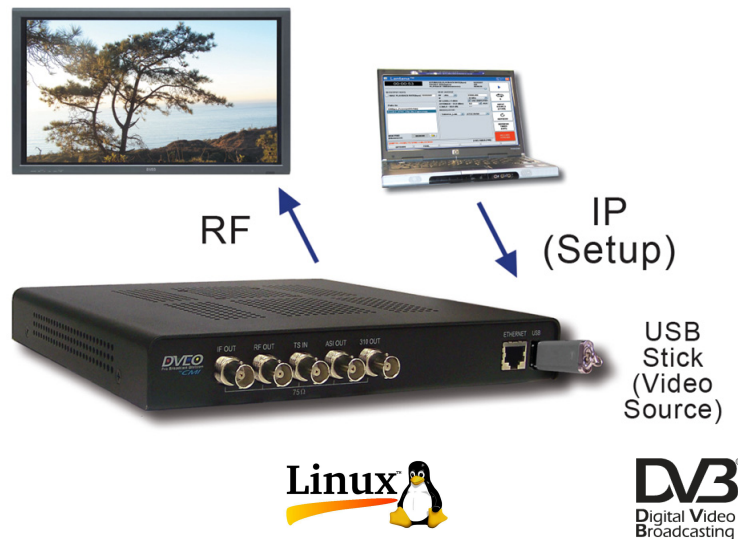


# Lantana™ – QAM/8VSB/ATSC M/H/DVB-T/DVB-T2/DVB-S/S2/ ISDB-T/CMMB

**Small, Standalone, Multi-Function,  
Frequency Agile, QAM (A, B, or C)  
Modulator with Web-based Management.  
Accepts MPEG-2 or H.264 Streams (SPTS or  
MPTS) from ASI, or Local USB “Stick”.  
Perfect Remotely Manageable RF Modulator.  
Modify Setup via Any Internet Connection –  
No Computer Required to Operate. Set Up  
Remotely and Forget.**



## Features

- Input: DVB-ASI, USB, or SMPTE 310M – plays transport streams from USB stick or ASI source
- Output: Choice of QAM, 8VSB, DVB-T/H, DVB-S/ S2, DMB-T, T-DMB, ISDB-T, CMMB, or ATSC M/H (Mobile DTV) – singly or combined
- RF Output Frequency: 55-860 MHz, 956-1750 MHz
- IF Output Frequency: 36 MHz/44 MHz selectable
- Field upgradeable – can be reprogrammed to add additional profiles
- Playback Scheduler for Day, Week, or Month
- Ships with Java®-based GUI
- On board Channel 1-135 selectable RF output up-converter
- Programmable RF output level (0.1 dB step)
- Sample transport streams available
- SNMP (10/100 Ethernet) remote web-based LAN management
- Bitrate: Up to 27 Mbps
- Special Bundle Prices for multiple modulations
- Works standalone and will reboot to configured state

## Applications

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

## Overview

Lantana™ 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.

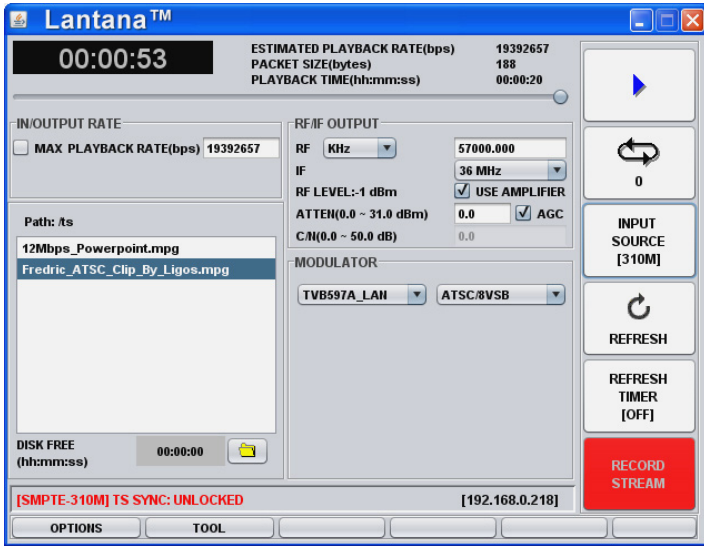
For example, retailers can install one unit at each store, along with a USB thumb drive loaded with numerous videos. Using web-based management, an operator in the home office can program which video will play out on multiple HD monitors at each location. Lantana is also suitable for set-top box testing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

Lantana is available with the customer's choice of QAM, 8VSB, DVB-T/H, DVB-S/S2, ATSC M/H, ISDB-T, T-DMB, DMB-T, or CMMB output. The input can be USB, DVB-ASI, or SMPTE 310M, single or multi program transport streams. One 8VSB RF channel can have up to one HD and one SD stream or three SD streams, and one QAM channel can have two HD streams.

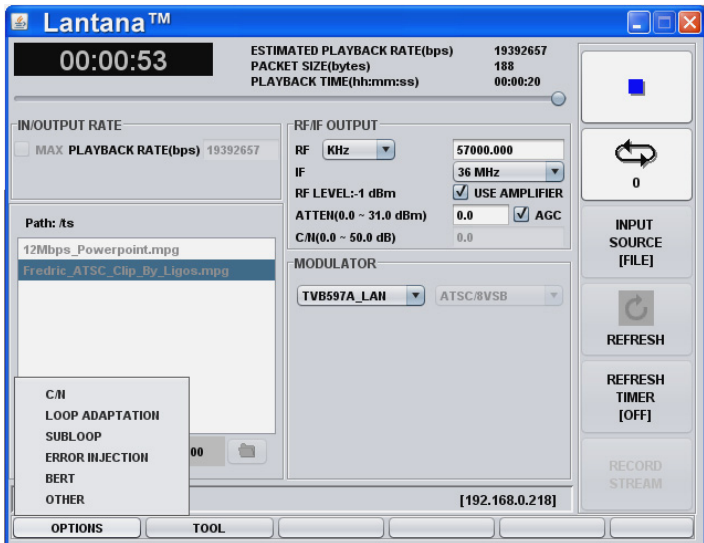
Customers can purchase licenses for additional profiles and upgrade the unit immediately. Lantana accepts and plays out MPEG-2 or H.264 streams (SPTS or MPTS) from ASI, or plays transport streams from a local flash-based USB “stick”.

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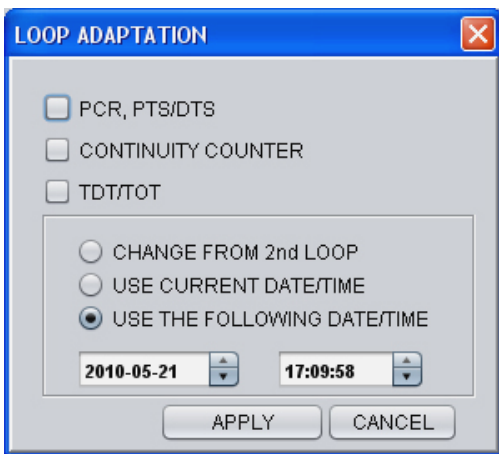
**DVEO**  
Broadcast Division  
Computer Modules, Inc.  
11409 West Bernardo Court  
San Diego, CA 92127  
Tel: 858-613-1818 Fax: 858-613-1815  
[www.dveo.com](http://www.dveo.com)



Main GUI

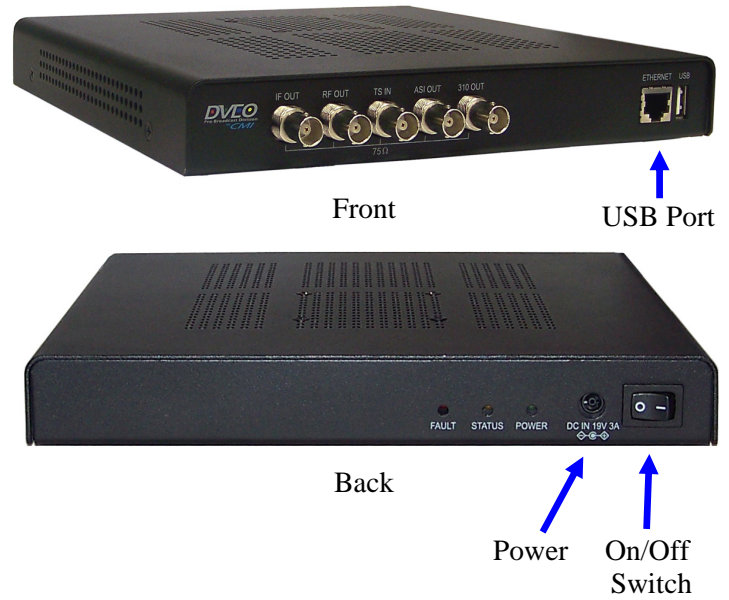


Options



Loop Adaptation

Note: Software ships with Lantana at no cost.



System Specifications

Inputs/Outputs

Input	USB, DVB-ASI, or SMPTE 310M
Output	Choice of: QAM, 8VSB, DVB-S+S2, DVB-T, DVB-T/H, DVB-T2, ATSC M/H, DMB-T, T-DMB, ISDB-T, or CMMB
IF output	Freq: 36 MHz/44 MHz selectable Level: -15 dBm max (@ 36/44 MHz)
RF output	Freq: VHF/UHF 55-956 MHz L-BAND 956-2150 MHz Level: VHF/UHF -31.5 to 0 dBm L-BAND -31.5 to -20 dBm Freq accuracy: +/-5 KHz max Attenuation step: 0.1 dB Phase noise <-90dBc/Hz @ 10 KHz RF step size: 100 KHz step (except for TDMB: 8 KHz step)
Connectors	75 Ohm BNC
Bitrate	Up to 27 Mbps
Ethernet	10/100 BT on RJ45
USB	USB 2.0

Physical & Power

Dimensions	Width: 9.2 inches (234 mm) Length: 9.3 inches (237 mm) Height: 1.25 inches (32 mm)
Weight	1 lb., 6 oz. (624 grams)
Power	External 19V DC power supply
Operating Temperature	32° to 113° F (0°C to 45°C)
Humidity	To 85% Non-condensing relative humidity
Conformities	FCC, RoHS, CE Mark

# Feature Specifications

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Specifications	
Standard	ITU-T J.83 Annex A/C and B compatible
Constellations	Annex A/C: 16-QAM, 32-QAM, 64-QAM, 128-QAM, and 256-QAM Annex B: 64-QAM and 256-QAM
<b>8VSB Option Specifications</b>	
Standard	ATSC A.53, 8VSB compliant
<b>DVB-T/H Option Specifications</b>	
Standard	ETSI EN300744 v1-4-1 compatible Non-hierarchical single program mode
Punctured Code Rate	1/2, 2/3, 3/4, 5/6, 7/8 selectable
Constellation	QPSK, 16QAM, 64QAM
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
<b>DVB-T2 Option Specifications</b>	
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
Number of RF (TFS):	Single
FEF	None
Number of PL	Single PLP
PLP Code Rate	1/2, 3/5, 2/3, 3/4, 4/5, 5/6
PLP Modulation	QPSK, 16QAM, 64QAM, 256QAM
Constellation Rotation	None
PLP FEC Type:	16K, 64K
Frame Interval:	'1'
Time Interleaving Length and Type:	'0'
Note	*DVB-T2 modulation from DVB-ASI input is not supported *Supports T2MI multiplexed stream
<b>DVB-S (QPSK) Option Specifications</b>	
Standard	ETSI EN 300421 (DVB-S) compliant
Code Rates	1/2, 2/3, 3/4, 5/6, 7/8
Symbol Rates	1~45 M symbols/s
DC Blocking Voltage	50V max
<b>DVB-S2 Option Specifications</b>	
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
Modulation Mode	QPSK, 8PSK, 16APSK, 32APSK
Baseband Shaping Filter	Roll-off 0.20, 0.25, 0.35, none selectable
Symbol Rates	2~45 M symbols/s without shaping filter 2~22 M symbols/s with shaping filter
DC Blocking Voltage	50V max
<b>T-DMB Option Specifications</b>	
Standard	Compliant with ETS 300401 and ETS 300799
Transmission modes	DAB transmission modes I, II, III, IV Mode automatically selected from the ETI stream Supports ETI (NI) and ETI (NA) file formats
Modulation	*T-DMB modulation from TS input is not supported
<b>ATSC M/H (Mobile DTV) Option Specifications</b>	
Standard	ATSC A/153 Part 2 compliant
Note	*Supports captured file play, live from external ATSC-M/H mux through ASI/SMPTE-310M input

# Option Specifications

ISDB-T Option Specifications	
Standard	ARIB STD-B31 v1.6 compliant
Mode	Mode I, Mode II, Mode III
Code Rates	1/2, 2/3, 3/4, 5/6, 7/8 selectable
Mapping	DQPSK, QPSK, 16-QAM, 64-QAM
Guard Interval	1/4, 1/8, 1/16, 1/32
Timing Interleaving Length	Mode I - 0, 4, 8, 16; Mode II - 0, 2, 4, 8 Mode III - 0, 1, 2, 4
Number of Segments	1 / 13 Segment
Support TMCC Info & Generation (ISDB-T info & IIP)	*ISDB-T modulation from DVB-ASI input is not supported
<b>DTMB Option Specifications</b>	
Standard	GB20600-2006 compliant
Number of Carriers	1 or 3780 sub-carriers selectable
Frame Length	4200, 4335, 4725 symbols
Constellations	4-QAM-NR, 4-QAM, 16-QAM, 32-QAM, 64-QAM
Code Rates	0.4, 0.6, 0.8
Time Interleaving	240, 720 symbols
Bandwidth	8 MHz
<b>CMMB Option Specifications</b>	
Standard	GY/T 220.1-2006 compliant
Constellations	BPSK, QPSK, 16QAM
Subcarrier	4096/8 MHz
Modulation	*CMMB modulation from DVB-ASI input is not supported *CMMB stream should have control information table (CMCT)

# Ordering Information

- Lantana 8VSB
- Lantana ATSC M/H (Mobile DTV)
- Lantana CMMB
- Lantana DMB-T
- Lantana DTMB
- Lantana DVB-C
- Lantana DVB-S+S2
- Lantana DVB-T
- Lantana DVB-T2
- Lantana DVB-T/H
- Lantana ISDB-T
- Lantana QAM
- Lantana T-DMB
- Lantana MF/XX – Multi Formats on same unit

**Note: Software ships with Lantana at no cost.**