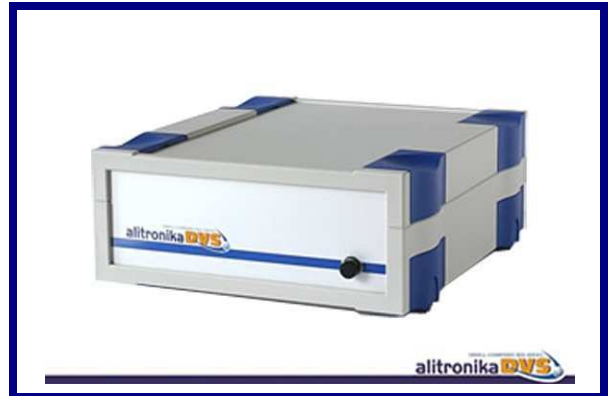


Digital Video Interfacing Products

**AT2780USB**

- ◆ DVB-T/H; QAM; ATSC Modulator
- ◆ IF及RF (VHF/UHF) Outputs
- ◆ DVB-ASI / DVB-SPI Inputs
- ◆ DVB-ASI Output for Monitoring TS



**Standard Features:**

- ◎ High Speed USB 2.0
- ◎ Windows 2000, XP Drivers & SDK
- ◎ Free DVStation3 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,
- ◎ TPS flags to indicate TS contains MPE-FEC and/or Time slicing.
- ◎ Supports Burst or continuous modes, 188 and 204 packet sizes.
- ◎ Birate:
  - 14MB/s To 65MB/s(DVB-C)
  - 4.98MB/s To 31.67MB/s(DVB-T/H)
  - 10.76 Mbaud & 19.39 MB/s(ATSC 8-VSB)

**Application:**

Targeted for Digital Video Professionals, Sophisticated End Users and OEMs, the AT2780USB is an ideal solution for a number of applications such as:

- ◎ Development Tools for DVB-T/H; QAM A/B/C & ATSC 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; QAM & ATSC output for OEM product.

**Power Consumption & Size**

- ◎ Power Consumption: 7.5 Watts
- ◎ Size LxWxH: 210mm x 170mm x 65mm

**IF & RF Specifications:**

- ◎ IF & RF Connector: 75 Ohms BNC.
- ◎ IF Output Frequency: 35/37 or 69/71MHz adjustable in 1Hz steps
- ◎ IF Output level: 0dBm @ 75Ohms
- ◎ RF Output Frequency Range: 50MHz to 1000MHz
- ◎ RF Output power over bandwidth: 2dBm to -35dBm/ 0.5dBm Steps
- ◎ Spectral Inversion: Both inverted and non-inverted
- ◎ 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.

**DVB-T/H Mode:**

- ◎ Channel Bandwidth: 5MHz, 6MHz, 7MHz, 8MHz.
- ◎ COFDM Spectrum: 2k, 4k and 8k carriers non-hierarchical
- ◎ Standards: EN300 744V1.5.1, EN302 304
- ◎ Modulation Modes: QPSK, 16QAM and 64QAM

**DVB- C Mode:**

- ◎ Channel Bandwidth: 6MHz, 8MHz
- ◎ Modulation Modes: 16QAM, 32QAM, 64QAM, 128QAM, 256QAM
- ◎ Standards: EN 300 429, ITU J83 Annex A/B/C

**ATSC 8-VSB Spec**

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

**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 I/O Clock: 270 MHz
  - ◎ DVB-ASI Input return loss: 15dB.
  - ◎ DVB-ASI I/O Bit Rate: 0 to Max Mbit/s\*.
  - ◎ DVB-SPI Connector: 25-pin sub-D
  - ◎ DVB-SPI Input Level: LVDS
  - ◎ DVB-SPI Input Bit Rate: 0 to Max Mbit/s
- \* Max Mbit/s = Maximum bit rate allowable by DVB-T/H or DVB- C or ATSC modulation.

**Similar Products:**

	
<p><b>iMod-T(AT2780USB)</b></p> <ul style="list-style-type: none"> <li>● DVB-T/H; ATSC; QAM Modulator</li> <li>● IF&amp;RF(VHF/UHF) Output</li> <li>● DVB-ASI Input</li> </ul>	<p><b>AT2780P/QT</b></p> <ul style="list-style-type: none"> <li>● DVB-T/H; ATSC; QAM Modulator</li> <li>● IF&amp;RF(VHF/UHF) Output</li> <li>● DVB-ASI/SPI Input</li> <li>● DVB-ASI Monitor Output</li> </ul>

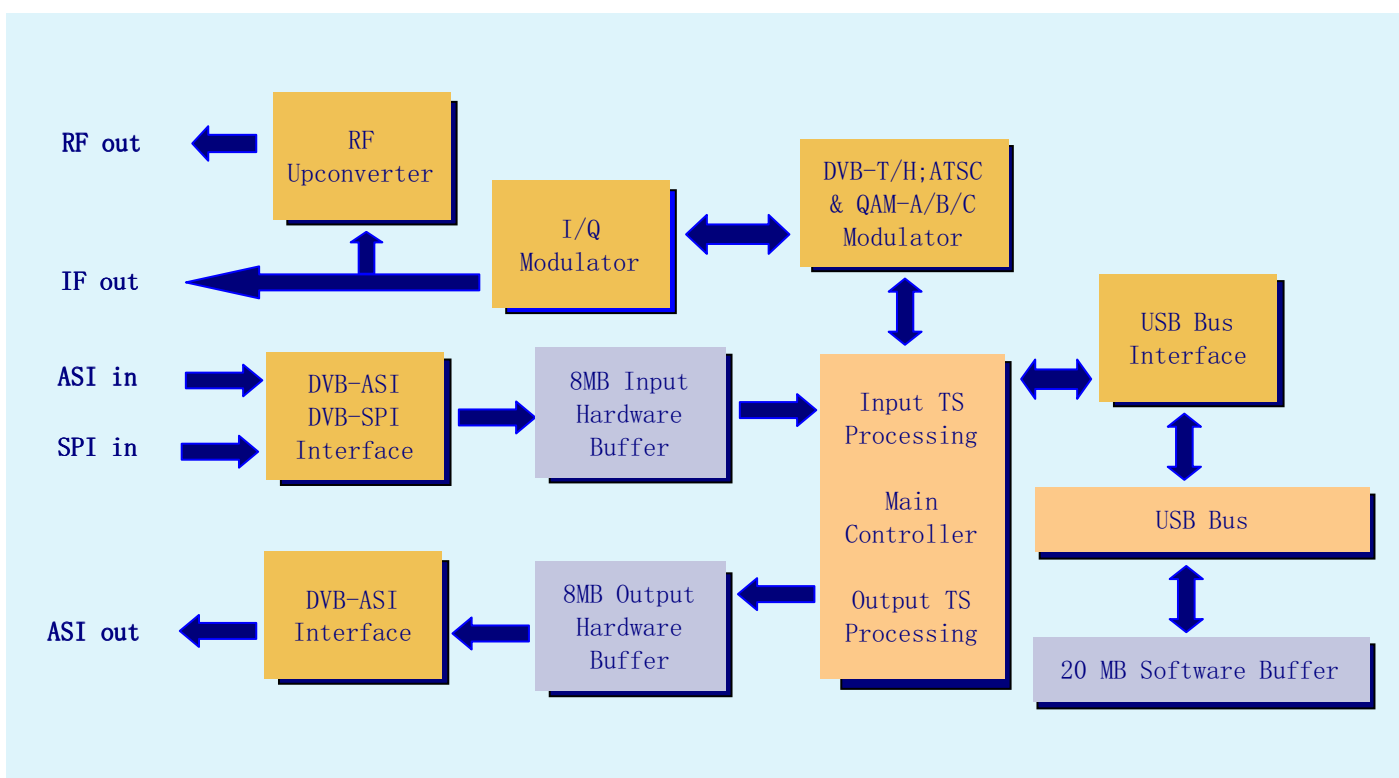
## 1. GENERAL DESCRIPTION

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

The AT2780USB is a USB based interface device suitable for DVB-T/H/C & ATSC 8-VSB Transport Stream Generation and IF as well as full range VHF & UHF up conversion.

## 2. BLOCK DIAGRAM

The figure below illustrates the block diagram of the AT2780USB device. The device communicates with the PC via the USB interface device. The AT2780USB is capable of modulating a DVB-T/H/C & ATSC TS from the harddisk of the PC or from the incoming DVB-ASI/SPI inputs. The modulated DVB-T/H/C & ATSC TS 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 DVStation3.



## 3. EXTERNAL INTERFACES

The external interfaces for the AT2780USB 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)** = Play /Record not activated – Error condition
- ON (Green)** = Normal operational condition



## 4. APPLICATION

Targeted for digital video professionals, sophisticated end users and OEMs the AT800USB 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.