

Headend Systems

CETUS™ MK II PAL D/K (B/G) Frequency Agile Television Modulator

Description

The CETUS™ MK II Frequency Agile Television Modulator is a high-quality, microprocessor controlled modulator used in large-sized broadband networks. It is used to convert audio and video signals into RF output signals. High performance plus agility makes it suitable for systems requiring backup modulators.



Features

- All agile channels from 47 MHz to 870 MHz
- Front panel LCD and buttons for user-friendly control
- Independent oscillation in IF 38 (38.9) MHz - SAW for IF and high SNR
- Low differential gain and differential phase
- PLL frequency composite in video carrier frequency and audio carrier frequency
- Unique diode dual balance design with good linearity and low noise
- Video AGC function with modulation depth of 87.5%
- IF video and audio interfaces for scrambling; clamping switch for video scrambling
- Automatic RF amplitude stabilizer
- Local or remote status monitoring and control via RS-485
- Support ROSA™ / TNCS element management
- 19-inch (1 RU) chassis with independent power supply

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Specifications

RF	Units	Specifications	
Television System	-	PAL B/G	PAL D/K
Frequency Range	MHz	47 to 870 (any channel)	
Channel	-	E02-E69	DS1-DS57
IF Frequency	MHz	38.9	38
Video/Audio Carrier Interspace	MHz	5.5 MHz \pm 0.5 kHz	6.5 MHz \pm 0.5 kHz
Output Return Loss	dB	\geq 10	
Video Carrier Output Level	dB μ V	\geq 120 (typical)	
Output Level Adjustment Range	dB	0 to 16 (in 0.5 dB step)	
Video/Audio Carrier	dB	8 to 22 (in 0.5 dB step)	
Frequency Accuracy	kHz	\leq \pm 5	
Video Carrier Deviation	kHz	\leq \pm 20	
CNR	dB	\geq 60	
Spurious Out-band	dB	\leq -60	
Test Point	dB	-30 \pm 1.5	
Connector Type	-	F connector	
Video			
Video Input Amplitude	-	1Vp-p (Full TV signal, positive pole)	
Video Input Impedance	Ω	75	
Video Modulation Depth	%	87.50	
In-band Flatness	dB	\leq 2 (within 5 MHz)	
Differential Gain	%	\leq 2 (typical)	
Differential Phase	$^{\circ}$	\leq 2 (typical)	
K Figure	%	\leq 2 (typical)	
Chrominance-Luminance Delay	ns	\leq 30 (typical)	
SNR	dB	\geq 58 (weighted)	
Connector Type	-	BNC	
Audio			
Audio Input Amplitude	V	0.775	
Audio Input Impedance	k Ω	10 (not balanced)	
Pre-emphasis	μ s	50	
Audio Deviation	kHz	\pm 50	
Frequency Response	dB	\pm 0.5 dB (40 Hz to 15 kHz)	
Distortion	%	\leq 1 (when deviation at \pm 60 kHz)	
SNR	dB	\geq 60	
Connector Type	-	BNC	
Element Management			
Communication Interface	-	RJ-45, DB-9	
Communication Format	-	RS-485, RS-232	
Communication Rate	bits/s	9600	
EM Supported	-	ROSA/TNCS	
Others			
Powering	V	220 V AC \pm 10% 50 Hz	
Power Consumption	W	25	
Operating Temperature	$^{\circ}$ C	+5 to +40	
Relative Humidity	%	20 to 80	
Dimensions	mm	482 x 433 x 44	
Weight	kg	6.2	

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Ordering Information

Description	Part Number
CETUS MK II PAL B/G Frequency Agile Television Modulator	2871001MK2
CETUS MK II PAL D/K Frequency Agile Television Modulator	2871100MK2



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Americas
1-800-722-2009 or 770-236-6900
www.scientificatlanta.com

Europe & Asia
+32 56 445 445
www.saeurope.com

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