PROMAX

THE LATEST BROADCAST TECHNOLOGIES

ATSC 3.0 | ISDB-T | DVB-S2x...

SPECTRUM & BROADCAST ANALYZERS

AND PORTABLE ANALYZERS FOR IP ENVIRONMENTS

ATLAS | ATLAS IP

www.promaxelectronics.com

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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, OTT… 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, OTT, 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.

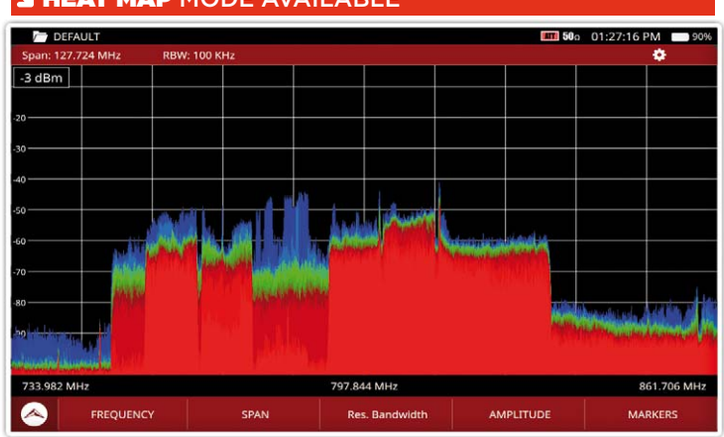
Technologies using S and/or C band are: Satellite teleports, VSAT ground networks, Radar, Terrestrial microwave links, Broadband Wireless Access (BWA) networks (LTE, Wi-Max, 5G, etc.).

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
- USER-DEFINABLE MARKERS
- 2 kHz TO 1000 kHz RESOLUTION FILTER
- DETECTION & MITIGATION OF TI TERRESTRIAL INTERFERENCE
- DIRECT C-BAND READINGS
- 5G INTERFERENCE DETECTION

HEAT MAP MODE AVAILABLE



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ALL-IN-ONE MULTIFUNCTION ANALYZER

- SPECTRUM ANALYZER
- TV ANALYZER
- IPTV ANALYZER
- ASI ANALYZER AND SDI ANALYZER
- OTT 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

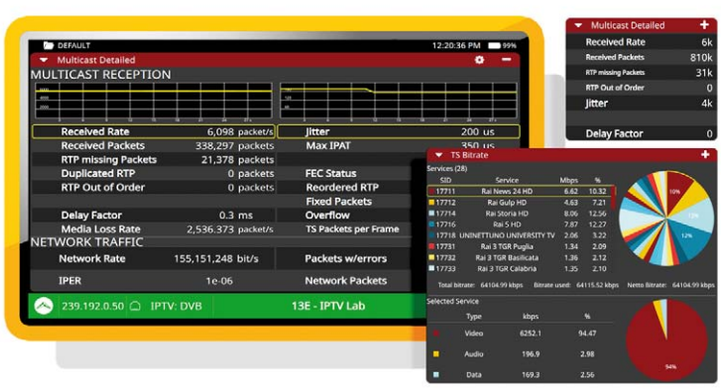
DRIVE TEST, FIBER OPTIC, IPTV... THE BROADCAST ANALYZER FOR STUDIO AND FIELD APPLICATIONS

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



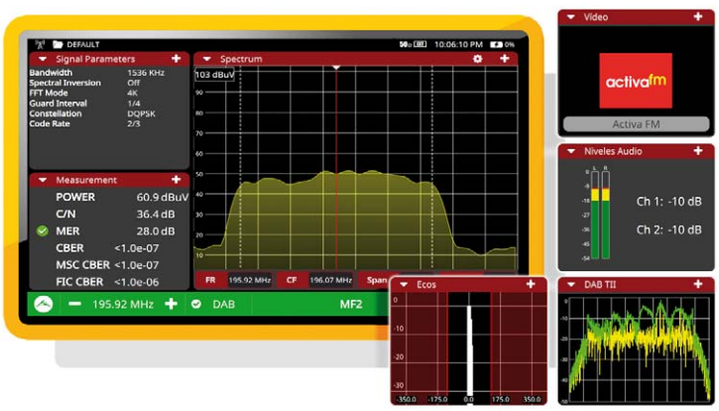
DOUBLE OPTICAL INPUT

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

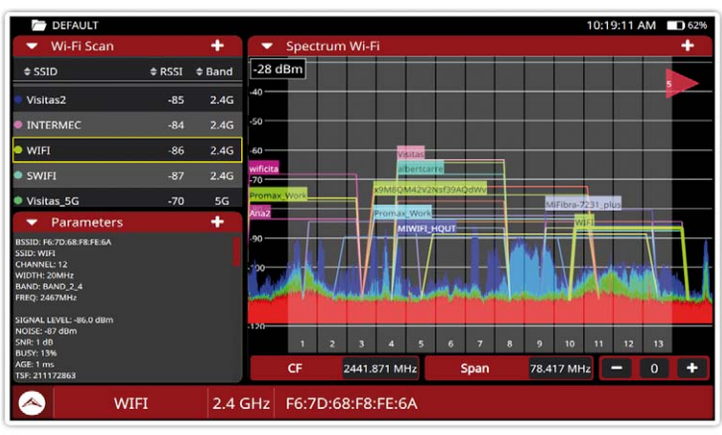
EXTEND YOUR 4G AND 5G NETWORK ANALYSIS. The 4G/5G option delivers **in-depth analysis across the entire FR1 band**, identifying and classifying all mobile channels based on their technology (4G or 5G), channel access method (TDMA, FDMA...), and distinguishing whether they are uplink or downlink channels. 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...

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

NETWORKS SPEED TEST



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/Tb 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.

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SPECIFICATIONS	ATLAS IP - PORTABLE ANALYZER FOR BROADCAST ENVIRONMENT	ATLAS NG - NEXT GENERATION SPECTRUM AND BROADCAST ANALYZER
BROADCAST STANDARDS		DVB-T, DVB-T2 (T2-base, T2-lite), ISDB-T/Tb (full seg / 1seg), 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 OUTPUTS	- ASI/SDI input and output (BNC-F, 75 Ω 3 Gbps) - SFP+ connector - HDMI™ output (v1.4b up to 3840x2160 pixels @30 Hz) - USB 2.0 master/device (Type C). Storage and remote commands - Ethernet: webControl and remote commands - IPTV input (RJ45) 10/100/1000 Mbps - Stereo output (jack 3.5 mm) - USB 3.0 host (A-type, USB-CDC devices) - CAM (DVB-CI, module input	*Also includes:* - Universal RF input (N-type, female 50 Ω) - Analogue audio/video input (jack 3.5 mm) - Optical input (FC/APC, female) - 1 PPS / 10 MHz reference input - Dual SIM slot (optional)
FUNCTIONS	- SMPTE ST2110 measurements (optional) - SRT measurements - 4K decoder - Screenshots - Service recording - Task planner - Signal monitoring - Remote control (webControl) - Video/Audio streaming - TS recording - TS analysis - IPTV multicast: measurement, decoding - Eye diagram (HD-SDI, 3G-SDI) - 8 GB internal memory, expandable via USB - OTT	*Also includes:* - Constellation diagram - LTE ingress test - Dynamic echoes analysis - StealthID (instant identification of tuning parameters) - PLS (Physical Layer Scrambling) - Ultra fast spectrum - MAX and MIN hold - FM RDS measurement and decoding - Datalogger - Beacon-Flyaways SNG and VSAT - Wideband LNB - WiFi - LTE 1.8 GHz - Field strength - Merogram - Spectrogram - MER by carrier - GPS (included) coverage analysis - ALP recording - Full band optical power measurement - SCAN + TILT - Shoulder attenuation - Network delay - DVB-2 MI analysis - Carrier Frequency Drift Test
SPECTRUM ANALYZER Spectrum analyzer mode TV mode Measurement margin Span (depending on band) Resolution bandwidths		From 5 MHz to 6 GHz From 5 to 1000 MHz (Terrestrial) / From 250 to 3000 MHz (Satellite) 1 ~ 130 dBµV (5MHz to 3GHz) / 10 ~ 130 dBµV (3 to 4.425GHz) 11 ~ 130 dBµV (4.425 to 6GHz) User-defined / 10 / 20 / 50 / 100 / 200 / 500 / 1000 / 3000 MHz / Full span 2, 10, 20, 30, 40, 100, 200, 1000 kHz
MEASUREMENT MODE (ATLAS NG ONLY) Frequency margin DVB-T (COFDM) DVB-T2 Base y Lite (COFDM) ISDB-T (COFDM) DVB-C (QAM) DVB-C2 (QAM) J83 Annex B (QAM) ATSC 1.0 (8VSB) ATSC 3.0 (COFDM) DVB-S (QPSK) DVB-S2 (QPSK, 8PSK 16/32 APSK) DVB-S2x (QPSK, 8PSK, 8/16/32/64/128/256 APSK/APSK-L) DSS (QPSK) PAL, SECAM and NTSC (analog TV) FM RDS radio FM RDS radio (advanced option) DAB/DAB+ radio (advanced option)		From 45 to 1000 MHz (terrestrial), from 250 to 3000 MHz (satellite). Frequency resolution 1 kHz. Power (20 dBµV - 130 dBµV), CBER, VBER, MER, C/N, Wrong packets, Link Margin Power (20 dBµV - 130 dBµV), CBER, C/N, LBER, MER, Link Margin, BCH ESR, Iteraciones LDP, Wrong packets Power (20 dBµV - 130 dBµV), CBER, VBER, MER, C/N, Wrong packets, Link Margin Power (20 dBµV - 130 dBµV), BER, MER, C/N, Wrong packets, Link Margin Power (20 dBµV - 130 dBµV), CBER, MER, C/N, LBER, BCH ESR, Iteraciones LDP, Wrong packets Power (20 dBµV - 130 dBµV), BER, MER, C/N, Wrong packets, Link Margin Power (20 dBµV - 130 dBµV), SER, VBER, MER, Wrong packets, C/N, Link Margin Power (20 dBµV - 130 dBµV), CBER, MER, Wrong packets, C/N, LBER, BCH ESR Power (35 dBµV - 127 dBµV), CBER, VBER, MER, C/N, Link Margin Power (35 dBµV - 127 dBµV), CBER, LBER, MER, Wrong packets, C/N, BCH ESR, Link Margin Power (35 dBµV - 127 dBµV), CBER, LBER, MER, Wrong packets, C/N, BCH ESR, Link Margin Power (35 dBµV - 115 dBµV), CBER, VBER, MER, C/N, Wrong packets, Noise margin Level, C/N, V/A (M/N/B/G/I/D/K/L) Level, C/N, RDS information MPX power, Frequency offset, Bandwidth, Freq. deviation (L, R, L+R, L-R, MPX, RDS, pilots), Level (L, R, L-R, L+R, MPX) Power, C/N, MER, CBER, MSC CBER, FIC CBER, FIB RATIO, Offset, Bandwidth
OPERATING MODES	IPTV multicast/unicast, SD/HD/3G-SDI, ASI-TS Streaming analyzer with SRT and OTT support	*Also includes:* Spectrum analyzer, WiFi 802.11 ac/a/b/g/n analyzer, 4G/5G telephony (optional)
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.	*Also includes:* 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 ACCESORIES	WiFi dongle, DC Adapter+cable, Car lighter adapter, Transport belt, Pouch, Transport case, Monopode	*Also includes:* GPS, A/V jack cable, WiFi antenna, RF adapters, GPS

OPTIONS		ATLAS IP	ATLAS NG
OP-006-PS	Optical fibre: Selective optical power meter + optical to RF converter		Available
OP-006-FM	Advanced measurements for FM radio		Available
OP-006-DAB	Advanced measurements for DAB/DAB+ digital radio		Available
OP-006-T	4G/5G measurements		Available
OP-006-OT	Optical SDI and ASI output	Available	Available
OP-006-OR	Optical SDI and ASI input	Available	Available
OP-006-XX	SMPTE ST2110 measurements	Available	Available

OPERATING MODES	*(Model dependant, please refer to table above)*
Spectrum analyzer	Power measurement, C/N, Frequency, max/min traces hold. Includes 4 delta markers with frequency and level measurement.
IPTV multicast/unicast	More than 20 measurements (including Jitter, Packet rate, Histogram + jitter, Inter Packet Arrival Time). Multicast. T2MI&BTS reception.
SD/HD/3G-SDI	3 Gbps input/output. Eye statistical diagram, CRC error detection, 16 AES3 audio channel monitoring, 1080p 60 pattern chart.
Streaming analyzer	SRT reception in caller, listener, and rendezvous modes. More than 12 metrics including RTT, latency, NACK packets, and received TS analysis.
WiFi 802.11 ac/a/b/g/n analyzer	Spectrum analyzer + WiFi dongle. RSSI, Access point occupancy, SNR, Noise
ASI-TS	TS, T2MI and BTS support
4G/5G telephony (optional)	Dual SIM. Uplink/Downlink bands indication over the spectrum. Measurements: RSSI, RSRP, RSRQ, SINR, SRXLEV.

DESIGN AND SPECIFICATIONS ARE SUBJECT TO CHANGES WITHOUT PRIOR NOTICE. 09/25

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