Digital Video Interfacing Products

AT2900USB

◆ DVB-S/S2;DVB-DSNG Modulator
◆ IF & RF（L-Band）Outputs
◆ DVB-ASI / DVB-SPI Inputs
◆ DVB-ASI Output for Monitoring TS

AT2900USB
DVB-S/S2 & DSNG Modulator with IF & RF outputs
alitronika DVS

Standard Features：

◎ High Speed USB 2.0

◎ Windows 2000, XP Drivers & SDK

◎ Free DVSStation3 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:

● UP To 72.574 MBit/s(DVB-S)

● UP To 200.385 MBit/s)DVB-S2)

◎ Standards：EN300 421, EN301 210 & EN302 307

Application：

Targeted for Digital Video Professionals, Sophisticated End Users and OEMs, the AT2900USB is an ideal solution for a number of applications such as:

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

Power Consumption & Size

◎ Power Consumption: 7.5 Watts

◎ Size LxWxH: 210mm x 170mm x 65mm

IF & RF Specifications:

◎ IF Connector: 75 Ohms F-type
◎ IF Output Frequency: 49-51or 99-101 MHz adjustable in 1Hz steps
◎ IF Output Power over bandwidth: -10dBm
◎ RF Connector: 75 Ohms F-Type
◎ RF Output Frequency Range: 950MHz to 2150MHz.
◎ RF Output Power over bandwidth: -10dBm to -35dBm,in 0.5dB steps
◎ Symbol rate: up to 45 MSymbols/s
◎ Spectral modes: inverted and non-inverted

DVB-S：
◎ Alpha roll off: 0.35.
◎ Modulation Modes: QPSK
◎ FEC Code Rates: 1/2, 2/3, 3/4, 5/6 and 7/8

DVB-S2：
◎ Alpha roll off: 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

DVB-DSNG（Digital Satellite New Gathering）：
◎ Modulation Modes:8PSK, QAM16

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-S/S2 modulation.

Similar Products：

iMod-S(AT290USB)
● DVB-S/S2;DVB-DSNG Modulator
● IF&RF(L-Band) Output
● DVB-ASI Input

AT2900P/S
● DVB-S/S2;DVB-DSNG Modulator
● IF&RF(L-Band) Output
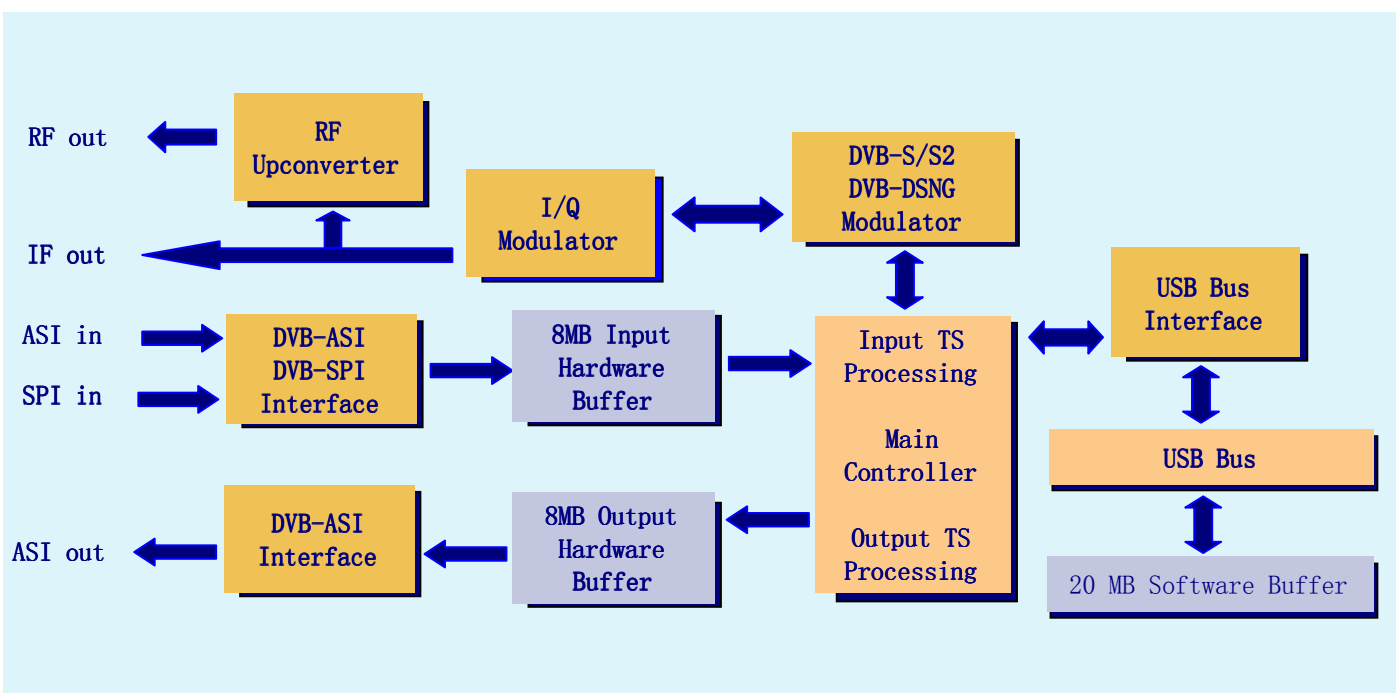● DVB-ASI/SPI Input
● DVB-ASI Monitor Output

1. GENERAL DESCRIPTION

A member of Alitronika's state of art digital video interfacing products.
The AT2900USB is a USB based interface device suitable for DVB-S/S2 Transport Stream Generation and IF as well as full range L-band up conversion.

2. BLOCK DIAGRAM

The figure below illustrates the block diagram of the AT2900USB device. The device communicates with the PC via the USB interface device. The AT2900USB is capable of modulating a DVB-S or DVB-S2 TS from the harddisk of the PC or from the incoming DVB-ASI/SPI inputs. The modulated DVB-S/S2 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 DVSStation3.

RF out ← RF Upconverter

I/Q Modulator ↔ DVB-S/S2 DVB-DSNG Modulator

IF out ←

ASI in → DVB-ASI DVB-SPI Interface → 8MB Input Hardware Buffer → Input TS Processing / Main Controller / Output TS Processing ↔ USB Bus Interface

SPI in →

USB Bus Interface ↕ USB Bus ↕ 20 MB Software Buffer

ASI out ← DVB-ASI Interface ← 8MB Output Hardware Buffer ←

3. EXTERNAL INTERFACES

The external interfaces for the AT2900USB are shown. There are 2 Female 75 Ohms F type for the RF, IF and 2 BNC connectors for DVB-ASI I/O and a 25-pin D-type connector for DVB-SPI input as well as USB and DC power inlet connectors. The Unit is supplied with power supply and USB2.0 cable.

The LED on the back of unit functions as:

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 AT2900USB 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.