

The *OmniLynx* **OmniMod II**

Agile Television Modulator



The *OmniLynx OmniMod II* offers performance, flexibility and reliability to meet the most demanding requirements. It accepts video and audio baseband inputs and provides a modulated visual and aural carrier on any NTSC or PAL channel in 45 - 550 MHz and 550 - 850 MHz ranges.

Features include :

- Versions available for NTSC, PAL B/G, I and D/K. Also dual format versions and NTSC/PAL field configurable
- RF level output +50 dBmV 45 - 850 MHz
- Front panel DIP switch control
- T7 - T13 (7 - 43 MHz) channel operation (extended operation)
- Fully quartz synthesized visual and aural carriers exceed FCC required intercarrier stability
- SAW filtering ensures broadcast quality RF performance
- Carrier to noise does not degrade with decreased RF level adjustment
- Defeatable audio pre-emphasis or aural carrier for BTSC stereo compatibility
- Low cost
- Frequency offsets automatically selected for FCC/DOC requirements (fully synthesized)
- Ultra low noise performance -72 / - 92 dBc (see reverse side)
- 80 channel system noise performance > 55 Bc / 4 MHz
- Micro processor based diagnostic routines ensure specifications for correct operation
- Space efficient -- 8 modulators require only 4U (7" rack height)
- High reliability, state of the art design using MMIC, microstrip and SMD technology
- Durable design is reflected in stainless steel chassis



Specifications - OmniMod II

Agile Television Modulator

Video

Input Level	1V p-p (typical)
Modulation Level	Adjustable; 60 - 95%
Differential Gain	< 5%
Differential Phase	< 3°
Input Impedance	75 ohm
Video Frequency Response	±1 dB

Audio

Audio Input Level	250 mV RMS for 25 kHz peak deviation
Audio Distortion	< 0.5% @ 25 kHz peak deviation
Pre-emphasis	75 or 50 µs, 50 Hz - 15 kHz
Audio Frequency Response	±1 dB pre-emphasis curve
BTSC Compatibility	
Pre-emphasis Bypass Method	Pre-emphasis may be bypassed with an internal jumper
External Aural Carrier Injection Method	Aural carrier may be disabled with an internal jumper



RF

Frequency Range of Video Carrier	45 - 550 MHz or 550 - 850 MHz
Extended Channels	T7 - T13 (7 - 43 MHz)
Output Level	+50 dBmV
Level Control Range	> 10 dB adjustable
Spurious Output	
45 - 550 MHz	-60 dBc, Ch 2 to Ch 78 NTSC CATV
550 - 850 MHz	-60 dBc, Ch 79 to Ch 133 NTSC CATV
A/V Carrier Ratio	-12 to -20 dB (factory set to -16 dB)
Visual Carrier Frequency Accuracy	5 kHz (10 - 40°C; VHF)
.....	8 kHz (10 - 40°C; UHF)
Aural/Visual Frequency Accuracy	500 Hz (10 - 40°C)
Aural Carrier Disable	Programmable by internal jumper
Frequency Offset Adjustment	Automatic FCC offset enabled via front panel control
.....	(0, +12.5 and +25 kHz synthesized)
Offset Frequency Accuracy	±500 Hz
Broadband Noise	
50 MHz to 2 * Ch Freq.	-72 dBc in 4 MHz bandwidth
2 * Ch Freq. to 550 MHz	-90 dBc in 4 MHz bandwidth

General

DC Power Input	+11.5 - +14 VDC, 600 mA
Weight	3 lbs (1.4 kg)
Dimensions	5.5" x 1.5" x 11.5" (14 x 4 x 29 cm)
Mounting	Vertical Mounting (8 Modulators in 4U; 7" height)
.....	Horizontal Mounting (Up to 3 units in 1U; 1.75" height)
Operating Temperature	10 - 40°C



Options

- FCC Predistorted Group Delay
- IF loopthrough before SAW (video)
- IF Loopthrough after SAW (composite)
- Dual IF loopthrough (separate audio/video)
- Over Modulation LEDs (audio/video)
- Custom Synthesized RF Output/Offset Frequency is available



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