Proven in over ten years of use in a wide range of unmanned and manned aircraft surveillance applications, the ENC1000A29 digitizes and compresses a standard analog NTSC or PAL video signal to form a continuous serial digital output bit stream representing the input video at any fixed rate up to 20 Mbps. A variety of standard digital transmission interfaces are available. Up to four separate video sources can be connected to the encoder, and each can be selected for compression and transmission via an RS-232 serial port command line interface that enables remote encoder setup using any controller with terminal emulation. User-selectable configuration is provided for three levels of horizontal resolution (pixels/line), compression quantization level, crop mode, output bit rate, color, tint, system defaults, test patterns, and system status. All settings are stored in non-volatile memory so the encoder returns to its last configuration without user intervention when power cycled.

Based on the JPEG standard, the ADVS® Adaptive Digital Video Standard processor compresses each frame separately, eliminating frame-to-frame error propagation and potential degradation resulting from motion estimation algorithms. 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.
**SPECIFICATIONS**

**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-232 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

**ENVIRONMENTAL**

**Operating Temperature Range**
- -40 to +85ºC

**MIL-STD-810 Testing**
- Consult factory for details

**MIL-STD-461 Testing**
- Consult factory for details

**OPTIONAL FUNCTIONS**

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

* Software Selectable

**POWER**

**Input Power**
- 28 VDC ± 20%

**Power Consumption**
- 350 mA maximum at 28 VDC

**SIZE**

**Dimensions**
- 29 cubic inches, 5 in. x 4 in. x 1.45 in.

**Weight**
- 25 ounces

---

**CONTACT**

1935 CORDELL COURT  
EL CAJON, CA 92020-0911

WEB WWW.VIASAT.COM/ISR-DATA-LINKS  
TEL 619.438.6000  
EMAIL ENERLINKS@VIASAT.COM

Copyright © 2010 ViaSat, Inc. All rights reserved. Printed in the USA. “ViaSat” and ADVS are registered trademarks of ViaSat, Inc. All other trademarks are the sole property of their respective companies. Specifications and product availability are subject to change without notice. Enerdyne Technologies, Inc. is now a part of ViaSat.