

# ATSC 3.0 Handheld Signal Level Meter SLM 1530



## OVERVIEW

The ultra-portable SLM 1530 ATSC 3.0 Handheld Signal Level Meter is the perfect solution for broadcast professionals testing all-new ATSC 3.0 equipment and installations. Beyond the ATSC 3.0, it includes full support for legacy ATSC 1.0 and also QAM-B cable signals making it an all-around tool for testing, installation and maintenance.

This lightweight meter is packed with big features including in-depth RF measurements such as signal level, MER, BER, S/N and constellation diagrams. It also has a powerful spectrum analyzer function available for single channel all the way to full spectrum views. The built-in pass/fail metrics make it easy to quickly identify issues in any system.

In addition to the RF measurements, the SLM 1530 includes the ability to fully decode and display in full motion and color the video and audio components of received RF signals. This provides at-a-glance assurance that the RF system is working. The included webUI and Ethernet connectivity brings remote control, log download and simple firmware updates to handle the constantly evolving ATSC 3.0 settings.

The SLM 1530 is designed to meet the rigors of everyday field use with a rugged display that is both dependable and viewable even in the brightest sunlight. It also includes a 5 hour battery and a padded nylon case with all the straps and handles a user could want.

## APPLICATIONS

- Testing and maintenance of new ATSC 3.0 and other digital RF equipment, such as modulators, receivers and decoders
- Professional installation and troubleshooting of digital TV broadcasts, cable TV digital or analog reception and distribution paths
- Antenna alignment for private TV/RF distribution systems in schools, campuses and hospitality networks



## KEY FEATURES

- Professional ATSC 3.0 hardware demodulator built in
- Ultra-portable handheld form factor with 5-hour battery
- 2.8" full-color LCD screen for easy navigation and results viewing
- Full motion video and audio decoding of received channels
- Digital RF measurements including average power/level, pre/post BER, MER, spectral analysis and constellation
- Built-in webUI for remote control, remote measurements, firmware updates and datalog retrieval

# SPECIFICATIONS

## ATSC 3.0 Handheld Signal Level Meter - SLM 1530

### GENERAL SPECIFICATIONS

Display:	2.8" TFT 400 x 240 full color
Weight:	1.12 lbs. (510 g)
Size:	6.9 x 3.9 x 2 in / 175 x 100 x 52 mm (H x W x D)
AC Adaptor:	Input: 100-240 VAC 50-60Hz; Output: 12 VDC, 2A
Battery:	Lithium Ion smart battery (7.2 VDC, 2600 mAh)
Operating Time:	> 5 hours
Operating Temperature:	23°F to 104°F (-5°C to 45°C)
Storage Temperature:	-4°F to 158°F (-20°C to 70°C)
Humidity:	5% to 95% non-condensing
Ruggedness:	Survives 1 m (3 ft) drop to concrete on all sides
Interfaces:	RJ45 10/100 Ethernet interface for remote control and measurements Wi-Fi and Bluetooth for datalog retrieval and automatic software updates (Coming Soon with software update!)
Storage:	3 GB (internal) for measurements
Power up time:	<10 seconds

### TECHNICAL SPECIFICATIONS

Frequency Range:	5 MHz to 1002 MHz
Resolution:	10 kHz
Tuning:	By frequency or channel
Input/Impedance	75Ω F-type connector, replaceable

### DIGITAL MEASUREMENTS

Power:	-30 to +60 dBmV
C/N:	up to 45 dB
MER:	up to 40 dB
BER:	Included
Accuracy:	±2 dB
Resolution:	0.1 dB

### QAM-B INPUT

Demodulation:	ITU-T J.83B
Modulations:	64 and 256 QAM
Symbol Rate:	5.056941, 5.360537, 5.6 Msym/s
DPE filter:	On / Off
Pre-BER and Post-BER:	1.0E-3 to 1.0E-8

### ATSC 3.0 INPUT

Demodulation:	ATSC 3.0
Bandwidth:	6, 7 and 8 MHz
FFT Size:	8, 16 and 32K
Features:	Mandatory Modulation and Coding Combinations All guard interval pattern Single and multiple-PLPs SISO and MISO transmission TDM, FDM and LDM (Layered Division Multiplexing) ALP (ATSC Link Layer Protocol) EAS (Emergency Alert System) SLT service name extraction Impulse Response test

### ATSC 1.0 INPUT

Demodulation:	ATSC 1.0
Bandwidth:	6 MHz
Features:	8VSB modulation 2/3 code rate TVCT service name extraction

### SPECTRUM ANALYZER

Span:	2.5, 6.25, 12.5, 25, 62.5, 125, 250, 500 MHz and Full
Scale:	5 and 10 dB/div
Features:	Automatic and manual reference level

### CONSTELLATION

Display:	16, 32, 64, 128, 256, 1024 and 4096 QAM
Zoom Capability:	Yes

### CHANNEL EQUALIZER

Graphical representation: Yes

### SYSTEM SCAN

Channels:	User-selectable zoom up to ALL CHANNELS (analog and/or digital)
Measurements:	Level bar representation and C/NBER/MER of the selected channel

### TILT

Channels:	1 to 16 or ALL CHANNELS (analog and/or digital)
Selectable markers:	Yes

### HUM

Range:	2 to 5%
Accuracy:	±1%

### OTHER INCLUDED FEATURES

- Web access with screen mirroring
- Service info including TSID, service name, PID and encode type
- Real-time video and audio decoding of formats supported by ATSC 1.0 and ATSC 3.0
- ATSC 3.0 video and audio descrambling (Future feature, where applicable)
- Factory and customizable Pass/Fail indicators
- Factory and customizable channel plans

### INCLUDED ACCESSORIES

- Protective nylon case
- 100-240 VAC AC adaptor
- 12 VDC car charger
- Field-replaceable F connector