H30Evolution spectrum analyzer - Ready for the NEXTGEN TV

All the functions you need now on your smartdevice

H30Evolution is a field strength meter that combines the best features of a portable and compact equipment - distinctive of the H30 series - with revolutionary functionalities. Thanks to the innovative multiscreen system based on Wi-Fi/Bluetooth, the meter may be remotely displayed and controlled using any Android or iOS device or a PC, thus providing the flexibility and convenience of a wireless system.

In addition, to make the use of the smartphone even more natural, a universal bracelet is provided for devices up to 6".

H30Evolution is a lightweight, compact and robust equipment that includes a full range of tools and functionalities to successfully perform installation, maintenance and troubleshooting tasks in both analogue networks and digital networks with ATSC and QAM channels. Since it is a multi-standard equipment, the options may be updated by means of a license-based downloadable software, without the need for the equipment to be replaced.

Just as the rest of the meters fully designed and manufactured in Televes Corporation, H30Evolution takes advantage of the digital processing technology, and provides the user with a speed and mathematical accuracy equivalent to that of laboratory equipment.

Ref.	593585
EAN13	8424450219478

Other features

Complement	FULL: Meter + ATSC 1.0 / 3.0. + QAM + Wi-Fi and IPTV Analyzers + HEVC display
Standards included	ATSC 1.0 + QAM

Packaging info

Box	1 pcs.

Physical data

Net weight	982.00 g
Gross weight	1,400.00 g
Width	95.00 mm
Height	205.00 mm
Depth	52.00 mm
Main product weight	500.00 g

Highlights

- Professional RF signal analyzer: decoding and display of video and audio parameters of received ATSC 1.0 / 3.0 and QAM signals
- Multiscreen system with touch control: display the meter screen on a mobile device, and control the meter by touch gestures and buttons
- Wi-Fi and Bluetooth connectivity
- Web App to easily manage your meter from your smart device or PC
- Real-time digital processing
- Light-weight handheld meter
- User friendly interface
- Multi-standard, fully configurable; with Wi-Fi / IPTV analyzers and HEVC display available
- All measurements are displayed with a single button press, Pass/Fail indicators provided to reduce errors

Features

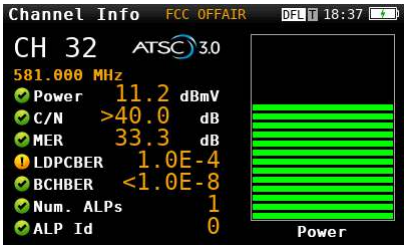
Multiscreen and remote control

Controllable from any Android or iOS device or a PC with H30Suite

The H30Evolution multiscreen system allows you to display the meter's screen on your smartphone or tablet to wirelessly control the meter or just for the sake of working with a larger screen.
The installer may wirelessly access the equipment at any time from anywhere in the installation (depending on the local network connection range), with the convenience of always using his/her own device.
Simply install the H30Suite App (ref. 100016) on your device and connect it to the Wi-Fi network generated by the meter (AP mode).

Ready for NEXTGEN TV

The best tool for ATSC 3.0 installation analysis (*)



H30Evolution provides a deep and detailed analysis of ATSC 3.0 signals. It also provides full analysis of ATSC1.0 and QAM signals, with the ability to decode and display the video and audio parameters of received RF signals.
(*) Optional feature depending on the model: Ref. 593280, that requires previous upgrading with all the optional features (Refs. 5932xx).

Multi Standard

Fully configurable equipment to meet your needs

H30Evolution is fully prepared to meet the specific needs of each individual user. It is a multi-standard equipment, ready to take measurements on the satellite band, but also on the terrestrial band channels. In order to meet the changing needs of individual users, the equipment allows them to easily add new options, with no need to send the meter back to the factory.

Wi-Fi and Bluetooth connectivity

Wireless access to the meter

Equipped with 2.4/5 GHz Wi-Fi and Bluetooth, the equipment allows a secure access through an Android or iOS device, or a PC. The web management application H30Suite (ref. 100016) may be used to check and export stored measurements, access to quality profiles, meter settings cloning, meter registration through a friendlier interface or real-time consultation of the user manual.

Interactive User Interface

Optimize the learning curve

Scrolling through the menu is now very easy, thanks to its single-level structure, which includes all the functions in a very intuitive way: better utility, higher operation speed, and maximum productivity. No function requires more than three successive button pushes to achieve the desired operation. You will not find any easier-to-use device, and will be able to surf the different functions with no need for a user manual.

Comprehensive Functionality

Pass/Fail indicators

A full range of functionalities such as Single-channel measurements, Constellation diagram, Spectrum analyzer, Service identification, Data logs, Channel plan auto-learning, and more.

Accuracy and Speed

Real-time digital processing

Designed to instantly obtain all the information about the signal in real time, it is a true milestone in field work. H30Evolution provides the required accuracy and speed to detect minor transient radiation, or spurious signals that could affect the system during signal reception.

100% Automatic

Signal detection

Fully automatic, it detects the parameters of different modulations with no need for configuration. H30Evolution will detect at once whether the input signal is analogue or digital, and will determine its constellation, symbol rate and other modulation parameters, providing an instant reading without any user intervention.

Rugged and Light-Weigh

Absolute reliability

Its exclusive casing made of double-injection rubber and polycarbonate plastic guarantees protection and durability. Weighing only one pound, H30Evolution is convenient to carry and use. You can slip it in your pocket or use its strap around your shoulder... You will barely notice it is there!

Made in Televes

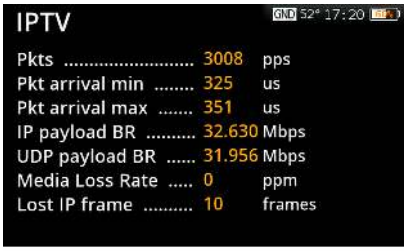
Your Quality Warranty

The H30Evolution is entirely designed by Gsertel, company within Televes Corporation, where our team of experienced and highly qualified telecommunication engineers managed to integrate digital processing in a handheld unit of 1lb of weight. Each H30Evolution includes more than 5,000 components and integrated circuits.

Functionalities

Services and IPTV Analyzer (*)

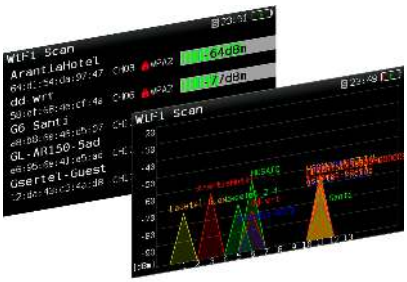
IPTV and RF services information



Provides demodulation and analysis of IPTV streams (both Unicast and Multicast), display both total bitrate and bitrate for each service. The relevant information for each service is: SID, VPID, AID, video profile, bit rate for both audio and video.
In addition, this option completes the RF measurements since all this information by service is analyzed as well for this type of signals.
For IPTV signals, specific protocol measurements (UDP/RTP) are also analyzed, such as UDP format, Media Loss Rate, Lost IP frames.
(*) Optional feature depending on the model: Ref. 593251

Wi-Fi Analyzer (*)

All bands (2.4 / 5 GHz)



This functionality allows a full analysis of the Wi-Fi band for automatic detection of all networks. Each of them is identified by name, and the power of the signal at the access point is also displayed. Two display modes are provided for the user to choose. The “list” mode provides a list of the detected networks with the associated data and power, while the “map” mode represents them on a dual-axis map: power vs. frequency.
(*) Optional feature depending on the model: Ref. 593250

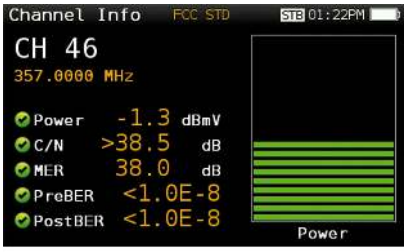
Pass/Fail Indicators

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.

Channel Information

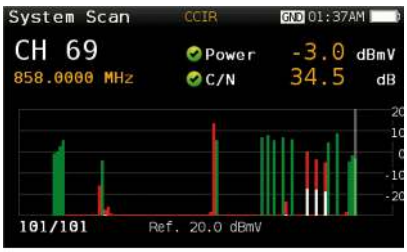
The less the better



Sometimes, taking a quick glance at one channel is all you need. The advanced H30Evolution single-channel measurement option automatically detects the channel type, displaying the audio and video levels, A/V and C/N for analogue signals, and power, C/N, and appropriate quality measures for each type of digital signal. All these measures are taken by means of one single button; at that point, all indicators will be activated and display the “Pass/Fail” condition based on the thresholds specified by the user. Easy-to-interpret results, even for junior technicians.

System Scan

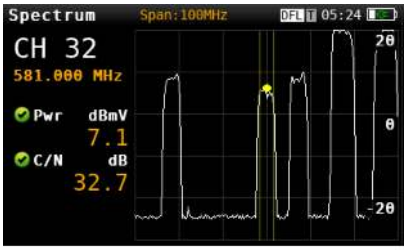
Monitored installation



Scan each existing analogue and digital channel in real time to determine the overall system frequency response. This function leverages the location-based thresholds to clearly show whether the signal levels meet the cable systems’ specifications with green, yellow and red bars. This feature provides an easy-to-understand, real-time view of the system, including the BER and MER values of the selected channel.

Spectrum Analyzer

From 5MHz to "full span“



H30Evolution spectrum analyzer provides a value range of 5, 10, 20, 50, 100, 200, 500 MHz and Full, as well as a reference level auto-adjust feature. Real-time processing speeds ensure the capture of any signal incidents. You will be surprised by the accuracy and the level of detail provided by this ultra-portable pocket spectrum analyzer. The ultimate tool for identifying and localising noise, interference, radiation, and any other signals that may be affecting the quality of the television signal distribution service.

MPEG

MPEG video and detailed information

Do you wish to know the contents offered on a DIGITAL channel? H30Evolution function MPEG will tell you. In addition to channel services display, you will get their key parameters: Service name, PID, resolution, audio types and figures, and NIT. A valuable help when troubleshooting your encoder configuration.

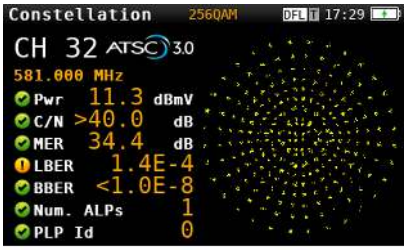
HEVC display (*)

Only available on the meter display screen

Supports HEVC H.265 compression format at Full HD resolution (1920 x 1080).
(*) Optional feature depending on the model: Ref. 593252

Constellation Diagram

Fine-tune your digitals



Constellation analysis is essential for determining the quality of digital signals. Constellation diagrams help detecting noise, jitter, interference and signal saturation, and all the variables that could impact signal quality, eventually leading to service suspension. By visually inspecting the size and shape of the dots in the constellation matrix, the technician will be able to easily identify the nature of the problem

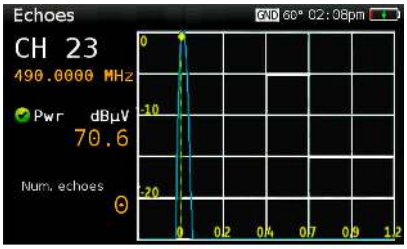
Capture Plan

Custom channel plans

Identify the channels in your distribution with the ultra-fast Capture Plan function, and from there build your own channel plan containing only the channels you are interested in. Furthermore, each channel will be displayed on a bar chart with the appropriate colour based on the selected quality threshold.

Echo

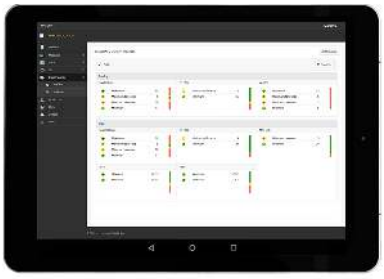
Optimal signal reception



In terms of terrestial signal reception, controlling the absence of any echoes that could jeopardize reception is crucial. H30Evolution displays the echoes of the received signal, allowing the installer to minimize them for optimal signal reception.

Web management App

Setting and exporting from your smart device



Due to the meter's connectivity, the web management App is easily accessed from your smart device. This App offers a user-friendly interface when querying and setting your meter's data. It may be used to export measurements, edit user profiles and channel plans that may also be exported and shared with other H30Evolution meters.

Datalogs

Save and download

While you are taking measurements or looking for possible problems, you can save sample signal parameters for further in-depth analysis or just for record and use in your reports. It can also prove to be a useful tool for training purposes.

Always updated

Automatic detection of new software versions

The meter automatically detects if there is a new software version when it connects to the internet (Wi-Fi, Ethernet). To notify that new software is available, an icon in the upper right part is activated without interrupting the user's work. The system update can be accessed on the settings menu.

If the meter is not connected to the internet, it can also be updated using a PC (USB port) where the software version was previously downloaded.

Technical specifications

H30Evolution	
Mechanical Specifications	
Display	2.8” TFT 400 x 240 full color
Weight	510 g (1.124 lb)
Dimensions	175x100x52 mm / 6.9x3.9x2 in(HxWxD)
Power Source	Input: 100-240V~ 50-60Hz Output: 12VDC, 3A
Battery	Li-ion (7,2VDC, 2300mAh)
Operating Time	>4 hours
Operating Temperature	23ºF to 104ºF
Storage Temperature	-4ºF to 158ºF
Humidity	5% to 95% non-condensing
Ruggedness	Survives drops from 1 m (3.3 ft) onto concrete on all sides
Interfaces	USB 2.0 to download Datalogs and software upgrades
Storage capacity	400 MB (internal) for measurements
Power-up time	<10 seconds

Technical Specifications			
		593581	**593585**
Frequency			
Range		5-1002 MHz (depending on the function)	
Resolution		125 kHz	
Tunning		Frequency or channel	
Spectrum analyzer			
Span		5, 10, 20, 50, 100, 200, 500 MHz and Full span	
Scale		5 and 10 dB/div	
Hold mode		OK	
Reference level (automatic and manual)		OK	
Digital Measurements ATSC 3.0 [Modulation: OFDM]			
MPEG Image		Upgrade 593280	OK
Power	From -15 to 50 dBmV (45-110 dBµV)	Upgrade 593280	OK
	From -35 to 60 dBmV (25-120 dBµV)	Upgrade 593280 + Upgrade 593235**	Upgrade 593235**
MER	Up to 38 dB	Upgrade 593280	OK

LDPCBER*	1.0E-2 – 1.0E-6	Upgrade 593280	OK
BCHBER*	1.0E-3 – 1.0E-8	Upgrade 593280	OK
C/N	Up to 40 dB	Upgrade 593280	OK
Constellation		Upgrade 593280	OK
Echoes		Upgrade 593280	OK
Digital Measurements ATSC 1.0 [Modulation: 8VSB]			
MPEG Image		OK	OK
Power	From -15 to 50 dBmV (45-110 dBµV)	OK	OK
	From -35 to 60 dBmV (25-120 dBµV)	Upgrade 593235**	Upgrade 593235**
MER	Up to 38 dB	OK	OK
Pre-BER	9.9E-2 – 1.0E-6	OK	OK
Post-BER	1.0E-3 – 1.0E-8	OK	OK
Constellation		OK	OK
Digital Measurements QAM [Modulations: 64QAM, 256QAM]			
MPEG Image		OK	OK
Power	From -15 to 50 dBmV (45-110 dBµV)	OK	OK
	From -35 to 60 dBmV (25-120 dBµV)	Upgrade 593235**	Upgrade 593235**
MER	Up to 38 dB	OK	OK
Pre-BER and Post-BER	1.0E-3 – 1.0E-8	OK	OK
C/N	Up to 40 dB	OK	OK
Constellation		OK	OK
Analog Measurements			
Level	From -35 to 65 dBmV (25-125 dBµV)	OK	OK
C/N	Up to 45dB	OK	OK
V/A		OK	OK
Measurements and functions			
Wi-Fi Analyzer		Upgrade 593250	OK
IPTV Analyzer		Upgrade 593251	OK
HEVC video display		Upgrade 593252	OK
System Scan		OK	OK
Learning Plan		OK	OK
Terrestrial channel plans		CCIR, FCC STD, FCC	
User channel plans		OK	
Units		dBµV, dBmV, dBm	

Preamp powering	13, 18, 24 Vdc (max. current 475, 370, 140 mA)

*Notes:

LDPCBER is the BER measurement before LDPC correction.

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

**Ref. 593235: Free upgrade when registering the equipment.