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.	596101
Logical ref.	MOSAIQ6
EAN13	8424450191538

Other features

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

Packaging info

Box	1 pcs.

Physical data

Net weight	4,900.00 g
Gross weight	5,700.00 g
Width	230.00 mm
Height	260.00 mm
Depth	85.00 mm
Main product weight	2,450.00 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

Features

Gesture commands

An actual touch screen

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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.
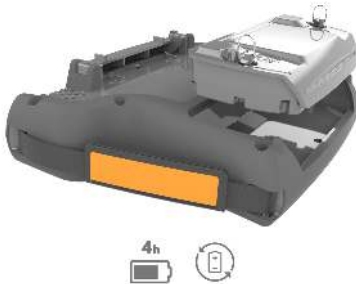
Custom display

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.

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

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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.

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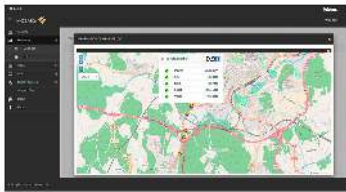
Solve your doubts in real time

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.

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Technical specifications

MOSAIQ6	
General Specifications	
Pantalla	8" touch screen TFT 1024x468 full color
Weight	2150 g
Dimensions	250x210x60mm (HxWxD)
Battery	Li-ion (7,2VDC, 9000mAh) intercambiable en campo
Autonomy	> 4 hours
Interfaces	ETH, USB, HDMI, Audio Out (Jack), FC/APC optical fiber connector, GPS antenna connector
Storage	32 GB
Technical Specifications	
Frequency	
Range	5 - 3300 MHz
Accuracy	1 KHz
Tuning	Frequency or channel
Spectrum analyzer	
Span	100 KHz, 1, 5, 10, 20, 50, 100, 200, 500 MHz, 1,0, 2,0, 3,3 GHz and other (any value between 100 KHz and 3,3 GHz)
RBW	500 Hz, 1, 3, 5, 10, 30, 50, 100, 300, 500 KHz, 1, 3, 5 MHz
Marks	Up to 4, with delta feature
Event trigger	OK
Waterfall	OK
Hold feature	Maximum and minimum
Reference level	Automatic and manual
DVB-T Digital measurements	
Modulations	COFDM (QPSK, 16QAM, 64QAM)
Power	From 20 to 128 dBµV
CBER	9.9E-2 – 1.0E-6
VBER	1.0E-3 – 1.0E-8
MER	Up to 40dB
C/N	Up to 52dB
Echoes	OK
MER by carrier	OK
Constellation	OK
Error packets	OK

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TILT	OK
Attenuation	OK
DVB-T2 Digital measurements	
Modulations	COFDM (QPSK, 16QAM, 64QAM and 256QAM)
Power	From 20 to 128 dBµV
LDPCBER*	9.9E-2 – 1.0E-6
BCHBER*	1.0E-3 – 1.0E-8
Link Margin	Up to 40dB
MER	Up to 40dB
C/N	Up to 52dB
Echoes	OK
MER per carrier	OK
Constellation	OK
Error packets	OK
TILT	OK
Attenuation	OK
Multiple PLP	OK
QAM Digital Measures (ANNEX A/B/C)	
Modulations	4QAM, 16QAM, 32QAM, 64QAM and 256QAM
Power	From 20 to 128 dBµV
BER	1.0E-3 – 1.0E-8
MER	Up to 40dB
C/N	Up to 52dB
Constellation	OK
Error packets	OK
TILT	OK
Attenuation	OK
DVB-S Digital Measures	
Wideband (only compatible HW)	230 - 2400 MHz
Power	From 20 to 128 dBµV
CBER	9.9E-2 – 1.0E-6
VBER	1.0E-4 – 1.0E-8
MER	Up to 20dB
C/N	Up to 30dB

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Constellation	OK
Error packets	OK
TILT	OK
Attenuation	OK
DVB-S2X Digital Measures	
Wideband (only compatible HW)	230 - 2400 MHz
Modulations	QPSK, 8PSK, 8APSK, 16APSK and 32APSK
Power	From 20 to 128 dBµV
LDPCBER*	9.9E-2 – 1.0E-6
BCHBER*	9.9E-2 – 1.0E-8
Link Margin	Up to 10dB
MER	Up to 10dB
C/N	Up to 30dB
Constellation	OK
Error packets	OK
TILT	OK
Attenuation	OK
Multi TS	OK
PLS scrambling	OK
DVB-S2 Digital Measures	
Wideband (only compatible HW)	230 - 2400 MHz
Modulations	QPSK, 8PSK, 8APSK, 16APSK and 32APSK
Power	From 20 to 128 dBµV
LDPCBER*	9.9E-2 – 1.0E-6
BCHBER*	9.9E-2 – 1.0E-8
Link Margin	Up to 10dB
MER	Up to 20dB
C/N	Up to 30dB
Constellation	OK
Error packets	OK
TILT	OK
Attenuation	OK
Multi TS	OK

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FM	
Level	OK
C/N	Up to 52dB
RDS	OK
DAB/DAB+ (**Opc. 596204)	
Power	From 20 to 128 dBμV
MER	Up to 20dB
C/N	Up to 30dB
BER*	9.9E-2 – 1.0E-6
ANALOGUE TV (**Opt. 596203)	
Level	From 20 to 128 dBμV
V/A	Up to 52dB
C/N	Up to 30dB
Features	
User-customizable widgets on screen	Up to 6
Scan System with measurements and learning plan	OK
LTE Check	OK
F.O.	Refs. 596101/02/05
F.O. Selectivo	Refs. 596111/12/15
GPS Drive Test	Opt. 596201
4K - UHD visualization (HEVC)	OK
MPEG info	SID, VID, AID, Resolution, Profile, Audio Bitrate, Video Bitrate, Resolution info
IPTV Analyzer	OK
WiFi Analyzer	2,4GHz and 5GHz (Opt. 596202**)
Units	dBμV, dBmV, dBm
Network tools	OK
Pre-amplifiers powering	
Pre-amplifiers powering	5, 13, 18, 24 Vdc and other (any value between 5 and 24V)
Max. supplied power	12W
Max. supplied current	900 mA
LNB tone	22 KHz
DiSEqC	OK
SCR (EN50494) | dCSS (EN50607)	OK

*Notes

LDPCBER is the BER measurement before LDPC correction.

BCHBER is the BER measurement after LDPC corrector and before BCH correction.

**Refs. 596202/03/04/05 included in Advance model

Technical specifications : Ref. 596101

Screen		Touch, Color TFT
Screen size	in	8
Battery power	Vdc	7.2
Battery capacity	mAh	9000
Operating temperature	°C	-5 ... 45
PSU input voltage	Vac	100 ... 240
Mains frequency		50 Hz
PSU output voltage	Vdc	24
Max PSU output current	A	4
RF connectors		"F" female
Optical connectors		FC/APC
Number of Gigabit Ethernet ports (10/100/1000BaseT)		1
USB port		USB 2.0
Display port		HDMI
Audio port		jack
GPS antenna		Yes
CAM		Yes
Storage capacity	GB	32
Frequency range	MHz	5 ... 3300
Measurements resolution	kHz	1
WiFi analyzator		Yes
Bluetooth		Yes
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

		DVB-T	DVB-T2	DVB-C	ISDB-T/Tb	DVB-S	DVB-S2	DVB-S2X	DAB/DAB+	FM	Analog Measures
Standards		DVB-T	DVB-T2	DVB-C	ISDB-T/Tb	DVB-S	DVB-S2	DVB-S2X	DAB/DAB+	FM	Analog Measures
Modulations		16QAM / 64QAM / COFDM / QPSK	128QAM / 16QAM / 256QAM / 32QAM / 64QAM	16QAM / 256QAM / 32QAM / 64QAM	16QAM / 64QAM / DQPSK / QPSK	QPSK	16APSK / 32APSK / 8APSK / 8PSK / QPSK	16APSK / 32APSK / 8APSK / 8PSK / QPSK	--	--	--
Signal level	dBµV	20 ... 128	20 ... 128	20 ... 128	-100 ... 20	20 ... 128	20 ... 128	20 ... 128	20 ... 128	20 ... 128	20 ... 128
C/N	dB	< 52	< 52	< 52	< 50	< 30	< 30	< 30	< 52	< 52	< 52
V/A	dB	--	--	--	--	--	--	--	--	--	< 30
MER	dB	< 40	< 40	< 40	< 40	< 20	< 20	< 20	< 20	--	--
Pre-BER		--	--	1.0E-2 – 1.0E-9	1.0E-2 – 1.0E-6	--	--	--	--	--	--
Post-BER		--	--	1.0E-2 – 1.0E-8	1.0E-2 – 1.0E-8	--	--	--	--	--	--
BER		--	--	1.0E-2 – 1.0E-8	--	--	--	--	1.0E-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	--	Yes	--	--	--	--	--	--
Constellation		Yes	Yes	Yes	Yes	Yes	Yes	Yes	--	--	--
MER per carrier		Yes	Yes	--	--	--	--	--	--	--	--
Multiple PLP		--	Yes	--	--	--	--	--	--	--	--
Multi TS		--	--	--	--	--	Yes	Yes	--	--	--
PLS scrambling		--	--	--	--	--	Yes	Yes	--	--	--
RDS		--	--	--	--	--	--	--	--	Yes	--

Error packets		Yes
TILT		Yes
Attenuation		Yes
WiFi analyzator		Yes
IPTV analyzator		Yes
Voltmeter		No
IP speed test		Yes
Full HD display (MPEG2/MPEG4)		Yes
4K display		No
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