


# MOSAIQ6 spectrum analyzer

## The power of user experience

MOSAIQ6 is a high performance portable meter for professional installers, which includes advance functionalities and high accuracy in the measurements.

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. This new interface has been designed and also programmed to take full advantage of a touch screen with touch gestures. Only in this way is it possible to operate so easily a meter with so many performances.

The meter is supplied in a carrying bag or transport case (according to reference), and a complete accesory kit is included to make easier its use by the installer:

- Screen protector
- Adjustable strap
- Coaxial connectors and adapters set
- Fiber optic adapters set
- Coaxial cable lead
- 3 fiber patch-cords and 1 fiber adapter cord
- Fiber optic cleaning set, with sticks and alcohol wipe
- 3 velcro flanges
- RJ45 patch-cord
- Regular and lighter-type chargers

| | |
|---|---|
| Ref. | 596105 |
| Logical ref. | MOSAIQ6A |
| EAN13 | 8424450223192 |

| Other features | |
|---|---|
| Complement | Advance: Meter + WiFi Analyzer + Analogue Measures + DAB/DAB+ + |

| Physical data | |
|---|---|
| Net weight | 5,628.00 g |
| Gross volume | 23.76 dm³ |

| | |
|---|---|
| | Carrying Bag |
| Standards included | DVB-T/T2/S/S2/SX/C + CI + F.O. |

| Packaging info | |
|---|---|
| Box | 1 pcs. |

| | |
|---|---|
| Gross weight | 5,628.00 g |
| Width | 250.00 mm |
| Height | 210.00 mm |
| Depth | 60.00 mm |
| Main product weight | 2,150.00 g |

## Highlights

- A true touch screen to take full advantage with touch gestures
- Thanks to its configurable interface, you choose which 6 widgets you want to simultaneously display in the 8” high resolution screen
- Ultra-fast spectrum analyzer: Real time digital processing
- Always ready: Field-replaceable battery
- Ergonomics: Optimized shape to maximize the effectiveness of movement
- Efficient management: Meter always updated with the cloud

## Discover

**Considerations**

The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI Trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

## Features



## Gesture commands

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.



## Custom display

User customizable widgets

MOSAIQ6 provides full flexibility when it comes to configuring the screen format to the dimensions you require. It is the core of the meter: “The Power of User Experience” means the configuration of the equipment is driven by your tastes and preferences.




## 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 carrying bag or case, the meter can be easily carried around. It is equipped with 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.



## 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.



## Efficient and centralized management

thanks to MyCloud web portal

It is possible to centralize the management of all meters registered in the cloud in a single web interface accessible from any device. Thanks to this portal, the installer can be connected in real time, either to configure the equipment or to consult and to capture the last measurements made.
MyCloud provides the necessary flexibility, mobility and comfort so that any single detail of the installation to be measured is missed.

More information: mycloud.televes.com

## Functionalities



### ULTRA-FAST SPECTRUM ANALYSER

MOSAIQ6 makes it possible to capture interfering signals, as fast as they may be

Professional spectrum analyzer 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.).



### WATERFALL

Signal graphic display in both time and frequency

Signal levels turn into colours and are represented on the time axis (see figure). The perfect tool for short signal interference or fading analysis, which observation would be difficult by only resorting to the spectrum.



### CONSTELLATION AND ECHOES

Knowing the impact on MER is essential

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.



## MULTISTANDARD

All in one

A single meter is capable of analyzing 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.



## OPTICAL MEASUREMENTS

New high-capacity networks can now be measured

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

Beyond radio frequency

Allows the demodulation and analysis of IPTV streams (both Unicast and Multicast), not only through video display but also by displaying the total bit rate and the relevant information for each service: SID, VPID, AID, video profile, bit rate for both audio and video.
In addition, specific protocol measurements are also analyzed, such as UDP Payload Bitrate, IP payload bitrate, and Packet arrival minimum and maximum. As quality measurements, Loss Rate and Delay Factor are provided, which indicate the packet losses and the delay suffered by each packet.



## NETWORK TOOLS

Connectivity and network monitoring, in a single interface

This functionality offers several control utilities and network monitoring, which can be displayed in mosaic mode. All network information at the same time, on a single screen (IP, DNS, gateway, connection mode...). These tools allow you to recognize a network by auditing the response time (latency or ping) and the connection speed (speed test, upload/download).
In addition, they also make easier the detection of connectivity problems by scanning connected equipment (ARP scan) and mapping their ports, whether open or closed, to determine their accessibility (NMAP).




## LTE CHECK

An interference-free installation

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.
Ready for LTE700 (5G) and LTE790 (4G) scenarios.



## PASS/FAIL INDICATORS

Easy decision-making

Reduce installation mistakes with the on-screen Pass/Fail indicators, a graphical tool that helps and speeds up the interpretation of measurement results. Different thresholds are available depending on the network area to be analyzed: headend, multi-band amplifiers, bridging connection, connection records, user home, etc. Besides the pre-set values, you will be able to customize your own threshold values.



## 100% AUTOMATIC

Automatic detection of all the input signal's parameters

Connect the input signal to your MOSAIQ6 and within a few seconds the meter will automatically capture the signal. The device first searches for the standard and then for all the standard's parameters. Showing the standard associated to the signal and the signal's parameters to the meter is no longer required. With MOSAIQ6 it is all as easy as connecting the RF cable; the meter automatically detects the standard (DVB-T/T2, DVB-C, QAM-B, ISDB-T for the terrestrial band, and DVB-S/S2/S2X for the satellite band, IPTV, etc. ) and all the parameters associated to that specific standard.



## SATELLITE IDENTIFICATION

By just connecting the RF cable to your MOSAIQ6 you will find out which satellite your antenna is pointing to. Without the need for previous checks or configurations.



## ECHOS

Optimal signal reception

In terms of DVB-T and DVB-T2 signal reception, controlling the absence of any echoes that could jeopardize reception is crucial. MOSAIQ6 displays the echoes of the received signal, allowing the installer to minimize them for optimal signal reception.



## USER PROFILES

The easiest way to configure your MOSAIQ6

MOSAIQ6 allows you to save multiple profiles according to the type of installation you will be working with. Therefore, you will not need to select the parameters required each time you need to perform a measurement. You will just need to select the profile you wish to work with and all the parameters will be automatically configured in the meter.



## MEASUREMENT STORAGE: MACROLOGS AND DATALOGS

Save all signal details in the 32-GB internal memory

While you are taking measurements or looking for any potential problems, you can save sample signal parameters for further in-depth analysis or just for the record and for use in your reports.
Not only the measurements will be saved, but also the screen captures just as they were recorded. Furthermore, you will be able to program a Macrolog, so that you can repeat and save measurements by just specifying the time interval between two consecutive measurements.

For convenience, take the information with you without transporting the meter. Simply export the data to an external USB memory.



## User manual on display

Solve your doubts in real time

MOSAIQ6 includes the function to check the user manual directly on the meter. It allows to solve doubts or to follow instructions in real time, without the need to have the printed version of the document.

(*)Requirements:
SW v1.38 or higher
HW v2019 onwards



## GPS OPTION FOR COVERAGE ANALYSIS (*)

A location-based installation inventory

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 doubleclicking on each image.

(*) Optional function: Ref. 596201



## Wi-Fi Analyzer 2.4/5 GHz (*)

All the communication interfaces at your disposal

This functionality performs a comprehensive analysis of the entire Wi-Fi band (2.4 and 5 GHz), to find, identify and measure all available Wi-Fi networks. For this, MOSAIQ6 offers 4 different analysis functions:

- Wi-Fi List: shows a list of all detected networks and for each one identifies: SSID, BSSID, channel, frequency, encryption mode and power of the access point.
- Wi-Fi measures: for a specific network, shows the current power value of the access point and a graph of its variation during a selectable time interval.
- Time graph: offers a time graph with the history of power measurements of all detected Wi-Fi networks.
- Channel map: shows a graph with the channel distribution of the detected Wi-Fi networks.

(*) Optional function: Ref. 596202



## ANALOGUE TV (*)

Analogue channel generation

This function allows you to display and measure the analogue TV channels still used in transmodulator-based TV systems. It allows the measuring of signal levels between 20 dBµV and 128 dBµV, C/N up to 52 dB, and V/A up to 30 dB.

(*) Optional function: Ref. 596203



**DAB/DAB+ (*)**

Digital radio at your fingertips

This function allows you to demodulate a DAB channel, providing signal quality measurements such as MER and CBER, and comprehensive information about the services delivered: Radio info: (Ensemble, PTY, Service, Mode, Audio- , bit rate audio). It allows power measuring between 20 dBµV and 128 dBµV, C/N and MER for this type of signals.

(*) Optional function: Ref. 596204



**4K UHD**

Ultra high definition in the palm of your hand

The MOSAIQ6 supports the HVEC H.265 video compression format with a maximum resolution of 4K - UHD (3840×2160) as well as the HDR colour coding standards.

# Technical specifications

**Ref. 596105**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Screen | | Touch, Color TFT | | | | | | | | |
| Screen size | in | 8 | | | | | | | | |
| Battery power | Vdc | 7.2 | | | | | | | | |
| Battery capacity | mAh | 9000 | | | | | | | | |
| Battery range | h | 4 | | | | | | | | |
| Operating temperature | °F | 23 ... 113 | | | | | | | | |
| PSU input voltage | Vac | 100 ... 240 | | | | | | | | |
| Mains frequency | | 50 Hz / 60 Hz | | | | | | | | |
| PSU output voltage | Vdc | 12 | | | | | | | | |
| Max PSU output current | A | 4 | | | | | | | | |
| RF connectors | | "F" female | | | | | | | | |
| Optical connectors | | FC/APC | | | | | | | | |
| USB port | | USB 2.0 | | | | | | | | |
| Display port | | HDMI® | | | | | | | | |
| Audio port | | Jack | | | | | | | | |
| GPS antenna | | No | | | | | | | | |
| CAM | | Yes | | | | | | | | |
| Storage capacity | GB | 32 | | | | | | | | |
| Frequency range | MHz | 5 ... 3300 | | | | | | | | |
| Measurements resolution | kHz | 1 | | | | | | | | |
| Ethernet | | Yes | | | | | | | | |
| Span | | 100 KHz ... 3,3 GHz (any value) | | | | | | | | |
| Scale (dB/div) | | 10 / 5 | | | | | | | | |
| Reference level | | Automatic / Manual | | | | | | | | |
| 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 | | | | | | | | |
| Number of markers | | 6 | | | | | | | | |
| Delta function | | Yes | | | | | | | | |
| Event trigger | | Yes | | | | | | | | |
| Waterfall | | Yes | | | | | | | | |
| Traces | | Maximum / Minimum | | | | | | | | |
| Standards | | DVB-T | DVB-T2 | DVB-C | DVB-S | DVB-S2 | DVB-S2X | DAB/DAB+ | FM | Analog Measures |
| Modulation format | | 16QAM / 64QAM / COFDM / QPSK | 16QAM / 256QAM / 64QAM / COFDM / QPSK | 16QAM / 256QAM / 32QAM / 4QAM / 64QAM | QPSK | 16APSK / 32APSK / 8APSK / 8PSK / QPSK | 16APSK / 32APSK / 8APSK / 8PSK / QPSK | -- | -- | -- |
| Digital channel format (ITU-T J.83) | | -- | -- | Annex A / Annex B / Annex C | -- | -- | -- | -- | -- | -- |
| Signal level | dBmV | -40 ... 68 | -40 ... 68 | -40 ... 68 | -40 ... 68 | -40 ... 68 | -40 ... 68 | -40 ... 68 | -40 ... 68 | -40 ... 68 |
| C/N | dB | < 52 | < 52 | < 52 | < 30 | < 30 | < 30 | < 30 | < 52 | < 30 |
| V/A | dB | -- | -- | -- | -- | -- | -- | -- | -- | < 52 |
| MER | dB | < 40 | < 40 | < 40 | < 20 | < 20 | < 20 | < 20 | -- | -- |
| Pre-BER | | -- | -- | 1.0E-2 – 1.0E-8 | -- | -- | -- | -- | -- | -- |
| Post-BER | | -- | -- | 1.0E-2 – 1.0E-9 | -- | -- | -- | -- | -- | -- |
| BER | | -- | -- | 1.0E-2 – 1.0E-8 | -- | -- | -- | 9.9E-2 – 1.0E-6 | -- | -- |
| CBER | | 1.0E-2 – 1.0E-6 | -- | -- | 1.0E-2 – 1.0E-6 | -- | -- | -- | -- | -- |
| VBER | | 1.0E-2 – 1.0E-8 | -- | -- | 1.0E-2 – 1.0E-8 | -- | -- | -- | -- | -- |
| LDPCBER | | -- | 1.0E-2 – 1.0E-6 | -- | -- | 1.0E-2 – 1.0E-6 | 1.0E-2 – 1.0E-6 | -- | -- | -- |
| BCHBER | | -- | 1.0E-2 – 1.0E-8 | -- | -- | 1.0E-2 – 1.0E-8 | 1.0E-2 – 1.0E-8 | -- | -- | -- |
| Link margin | dB | -- | < 30 | -- | -- | < 10 | < 10 | -- | -- | -- |
| Echoes | | Yes | Yes | -- | -- | -- | -- | -- | -- | -- |
| Constellation | | Yes | Yes | Yes | Yes | Yes | Yes | -- | -- | -- |
| MER per carrier | | Yes | Yes | -- | -- | -- | -- | -- | -- | -- |
| Multiple PLP | | -- | Yes | -- | -- | -- | -- | -- | -- | -- |
| Multi TS | | -- | -- | -- | -- | Yes | Yes | -- | -- | -- |
| PLS scrambling | | -- | -- | -- | -- | -- | Yes | -- | -- | -- |
| RDS | | -- | -- | -- | -- | -- | -- | -- | Yes | -- |
| Error packets | | Yes | | | | | | | | |
| TILT | | Yes | | | | | | | | |
| Attenuation | | Yes | | | | | | | | |
| Type of FO | | No selective OF | | | | | | | | |
| WiFi analyzator | | Yes | | | | | | | | |
| IPTV analyzator | | Yes | | | | | | | | |
| Voltmeter | | No | | | | | | | | |
| IP speed test | | Yes | | | | | | | | |
| Full HD display (MPEG2/MPEG4) | | Yes | | | | | | | | |
| 4K display | | Yes | | | | | | | | |
| MPEG info | | Yes | | | | | | | | |
| Powering per preamps | Vdc | 5 ... 24 | | | | | | | | |
| Max. current preamps | mA | < 900 | | | | | | | | |
| Powering LNB | Vdc | 5 ... 24 | | | | | | | | |
| Max current for LNB | mA | < 900 | | | | | | | | |
| LNB tone (22KHz) | | Yes | | | | | | | | |
| DiSEqC-commands | | Yes | | | | | | | | |
| dCSS standard | | EN50494 / EN50607 | | | | | | | | |