



# OTM-4870

## FREQUENCY AGILE 870MHz MODULATOR

### Features / Benefits

- Frequency agile from 48.25 to 865.25MHz
- Microprocessor controlled by front panel push buttons
- LCD displays channel or test description
- >80dB out-of-band carrier to noise ratio
- +60dBmV high output level
- Video AGC selectable
- Composite IF loop for up-converer applications
- Dual high level IF loops
- Auxiliary IF for EAS compatibility
- BTSC stereo and sap compatible
- Low power consumption for reliability
- Available in NTSC or PAL formats



The **OTM-4870** has all the high end features required by the most sophisticated users of 100+ channels in cable televisions systems. Output frequencies may be selected by frequency in 12.5KHz increments or by channel designation. EIA or OLSON channel plans can be selected for standard channel, HRC or IRC assignments.

SAW Filtering and **OLSON TECHNOLOGY** system design factors insure an out-of-band C/N ratio greater than 80dB while maintaining an RF output level of +61dBmV over the entire operating frequency range of the OTM-4870.

The **OTM-4870** up converter section is a high performance tuner with excellent Phase Noise (>90dBc) and frequency response that exceeds DOCSIS and CMTS specifications.

Order From:



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<b>RF</b>		
Frequency Range.....	48.25MHz to 865.25MHz	
	Selectable by front panel touchbuttons by channel or frequency in 12.5KHz increments.	
RF Output Level.....	+61dBmV typical	
Accuracy/Stability.....	±5KHz	
Spurious Output.....	>60dBc (typical)	
Out-of-Band C/N Ratio.....	>80dB	
Phase Noise.....	>90dBc @ 10KHz offset	
Audio/Video Ratio.....	-12dB to -21dB below video carrier level	
<b>VIDEO</b>		
Baseband Input Level.....	.5 to 1.5 volts p-p (75 Ω)	
Video Performance.....	1V p-p @ 87.5% modulation	
	Differential Gain <3%	
	Differential Phase <2°	
Frequency Response.....	±1dB, 30Hz to 4.2Mhz	
Video AGC.....	On/Off front panel control	
Chroma-Luma Delay.....	170 ±nsec	
<b>AUDIO</b>		
Baseband Input Level.....	-10 to +10dBm, 600 Ω balanced, Hi Z unbalanced	
Intercarrier Stability.....	±1KHz	
Audio Performance.....	2% maximum THD (1% typical)	
Frequency Response.....	50Hz to 15KHz, ±1dB	
Pre-Emphasis.....	75 is NTSC, 50 is PAL, defeated by internal jumper for BTSC and SAP compatibility	
Audio Subcarrier Input.....	+25dBmV to +45dBmV @ 75 Ω	
<b>DUAL IF LOOPS</b>		
Video IF.....	+36dBmV @ 45.75MHz (typical)	
Audio IF.....	Adjustable -12dB to -21dB relative to video carrier	
<b>COMPOSITE IF LOOP</b>		
Video IF.....	+18dBmV @ 45.75MHz (typical)	
Audio IF.....	Adjustable -12dB to -21dB relative to video carrier	
<b>AUX. IF INPUT</b>		
Four Modes of Control.....	Loss of video to modulator, rear panel closure screws for EAS compatibility	
<b>EXTERNAL FEATURES</b>		
Front Panel Controls.....	Video/Audio modulation levels, Audio to Video carrier ratio, RF output level, LCD contrast control, Push button menu controls	
Front Panel LED's.....	RF on, AUX IF in use, Synthesizer unlocked, Video/Audio over modulation	
Rear Panel Connectors.....	Type "F" connectors for RF output, RF test point, AUX IF input, Video baseband input, Video and Audio IF inputs/outputs. Composite IF input/output and Audio subcarrier. Screw terminals for contact closure/audio baseband	
<b>GENERAL</b>		
Power Supply.....	Universal 90 VAC to 240 VAC, 50 to 60Hz with IEC 320 power connector	
Physical Size.....	1.75" H x 19" W x 10" D	
Weight.....	9 lbs.	
Power Consumption.....	24 Watts	
Operating Temperature.....	0° C to 50° C	