

**250-watt VHF Band I Digital Transmitter**


This system includes: TAVD-250L Amplifier,  
TP1000 4 channel Encoder/Mux/Modulator

Note: Other configurations available:

- TP1800 Transmodulator 4-8VSB In, 1 Agile 8VSB Output
- TM900 Agile Adaptive Digital Modulator ATSC 1.0/3.0
- TM500 Low-Cost Digital Modulator

- 4 channels (2HD/2SD or 1HD/3SD) 8VSB RF output
- PSIP/PSI descriptors generator/injector with VCT
- Remultiplexer with PID editor, ASI injection, remap, restamp, grooming, and add-drop
- MPEG2/MPEG4 video encoding
- Full color touchscreen display, with Ethernet and SNMP
- Internal RF isolator, efficient switching power supply
- EAS input and control through GPI or SNMP
- Dynamic PSIP input from any external EIT EPG generator
- Excellent video quality and lower bitrates through triple pass video motion estimation
- 2 Year Warranty on Amplifier
- 1 Year Warranty on Modulator
- ATSC 3.0 Available on Select Modulators

**RF CHARACTERISTICS**

<b>Frequency Range</b>	Modulator:	50 – 860 MHz RF Input 55 – 858 MHz RF Output (band center)
	Amplifier:	54-87 MHz (VHF Band I)
<b>Frequency Step Size</b>		12.5 kHz
<b>Input Power</b>		0 dBm (nominal) into power amplifier from translator
<b>Transmitter Output Power</b>		250W (other levels available upon request)
<b>Power Level</b>		Adjustable 10 – 100% through amplifier
<b>Impedance</b>		Output of amplifier 50 Ω, N female
<b>Modulation</b>		8VSB, QAM (output power will change between standards)
<b>Spurious</b>		- 60 dBc including harmonics With Filter

**AUDIO / VIDEO INPUT CHARACTERISTICS**

<b>Digital Audio Inputs</b>	SDI embedded – (1) stereo pair or pass through compressed
<b>Digital Audio Format</b>	Selectable Dolby Digital / AC3 / Stereo / 5.1-7.1 pass-through / MPEG2 / AAC
<b>Analog Audio Inputs</b>	Optional AV/L-R balanced-unbalanced audio embedded available upon request
<b>Digital Video Inputs</b>	(4) HD / SD SDI with embedded audio
<b>Analog Video Inputs</b>	Optional CVBS / Component / HDMI / VGA / DVI adapter available upon request
<b>Input Resolution</b>	Auto detect any resolution
<b>Video Scaler</b>	Scaler function can be selected on standard software to scale the input to lower resolution for matching
<b>Encoding Modes</b>	MPEG2 / MPEG4 H264 selectable by software per each channel
<b>Encoding Latency</b>	Ultra-low delay 50 milliseconds encoding
<b>Encoding Bitrates</b>	User selectable from 0.5 to 20 Megabits/s per channel (VBR / CBR stat mux)
<b>Encoding Control</b>	Video bitrate, CBR / VBR, ultra-fast encoding modes, 1080P MPEG2 mode
<b>Features</b>	All Closed Caption and TXT formats, Crystal-View technology

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**ASI INPUT / OUTPUT**

<b>ASI Inputs</b>	(1) SPTS / MPTS
<b>Remultiplex</b>	Generate, inject, remap, restamp, grooming, add / drop; Stat Mux
<b>Max Input Bitrate</b>	214 Megabit/s
<b>ASI Outputs</b>	(2) Mirror
<b>ASI Output Format</b>	Selectable 188 / 204 bits
<b>Transport Stream</b>	ASI Mux MPTS ready for excitors, STLs, and uplinks
<b>Max Output Bitrate</b>	Fixed payload selectable to 19.3 Megabit/s (ATSC) or any other value as needed

**IPTV OUTPUT**

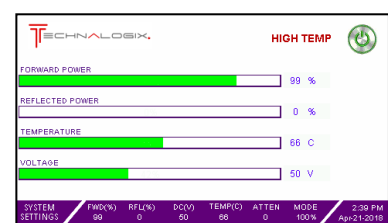
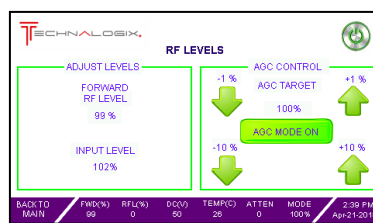
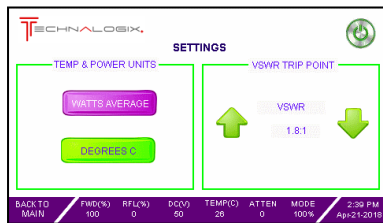
<b>IP Streaming Output</b>	(1) 100 / 1000 auto
<b>Mux IP Stream Output</b>	(1) Same as ASI MPTS Mux but over IP – ready for IP STLs, excitors, etc.
<b>SPTS Single Stream Output</b>	(4) Selectable RTP / RTSP / UDP Single Program Transport Streams, IGMP, Multicast / Unicast
<b>IPTV Bitrates</b>	Same as ASI Mux output for the MUS stream, same as each encoder for the SPTS streams
<b>Transport Stream ID</b>	TSID

**ELECTRICAL CHARACTERISTICS**

<b>Flexible AC Input</b>	100-240 Vac input, 50/60hz	
<b>AC Consumption</b>	Amplifier:	1000W typical [110Vac/9.4Aac] (dependent on frequency)
	Encoder/Stat	65W max
	Mux/Modulator:	

**INTERFACE**

<b>DB25 Remote Port</b>	<b>Control:</b>	RF carrier on/off, RF power up/down, reset
	<b>Monitor:</b>	Forward/reflected RF level, control PCB Vcc
	<b>Flags:</b>	Overdrive, VSWR (adjustable trip point), high temperature
<b>Ethernet</b>	<b>Control:</b>	RF carrier on/off, RF power up/down, AGC/manual mode, change VSWR trip point, reset
	<b>Monitor:</b>	Forward/reflected RF level, pallet voltage, RF input level, temperature, VSWR trip point, model/serial number
	<b>Flags:</b>	Carrier on/off, overdrive, pallet voltage, VSWR, RF input, temperature, AGC / manual
<b>SNMP</b>	<b>Control:</b>	RF carrier on/off, RF power up/down, AGC/manual mode, change VSWR trip point, reset
	<b>Monitor:</b>	Forward/reflected RF level, DC pallet voltage, RF input level, temperature, pallet current, attenuation, run time, RF fault, model/serial number
	<b>Flags:</b>	Overdrive, VSWR, temperature, SNMP error



Screenshots off Touchscreen Interface

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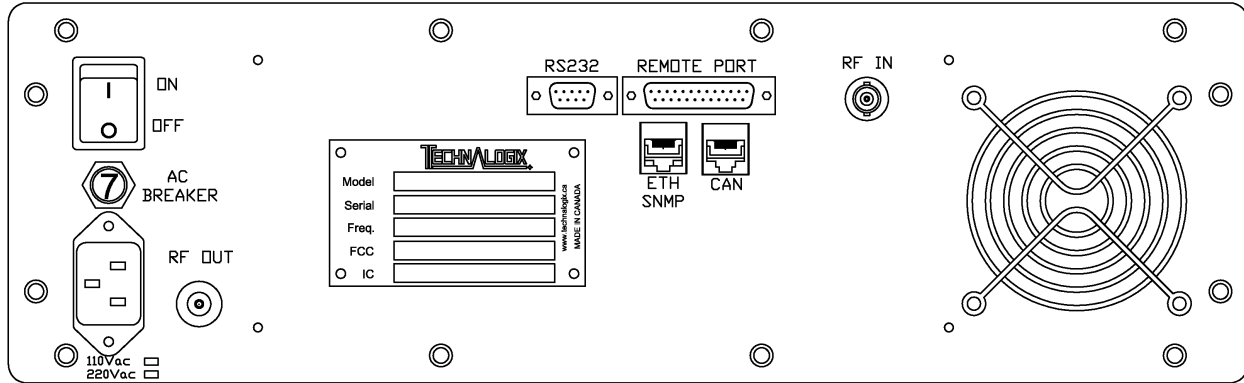
**PHYSICAL FEATURES**

**Minimal Rack Space**      Amplifier:            3U (H) x 25" (D) x 19" (W)  
    Modulator:            1U (H) x 18" (D) x 19" (W)

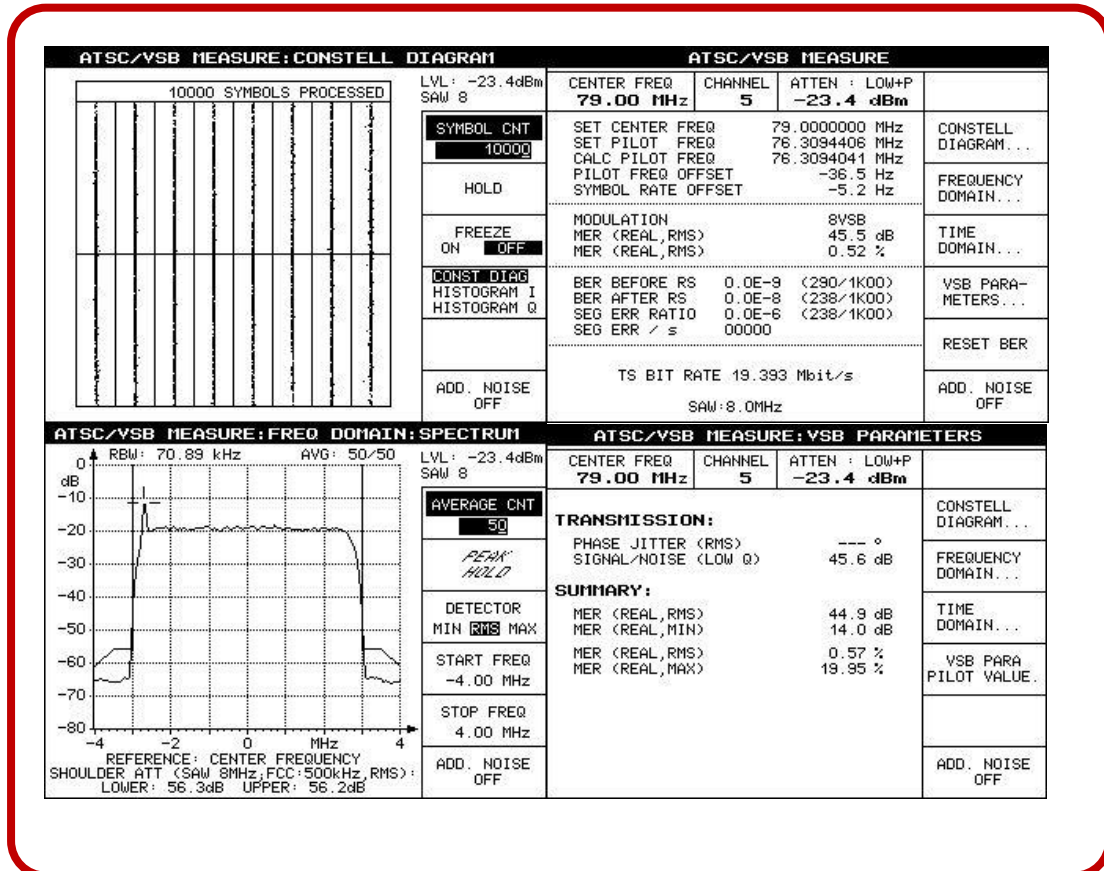
**Enclosures**                    Lightweight Aluminum

**Operating Temperature**      0 to +45° C

**Humidity**                            90%, non-condensing



All Specifications are Approximate. Taken with TP-1000 Modulator



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