

## Digital Video Interfacing Products

# AT290PCI

**DVB-S2/S & DSNG Modulator**  
VHF & UHF Up converter  
RF Output 950MHz to 2150MHz



## Standard Features

- DVB-S2/S Modulator with VHF & UHF Up converter.**
- PCI 2.2, 32 bit, 33/66MHz 3.3V.
  - Bus Master DMA, Scatter /Gather Interface Protocol.
  - Windows XP, Vista, Win 7 (64bit) Drivers + SDK.
  - Linux Drivers & sample application.
  - Accompanied by DVSStaion4, Alitronika's Integrated TS Player, Recorder & Real Time Quick Analyser Software.
  - Supports DVB According to Standard **A1010 Rev1 & EN50083**.
  - Modulation of Transport Stream files from Harddisk.
  - All modulation processes are done by hardware so that there is no CPU load and there is no need for an expensive high performance PC.
  - TPS flags to indicate TS contains MPE-FEC and/or Time slicing.
  - Bitrates: DVB-S :up to 72.57 Mbit/S, DVB-S DVB-S2 up to 200.385 Mbit/S
  - Symbol rates: up to 45Msymbols/s
  - Supports Burst or continuous modes, 188 & 204 packet sizes.

## Application

*Targeted for Digital Video Professionals, Sophisticated End Users and OEMs, the AT290PCI is an ideal solution for a number of applications such as:*

- Development Tools for DVB-S2/S or DVB-DSNG Receiver R&D.
- IP to DVB Gateway.
- DVB-S2/S Transport Stream Generation.
- Stand alone QPSK signal generator for Test & Validation.
- Demonstration and Trade Shows.
- DVB-S2/S output for OEM product.

## IF & RF Specifications

- **DVB modes:** DVB-S2 and DVB-S.
- **Spectral modes:** inverted and non-inverted.

### DVB-S:

- **Alpha rolloff:** 0.35.
- **Modulation Modes:** QPSK.
- **FEC Code Rates:** 1/2, 2/3, 3/4, 5/6 and 7/8.
- **Symbol rate:** up to 45 MSymbols/s.
- **Bitrate:** up to 72.574 MBit/s.

### DVB-S2:

- **Alpha rolloff:** 0.20, 0.25 and 0.35.
- **Modulation Modes:** QPSK, 8SPK, 16APSK and 32APSK.
- **FEC Code Rates:** 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9 & 9/10.
- **Symbol rate:** up to 45 MSymbols/s.
- **Bitrate:** up to 200.385 MBit/s.

## Specifications

- **On Board Buffer:** 16Mbytes.
- **RF Connector:** 75 Ohms F-type.
- **RF Output Frequency Range:** 950MHz to 2150MHz.
- **RF Output power:** -10dBm to -45dBm.
- **Power Consumption:** 5 Watts.
- **Size WxL:** 175mmx107.

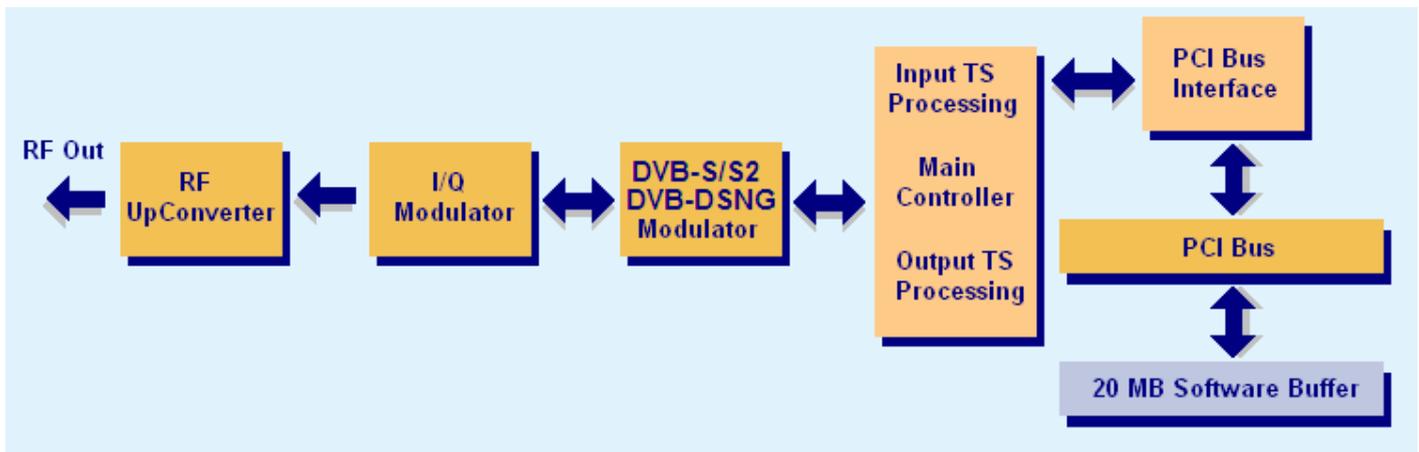
## 1 GENERAL DESCRIPTION

*A member of Alitronika's state of art digital video interfacing products.*

The AT290PCI is a PCI based interface device suitable for DVB-S2/S Transport Stream Generation and IF as well as full range VHF & UHF IF up conversion.

## 2 BLOCK DIAGRAM

The figure below illustrates the block diagram of the AT290PCI device. The device communicates with the PC via the PCI interface device. The AT290PCI is capable of modulating a DVB-S2/S TS from the Harddisk of the PC. The modulation options, output frequencies and all other setting are done with the help of DVStation4.



## 3 EXTERNAL INTERFACES

The external interfaces for the AT290PCI are shown.

The RF output connector is a 75Ohms F-Type connector.

The LED on the unit function as follows:

**OFF** = Power is off/ device not activated.

**Flashing** (Red) = Modulation not activated – Error condition.

**ON** (Green) = Normal operational condition.



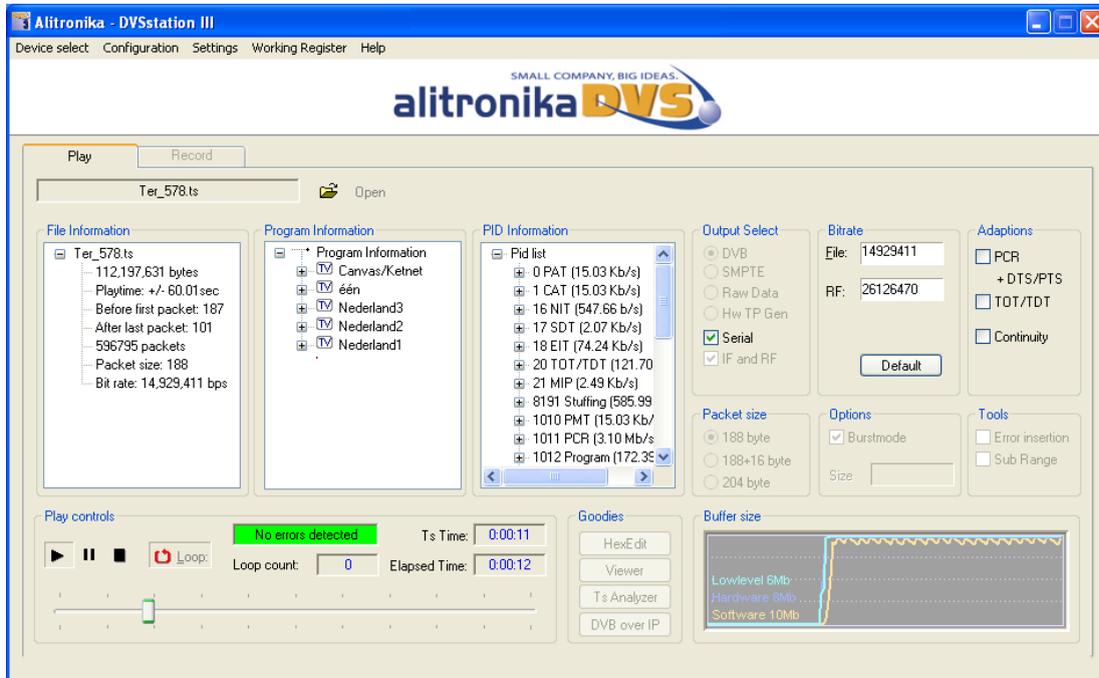
## 4 APPLICATION

Targeted for digital video professionals, sophisticated end users and OEMs the AT290PCI is an ideal solution for a number of applications such as, development tools, universal interface for MPEG-II Transport Stream Playing and Recording, video on demand server, transport stream test generator, high speed serial data link, software based MPEGII decoders & encoders and many other applications.

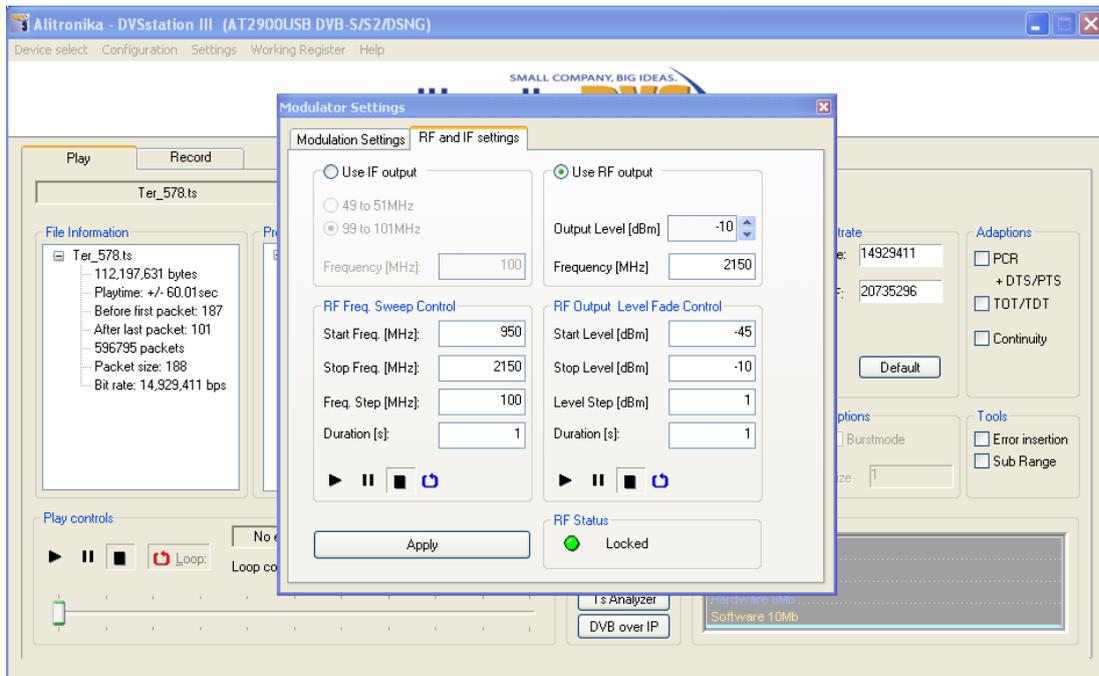
## 5 Software Application, DVStation4

**5.1 – DVStation4:** Alitronika devices are supported by DVStation3/4, Alitronika's **FREE** Transport Stream Player, Recorder, Analyser & converter application software. Please refer to DVStation4 specification and User Manual on our website for more information about DVStation4. Even better please download it from our website & try it out. It works in DEMO mode without any Alitronika devices.

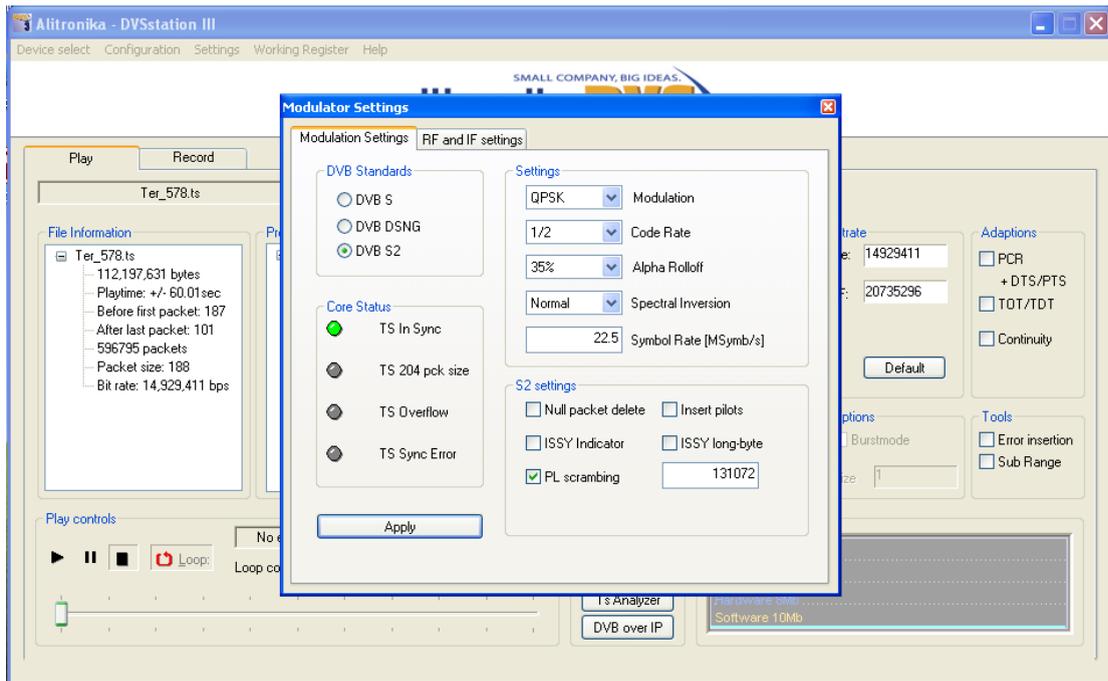
### Play Screen



### RF Settings



## Modulation Settings DVB-S2/S



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