

# S7000 TV Analyzer

## Main Features

- All standards in one: QAM(J.83A/B/C), 8VSB, DVB-T/H/T2, DVB-S/S2
- Digital/Analog TV and Satellite TV analysis
- MPEG2 Transport stream analyzer and monitoring via TS-ASI input & RF input
- Fast spectrum analysis with 5 ~ 2150 MHz frequency span
- DSP Technology to support different Video decoding: MPEG-2, MPEG-4 and H.264 for 1080i, 720p and 576i, support PAL/NTSC/SECAM color system
- Support SD&HD Video format
- DVB-CI module (Conditional Access) for encrypted channels
- TS-ASI input and output
- TS record and TS replay
- IPTV analysis option
- GPS option
- HDMI, LAN and USB interface
- Easy to use
- High resolution 7" TFT LCD with bright display for indoors and outdoors use
- W245×H194×L105, light weight.
- Working time > 5 hours (battery)

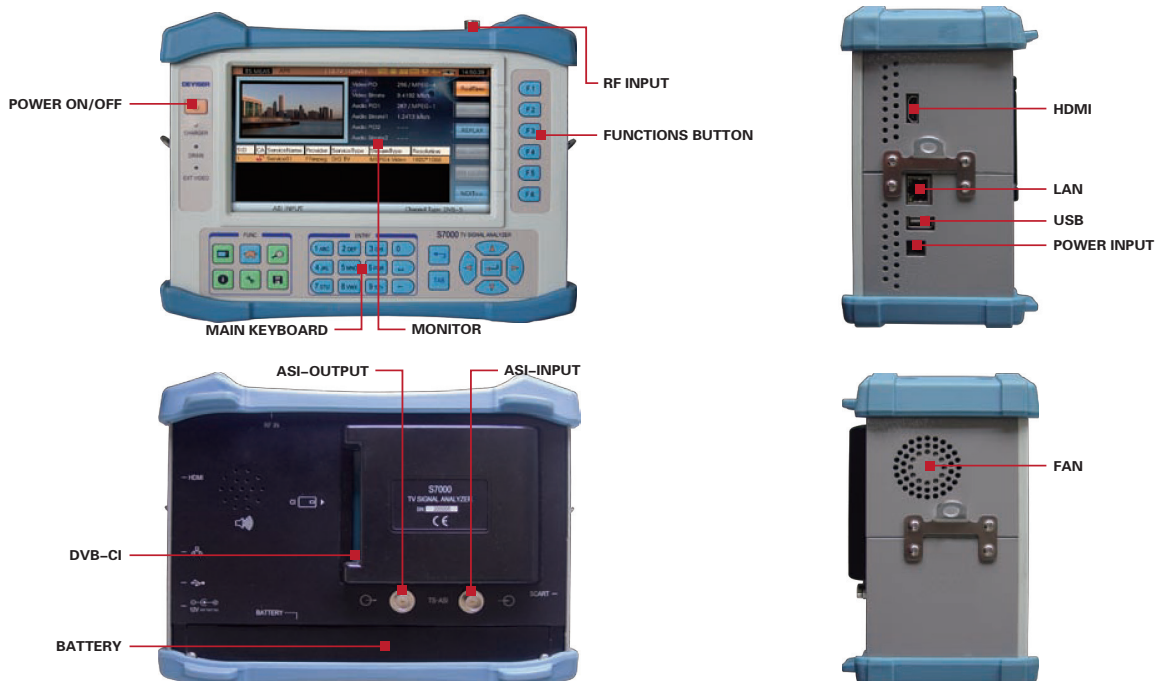


***ALL IN ONE***

- Digital TV Analyzer: DVB-C/T/H/T2/S/S2**
- Video decoder: MPEG2/4/H.264, SD/HD**
- Handheld TS Analyzer**
- Spectrum Analyzer**
- GPS**

## Model Guide

Module	Configuration
S7000	DVB-C/T/H/S/S2/8VSB
Options	CI/TS analyzer/GPS/DVB-T2/DTMB/IPTV



**TV Monitoring**

S7000 provides analog and digital TV monitoring. It supports different video decoding with DSP Technology: MPEG-2, MPEG-4 and H.264 for 1080i, 720p and 576i, and supports PAL/NTSC/SECAM color system. It supports SD&HD video format and CAM module (Conditional Access) for encrypted channels.



MPEG4 HD for 1080i Decode

**Friendly GUI and Easy to Use**

S7000 has windows style main menu. It is very easy to operate the analyzer with navigation keyboard, even without the operate manual.



TV Main Menu



Satellite Main Menu

**Spectrum Measurement**

S7000 has spectrum analysis function. The sweep span covers TV& Broadcasting signal(5-1050 MHz) and Satellite IF signal (950-2150 MHz ).



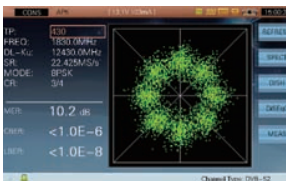
TV Signal Sweep



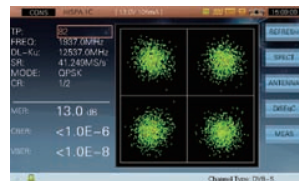
Satellite Signal Sweep

**DVB-S/S2 Signal Analysis**

S7000 supports DVB-S/S2 standard and provides Power level, MER, BER, constellation measurement.



DVB-S2 Constellation



DVB-S Constellation



DVB-S/S2 Signal Measurement



Display Max. 12 Transponder Signals' quality to Align Dish Antenna

**DVB-T/T2 Signal Analysis**



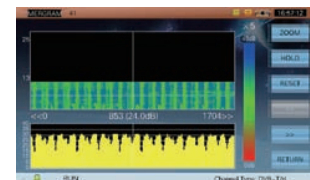
DVB-T signal measurement



DVB-T constellation



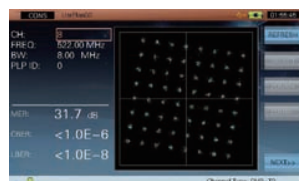
DVB-T Echo pattern displaying to locate SFN interference



DVB-T MER versus carriers



DVB-T2 signal measurement



DVB-T2 constellation



DVB-T2 Echo pattern displaying to locate the SFN interference

# S7000 TV Analyzer

## DVB-C Signal Analysis

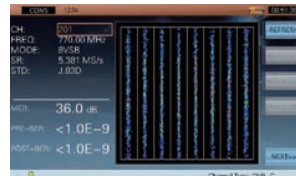
S7000 supports J83 A/B/C/D standard and provides Power level, MER, BER, constellation measurement. The EVS tool is helpful to find the interference signal under the QAM mask.



QAM signal quality measurement



QAM constellation measurement



8VSB signal analysis



EVS measurement

## Remote Feeding and Control Signal Setting

S7000 provides feeding power 5/13/15/18/24V and Max. power is 5W. The 22 kHz control signals is compatible with DiSEqC 1.2 and SaTCR.



## TS Analysis and Monitor

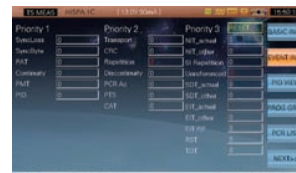
S7000 is a handheld TS analyzer. It provides TR101 290 3 level monitoring and list PSI/SI and program PID of transport stream. S7000 also lists the details of all programs running in a TV network or a transponder. The TS is from RF signal or TS-ASI input. S7000 has 8GB hard disk to save TS file and can replay and analysis TS file.



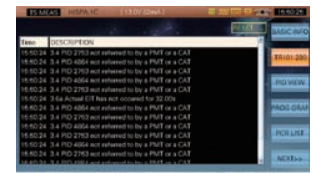
Programs Decode Monitoring and List



Basic Information Of TS



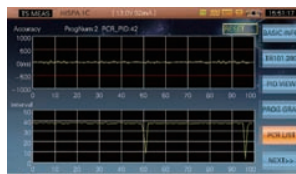
TR101 290 Three Level Monitoring



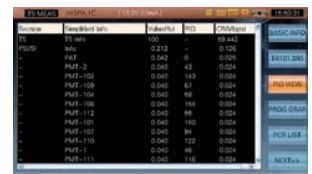
TR101 290 Monitoring Error Event List



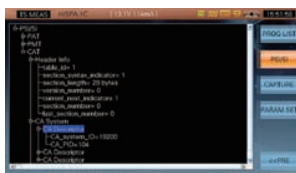
PCR Interval and PCR Accuracy Monitoring



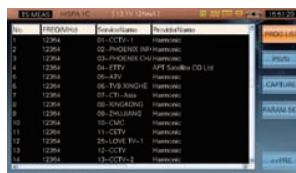
Program Information



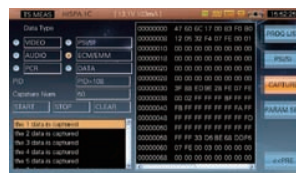
PID List



PSI/SI Tree List



EPG for a Transponder or TV System



PID Capture



Limit Settings for TR101 290 Monitoring

Specifications

<b>Spectrum Analyzer</b>	
Frequency Range	5 MHz ~ 1050 MHz (TV), 950 MHz ~ 2150 MHz (Satellite)
Frequency Span	1 MHz ~ 1045 MHz (TV), 10 MHz ~ 1200 MHz(Satellite)
Frquency Step	10 kHz (TV), 1 MHz (Satellite)
Resolution Bandwidth (-3 dB)	30 kHz, 100 kHz, 300 kHz, 1 MHz, 3 MHz (TV) 1 MHz, 3 MHz Auto Select (Satellite)
Level Measurement Range	10 dBμV ~ 120 dBμV (TV) 30 dBμV ~ 120 dBμV (Satellite)
Accuracy Of Measurements	<1.5 dB
Measurement Detector	Peak, sample, AVG (TV) , No Select for Satellite
Reference Level	30 dBμV ~ 120 dBμV
Markers	2 (TV) 1 (Satellite)
<b>Analogue TV Measurement</b>	
Standards	B/G, I, D/K, L/L', M/N
Colour Standards	PAL, SECAM, NTSC
Frequency Step	10 kHz
Hum Measurement	> 50dB
C/N	> 50dB
Level Measurement Range	30 dBμV ~ 120 dBμV
Accuracy Of Measurements	< 1.5 dB
Level Resolution	0.1 dB
<b>Digital CATV Measurement</b>	
Modulation Type	16/32/64/128/256 QAM ITU-T J.83 ANNEX A/B/C
Symbol Rate	4.0 MS/s ~ 7.0 MS/s
Power Level Range	30 dBμV ~ 110 dBμV
Level Resolution	0.1 dB
Power Level Accuracy	±1.5 dB(C/N > 20 dB)
MER Measurement	~40 dB
MER Accuracy	±2.0 dB
BER	1E-3 ~ 1E-9
Constellation	√
<b>DVB-T/H Measurement</b>	
Modulation Type	QPSK, 16 QAM, 64 QAM
Power Level Range	25 dBμV ~ 110 dBμV
Level Resolution	0.1 dB
Power Level Accuracy	±1.5 dB (C/N >20 dB)
MER Measurement	> 30 dB
MER Accuracy	±2.0 dB
CBER/VBER	√
Constellation	√
MER Versus Carriers	√
Echo Pattern	√
<b>DVB-T2 Measurement</b>	
Modulation Type	QPSK, 16 QAM, 64 QAM, 256QAM
Power Level Range	25 dBμV ~ 110dBμV
Level Resolution	0.1dB
Power Level Accuracy	±1.5 dB(C/N >20 dB)
MER Measurement	>30 dB
MER Accuracy	±2.0 dB
CBER/LBER	√
Constellation	√
Echo Pattern	√
<b>ATSC Measurement</b>	
Modulation Type	8 VSB
Power Level Range	25 dBμV ~ 110 dBμV
Level Resolution	0.1 dB
Power Level Accuracy	±1.5 dB(C/N >20 dB)
MER Measurement	>35 dB
MER Accuracy	±2.0 dB
BER	√
Constellation	√
<b>DTMB Measurement</b>	
Carriers	C=1, 3780
Power Level Range	25 dBμV ~ 110 dBμV
Level Resolution	0.1 dB
Power Level Accuracy	±1.5 dB (C/N >20dB)
MER Measurement	>28 dB
MER Accuracy	±2.0 dB
BER	√

Constellation	√
Echo Pattern	√
<b>DVB-S/S2 Measurement</b>	
Modulation Type	QPSK, 8PSK
Symbol Rate	2 - 45 MS/s (DVB-S) 1 - 45 MS/s (QPSK DVB-S2) 1 - 45 MS/s (8PSK DVB-S2)
Power Level Range	40 - 110 dBμV
Level Resolution	0.1 dB
Power Level Accuracy	±1.5 dB (C/N>20dB)
MER Measurement	> 25 dB
MER Accuracy	±2.0 dB
BER	DVB-S (CBER/VBER) DVB-S2 (CBER/LBER)
Constellation	√
<b>Video/Audio Decoder</b>	
Video	MPEG1/2/4, H.264
Video Resolution	1080i, 720p and 576i
Audio	MPEG1/2/4, AAC
CAM Module	EN50221 (DVB-CI) PCMCIA interface
TS-ASI Input And Output	√
TS Record	√
<b>TS Analyzer</b>	
<b>En 50083-9(DVB SPI, ASI)</b>	
DVB-ASI Interface	75 Ω BNC
DVB-ASI Clock	270 MHz
DVB-ASI Max Data Rate	0 to 72 Mbps
DVB-ASI Output Signal Level	1.0 Vp-p nominal
DVB-ASI Return Response	> 15dB
DVB-ASI Input Level	800 mV +/- 10%
Realtime Decoder	Display the real television pictures (through CA system). Including program numbers, program names, provider information, video & audio PIDs
TR101290 Monitor	TR101 290 three levels real time monitor
Base Information	Count the PIDs percent according to the type of the streams. Videos, Audios, PSI/SI, Null Packages
PID List	Display all the PIDs in current stream
Program Information	The detail infos about a program if it isn't be encrypted. The video resolutions and audio compress rate.
PCR Monitor	Calculate PCR interval and PCR accuracy
PSI/SI List	Display the PSI/SI infos by tree view. Including PAT,PMT,C AT,(NIT,SDT,RST,TDT,EIT options)
Program Info	EPG
PID Capture	Capture a specified PID by it's type: Video, Audio, PSI(PA T,PMT,NIT,TDT,RST,SDT,EIT) etc. And display the data in HEX format
Transport Stream Record and Replay	<2 GB (udisk) for TS record and TS Replay
<b>Interface</b>	
RF Input	75 Ω F
<b>HDMI Output</b>	
USB	1 USB 2.0
LAN	1 10/100 M
DVB-CI	1 PCMCIA
TS-ASI Input/Output	2 75 Ω BNC
DC Supply Input	12 V / 5 A
GPS Input	USB
<b>General</b>	
Display	7 inches TFT LCD 800 × 480 pixels
AC/DC Adapter	AC 100 - 240 V/50-60 Hz DC 12 V/5 A
Battery	Li-ion, 7.4 V/13 Ah
Charge Time	Around 5 Hours
Working Time	>5 Hours
Remote Feeding	5/13/15/18/24 V, Max. 5 W
22 kHz Control Signals	DiSEqC 1.2 and SaTCR
Dimension (W×H×L)	245 mm × 194 mm × 105mm
Weight	Around 2.8 kg
Working Temperature	-10 ~ +50 °C
Storage Temperature	-20 ~ +70 °C