

Digital Video Interfacing Products

AT278USB, iMod

DVB-T/H/C & ATSC Modulator
IF and RF (VHF & UHF) Output
DVB-ASI Input



Standard Features

DVB-T/H/C Modulator with VHF & UHF Up converter.

- **High Speed USB 2.0.**
- Windows XP, Vista, Win 7 (64bit) Drivers + SDK.
- Linux Drivers & sample application.
- Accompanied by DVSStaion3, 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.
- Modulation of TS from the ASI input.
- 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 from 4.98 MB/s to 31.67 MB/s. for DVB-T/H and from 14 MB/s to 65 MB/s. for DVB-C.
- Supports Burst or continuous modes, 188 and 204 packet sizes.

Inputs:

DVB-ASI input.

Outputs:

RF and IF Output.

Application

Targeted for Digital Video Professionals, Sophisticated End Users and OEMs, the AT278USB is an ideal solution for a number of applications such as:

- Development Tools for DVB-T/H or DVB-C QAM A/B/C Receiver R&D.
- IP to DVB Gateway.
- DVB-Transport Stream Generation.
- Stand alone DVB-T/H/C signal generator for Test & Validation.
- Demonstration and Trade Shows.
- DVB-T/H/C output for OEM product.

IF & RF Specifications

- **FEC Code Rates:** 1/2, 2/3, 3/4, 5/6, 7/8.
- **Spectral Inversion:** Both inverted and non-inverted.

DVB-T/H Spec.

- **Channel Bandwidth:** 5MHz, 6MHz, 7MHz, 8MHz.
- **COFDM Spectrum:** 2k, 4k and 8k carriers non-hierarchical.
- **Standards:** COFDM according EN 300 744.
- **Modulation Modes:** QPSK, 16QAM and 64QAM.
- **Guard Interval Modes:** 1/32, 1/16, 1/8 and 1/4.

DVB-C Spec.

- **Channel Bandwidth:** 6MHz, 8MHz.
- **Standards:** QAM according EN 300 744.
- **Modulation Modes:** 16QAM, 32QAM, 64QAM, 128QAM, 256QAM.

ATSC 8-VSB Spec.

- **Channel Bandwidth:** 6MHz.
- **Standards:** A/53 8-VSB.

Specifications

- **On Board Buffer:** 16Mbytes
- **IF & RF Connector:** 75 Ohms BNC.
- **IF Output Frequency:** 35/37 or 69/71MHz adjustable in 1Hz steps
- **IF Output level:** 0dBm @ 75Ohms.
- **RF O/P Frequency:** 50MHz to 1000MHz.
- **RF Output power:** -15dBm to -45dBm
- **DVB-ASI Connector:** 75 Ohms BNC.
- **DVB-ASI Input return loss:** 15dB.
- **Power Consumption:** 5 Watts
- **Size WxLxH:** 140mmx120mmx30mm

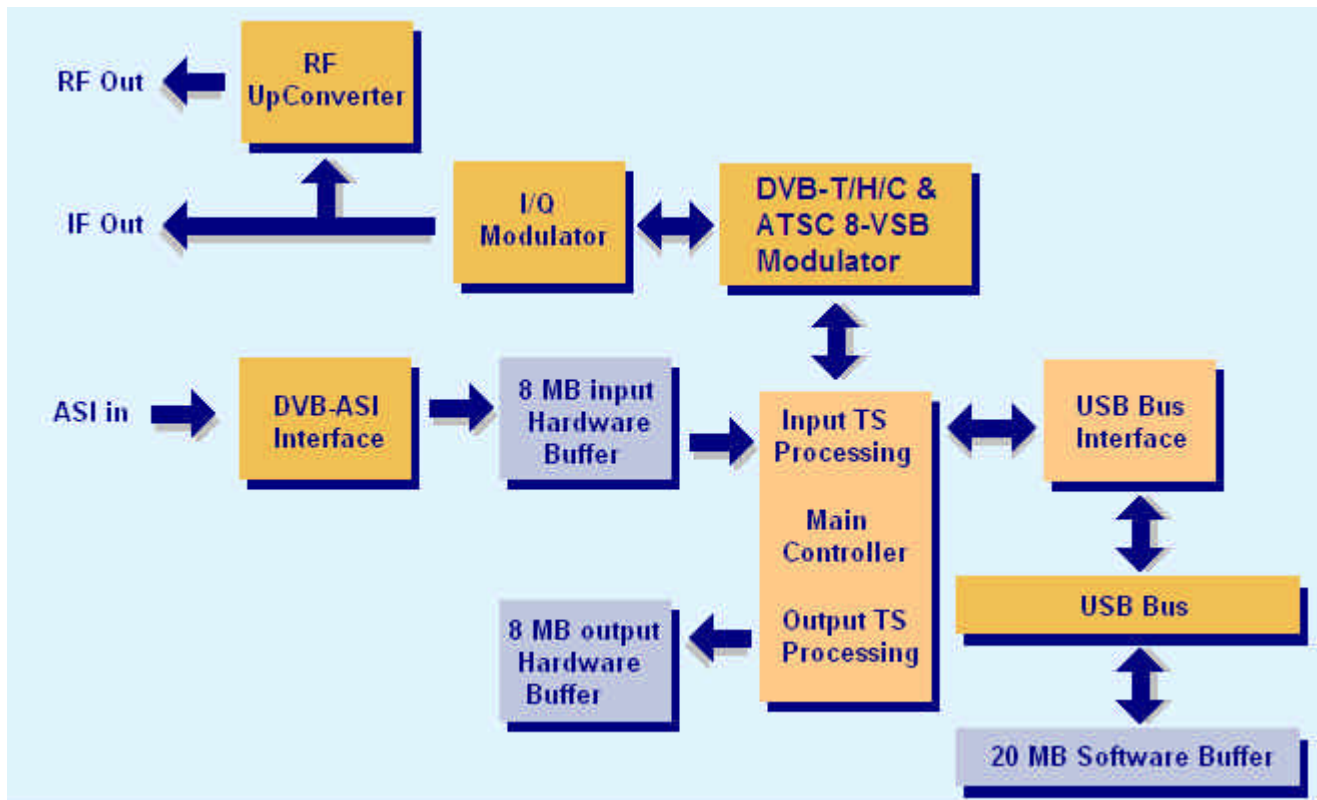
1 GENERAL DESCRIPTION

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

The AT278USB is a PCI based interface device suitable for DVB-T/H/C 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 AT278USB device. The device communicates with the PC via the USB interface device. The AT278USB is capable of modulating a DVB-T/H/C TS from the harddisk of the PC or from the incoming DVB-ASI input. The modulated DVB-T/H/C is available on both IF and RF. The modulation options, output frequencies and all other setting are done with the help of DVStation3.



3 EXTERNAL INTERFACES

The external interfaces for the AT278USB are shown. There are 3 BNC connectors for the RF& IF outputs and DVB-ASI input.

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



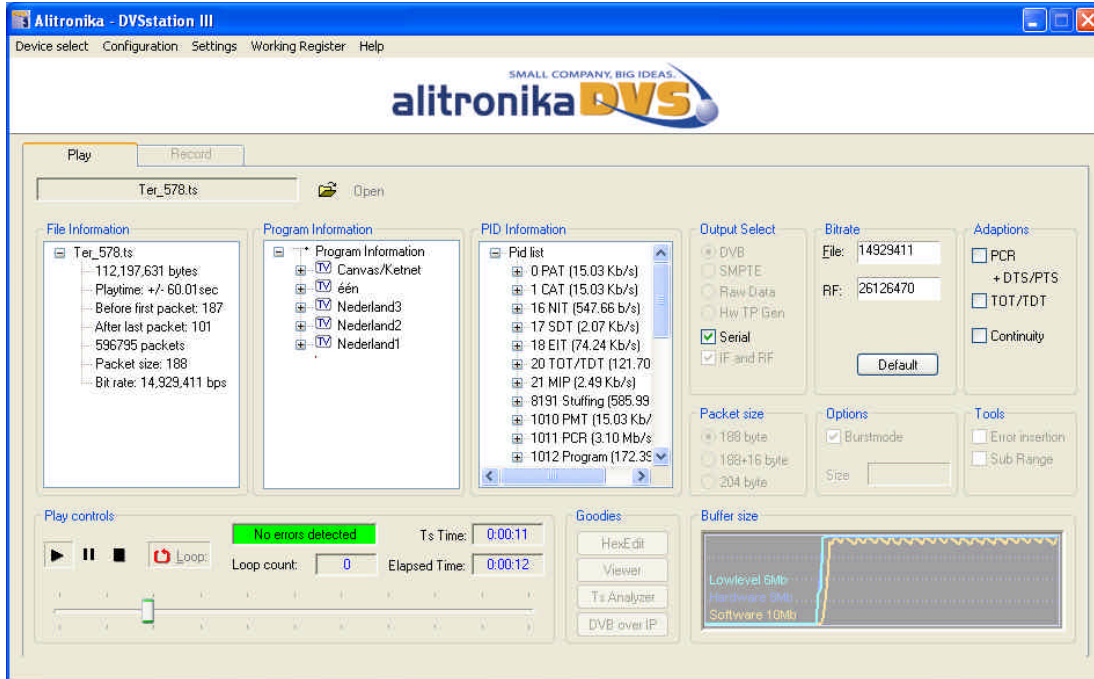
4 APPLICATION

Targeted for digital video professionals, sophisticated end users and OEMs the AT278USB 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

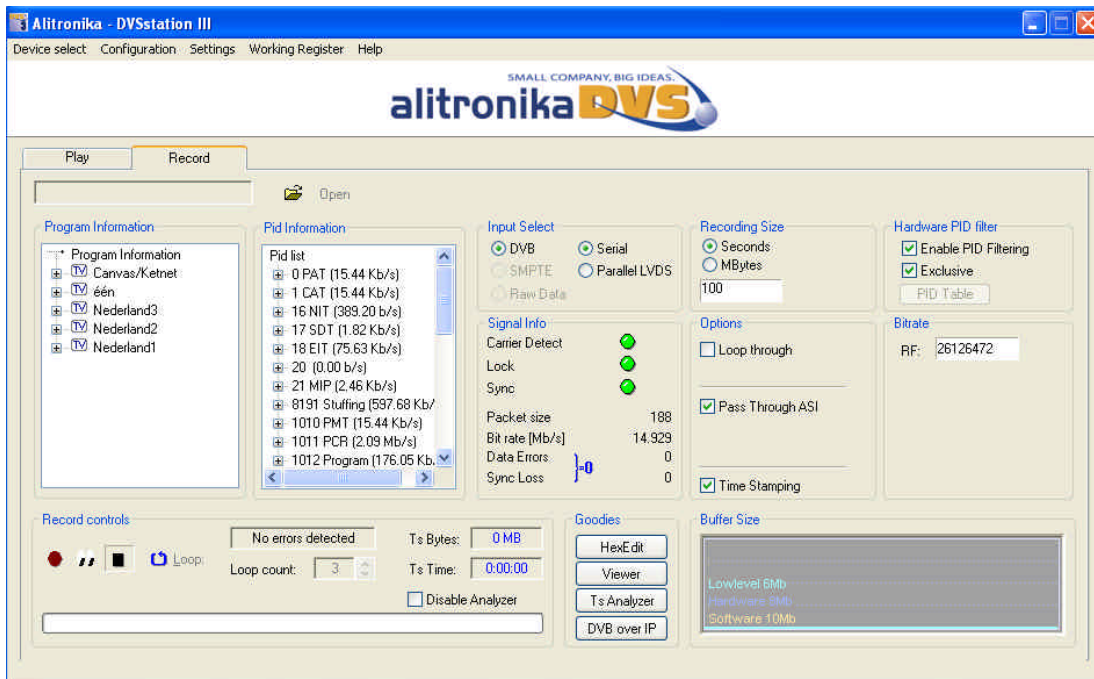
5 Software Application, DVStation3

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

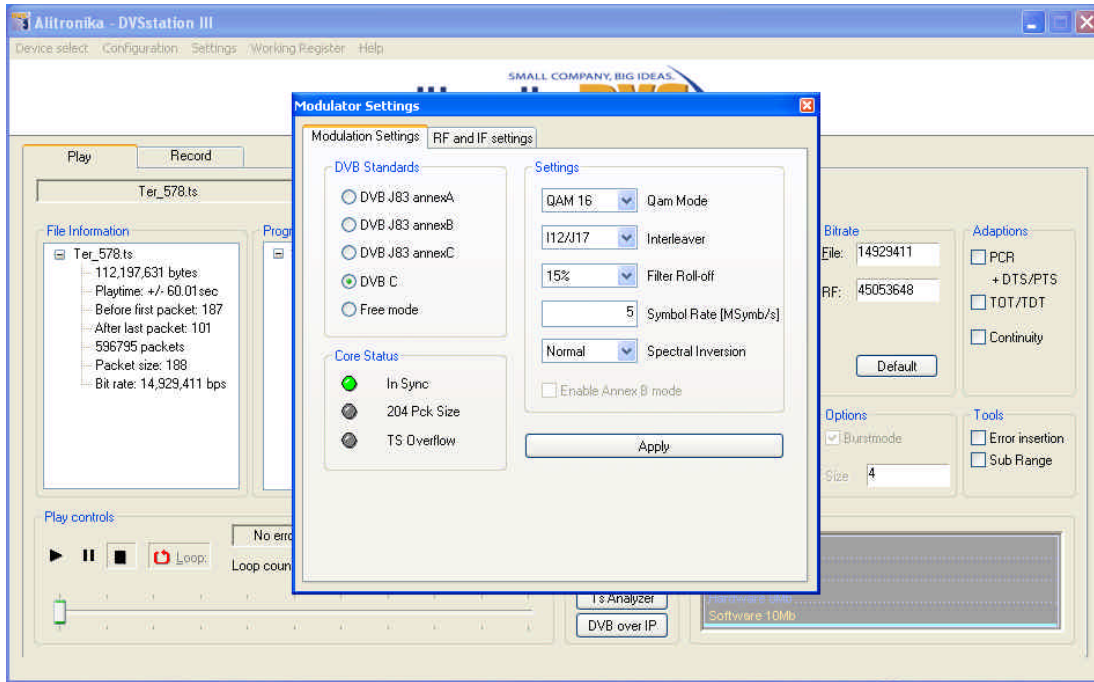
Play Screen



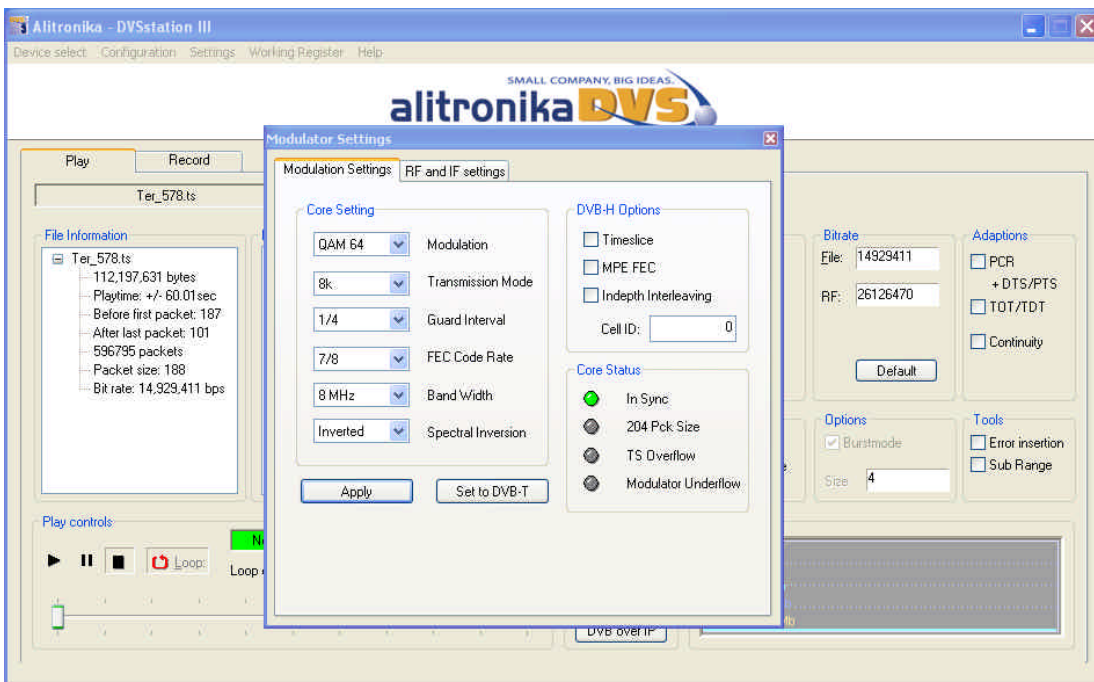
Record Screen



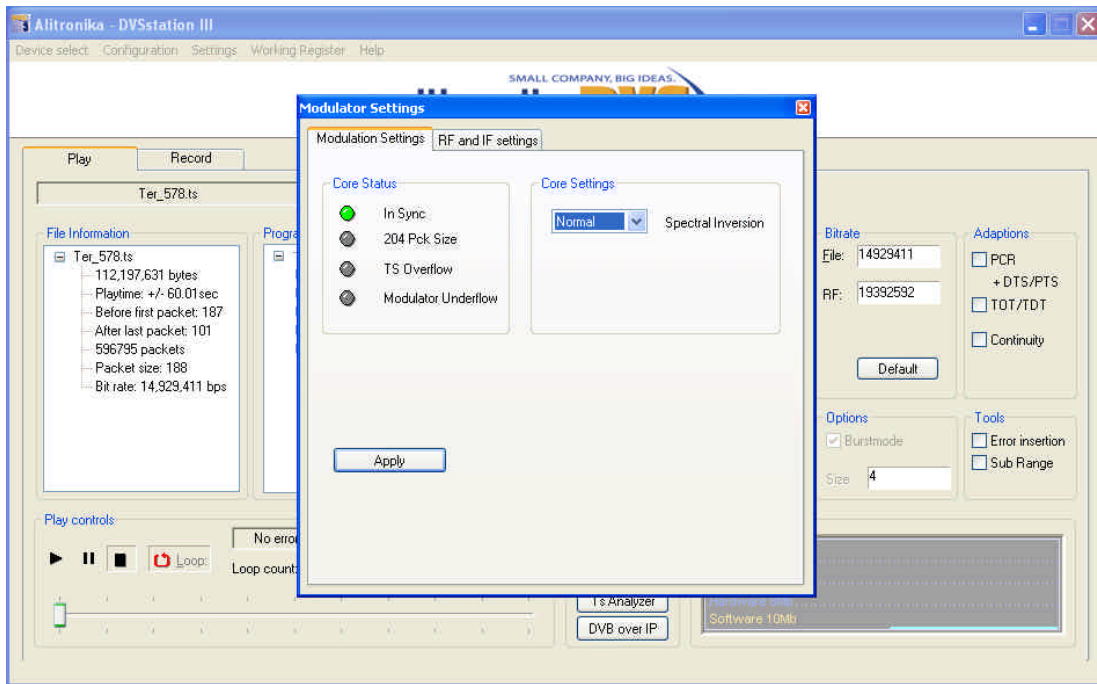
Modulation Settings DVB-C



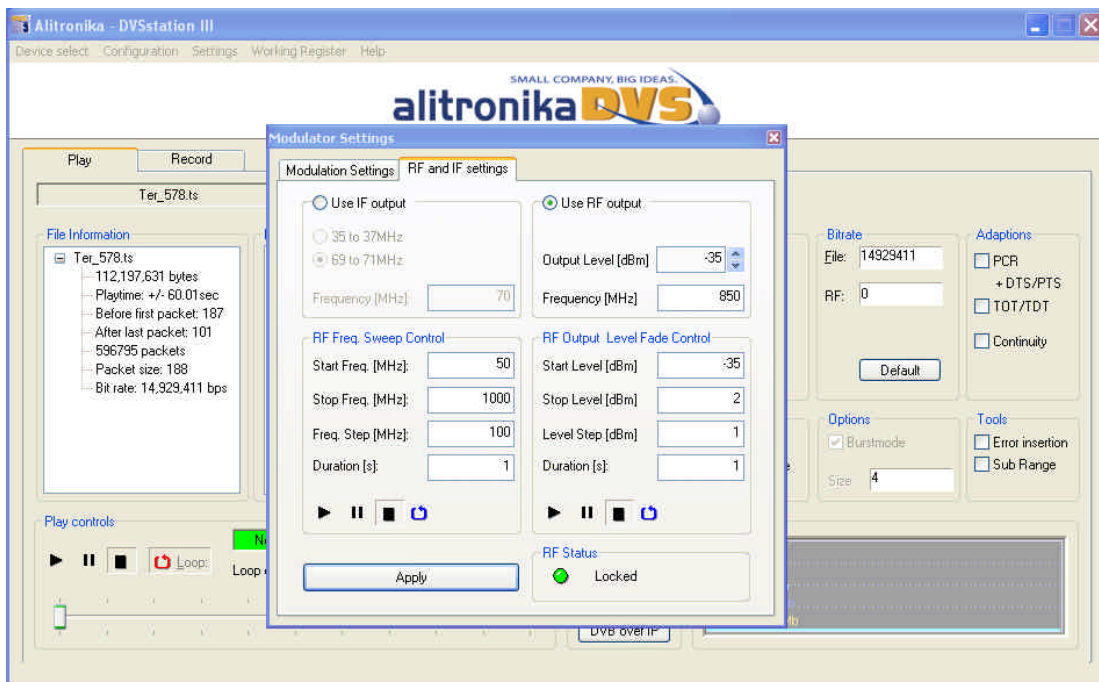
Modulation Settings DVB-T/H



Modulation Settings ATSC



RF Settings



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Therefore Alitronika DVS reserves the right to make changes in its product specifications at any time without notice. The reader is cautioned to verify that the specification documents are current before placing orders.

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