

TVB597A

Premium USB DTV Modulator



Overview

The Premium USB digital streaming DTV modulator can play MPEG stream from hard disk and DVB-ASI/SMPTE-310M input into on-air signal. The output can be industry standard 55~2150MHz selectable RF signal. On board synthesizer can generate stable and accurate symbol clock and tuning frequency. The transport stream can be supplied through USB interface and DVB-ASI/SMPTE-310M input.

Features

- Transport stream from hard drive thru USB interface and DVB-ASI/SMPTE-310M input
- DVB-ASI, SMPTE-310M output for monitoring
- On board VHF/UHF/L-BAND RF output up-converter
- Programmable RF output level (0.1dB step)
- Superposition white noise over modulated signal and control the output C/N ratio
- SDK for Windows 2000/XP(32/64bit)/Vista(32/64bit)/7(32/64bit) WDM and Linux
- CMMB, DVB-T/DVB-H, ATSC 8VSB, QAM, DVB-S/DVB-S2, T-DMB, ISDB-T, ISDB-S, DTMB, ATSC-M/H, DVB-T2 modulation option available
- Free 0dBm amplifier option

Module Specifications

Transport Stream Input From hard disk thru USB Bit Rate Up to 90Mbits/s ASI/ SMPTE-310M Input/Output Connector: 75ohm BNC	RF Output Connector: 75ohm BNC Freq: 55~2150MHz, Level: 0dBm max Freq accuracy: +/-5KHz max Attenuation step: 0.1dB Phase noise <-90dBc/Hz @ 10KHz RF step size: 50KHz step(except for TDMB: 8KHz step) USB Interface USB 2.0 high speed compliant	Physical/Environmental HxWxL: 32mm x 146mm x 223mm Driver Windows2000/XP(32/64bit)/Vista(32/ 64bit)/7(32/64bit) WDM and Linux Application Software Televue made GUI Operating Condition Temperature: 0~45°C Humidity: 0~85%
---------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

DVB-T/H Option Specifications

Standard ETSI EN300744 v1-4-1 compliant Non-hierarchical single program mode Punctured Code Rate 1/2, 2/3, 3/4, 5/6, 7/8 selectable Constellation QPSK, 16-QAM, 64-QAM	Transmission Mode 2K/4K/8K mode selectable 4K mode only for DVB-H Guard Interval 1/4, 1/8, 1/16, 1/32 selectable	In-depth Interleaving Only for DVB-H Bandwidth 5/6/7/8 MHz mode selectable 5 MHz only for DVB-H
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------

8VSB Option Specifications

Standard ATSC A.53, 8VSB compliant		
----------------------------------------------	--	--

QAM Option Specifications

Standard ITU-T J.83 Annex A/C and B compliant	Constellation Annex A/C: 16-QAM, 32-QAM, 64-QAM, 128-QAM, 256-QAM	Annex B: 64-QAM, 256-QAM
---------------------------------------------------------	-----------------------------------------------------------------------------	--------------------------

QPSK Option Specifications

Standard ETSI EN 300421 (DVB-S) compliant	Code Rate 1/2, 2/3, 3/4, 5/6, 7/8	Symbol Rate 1~45 M symbols/s DC Blocking Voltage 50V max
-----------------------------------------------------	---------------------------------------------	---------------------------------------------------------------------------------

DVB-S2 Option Specifications

Standard ETS 302 307 compliant LDPC Code 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, and 9/10 supports	Modulation Mode QPSK, 8PSK, 16APSK, 32APSK Baseband Shaping Filter Roll-off 0.20, 0.25, 0.35, none selectable	Symbol Rate 1~45 M symbols/s DC Blocking Voltage 50V max
-------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------

T-DMB Option Specifications

Standard ETS 300401, ETS300799 compliant Transmission Mode DAB transmission modes I, II, III, IV	- Transmission mode automatically selected from the ETI stream	Supports ETI(NI, G.703), ETI(NA, G.704)5592 and ETI(NA, G.704)5376 file format *T-DMB modulation from TS input is not supported
-------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------

ISDB-T Option Specifications

Standard ARIB STD-B31 v1.6 compliant Mode Mode I, Mode II, Mode III Code Rate 1/2, 2/3, 3/4, 5/6, 7/8 selectable Mapping DQPSK, QPSK, 16QAM, 64 QAM	Guard Interval 1/4, 1/8, 1/16, 1/32 Time Interleaving Length Mode I - 0, 4, 8, 16 Mode II - 0, 2, 4, 8 Mode III - 0, 1, 2, 4	The Number of Segment 1 / 13 Segment Support TMCC Information and Generation (ISDB-T information and IIP) *ISDB-T modulation from DVB-ASI input is supported
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

ISDB-S Option Specifications

Standard ARIB STD-B20 v3 compliant FEC inner:Trellis, convolutional coders outer:RS(204,188)	Modulation TC8PSK, QPSK, BPSK (hierarchical) Code Rate 1/2, 2/3, 3/4, 5/6, 7/8 selectable	*ISDB-S modulation from DVB-ASI input is not supported *Supports framed TS with TMCC (1~8 TS have totally 48 slots can be selected) *ISDB-S option is supported since TVB597A V2.0
------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

DTMB Option Specifications

Standard GB20600-2006 compliant Number of Carrier 1 or 3780 sub-carriers selectable Frame Length 4200, 4335, 4725 symbols	Constellation 4QAM-NR, 4QAM, 16QAM, 32QAM, 64QAM Code Rate 0.4, 0.6, 0.8	Time Interleaving Length 240, 720 symbols Bandwidth 8MHz
---------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------

CMMB Option Specifications

Standard GY/T 220.1-2006 compliant Constellation BPSK, QPSK, 16QAM	Subcarrier 4096/8MHz	*CMMB modulation from DVB-ASI input is not supported *CMMB stream should have control information table (CMCT)
-------------------------------------------------------------------------------------------	--------------------------------	-------------------------------------------------------------------------------------------------------------------

ATSC-M/H Option Specifications

Standard ATSC A/153 Part2 compliant	*Supports captured file play, live from external ATSC-M/H MUX through ASI-SMPTE-310M input	
-----------------------------------------------	--------------------------------------------------------------------------------------------	--

DVB-T2 Option Specifications

Standard ETSI EN302 755 compliant MISO/SISO SISO FFT Size 1K, 2K, 4K, 8K(Normal and extended) Guard Interval 1/4, 1/8, 1/16, 1/32, 1/128, 19/128, 19/256 PAPR None L1 Modulation BPSK, QPSK, 16QAM, 64QAM Pilot Pattern PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8	The Number of RF (TFS) Single FEF None The Number of PLP Single PLP, Multi PLP(8 PLPs) PLP Code Rate 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 PLP Modulation QPSK, 16QAM, 64QAM, 256QAM Constellation Rotation Supports at QPSK, 16QAM	PLP FEC Type 16K, 64K Frame Interval '1' Time Interleaving Length '0' Time Interleaving Type '0' *DVB-T2 modulation from DVB-ASI input is not supported *Supports T2MI multiplexed stream
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------