Lantana™ IP/DVB-T2

Overview
RF modulators convert video to RF (radio frequency) so the video can be transmitted to a television via its RF input. DVB-T2 is the second generation version of the DVB-T standard used for terrestrial (over the air) broadcasting in Europe and many other areas of the world. DVB-T2 offers 30 to 50 percent higher transmission capacity than DVB-T, plus improved forward error correction.

The Lantana IP/DVB-T2 is a remotely operated, software definable, frequency agile modulator that sends live or recorded video streams to multiple HD monitors via inexpensive RF over coaxial cable. With its included software, one can create a powerful remote signage server. It does not need a computer to feed content to it.

For example, retailers can install one unit at each store, along with a USB thumb drive loaded with numerous videos. Using remote management software, an operator in the home office can program which video will play out on multiple HD monitors at each location. The Lantana IP/DVB-T2 is also suitable for set-top box testing and laboratory applications.

The input can be IP, USB, DVB-ASI, or SMPTE 310M, single or multi program transport streams. One DVB-T2 channel can have two HD streams.

Customers can purchase licenses for additional modulation profiles and upgrade the unit immediately. The Lantana IP/DVB-T2 accepts and plays out MPEG-2 or H.264 streams (SPTS or MPTS) from IP or ASI, or plays transport streams from a local flash-based USB “stick”.

Features
- Input: IP, DVB-ASI, USB, or SMPTE 310M – plays transport streams from RTP/UDP over Ethernet, SD memory card, USB stick, or ASI source
- Accepts MPEG-2 or H.264 Streams (SPTS or MPTS)
- Output: DVB-T2
- RF Output Frequency: 55-2150 MHz
- Payload = Up to 40 Mbps
- Field upgradeable – can be reprogrammed to add additional profiles or new firmware
- Playback Scheduler for Day, Week, or Month
- Ships with Java®-based application GUI
- Programmable RF output level (0.1 dB step)
- White noise addition over modulated signal to have desired C/N ratio
- Sample transport streams available
- Special Bundle Prices for multiple modulations
- Works standalone and will reboot to configured state

Applications
- Digital signage
- In Store Demo of televisions
- Sending HD video to multiple monitors in sports arenas and stadiums
- Set-top box testing
- Laboratory applications
**Specifications**

### Inputs/Outputs

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>UDP over IP (CBR only), USB, SD card, DVB-ASI, or SMPTE 310M</td>
<td>DVB-T2</td>
</tr>
</tbody>
</table>

| RF output              | Frequency: VHF/UHF 55–2150 MHz |
|                       | Level: VHF/UHF -31.5 to 0 dBm   |
|                       | Attenuation step: 0.1 dB        |
|                       | Phase noise <-90dBc/Hz @ 10 KHz |

| Connectors            | 75 Ohm BNC                   |
|                       | Bitrates: Up to 40 Mbps      |
| Ethernet              | USB 2.0 for flash memory     |
| SD Card               | SDHC class 2/4/6/10 supported |

### DVB-T2 Specifications

- **Standard:** ETSI EN302 755 compliant
- **MISO/SISO:** SISO/MISO Tx1, Tx2 Support
- **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, PP2, PP3, PP4, PP5, PP6, PP7, PP8
- **Number of RF (TFS):** Single
- **FEF:** None
- **PLP Type:** Common, Type 1, Type 2 PLP
- **Number of PLP:** Single PLP, Multi PLP (8 PLPs)
- **PLP Code Rate:** 1/2, 3/5, 2/3, 4/5, 5/6
- **PLP Modulation:** QPSK, 16QAM, 64QAM, 256QAM
- **Constellation Rotation:** Supports at QPSK, 16QAM, 64QAM, 256QAM
- **PLP FEC Type:** 16K, 64K
- **Frame Interval:** ‘1’
- **Time Interleaving Length:** ‘0’ ~ ‘255’
- **Time Interleaving Type:** ‘0’, and Frame Interval (I_Jump)=1

### Notes

- * L1 post scrambling is supported
- * T2-Lite is supported
- * DVB-T2 modulation from DVB-ASI input is supported
- * Supports T2MI multiplexed stream
- * Supports up to 40 Mbps stream
- * In case of Multi PLP, it is recommended to use T2MI multiplexed stream due to CPU performance issue

### Physical & Power

<table>
<thead>
<tr>
<th>Dimensions (l x w x h)</th>
<th>9.25 x 2.76 x 6.7 inches (235 x 70 x 170 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>3.2 lbs. (1.45 kg)</td>
</tr>
<tr>
<td>Power</td>
<td>External 14-20V DC power supply</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>32° to 95° F (0°C to 35°C)</td>
</tr>
<tr>
<td>Humidity</td>
<td>10% ~ 90%, Non-condensing</td>
</tr>
<tr>
<td>Conformities</td>
<td>FCC, RoHS, CE Mark</td>
</tr>
</tbody>
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