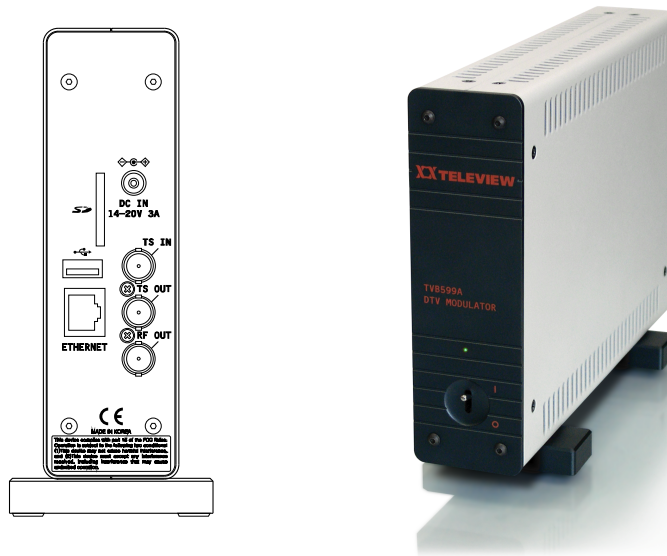


TVB599/LAN

Network DTV Modulator



Overview

TVB599/LAN is a TVB599A integrated into dedicated housing unit which has Single-chip Embedded Linux computer. The TVB599/LAN has 10/100/1000Mbps Ethernet port, USB2.0 port and SD card slot. Ethernet based remote control software TVB_Manager is used to control this product from remote site and also used to upgrade firmware on the TVB599/LAN. The USB2.0 port and SD card slot can be used optionally to store transport stream file.

Features

- Transport stream from RTP/UDP over Ethernet (up to 24Mbps) , USB 2.0 stick memory and SD memory card (up to 54Mbps) , and DVB-ASI/SMPTE-310M input
- DVB-ASI, SMPTE-310M output for monitoring
- Integrated VHF/UHF/L-BAND RF output up-converter
- Programmable RF output level (0.1dB step)
- White noise addition over modulated signal to have desired C/N ratio
- DVB-T/DVB-H, ATSC 8VSB, QAM(DVB-C & USA-QAM), DVB-S/DVB-S2, T-DMB, ISDB-T, ISDB-S, DTMB, CMMB, ATSC-M/H, DVB-T2, DVB-C2 modulation options are supported
- SNMP based remote control

Module Specifications

Transport Stream Input RTP over IP, USB flash, SD card, DVB-ASI/SMPTE-310M Bit Rate When playing thru RTP over IP: Up to 24Mbits/s When playing thru USB/SD card: Up to 54Mbits/s ASI/ SMPTE-310M Input/Output Connector: 75ohm BNC	RF Output Connector: 75ohm BNC Freq: 55~2150MHz Level: VHF/UHF/L-BAND 0dBm max Freq accuracy: +/-5KHz max Attenuation step: 0.1dB Phase noise <-90dBc/Hz @ 10KHz RF step size: 100KHz step(except for TDMB: 8KHz step) Ethernet 10/100/100Mbit Ethernet port used for remote control and TS input	USB USB 2.0 for flash memory SD Card SDHC class 2/4/6/10 supported Physical/Environmental HxWxL: 170mm x 70mm x 235mm Application Software Televue TVB manager Operating Condition Temperature: 0~35°C Humidity: 10% ~ 90%, Non-condensing
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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
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8VSB Option Specifications

Standard ATSC A.53 Part 2: 8VSB compatible		
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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
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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
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DVB-S2 Option Specifications

Standard ETS 302 307 broadcast services 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
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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
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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 direct modulation from DVB-ASI input is supported
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ISDB-S Option Specifications

Standard ARIB STD-B20 v3 compliant FEC inner:Trellis, convolutional coders outer:RS(204,188) Modulation TP8PSK, 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)
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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
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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)
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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	
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DVB-T2 Option Specifications

Standard ETSI EN302 755 compliant MISO/SISO SISO FFT Size 1K, 2K, 4K, 8K, 16K, and 32K (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 ~ 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, 64QAM, 256QAM Bandwidth 5/6/7/8 MHz mode selectable	PLP FEC Type 16K, 64K Frame Interval '1' Time Interleaving Length '0' ~ '255' Time Interleaving Type '0' *DVB-T2 modulation from DVB-ASI input is not supported *Supports T2MI multiplexed stream *Supports up to 40Mbps stream * In case of Multi PLP, it is recommended to use T2MI multiplexed stream due to CPU performance issue
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DVB-C2 Option Specifications

Standard ETSI EN302 769 compliant L1 TI Mode NONE, BEST FIT, 4 Symbols, 8 Symbols Guard Interval 1/64, 1/128 Data Slice Type TYPE1, TYPE2 Time Interleaving '00'	FEC Header Type ROBUST, HEM BBHeader Format NORMAL, HEM The Number of PLP Single PLP, Multi PLP (8 PLPs) PLP Code Rate 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 PLP Modulation* 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM	PLP FEC Type 16K, 64K Bandwidth 6/7/8 MHz mode selectable *256QAM,1024QAM,4096QAM configurations could have some post LDPC errors
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