

Digital Video Interfacing Products

AT2800USB

DVB-T /H Modulator
IF and RF (VHF & UHF) Output
DVB-ASI & DVB-SPI Inputs



Standard Features

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

- High Speed **USB 2.0**
- Windows 2000, XP Drivers and **Linux Drivers & API**.
- Free **DVSStation2** Alitronika's Application Software.
- Supports DVB According to Standard **A1010 Rev1 & EN50083**.
- Modulation of Transport Stream files from Harddisk.
- Modulation of TS from the ASI or SPI inputs.
- All modulation processes are carried out by the hardware so that there is no load on the PC processor,
- So there is no need for an expensive high performance PC.
- TPS flags to indicate TS contains MPE-FEC and/or Time slicing.
- Bit rates from 4.98 MB/s to 31.67 MB/s.
- Supports Burst or continuous modes, 188 and 204 packet sizes.
- RF Section in metal enclosures to provide noise immunity and high performance.

Inputs:

- DVB-ASI input.
- DVB-SPI input.

Outputs:

- RF and IF Output.
- DVB-ASI output for monitoring the modulated TS file.

Application

Targeted for Digital Video Professionals, Sophisticated End Users and OEMs, the AT2800USB is an ideal solution for a number of applications such as:

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

IF & RF Specifications

- **IF Connector:** 75 Ohms BNC.
- **IF Output Frequency:** 35-37 MHz
or 69-71MHz adjustable in 1Hz steps
- **IF Output level:** 0dBm @ 75Ohms.
- **RF Connector:** 75 Ohms BNC.
- **RF Output Frequency Range:** 50MHz to 1000MHz.
- **RF Output power over bandwidth:** 0dBm to -45dBm.
- **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.
- **FEC Code Rates:** 1/2, 2/3, 3/4, 5/6, 7/8.
- **Spectral Inversion:** Both inverted and non-inverted.

ASI/SPI Specifications

- **On Board Buffer:** 16Mbytes
- **DVB-ASI I/O Connectors:** 75 Ohms BNC.
- **DVB-ASI Signal level:** 1.0Vp-p nominal.
- **DVB-ASI Output Clock:** 270 MHz.
- **DVB-ASI Input return loss:** 15dB.
- **DVB-ASI Output Bit Rate:** 0 to 214 Mbit/s.
- **DVB-SPI Connector:** 25-pin sub-D.
- **DVB-SPI Input Level:** LVDS.
- **DVB-SPI Input Bit Rate:** 0 to 108 Mbit/s.
- **Power Consumption:** 7.5 Watts
- **Size WxLxH:** 170mmx210mmx65mm

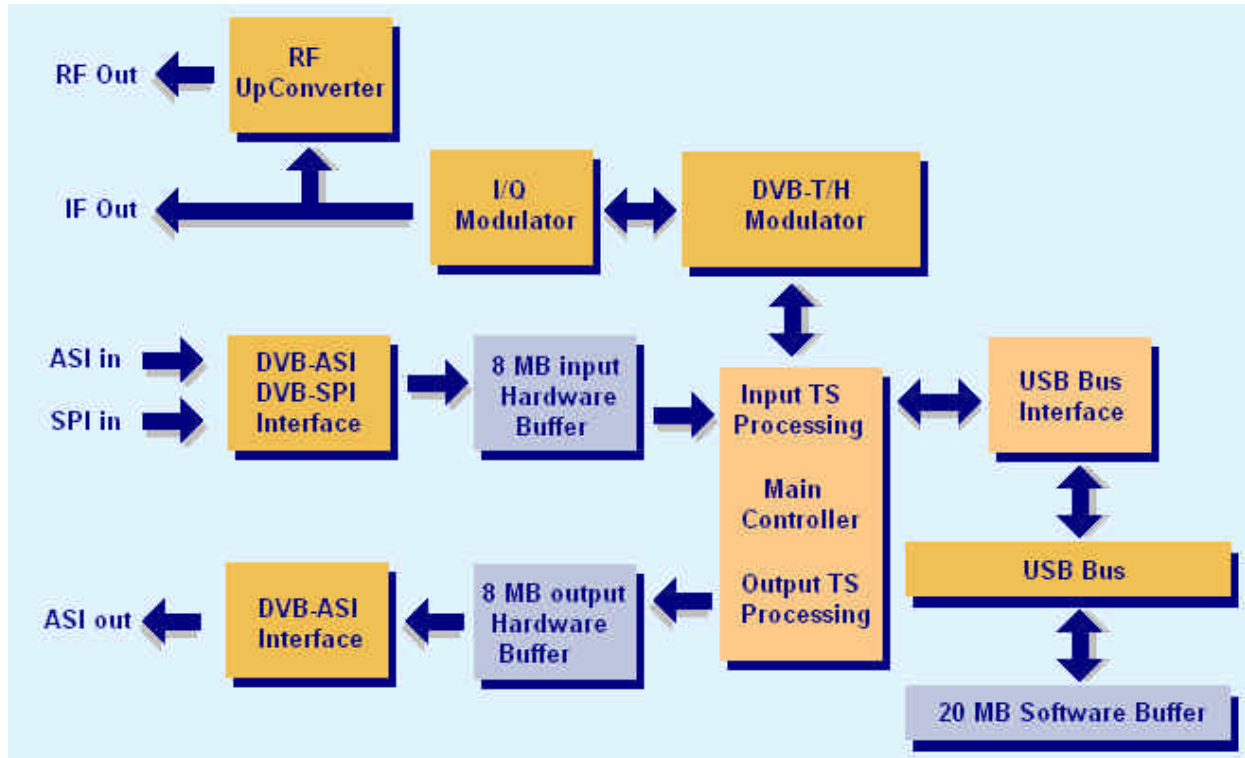
1 GENERAL DESCRIPTION

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

The AT2800USB is a USB based interface device suitable for DVB-T/H Transport Stream Generation and IF & RF (both VHF & UHF) up conversion.

2 BLOCK DIAGRAM

FIG4 illustrates the block diagram of the AT2800USB device. The device communicates with the PC via the USB interface device. The AT2800USB is capable of modulating a DVB-T or DVB-H TS from the harddisk of the PC or from the incoming DVB-ASI/SPI inputs. The modulated DVB-T/H is available on both IF and RF outputs as well as DVB-ASI output (for monitoring). The modulation options, output frequencies and all other setting are done with the help of DVStation2.



3 EXTERNAL INTERFACES

The external interfaces for the AT2800USB are shown. There are 4 BNC connectors for the RF, IF, DVB-ASI I/O and a 25-pin D-type connector for DVB-SPI input (LVDS) as well as USB and DC power inlet connectors. The Unit is supplied with power supply and USB2.0 cable.

The LED in the back of 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 AT2800USB 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.