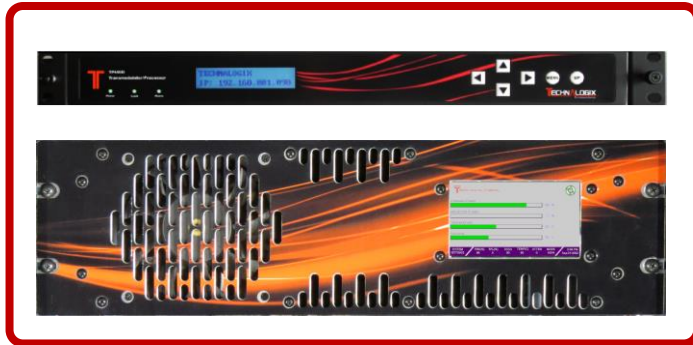


**100-watt VHF Band I Digital Transmitter**


This system includes: TAVD-100L 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<br>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> |            | 100W (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  |

\*\* Due to continuous product improvements, Technalogix reserves the right to change specifications without notice. \*\*

**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**

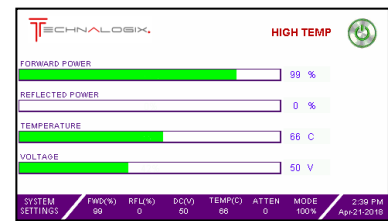
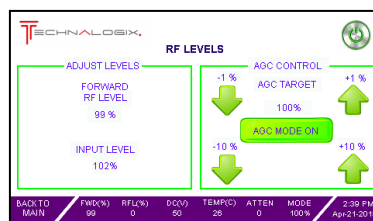
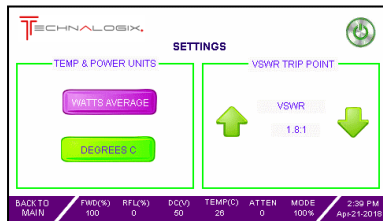
|                                  |   |
|----------------------------------|---|
| <b>IP Streaming Output</b>       | (1) 100 / 1000 auto   |
| <b>Mux IP Stream Output</b>      | (1) Same as ASI MPTS Mux but over IP – ready for IP STLs, excitors, etc.                    |
| <b>SPTS Single Stream Output</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        |

**ELECTRICAL CHARACTERISTICS**

|                          |   |
|--------------------------|---|
| <b>Flexible AC Input</b> | 100-240 Vac input, 50/60hz  |
| <b>AC Consumption</b>    | Amplifier: 400W typical [110Vac/4.9Aac] (dependent on frequency)<br>Encoder/Stat: 65W max<br>Mux/Modulator: |

**INTERFACE**

|                         |  |
|-------------------------|--|
| <b>DB25 Remote Port</b> | <b>Control:</b> RF carrier on/off, RF power up/down, reset<br><b>Monitor:</b> Forward/reflected RF level, control PCB Vcc<br><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<br><b>Monitor:</b> Forward/reflected RF level, pallet voltage, RF input level, temperature, VSWR trip point, model/serial number<br><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<br><b>Monitor:</b> Forward/reflected RF level, DC pallet voltage, RF input level, temperature, pallet current, attenuation, run time, RF fault, model/serial number<br><b>Flags:</b> Overdrive, VSWR, temperature, SNMP error          |

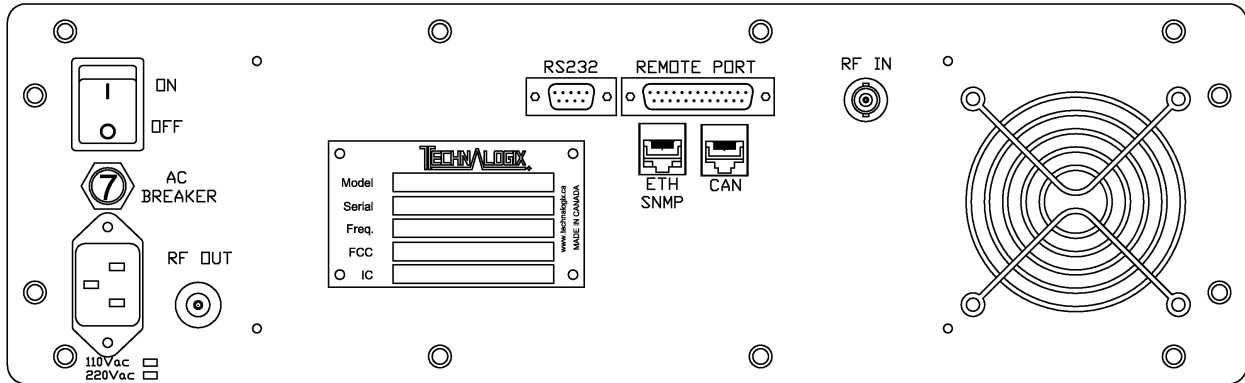


Screenshots off Touchscreen Interface

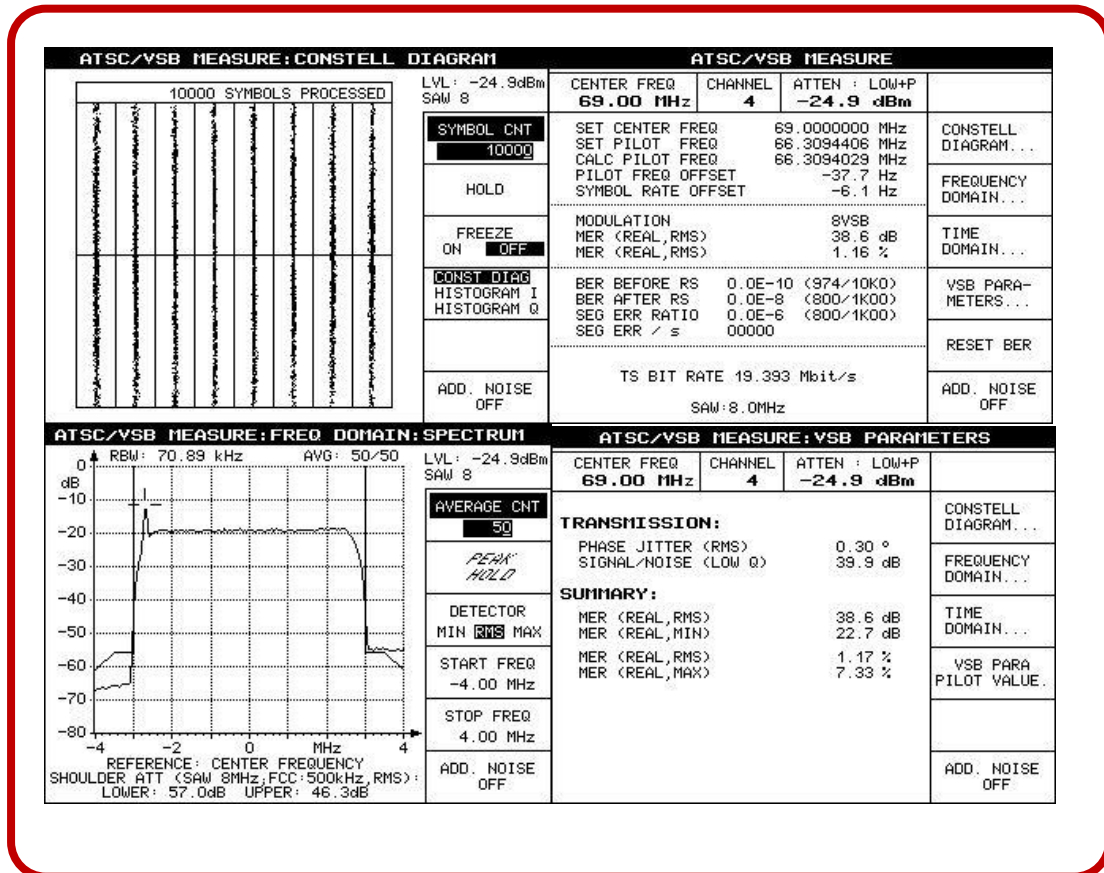
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### PHYSICAL FEATURES

|                              |                      |                            |
|------------------------------|----------------------|----------------------------|
| <b>Minimal Rack Space</b>    | Amplifier:           | 3U (H) x 25" (D) x 19" (W) |
|                              | Modulator:           | 1U (H) x 18" (D) x 19" (W) |
| <b>Enclosures</b>            | Lightweight Aluminum |                            |
| <b>Operating Temperature</b> | 0 to +45° C          |                            |
| <b>Humidity</b>              | 90%, non-condensing  |                            |



Specifications taken with our TP-1000 modulator



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