

ENC1000A29

Color Video Compression Encoder

Features

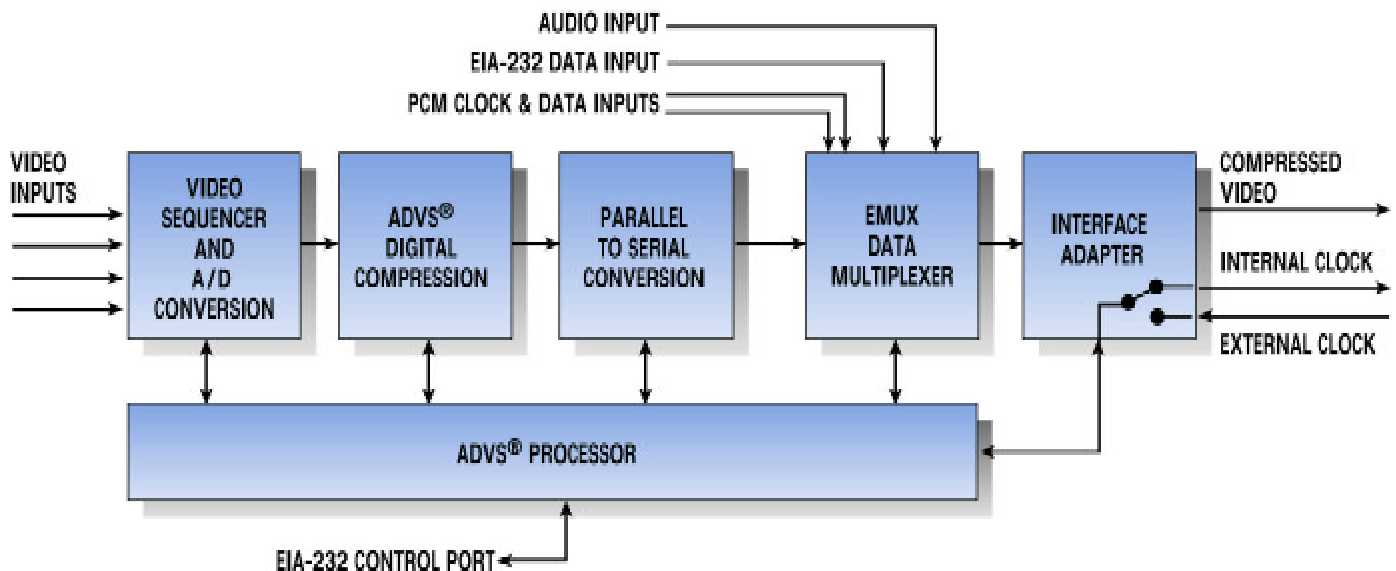
- **ADVS® - Adaptive Digital Video Standard Compression Algorithm**
- **Real-Time Digital Compression of Full-Motion Video**
- **Very Small Size - 29 Cubic Inches**
- **Low Power - 8 Watts Typical at 28 VDC**
- **Four Selectable Video Inputs**
- **No Blurred Motion - Each Frame Separately Encoded**
- **User Programmable Video Parameters via EIA-232 port**
- **Composite NTSC Color and PAL, Y/C Capabilities**
- **Transmits at Rates up to 20 Mbps, 10 Mbps If Multiplexer Is Active**

The encoder digitizes and compresses a standard analog NTSC color video signal and outputs a single, continuous, serial digital output signal representing the input picture clocked at any fixed rate up to 20 Mbps. A variety of standard transmission interfaces are available. Up to four separate video sources can be connected to the encoder and each can be selected one at a time or two or more inputs may be multiplexed into one data stream. The encoder receives EIA-232 encoder control signal data as required, allowing for remote encoder setup using any DOS-based PC with terminal emulation. Setup includes user selectable adjustments for three levels of horizontal resolution (pixels/line), quantization level, crop mode, output bit rate, color, tint, system defaults, test patterns, and system status information. The 3-wire EIA-232 control port supports serial data baud rates of 300 to 9600; all external EIA-232 programming is stored in EEPROM, and therefore, is retained upon power down. The ADVS® Advanced Digital Video Standard compression technique causes no blurring of the compressed picture upon the encoding and decoding of any type of moving objects within a given picture. Using this scheme, each and every video frame is digitized separately and completely.

A multiplexer provides inputs for asynchronous serial data, PCM data and clock, and an audio signal to be interspersed into the digitized video data stream.

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ENC1000A29 Encoder Functional Block Diagram



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Standard Functions

FEATURE	DESCRIPTION
Video Inputs *	One of Four Inputs: NTSC or PAL, Composite or Y/C, 1 Vp-p, 75 ohms
Digital Data Outputs	NRZL clock and data, EIA-422A levels
Data Multiplexer	
PCM input *	TTL, CMOS or EIA-422A selectable input levels, maximum data rate is 49% of total link frequency
Audio input *	300 Hz to 3000 Hz, 600 ohms, 1 Vp-p
EIA-232C multiplex input *	EIA-232C at 9600, 4800, 2400, 1200 or 300 baud
Communications Port *	EIA-232C at 9600, 4800, 2400, 1200 or 300 baud
Resolution *	560, 280 or 140 pixels per line
Quantization *	240 steps
Cropping *	4 steps
Compression Standard	ADVS®
Internal Data Clock Output *	19 KHz to 20.0 Mbps in 71 steps
External Data Clock Input *	Any rate up to 20 Mbps
Interface Connector	MDM25 for power, control, and input/output; SMA for video inputs
Input Power	28 VDC ± 20%
Power Consumption	350 mA maximum at 28 VDC
Dimensions	29 cubic inches, 5 in. x 4 in. x 1.45 in.
Weight	25 ounces
Operating Temperature Range	-40 to +85°C
MIL-STD-810 Testing	Consult factory for details
MIL-STD-461 Testing	Consult factory for details

Optional Functions

FEATURE	DESCRIPTION
Forward Error Correction *	Reed-Solomon correction at 12% overhead

* Software Selectable

