

# Portable Transport Stream Analyzer SPA-11P

## Description

SPA-11P Portable Transport Stream Analyzer, is a powerful and portable DVB Transport Stream processing equipment. It has one TS input interface(ASI), one TS output interface (ASI), one RF input interface, one RF loop-out interface and a fast 100base-T Ethernet interface connected with computer network interface. Combined with software run on the host computer, it provides powerful functions such as real-time transport stream analysis, RF signal measurement, data broadcast analysis, transport stream recording, off-line TS file analysis, TS file transmission and TS decoding. As portable equipment, it can work with all kinds of computers such as laptop, desktop and server. It is easy to use and configure with high stability and performance.



## Feature

- ▶ Real-time monitoring and analyzing on transport stream
- ▶ Detailed Offline analysis on TS file
- ▶ Recording Transport Stream to hard disk (support ASI signal or RF signal)
- ▶ General view of all the EPG status
- ▶ Complete analysis on PSI/SI information as well as content of descriptor
- ▶ Recording mode: synchronous, original and PID selected
- ▶ DVB RF and ASI input port
- ▶ Measuring RF signal parameters: Constellation, Level, MER, EVM, BER, SNR, etc.
- ▶ Analysis on data broadcast (support Data Carousel and Object Carousel)
- ▶ Video and Audio decoding
- ▶ Remote monitoring and remote control
- ▶ Automatically loop-out Transport stream through RF/ASI interface
- ▶ Demodulating RF signal(support DVB-C to ASI signals and being sent out through ASI Output Interface)
- ▶ TS files can be intercepted

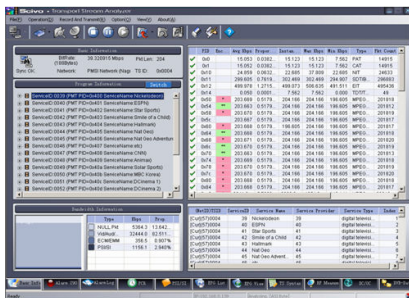


## Function

- ▶ Analysis on TS and network information
- ▶ TR101290 error detecting
- ▶ PCR precision and interval statistical analysis
- ▶ Analysis on EPG in detail about its event including EIT act/other and EIT present/following/schedule
- ▶ Display EPG dynamic changes
- ▶ Monitoring CA control word
- ▶ Measuring RF signal parameters: Constellation, Level, MER, EVM, BER, SNR, etc.
- ▶ Complete analysis on PSI/SI information as well as content of descriptor
- ▶ Time interval, error Stat. and status of PSI/SI
- ▶ Display dynamic change of PSI/SI
- ▶ Log files can be automatically saved
- ▶ Page information can be manually output

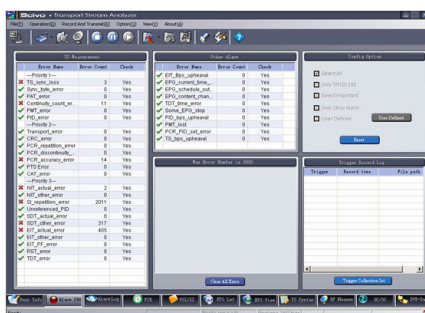
# Detailed specification

## Basic Information



- Program components of TS
- Program bandwidth display
- Program components of TS, PID category, current data rate, average data rate, maximum data rate, minimum data rate and the proportion of TS information
- Monitoring CA system control word
- Network ID, TS ID, current data rate, packet length
- PID amount, program amount
- Titles, providers, types of all the programs inside the current network

## Error Alarm

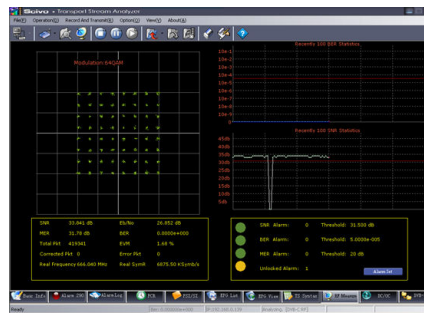


- Error description and Stats. about TR101290
- Stats. on severe error about EPG
- Analysis on every error and its main cause
- Users can define different error category and track it
- User can stop the current counting

manually and refresh.

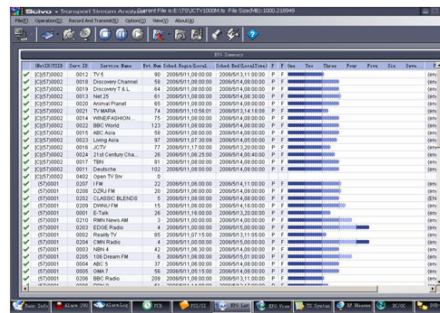
- The counting will be stopped when error number exceeds 3000.

## RF Analysis



- Constellation display(16QAM,32QAM,64QAM,128QAM,256QAM)
- SNR、MER、BER、EVM
- Eb/No、Electric Level、Real Frequency、Real Symbol Rate
- Total packets, Error packets, Corrected packets counting
- SNR,BER,MER Alarm with user-defined threshold

## EPG Monitor

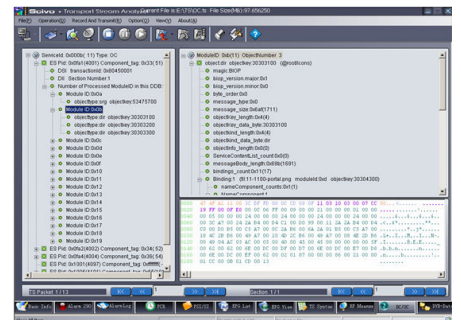


- Network ID, TS ID, program number, title and section amount of program table inside the current TS and the others.
- Start/end time of all programs' schedule
- P/F of every program
- Duration time displayed in GUI

about every program schedule Current section and language

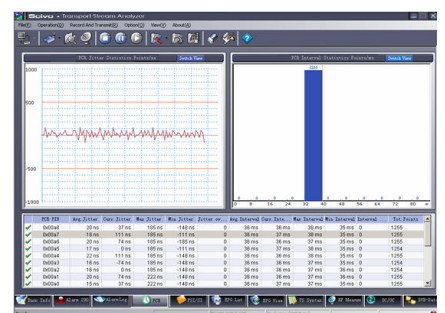
- Display the updating of current program table

## DC/OC Analysis



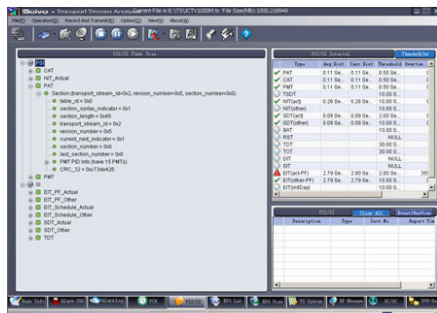
- Data Carousel Analysis
- Object Carousel Analysis
- Mux Analysis
- File analysis
- DS/DLL/DDB information Analysis
- Module Information Analysis
- Download the directory and file.

## PCR



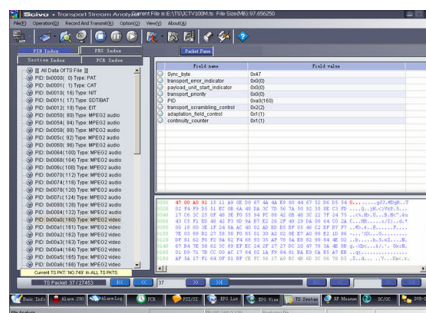
- PCR-PID, average jitter, current jitter, maximum jitter, minimum jitter, average interval, current interval, maximum interval, minimum interval Stat.
- Count on jitter overstep, interval overstep and PCR gross of PCR\_PID
- Stat. on PCR process and PCR interval displayed in strip chart.

### PSI/SI Analysis



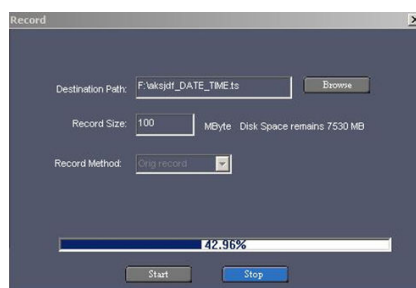
- Complete analysis on PSI/SI information in tree pattern.
- Analysis on PSI/SI as well as content of descriptor
- Stat. on every table of PSI/SI including average interval, current interval, timeout limit , timeout times.
- Easy to tracking the dynamic change of PSI/SI
- Description on dynamic event category, place, reporting time of PSI/SI
- The analysis can be paused and refreshed
- PSI/SI can be classified in detail: SDT\_ACTUAL; SDT\_OTHER; EIT\_PF\_ACTUAL; EIT\_PF\_OTHER; NIT\_ACTUAL;
- Detailed analysis of EIT of all Transport Stream, and also can only analyze EIT\_actual

### TS File Analysis



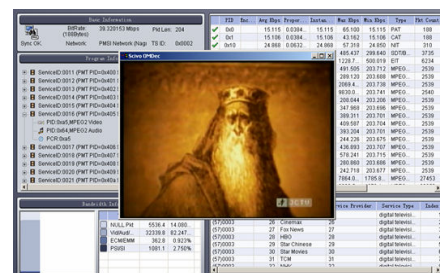
- Packet analysis in PID/PES/SECTION/PCR index
- Display original hex data
- Hex data export in SECTION index mode

### Recording TS



- Recording through ASI or RF
- Recording mode through ASI / RF: synchronized TS, original TS and PID selected (100 PID the most)
- Modify recording files' title, saving path and size
- After tuning successfully, ASI output TS automatically.
- Remember several frequency just used and tuning configuration

### V/A Decoding



- Software-decoding of real-time transport stream
- Software-decoding of off-line TS file
- Support 4:2:2 and 4:2:0, support MPEG-2/MPEG-4/H.264.

### Transmitting TS

TS files stored in the computer can be transmitted only after using this software.

### Save Page information

Information in each page can be exported and saved. PSI/SI can be exported as a XML file.

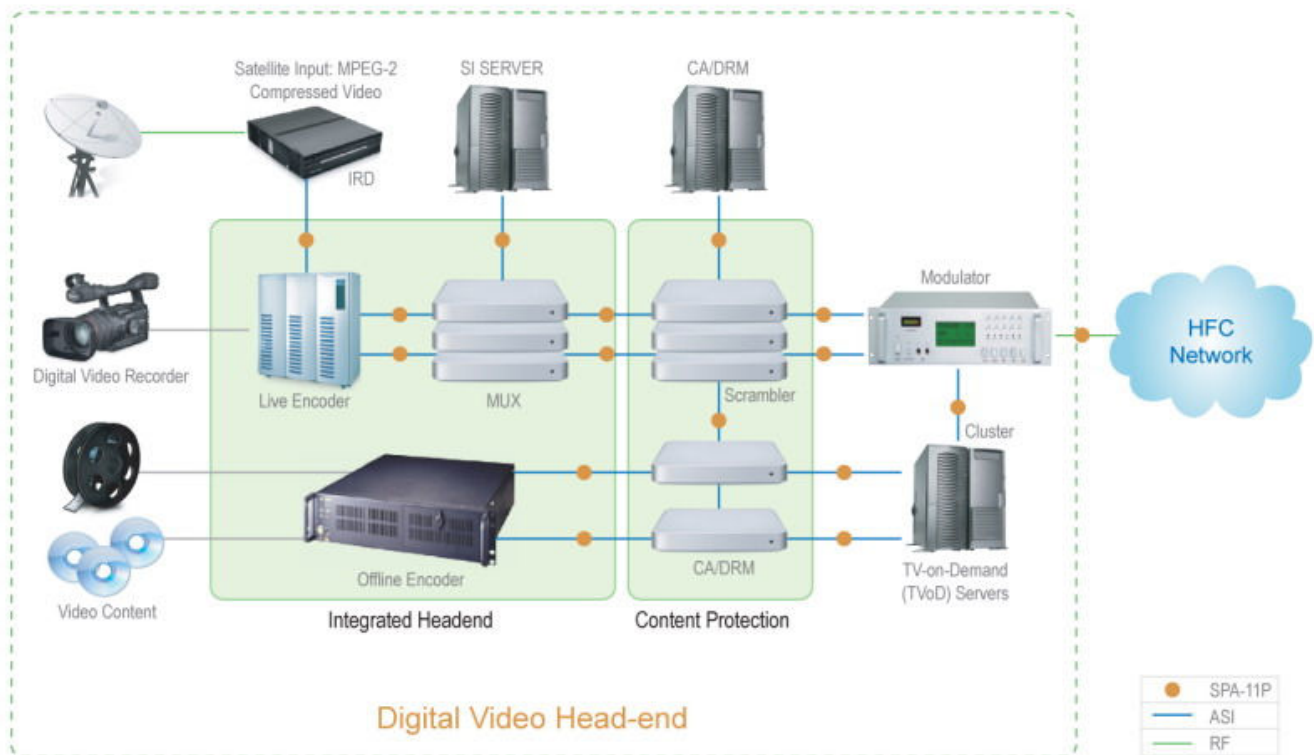
### Scan Frequency

Support the frequency scan. User can set the frequency range.

### Remote Control

Support remote control through IP network.

## Headend application



### RF interface

- RF Input: 1
- RF Loopout: 1
- Support DVB-C/DVB-S/DVB-T/DTMB

#### DVB-C QAM support 16QAM, 32 QAM, 64 QAM, 128 QAM, 256 QAM

- Frequency 50~860MHz
- Symbol rate 1~7MSymbol/S

#### DVB-S QPSK support horizontal/vertical polarization

- Frequency 950~2150MHz
- Symbol rate 1~50MSymbol/s

#### DVB-T COFDM support QPSK, 16QAM, 64QAM

- Input frequency: 174~860MHz UHF&VHF
- Bandwidth: 6, 7 or 8MHz, Min Level: 34dBuV

#### DTMB support 4QAM-NR, 4QAM, 16QAM, 32QAM, 64QAM

- Frequency: 426~860MHz
- Bandwidth: 8MHz

### ASI interface

- ASI Input: 1, BNC
- ASI Output: 1, BNC
- Max Bit rate 160Mbps
- 188/204 packet length
- ASI Loopout
- RF demodulation

### Ethernet interface

- RJ45: 1, 100Base-T
- MAX payload rate: 50Mbps

### Serial interface

- RS232: 1