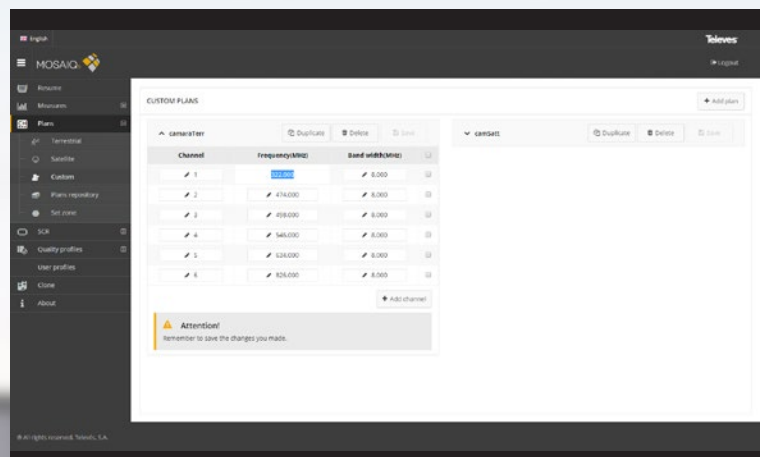
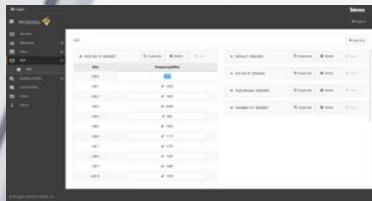
**REMOTE CONTROL:**

By using VNC, the free remote desktop software program, the meter's tactile functionalities are easily accessible through the PC mouse. The MOSAIQ6 measurement parameters can be remotely displayed and managed, as easily as on-site. No missing details for the measured installation! The connection is established using the IP address on any of the communication interfaces (Ethernet or Wi-Fi); it also allows access to the web interface.

Through the meter's internal website, the user can have a quick access to the remote control by using the menu on the left side.

**CLOUD:**

This tool allows equipment to be registered and quickly updated.



## AUTONOMY

### LONG-LASTING BATTERY:

The high-quality Li-Ion battery provides an average range up to 4 hours.

### ALWAYS READY:

For the meter to run out of battery is no longer a problem; it will always be ready thanks to the **field replaceable battery**.

Furthermore, with just two batteries the meter will have enough autonomy during long working hours.



### STAND-ALONE CHARGING:

Thanks to its stand-alone charger, the battery can be charged without being connected to the meter. Work can thus proceed anywhere while the backup battery is charging.

## CONVENIENCE

### ERGONOMY:

With a sleek design and adequate dimensions (220 mm x 260 mm x 65mm), the meter provides an optimum way to maximize movement efficiency by allowing menu and button access with a single hand.

### EASY TO CARRY:

Thanks to its unique carrying bag, the meter can be easily carried around. It is equipped with a strap that can be adapted to multiple lengths, and several internal compartments to store a replaceable battery, for example.



### SELF-SUPPORTING:

To make fieldwork easier, the meter is compatible with a standard tripod: it is equipped with a universal 1/4" threaded port on the back side.

## VERSATILITY





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# ON THE FIELD



### MAXIMUM PROTECTION

#### ROBUSTNESS:

Its double-injection polycarbonate plastic rubber casing provides an outstanding impact resistance, while minimizing the falling risks.

#### WEATHER RESISTANT:

Thanks to the high-quality materials and the water-proof screen, the meter is prepared to withstand adverse weather conditions.

#### PROTECTED TERMINATION:

Signal inputs are equipped with a cap, while the other central connectors and the power supply are protected with a cover, also used as a support when the meter is used on a flat surface.



## TECHNICAL SPECIFICATIONS

### GENERAL INFORMATION

Screen	8" TFT touch screen 1024x768 Full Color
Weight	2,150 (without the cover)
Dimensions	250 mm * 210 mm * 60 mm
Battery	Li-ion (7.2 VDC, 9,000 mAh) swappable in the field

Range	> 4 hours
Interfaces	ETH, USB, HDMI, audio output (Jack), FC/APC optical fibre connector, GPS antenna connector
Storage capacity	32 Gb

### TECHNICAL SPECIFICATIONS

FREQUENCY	
Resolution	1 KHz
Tuning	Frequency or channel
SPECTRUM ANALYSER	
Span	100 KHz, 1 MHz, 5MHz, 10 MHz, 20 MHz, 50 MHz, 100 MHz, 200 MHz, 500 MHz, 1.0 GHz, 2.0 GHz, 3.3 GHz, and an additional value (any value between 100 KHz and 3.3 GHz)
RBW	500 Hz, 1 KHz, 3 KHz, 5 KHz, 10 KHz, 30 KHz, 50 KHz, 100 KHz, 300 KHz, 500 KHz, 1 MHz, 3 MHz, 5 MHz
Markers	Up to 4, with delta function
Event trigger	✓
Waterfall	✓
Traces	Maxima, minima
Reference level	Automatic and manual
DVB-T DIGITAL MEASUREMENTS	
Modulations	COFDM ( QPSK, 16 QAM, 64 QAM)
Power	From 20 dBμV to 128 dBμV
CBER	9.9 E-2 – 1.0 E-6
VBER	1.0 E-3 – 1.0 E-8
MER	Up to 40 dB
C/N	Up to 52 dB
Echoes	✓
MER per carrier	✓
Constellation	✓
Error packets	✓
TILT	✓
Attenuation	✓
DVB-T2 DIGITAL MEASUREMENTS	
Modulations	COFDM ( QPSK, 16 QAM, 64 QAM y 256 QAM)
Power	From 20 dBμV to 128 dBμV
LDPCBER	9.9 E-2 – 1.0 E-6
BCHBER	1.0 E-3 – 1.0 E-8
Link Margin	Up to 30 dB
MER	Up to 40 dB
C/N	Up to 52 dB
Echoes	✓
MER per carrier	✓
Constellation	✓
Error packets	✓
TILT	✓
Attenuation	✓
Multiple PLP	✓

QAM DIGITAL MEASUREMENTS (ANNEX A/B/C)	
Modulations	4 QAM, 16 QAM, 32.64 QAM, and 256 QAM
Power	From 20 dBμV to 128 dBμV
BER	1.E-3 – 1.0E-8
MER	Up to 40 dB
C/N	Up to 52 dB
Constellation	✓
Error packets	✓
TILT	✓
Attenuation	✓
DVB-S DIGITAL MEASUREMENTS	
Power	From 20 dBμV to 128 dBμV
CBER	9.9 E-2 – 1.0 E-6
VBER	1.0 E-4 – 1.0 E-8
MER	Up to 20 dB
C/N	Up to 30 dB
Constellation	✓
Error packets	✓
TILT	✓
Attenuation	✓
DVB-S2X DIGITAL MEASUREMENTS	
Modulations	QPSK, 8PSK, 8APSK, 16 APSK and 32 APSK
Power	From 20 dBμV to 128 dBμV
Link Margin	Up to 10 dB
MER	Up to 20 dB
C/N	Up to 30 dB
LDPCBER	9.9 E-2 – 1.0 E-6
BCHBER	9.9 E-2 – 1.0 E-8
Constellation	✓
Error packets	✓
TILT	✓
Attenuation	✓
Multi TS	✓
PLS scrambling	✓
DVB-S2 DIGITAL MEASUREMENTS	
Modulations	QPSK, 8PSK, 8APSK, 16 APSK and 32 APSK
Power	From 20 dBμV to 128 dBμV
Link Margin	Up to 10 dB
MER	Up to 20 dB
C/N	Up to 30 dB
LDPCBER	9.9 E-2 – 1.0 E-6
BCHBER	9.9 E-2 – 1.0 E-8
Constellation	✓
Error packets	✓
TILT	✓
Attenuation	✓

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FM	
Level	✓
C/N	Up to 52 dB
RDS	✓
DAB / DAB+ [* option ref. 596204]	
Power	From 20 dBμV to 128 dBμV
MER	Up to 20 dB
C/N	Up to 30 dB
BER	9.9 E-2 – 1.0 E-6
ANALOGUE TV [* option ref. 596203]	
Level	From 20 dBμV to 128 dBμV
V/A	Up to 52 dB
C/N	Up to 30 dB

REMOTE POWER FEEDING	
Power supply pre-amplifiers	5 VDC, 13 VDC, 18 VDC, 24 VDC, and an additional value (any value between 5 V and 24 V)
Maximum power supplied	12 W
Maximum current supplied	900 mA
LNB tone	22 KHz
DiSEqC	✓
SCR   dCSS (EN 50494   EN 50607)	✓

## HIGHLIGHTS

PASS/FAIL indicators	Automatic satellite identification
dCSS and SCR	Up to 4 markers on the spectrum
DiSEqC 1.1	Guided ICT report production
Generic TILT	Measurement memorizing using LOG and MacroLOG

## PRODUCT RANGE

## METERS

REF. NO.	REF. REF.	DESCRIPTION	EAN13
596101	MOSAIQ6	MOSAIQ6: DVB-T/T2/S/S2/C + CI + F0	8424450191538
596111	MOSAIQ60	MOSAIQ6: DVB-T/T2/S/S2/C + CI + F0 SEL.	8424450191545

## OPTIONS

REF. NO.	REF. REF.	DESCRIPTION	EAN13
596201	M6-UP-GPS	<b>MOSAIQ6 GPS DRIVE TEST OPTION</b>	8424450193198
		Measurements can be displayed on a map at the very same spot where they were actually taken, thus facilitating coverage analysis.	
596202	M6-UP-Wi-Fi	<b>MOSAIQ6 Wi-Fi 5 GHz OPTION</b>	8424450193204
		The 5 GHz band is a much less congested frequency, which means much less interference.	
596203	M6-UP-ANA	<b>MOSAIQ6 ANALOGUE MEASUREMENT OPTION</b>	8424450193211
		It allows the measuring of signal levels between 20 dBμV and 128 dBμV, C/N up to 30 dB, and V/A up to 52 dB.	
596204	M6-UP-DAB	<b>MOSAIQ6 DAB/DAB+ OPTION</b>	8424450193228
		It allows power measuring between 20 dBμV and 128 dBμV, standard C/N and MER .for this type of signal	
596205	M6-UP-4K	<b>MOSAIQ6 4K UHD OPTION</b>	8424450193235
		Allows signal display with 4K resolution (3,840 x 2,160) and supports the new H.265 HEVC video compression format.	

## ACCESSORIES

REF. NO.	REF. REF.	DESCRIPTION	EAN13
596210	M6-AKKU	Stand-alone, field replaceable battery.	8424450196526

