PROMAX

ATLAS

NEXT-GENERATION
SPECTRUM & BROADCAST ANALYZER

THE ALL-IN-ONE ANALYZER

www.promaxelectronics.com

THE UNIVERSAL
BROADCAST ANALYZER

FOR THOSE WHO DO NOT COMPROMISE and equip themselves with top-shelf test equipment only, we created **ATLAS NG**, a multipurpose and featured packed spectrum analyzer which covers the most stringent requirements for broadcast professionals. DVB-S2x, ATSC 3.0, IPTV, Fiber optics, 3G-SDI, Transport stream ASI, Wi-Fi, Mobile… all checked!

The new outer frame offers extreme ruggedness while featuring a larger 10" touch screen and maximizing grip and ease of handling.

ATSC 3.0 AND S2x
NEXT-GENERATION TECHNOLOGIES.

6 GHz FREQUENCY RANGE
INTERFERENCE MITIGATION IN MODERN WIRELESS NETWORKS.

4K UHD VIDEO DEMODULATION
INCORPORATES HDMI™ 1.4 CONNECTIVITY.

SDI INPUT
BROADCAST STUDIOS AND OB VANS.

FIBER OPTICS, IPTV, WiFi...
OUTSTANDING I/O CAPABILITIES.

10" MULTITOUCH SCREEN
HIGHLY INTUITIVE CONTROL.

ATSC 3.0, DVB-S2x AND MORE...

ATSC 3.0
ROUTE & MMT ENCODING.

DVB-S2x
NEW SATELLITE TECHNOLOGY.

DVB-S2/T2/C2
FOR SATELLITE, TERRESTRIAL AND CABLE.

ISDB-T
SELECTABLE LAYERS AND EWBS.

THE LATEST BROADCAST TECHNOLOGIES: New television standards such as **ATSC 3.0** push forward frontiers in what technology is capable of. ATSC 3.0 makes use of OFDM and as many as four simultaneous PLPs (Physical Layer Pipes) at the physical layer and modulation schemes up to 4096-QAM.

DVB-S2x is the new kid on the block in satellite broadcast. It provides higher throughputs and new signal modulation schemes that only the most advanced broadcast analyzers such as the **ATLAS NG** can handle.

64/128/256-APSK modulations, 5%, 10% and 15% reduced roll-off factors, improved filtering and carrier spacing, and channel bonding are just some of the new technologies adopted by this new standard, and of course, **ATLAS NG** is fully compatible.

NEW MORE POWERFUL
6 GHz SPECTRUM
WITH AN IMPROVED USER EXPERIENCE

PARTNER YOURSELF WITH AN ANALYZER capable of taking measurements up to 6 GHz covering the S and C bands, where an increasing number of technologies are all fiercely competing for bandwidth.

Technologies using S and/or C band are: Satellite teleports, VSAT ground networks, Radar, Terrestrial microwave links, Broadband Wireless Access (BWA) networks (LTE, Wi-Max, 5G, etc.).

Applications: TV broadcast & data, Air navigation and maritime communications, Banking comms, E-government, Backhaul in remote areas or in mission-critical operations, Aircraft Radar altimeters, Weather/metereological stations, ITS (Intelligent Transport Systems), ISM (Industrial, Scientific and Medical), etc.

A 6 GHz spectrum analyzer becomes vital to identify and evaluate why systems and services are being disrupted by interferences.

HIGH SPEED DIGITAL PROCESSING

2 kHz TO 1000 kHz RESOLUTION FILTER

DIRECT C-BAND READINGS

USER-DEFINABLE MARKERS

DETECTION & MITIGATION OF TI TERRESTRIAL INTERFERENCE

5G INTERFERENCE DETECTION

HEAT MAP MODE AVAILABLE
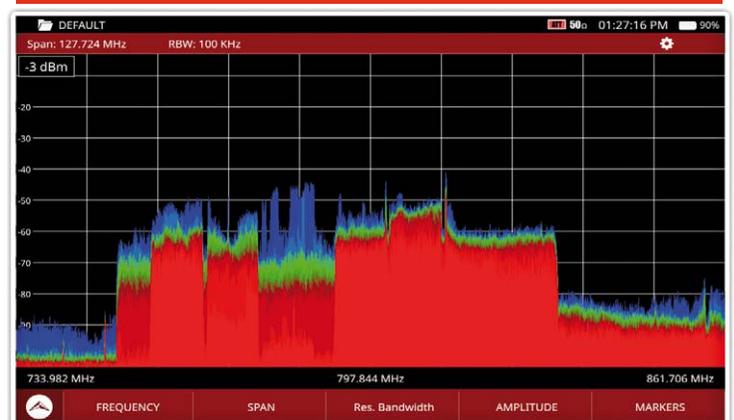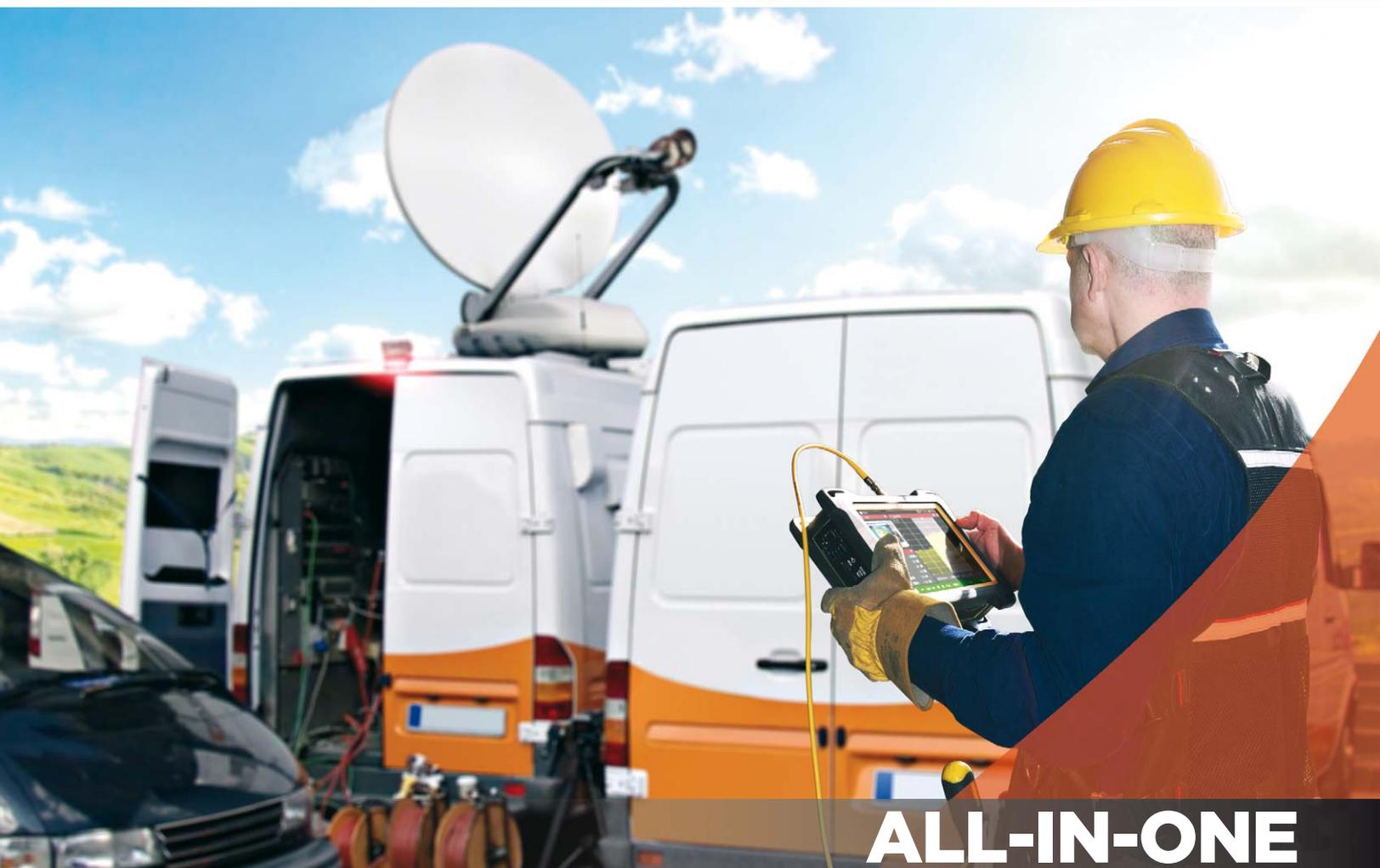
ALL-IN-ONE
MULTIFUNCTION ANALYZER

SPECTRUM ANALYZER

TV ANALYZER

IPTV ANALYZER

ASI ANALYZER

SDI ANALYZER

WiFi ANALYZER

FM & DAB/DAB+ RADIO

MOBILE

↘ INCLUDES A 3G SDI INPUT

Finding a meter that could close the gap between the studio and transmission departments has been a long time coming, but it is finally here.

The **ATLAS NG** runs full 3G-SDI signal diagnosis, including a professional audio meter and eye diagram, and features an external SDI input for that task, other than the standard ASI input and output.

↘ IPTV ANALYZER

The omnipresence of IP technology in the broadcast industry makes it compulsory for an analyzer to be capable of feeding from IPTV signals and monitor them.

Therefore, it becomes essential to have at hand a tester that can monitor and picture IPTV streams.

3G-SDI COMPATIBLE
THE AUDIOVISUAL PARTNER

IDEAL FOR PROFESSIONAL BROADCAST ENVIRONMENTS, audiovisual production and post-production. The **ATLAS NG** is the most suitable solution for testing the correct deployment and configuration of professional audio and video equipment.

A basic **SDI test signal** generator is Included in the equipment, which can be used to assess communication when a live signal is unavailable or when diagnosing system issues.

Compatible with industry-standard SDI formats (SD-SDI, HD-SDI, and 3G-SDI) with data rates up to 3 GB. It can display video and up to 16 simultaneous audio channels. The built-in **statistical eye diagram** allows an accurate assessment of signal quality.

Offers optional **analysis and generation of up to 3 Gbps SDI signals** over fiber optic.

SDI CHART GENERATION
SYSTEM TESTING WITHOUT LIVE FEED

SUPPORTS OPTICAL SDI
SUPERIOR SPEED, QUALITY AND RELIABILITY

STATISTICAL EYE DIAGRAM
DISCOVER PROBLEMS AT A GLANCE

UNPROCESSED SIGNAL RECORDING
RAW RECORDING FEATURE

FANTASTIC
CONNECTIVITY

N-TYPE UNIVERSAL INPUT
MORE ROBUST. BETTER RF PERFORMANCE.

OPTICAL FIBER
OPTIONAL SELECTIVE POWER METER
AND CONVERTER.

1 PPS INPUT
FOR GPS CLOCK SYNCHRONIZATION.

ASI-SDI INPUT/OUTPUT
FOR BROADCAST ENVIRONMENTS.

SFP+ EXPANSION PORT
READY FOR FUTURE APPLICATIONS.

IPTV INPUT
DEDICATED RJ45 PORT.

USB 3.0 + 8 GB INTERNAL MEMORY
FAST DATA TRANSFER & SOFTWARE
UPDATES.

ETHERNET PORT
REMOTE CONTROL. REMOTE COMMANDS.

COMMON INTERFACE
SCRAMBLED SERVICES DE-ENCRYPTION.

ULTRA HD: SUPPORTS HDMI™ 1.4B
2.9 GB/S UP TO 3840x2160 @30 Hz

DRIVE TEST, FIBER OPTIC, IPTV...
THE BROADCAST ANALYZER
FOR STUDIO AND FIELD APPLICATIONS

AN EFFICIENT DRIVE TEST ANALYSIS tool provides GPS-referenced measurements and allows the creation visual coverage maps on Google Earth. This enables a comprehensive evaluation of terrestrial transmitter performance for FM radio, DAB/DAB+ digital radio, and the wide range of TV broadcasting standards supported by the equipment.

SEAMLESS OPTICAL FIBER INTEGRATION because broadcast signal reception goes beyond the antenna. In addition to receiving Transport Stream (TS) signals from RF, IP, and ASI inputs, it's also possible to receive them from the Fiber Optic interface, a growing trend in the broadcast industry.

UNLEASH THE POWER OF IPTV
COMPREHENSIVE MEASUREMENTS, BITRATES, DECODING, AND TS ANALYSIS
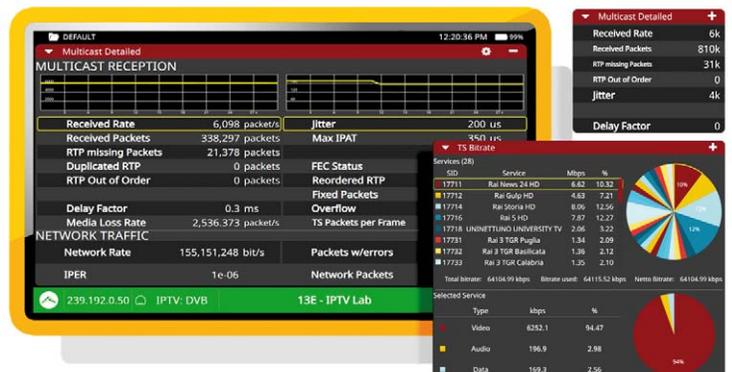
DOUBLE OPTICAL INPUT

ATLAS

SIGNAL ANALYSIS SOLUTIONS FOR DIGITAL DAB+ AND FM RADIO BROADCASTERS

ADVANCED DAB/DAB+ ANALYSIS
MSC CBER, FIC CBER, CBER, FIB RATIO

ETI RECORDING

FM DEVIATION GRAPHIC
THE COMPLETE SET OF FM AND RDS PARAMETERS

OVER 130 MILLION DIGITAL RADIO RECEIVERS SOLD IN EUROPE. Including in-vehicle receivers, a large portion of Europe now has access to the new generation of digital radio, DAB/DAB+. The ATLAS NG provides an in-depth, advanced analysis option featuring ETI recording and playback, IQ component recording, Constellation, Echoes, Full ensemble CBER, MSC CBER, FIC CBER, audio decoding and other capabilities.

ADVANCED FM ANALYSIS OPTION. ATLAS NG goes the extra mile with its extended and in-depth analysis of FM radio signals, including Modulation Power, Stereo Pilot Detection, Frequency Deviation (of MPX, audio carriers, and RDS carrier), Frequency Offsets, histograms... and the FM deviation graph as per ITU-R SM.1268-2 and SM.1268-4.
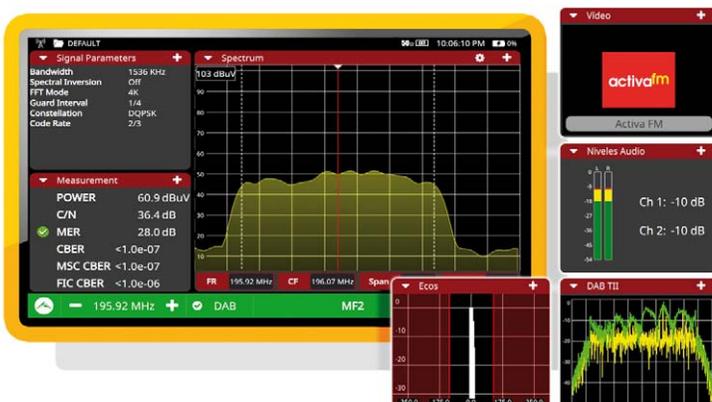
4G/5G MOBILE NETWORKS
AND WiFi ANALYZER

⬇ EXTEND YOUR 4G AND 5G NETWORK ANALYSIS. The 4G/5G

option delivers **in-depth analysis across the entire FR1 band**, identifying and classifying all mobile channels based on their technology (4G or 5G), channel access method (TDMA, FDMA...), and distinguishing whether they are uplink or downlink channels. Crucial insights into the network infrastructure being evaluated and potential interference factors.

⬇ THE WiFi ANALYZER REVEALS WHAT APPS CANNOT. Wi-Fi bands

in different standards have different reception characteristics. The saturation of lower bands is driving the development of higher frequency technologies and more complex transmission procedures. **ATLAS NG** not only does it identify networks, access points, and active channels in each band, but it also provides information about the traffic transmitted through each of them.

📶 REAL-TIME WiFi ANALYZER
PARAMETERS, NEWORKS, CHANNELS, ACCESS POINTS...

5G OPTIONAL 4G/5G ANALYZER
ACTIVE NETWORKS, UPLINK/DOWNLINK BANDS, CELLS, TRAFFIC...

⊙ NETWORKS SPEED TEST

ATLAS

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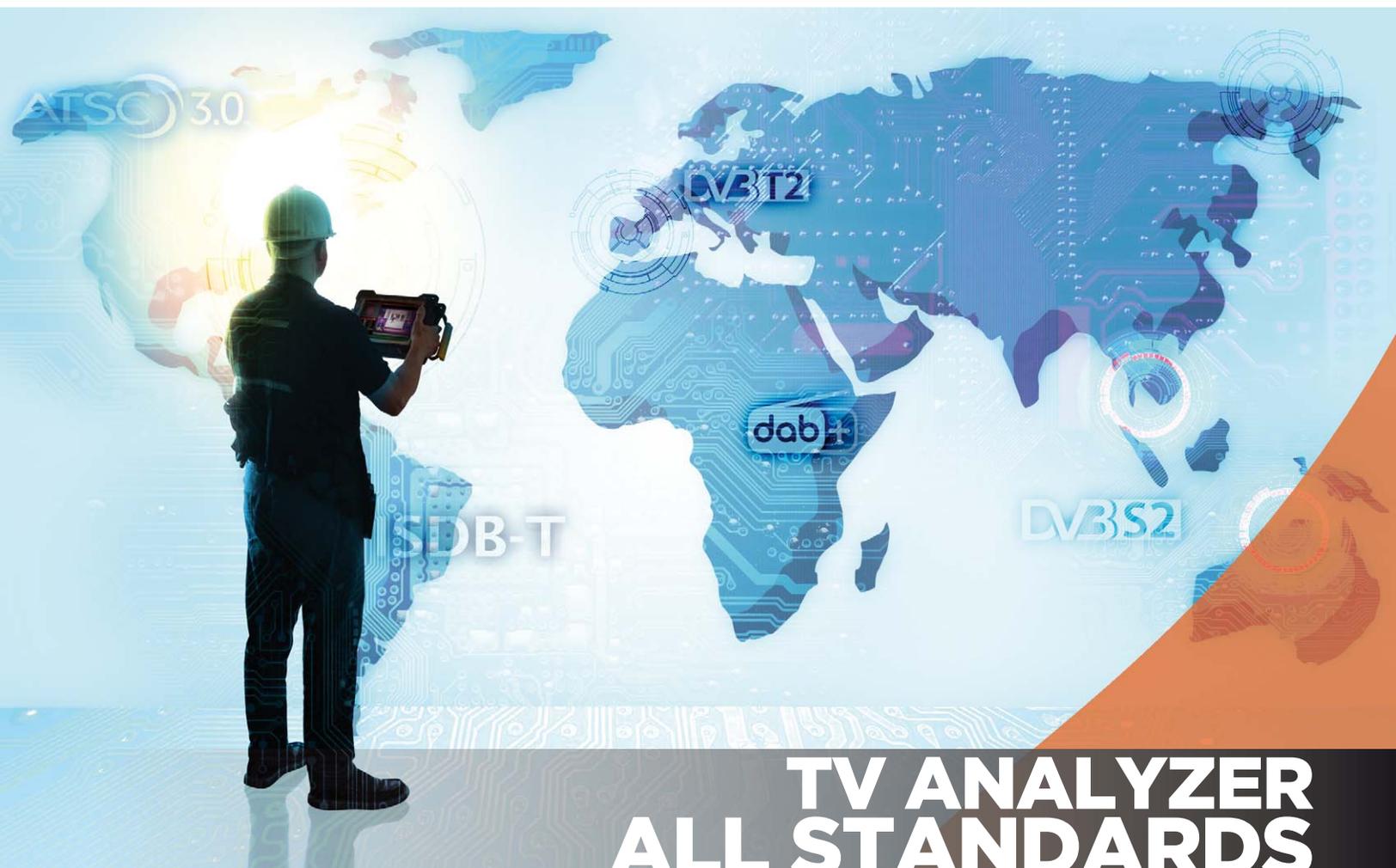
TV ANALYZER
ALL STANDARDS
RIGHT OUT OF THE BOX

SECOND-GENERATION DVB STANDARDS
DVB-T2 BASE/LITE, DVB-C2, DVB-S2, DVB-S2x

ATSC 3.0 NEXT-GEN TV
THE EMERGING STANDARD

ISDB-T/T$_B$ ENABLED
REACHING THREE CONTINENTS

4K INCLUDED AS STANDARD
HEVC, 10-BIT COLOR DEPTH

DYNAMIC ECHOES ANALYZER
FOR OPTIMAL TERRESTRIAL ANTENNA ALIGNMENT

SHOULDER ATTENUATION
DETECTION OF FAILURES AT THE HEADEND

TRANSPORT STREAM RECORDING
UP TO 200 MBPS TO INTERNAL OR EXTERNAL STORAGE

INSTRUMENT WHICH CAN BE USED ANYWHERE IN THE WORLD: The **ATLAS NG** offers built-in compatibility with a variety of international broadcasting standards, such as DVB, ISDB-T, ATSC, and ATSC 3.0.

With its unprecedented multi-standard compatibility, **ATLAS NG** is the ultimate global solution tool for identifying, troubleshooting, and preventing problems in terrestrial, satellite, and cable broadcasting.

ADVANCED FM RADIO ANALYZER: While the future of radio is the digital DAB+, FM radio still plays a vital role and it seems that it has a long way to go yet. The **ATLAS NG** is equipped with a basic FM analyzer featuring RDS. An optional add-on enables a comprehensive analysis of all FM parameters including pilots, frequency deviation, alternative RDS frequencies, histogram, and more.

SPECIFICATIONS	ATLAS NG - NEXT GENERATION SPECTRUM AND BROADCAST ANALYZER
BROADCAST STANDARDS	DVB-T, DVB-T2 (T2-base, T2-lite), ISDB-T/Tb (full seg / 1sec), ATSC 1.0, ATSC 3.0, DAB, DAB+ DVB-C, DVB-C2, J.83 annex-B, 16/64/256-QAM DVB-S, DVB-S2 VCM/ACM/CCM, DVB-S2x, DSS, QPSK Analogue terrestrial (PAL, SECAM, NTSC), FM RDS
AUDIO CODECS	MPEG-1, MPEG-2, AAC, HE-AAC, Dolby Digital (DD), Dolby Digital Plus (DD+), Dolby AC-4
VIDEO CODECS	MPEG-1, MPEG-2, MPEG-4 / H.264 (CBP, MP, High Profile Level 5.2), HEVC / H.265 4k UHD (Main Profile Level 5.1 8b/10b)

INPUTS AND OUPUTS			

- Universal RF input
  (N-type, female 50 Ω)
- ASI/SDI input and output
  (BNC female, 75 Ω 3 Gbps)
- SFP+ connector
- Analogue audio/video input
  (jack 3.5 mm)
	- HDMI™ output (v1.4b up to
	  3840x2160 pixels @30 Hz)
	- USB 2.0 master/device (Type C).
	  Mass storage and remote control
	  commands
	- Ethernet (RJ45) for webControl
	  and remote control commands
		- Optical input (FC/APC, female)
		- 1 PPS / 10 MHz reference input
		- IPTV input (RJ45 Ethernet,
		  10/100/1000 Mbps)
		- Stereo headphone audio output
		  (jack 3.5 mm)
			- USB 3.0 host (A-type,
			  USB-CDC devices)
			- CAM (DVB-CI compliant,
			  module input
			- Double SIM card slot (optional)

FUNCTIONS			

- Constellation diagram
- LTE ingress test
- Dynamic echoes analysis
- StealthID (instant identification
  of tuning parameters)
- PLS (Physical Layer Scrambling)
- Ultra fast Spectrum analyzer
- 4K decoder
- MAX and MIN hold
- FM RDS measurement and
  decoding
	- Screenshots and Datalogger
	  for measurement reports
	- Beacon-Flyaways SNG and VSAT
	- Wideband LNB
	- WiFi
	- LTE 1.8 GHz
	- Service Recording
	- Field strength measurement
	- Task planner
	- Merogram
	- Spectrogram
		- Signal monitoring
		- Remote control (webControl)
		- MER by carrier
		- GPS (included) coverage analysis
		- Video/Audio Streaming
		- SCAN + TILT
		- TS recording
		- TS analysis
		- Shoulder attenuation
		- IPTV multicast measurement and
		  decoding
			- Network delay
			- DVB-2 MI analysis
			- Eye diagram (HD-SDI, 3G-SDI)
			- ALP recording
			- Carrier Frequency Drift Test
			- Full band optical power
			  measurement
			- 8 GB internal memory, expandable
			  via USB

SPECTRUM ANALYZER	
Spectrum analyzer mode TV mode Measurement margin Span Resolution bandwidths	From 5 MHz to 6 GHz From 5 to 1000 MHz (terrestrial) / From 250 to 3000 MHz (satellite) 1 to 130 dBµV (5 MHz to 3 GHz) / 10 to 130 dBµV (3 GHz to 4.425 GHz) / 11 to 130 dBµV (4.425 GHz to 6 GHz) User-defined / 10 / 20 / 50 / 100 / 200 / 500 / 1000 / 3000 MHz / Full span (depending on mode) 2, 10, 20, 30, 40, 100, 200, 1000 kHz

MEASUREMENT MODE	
Frequency margins	From 45 to 1000 MHz (terrestrial), from 250 to 3000 MHz (satellite). Frequency resolution 1 kHz.
DVB-T (COFDM)	Power (20 dBµV - 130 dBµV), CBER, VBER, MER, C/N, Wrong packets, Link Margin
DVB-T2 Base y Lite (COFDM)	Power (20 dBµV - 130 dBµV), CBER, C/N, LBER, MER, Link Margin, BCH ESR, IDP iterations, Wrong packets
ISDB-T (COFDM)	Power (20 dBµV - 130 dBµV), CBER, VBER, MER, C/N, Wrong packets, Link Margin
DVB-C (QAM)	Power (20 dBµV - 130 dBµV), BER, MER, C/N, Wrong packets, Link Margin
DVB-C2 (QAM)	Power (20 dBµV - 130 dBµV), CBER, MER, C/N, LBER, BCH ESR, IDP iterations, Wrong packets
J83 Annex B (QAM)	Power (20 dBµV - 130 dBµV), BER, MER, C/N, Wrong packets, Link Margin
ATSC 1.0 (8VSB)	Power (20 dBµV - 130 dBµV), SER, VBER, MER, Wrong packets, C/N, Link Margin
ATSC 3.0 (COFDM)	Power (20 dBµV - 130 dBµV), CBER, MER, Wrong packets, C/N, LBER, BCH ESR
DVB-S (QPSK)	Power (35 dBµV - 127 dBµV), CBER, VBER, MER, C/N, Link Margin
DVB-S2 (QPSK, 8PSK 16/32 APSK)	Power (35 dBµV - 127 dBµV), CBER, LBER, MER, Wrong packets, C/N, BCH ESR, Link Margin
DVB-S2x (QPSK, 8PSK, 8/16/32/64/128/256 APSK/APSK-L)	Power (35 dBµV - 127 dBµV), CBER, LBER, MER, Wrong packets, C/N, BCH ESR, Link Margin
DSS (QPSK)	Power (35 dBµV - 115 dBµV), CBER, VBER, MER, C/N, Wrong packets, Noise margin
PAL, SECAM and NTSC (Analog TV)	Level, C/N, V/A (M/N/B/G/I/D/K/L)
FM RDS radio	Level, C/N, RDS information
FM RDS radio (advanced option)	MPX power, Frequency offset, Bandwidth, Freq. deviation (L, R, L+R, L-R, MPX, RDS, pilots), Level (L, R, L-R, L+R, MPX)
DAB/DAB+ radio (advanced option)	Power, C/N, MER, CBER, MSC CBER, FIC CBER, FIB RATIO, Offset, Bandwidth

OPERATING MODES	
Spectrum analyzer IPTV multicast/unicast SD/HD/3G-SDI WiFi 802.11 ac/a/b/g/n analyzer ASI-TS 4G/5G telephony (optional)	Power measurement, C/N, Frequency, max/min traces hold. Includes 4 delta markers with frequency and level measurement. More than 20 measurements (including Jitter, Packet rate, Histogram + jitter, Inter Packet Arrival Time). Multicast. T2MI&BTS reception. 3 Gbps input/output. Eye statistical diagram, CRC error detection, 16 AES3 audio channel monitoring, 1080p 60 pattern chart. Spectrum analyzer + WiFi dongle. RSSI, Access point occupancy, SNR, Noise TS, T2MI and BTS support Dual SIM. Uplink/Downlink bands indication over the spectrum. Measurements: RSSI, RSRP, RSRQ, SINR, SRXLEV.
INTERNAL STORAGE	8 GB for measurement protocols, screenshots and transport stream recordings
REMOTE CONTROL	Remote commands. webControl interface (IP control input and WiFi) and SNMP protocol (IP control input and WiFi)
GENERAL	Color 10,1" TFT 16:9 screen. 850 cd/m². Multitouch user interface. DiSEqC 2.x generator (DiSEqC 1.2 commands implemented). dCSS/SCD2 (EN50607) and SATCR/SCD (EN50494)
POWER SUPPLY	> 4 h with Smart power management
INCLUDED ACCESSORIES	WiFi antenna, WiFi dongle, RF adapters, GPS, Audio/Video jack cable, DC Adapter+cable, Car lighter adapter, Transport belt, Pouch, Transport case, Monopode

OPTIONS	
OP-006-PS OP-006-FM OP-006-DAB OP-006-T OP-006-OT OP-006-OR	Optical fibre: Selective optical power meter + optical to RF converter Advanced measurements for FM radio Advanced measurements for DAB/DAB+ digital radio 4G/5G measurements Optical SDI and ASI output Optical SDI and ASI input

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