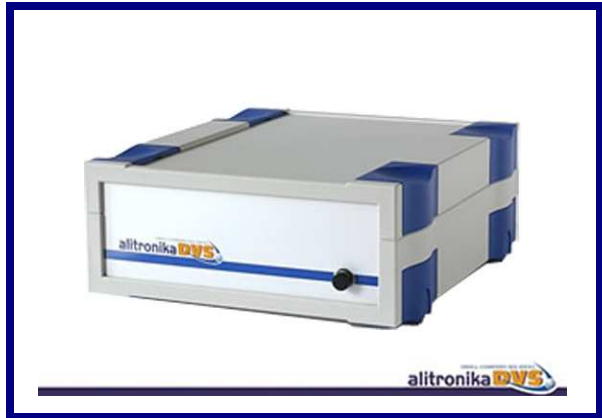


Digital Video Interfacing Products

**AT780USB**

- ◆ DVB-T2/T/C Receiver, Recorder & Converter
- ◆ DVB-T2/T/C Input
- ◆ DVB-ASI & DVB-SPI ( LVDS ) Outputs
- ◆ Supports 6 / 7 / 8 MHz Bandwidth



**Standard Features:**

- ◎ Combined DVB-T2/T/C Input and DVB-ASI/SPI Output Board.
- ◎ High Speed USB 2.0
- ◎ Windows 2000 & XP Drivers & SDK .
- ◎ Accompanied by DVStation3 Alitronika's Application Software.
- ◎ DVB-T2/T/C Compliant COFDM Reception.
- ◎ Modulation Modes: DVB-T/T2: QPSK, 16QAM, 64QAM
- ◎ Modulation Modes: DVB-C: 64QAM, 128QAM, 256QAM
- ◎ Guard Interval: DVB-T/T2: 1/4, 1/8, 1/16, 1/32
- ◎ Supports hierarchical & non-hierarchical modes.
- ◎ Supports 188, 204 Transport Packet Sizes.
- ◎ RF Loop Through Output.
- ◎ Simultaneous two Serial and one Parallel Outputs.
- ◎ Supports DVB According to Standard A1010 Rev1 and EN50083.

**Application:**

Targeted for Digital Video Professionals, Sophisticated End Users and OEMs, the AT780USB is an ideal solution for a number of applications such as:

- ◎ Development Tools.
- ◎ IP to DVB Gateway.
- ◎ DVB-T2/T/C to DVB-ASI & DVB-SPI Converter
- ◎ MPEG-II TS Recording, Monitoring, Playing & Processing
- ◎ Software Based MPEGII Decoders

**Power Consumption & Size**

- ◎ Power Consumption: 5 Watts
- ◎ Size LxWxH: 210mm x 170mm x 65mm

**RF Specifications:**



- ◎ On Board Buffer: 16 Mbytes
- ◎ RF Tuner Connector: 75 Ohms IEC female Type
- ◎ Loop Through Connector: 75 Ohms IEC male Type.
- ◎ Input Frequency Range:
  - High Band: 434.0 MHz to 858.0 MHz.
  - Mid Band: 149.5 MHz to 426.0 MHz
  - Low Band: 50.5 MHz to 142.5 MHz.
- ◎ Channel Bandwidth: 6, 7 & 8 MHz.
- ◎ RF Sensitivity: -80dBm.
- ◎ COFDM Spectrum: 2k and 8k carriers non-hierarchical and hierarchical.
- ◎ Standards: DVB-T2, DVB-T, DVB-C compliant.
- ◎ Modulation Modes:
  - DVB-T/T2: QPSK, 16QAM, 64QAM
  - DVB-C: 64QAM, 128QAM, 256QAM
- ◎ Guard Interval Modes: 1/4, 1/8, 1/16, 1/32.

**More Products, More Functions, Less Cost!**

**ASI/SPI Specifications:**

- ◎ On Board Buffer: 16Mbytes
- ◎ DVB-ASI Connectors: 75 Ohms BNC
- ◎ DVB-ASI Signal level: 1.0Vp-p nominal
- ◎ DVB-ASI Clock: 270 MHz
- ◎ DVB-ASI Output Bit Rate: 0 to 204 Mbit/s.
- ◎ DVB-SPI Output Clock: 0 to 13.5 MHz.
- ◎ DVB-SPI Output Bit Rate: 0 to 108 Mbit/s.
- ◎ DVB-SPI Connector: 25-pin sub-D
- ◎ DVB-SPI Input Level: LVDS & LVTTL

**Similar Products:**

 <p><b>AT780PCI</b></p> <ul style="list-style-type: none"> <li>• DVB-T2/T/C RF In</li> <li>• 2* DVB-ASI Output</li> <li>• DVB-SPI Output</li> </ul>	 <p><b>AT660USB(Or PCI)</b></p> <ul style="list-style-type: none"> <li>• DVB-S2/S RF In</li> <li>• 2* DVB-ASI Output</li> <li>• DVB-SPI Output</li> </ul>
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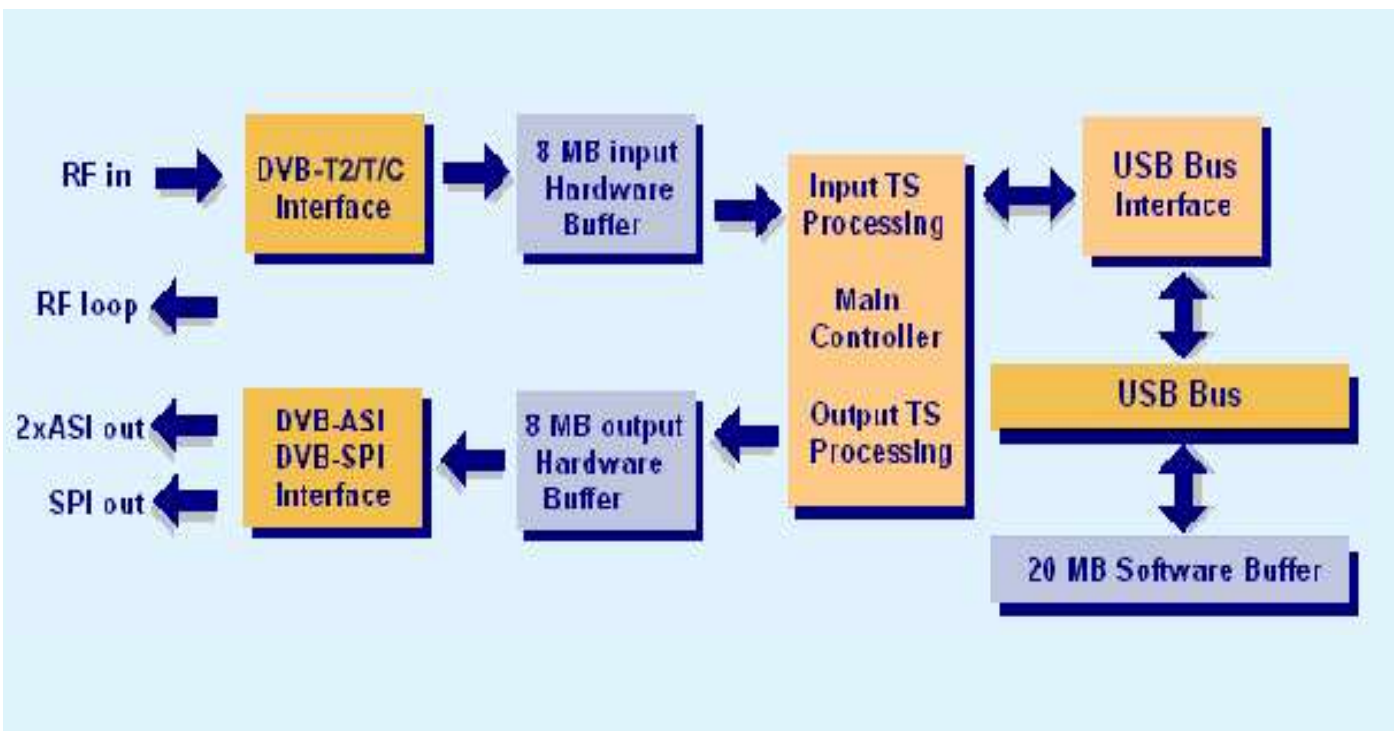
## 1. GENERAL DESCRIPTION

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

The AT780USB is a USB based interface device suitable for Recording, Playing and Analyzing of DVB Transport Streams.

## 2. BLOCK DIAGRAM

FIG4 illustrates the block diagram of the AT780USB device. The device communicates with the PC via the USB interface device. On the input side, the RF signal is demodulated and then de-coded before entering the PC via the main controller and the USB bus as Full TS files. On the output side, the MPEG-II transport streams enter the device via the USB interface device. The AT780USB then transmits the transport streams according to the settings provided by the application software. The data is 8b/10b encoded for DVB-ASI signals before it is serialized and transmitted via the BNC output connectors.



## 3. EXTERNAL INTERFACES

The external interfaces for the AT780USB are shown. Two 75 Ohms IEC type connectors for the RF input & Loop Through, 2 BNC connectors for DVB-ASI I/O and two 25-pin D-type connector for DVB-SPI output s(LVDS & LVTTTL) as well as USB and DC power inlet connectors. The Unit is supplied with power supply and USB2.0 cable.



The LED in the Left 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

In Record mode this LED indicates that a Carrier has been detected and the device has locked to incoming TS.

In Play mode this LED indicates that the output section has valid TS (normal operating conditions).

## 4. APPLICATION

Targeted for digital video professionals, sophisticated end users and OEMs the AT780USB 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 s