

# ST-5810

## Universal Digital TV Signal Level Meter

ST-5810 is the new signal level meter presented by SatLink. With cutting edge technologies and advanced platform, ST-5810 supports universal digital TV standards to analyze signals in real time, including spectrum analysis, demodulation parameters, and constellation.

Patented real time spectrum analysis methodology is used to provide precise spectrum scan and analysis functions over Satellite TV, Terrestrial TV, Cable TV and Over-The-Air TV signals in all frequency range. dCSS MDU and DisEqc applications are also supported.

ST-5810 equips with capacitive touch panel and high-resolution LCD screen. Together with intuitive graphical user interface and easy navigation user scenarios, the learning curve of operating ST-5810 is minimal.

## KEY FEATURES

- Compatible with all digital TV standards - DVB-S/S2, DVB-T/T2, ISDB-T/S/C, ATSC 1.0/3.0, DVB-C/C2, J.83 A/B/C
- Fast and reliable signal data processing
- Patented dual-frequency spectrum scan and capture module
- All-in-one digital TV installation qualification
- Specific details of measurement statistics for channel quality
- Constellation for all kinds of digital TV signals
- Automatic channel discovery to build regional channel plan
- Pre-loaded channel plans for all TV standards
- Satellite rotor DisEqc control and dCSS MDU application
- Antenna angle calculation and LNB power compensation
- Audible tone to reflect signal strength
- High-resolution LCD display
- Capacitive touch panel with multi-touch operation
- Intuitive graphical user interface and easy navigation user scenarios
- High capacity lithium battery for long operation and storage hours
- USB interface for firmware upgrade and file transfer
- Built-in parameters for global satellites and transmitters



# ST-5810

## Universal Digital TV Signal Level Meter

### TECHNICAL SPECIFICATIONS

DTV Standards Compliance	
DVB-S	ETSI EN 300-421 v1.1.2
DVB-S2	ETSI EN 302-307 v1.4.1
DVB-C	ETSI EN 300-429 v1.2.1
DVB-C2	ETSI EN 302-769 v1.2.1
DVB-T	ETSI EN 300-744 v1.6.1
DVB-T2	ETSI EN 302-755 v1.3.1
ISDB-T	ARIB STD-B31 v2.2
ISDB-S	ARIB STD-B20
ISDB-C	ITU-T J.83, J.183, JCTEA STD-002
J.83A/B/C	ITU-T J.83 v3.0
ATSC 1.0	ATSC A/53
ATSC 3.0	ATSC A/321, A/322, A/330

Spectrum Analysis	
Band Mode	Satellite or Terrestrial/Cable
Min. Resolution	10 kHz
SPAN Range	Satellite: 25 to 1200MHz; Terrestrial/Cable: 25 to 950MHz
Input Frequency Range	Satellite: 900 to 2150MHz; Terrestrial/Cable: 50 to 1000MHz
Trace Mode	Auto, Max Hold
Frequency Display Mode	TP Frequency or IF Frequency
Frame Speed	10 frames/sec. (typical)
Attenuator	0 to 60dB
Average	1 to 20
Marker	2 Markers
dB/Div Resolution	5 to 20dB
Unit	dBm or dBuV
Measurement	Run / Pause Switchable

General	
LCD	3.95", 480 x 3RGB x 320, 16-bit Color
Touch Panel	Capacitive Touch
Active touch area	55.68mm x 83.52mm
Power Adapter	12VDC / 1A
Battery	2Cell / 2500mAh
Power Consumption	8W max.
Dimension (W x D x H)	8.27" x 3.07" x 1.06" (210 x 78 x 27mm)
Interface	USB 2.0 x 1
Function	Firmware Upgrade; Satellite/TP and Terrestrial/Cable Channel Plan Modification

Cable	
DVB-C2	
Input Frequency	50MHz to 900MHz
Bandwidth	6MHz, 8MHz
Guard Interval	1/64, 1/128
Modulation	16, 64, 256, 1024QAM
Code Rate	2/3, 3/4, 4/5, 5/6, 8/9, 9/10
Data Slices	Types 1/2
Interleaving Modes	4, 8 Symbols or Best-Fit Time
DVB-C	
Input Frequency	50MHz to 900MHz
Symbol Rate	1.7M to 7.2M symbols/sec.
Roll-Off Factor	0.15
Modulation	16, 32, 64, 128 and 256QAM
J.83 A/B/C	
Symbol Rate	A: 5.056941, B: 5.360537, C: 5.6M symbols/sec.
Roll-Off Factor	0.18, 0.12
Modulation	64, 256QAM

ATSC	
ATSC 1.0	
BandWidth	6MHz
Modulation	8VSB
Code Rate	2/3
ATSC 3.0	
BandWidth	6MHz, 7MHz, 8MHz
FFT Size	8K, 16K, 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)
	ATSC Link Layer Protocol (ALP) Output
	Emergency Alert System (EAS) Flag Output
Channel Bonding	

Satellite	
DVB-S/S2	
Connector	75Ω F
Input Frequency	950 to 2150MHz
Input Level	-80 to -10dBm
LNB Power Supply	14V / 18V / OFF, I <sub>max</sub> 650mA
Port Switch	DisEqc 1.0, DisEqc 1.1
Motor Control	DisEqc 1.2, USALS
Symbol Rate	1M to 45M symbols/sec.
Roll-Off Factor	0.35 / 0.25 / 0.2
Modulation	DVB-S2: 8PSK/QPSK; DVB-S: QPSK
Code Rate	DVB-S2 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
	DVB-S2 QPSK: 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 4/5, 5/6, 8/9, 9/10
	DVB-S QPSK: 1/2, 2/3, 3/4, 5/6, 7/8
Satellite Database	Europe, Asia, American, Atlantic
dCSS	
Band	EN50494 8UB, EN50607 32UB
UB Center frequency	Preset or User Defined
Satellite Number	EN50494 2-Satellite, EN50607 4-Satellite
Pin Code	✓

Terrestrial	
DVB-T2	
Input Frequency	50MHz to 900MHz
Bandwidth	1.7MHz, 5MHz, 6MHz, 7MHz, 8MHz
FFT Size	1K, 2K, 8K, 4K, 16K, 32K
Modulation	16, 32, 64, 128, 256QAM
Code Rate	1/2, 3/5, 2/3, 3/4, 4/5, 5/6
PLPs	Single or Multiple PLPs
T2-Lite Profile	✓
SISO/MISO Transmission	✓
DVB-T	
Input Frequency	50MHz to 900MHz
Bandwidth	6MHz, 7MHz, 8MHz
FFT Size	2K, 8K
Modulation	QPSK, 16, 64QAM
Code Rate	1/2, 2/3, 3/4, 5/6, 7/8
ISDB-T	
Input Frequency	50MHz to 900MHz
Bandwidth	6MHz, 7MHz, 8MHz
FFT Size	2K, 4K, 8K
Guard Interval	1/4, 1/8, 1/16, 1/32
Modulation	QPSK, 16, 64QAM
Code Rate	1/2, 3/5, 2/3, 3/4, 4/5, 5/6
ISDB-S	
Symbol Rate	28.86M symbols/sec.
Roll-Off Factor	0.35
Modulation	BPSK, QPSK, TC8PSK
Code Rate	BPSK: 1/2
	QPSK: 1/2, 2/3, 3/4, 5/6, 7/8
	TC8PSK: 2/3
ISDB-C	
Symbol Rate	5.274M symbols/sec.
Roll-Off Factor	0.13
Modulation	64QAM, 256QAM
Features	Transport Streams Multiplexing Frame (TSMF) Channel Bonding

### Ordering Information

#### ST-5810

base unit with single or multiple standards

#### Satellite

DVB-S/S2

#### Cable

DVB-C/C2 or J.83 A/B/C

#### Terrestrial

DVB-T/T2 or

ISDB-T or ISDB-S or ISDB-C or

ATSC 1.0/3.0