

Superior Multi Channel Video Encoder and Multiplexer



Digital Encoder Host : Product Overview

The scalable Superior Digital Encoder Host features upto 6 channels with a combination of SD and HD modules, all within in a 2 rack unit (RU) chassis. The Encoder system can encode up to 6 analog video inputs with 3 Encoder Modules. The Encoder can multiplex the encoded video streams and output them via an integrated ASI Stream.

DIGITAL ENCODER HOST TECHNICAL SPECIFICATIONS	
Program Filtering and Grooming:	Encoded programs may be disabled or sent to ASI output ports. The output timing is re-stamped and null packets are managed as required.
Multiplexer:	Built in multiplexer circuitry combines the outputs of all enabled encoders in an Digital Encoder Host into multi-program transport ASI streams.
MPEG Program Numbers:	Configurable by operator. If not individually configured, default MPEG program numbers in the output transport stream will be assigned sequentially, corresponding to the encoder number. The leftmost encoder input, as viewed from the rear panel, will be # 1.
ASI Output:	Any or all of the enabled encoders may be directed to the ASI output by means of the user selectable program filter.
Output Symbol Rate:	1 to 7 MSps
I/Q Phase Error:	Less than 1 degree.
MER:	Greater than 38 dB with blind EQ
GENERAL	
Power:	90-132 VAC / 47-63 Hz, 70 W maximum
Weight:	11 lb. 5 oz. (5.2 Kg)
Size:	19" (48.26 cm) W x 14.25" (36.20 cm) L x 3.5" (8.89 cm) H

STANDARD DEFINITION ENCODER MODULE TECHNICAL SPECIFICATIONS

Analog Interface	
Composite Video Inputs:	2 composite inputs, one for each program
Composite Video Input Level:	1 Volt p-p +/- 3 dB
S-Video Inputs:	2 S-Video connectors, one for each program
Composite or S-Video select:	User selectable for each program input
Audio Inputs, for 2 programs:	RCA type for L and R audio channels, 2 sets
Audio Input Level:	1 V rms or 2 V rms max, user selectable
User adjustable audio gain:	+/- 15 dB
MPEG Encoder	
Encoder Formats – Input 1:	MPEG2 or MPEG4 H.264, selectable
Encode Format – Input 2:	MPEG2 only
Note: Each encoder module has two sets of inputs marked 1 and 2. Number 1 input from all installed modules will appear as odd-numbered encoders in the Digital Encoder Host menu. Likewise, number 2 SD inputs will correspond to even-numbered encoders in the Digital Encoder Host menu. The number 2 inputs/even numbered encoders cannot be set to encode MPEG4/H.264.	
Encoding Bitrate:	Constant Bitrate 1 Mbps to 8 Mbps
Encoding Resolution:	720x480 (Standard Definition)
Video Adjustments:	Brightness, Contrast, Saturation & Hue
Audio Encoding format:	Dolby AC-3



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HIGH DEFINITION ENCODER MODULE

The Superior high-definition encoder module generates an MPEG2 video stream, with Dolby® AC3 or MPEG1 layer 2 audio. This module is designed to be installed into Superior's plugin host chassis which provides the control and output interface to the unit. This configuration of encoder module and host chassis provides the ultimate in bandwidth management and economy by allowing multiple HD and SD streams to be multiplexed together. The high-definition encoder accepts non-encrypted HDMI, HD SDI or component video inputs and can inject closed-captioning data from a synchronized composite video source (typically provided by the same decoder that produces the HD video stream). Composite analog audio inputs provide the audio source when component video inputs are used. Typically HDMI has embedded audio but if the HDMI is derived from a source converter that does not provide audio, such as DVI-to-HDMI, then the analog composite inputs may be used.

HIGH DEFINITION MPEG ENCODER MODULE TECHNICAL SPECIFICATIONS

VIDEO INPUTS	
HDMI	HDMI input (does not support HDCP/Copy protection)
Component	1x HD Component (YCrCb) video input
Composite	1x 1V p-p +/- 3dB, 480i only
Closed Caption Input Format	1x 1V p-p +/- 3dB 480i composite video input (used for Closed Captioning data extraction during HD encoding)
AUDIO INPUTS	
RCA type L + R	1x 1Vrms nominal, 3.5Vrms max supports +/- 15dB gain adjustment
HDMI embedded audio	Supports stereo PCM digital audio from HDMI
VIDEO OPTIONS	
Input Video Modes	480i (640x480/720x480 @30fps)
Supported	480p (640x480/720x480 @60fps)
720p (1280x720 @60fps)	
1080i (1920x1080 @30fps)	
Supports auto-scan for input resolution	
Encoder format	MPEG2 or MPEG4 H.264
Video Adjustments	Brightness, Contrast, Hue, Saturation, Sharpness
MPEG4 profile support	Simple, Advanced Simple, High
Bitrate	Up to 19Mbps (depends on input format)
AUDIO OPTIONS	
Encoder format	Dolby® Digital AC3 or MPEG1 Layer 2
Output bitrate	320kbps



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