

# e100

## Dual Stream H.264 Video Encoder

**Synectics e100 single channel edge-based encoder delivers significant bandwidth savings compared with other video encoding technologies.**



The e100 is a compact yet powerful device that extends the functionality and interoperability of fully integrated IP surveillance and video management systems. The e100 ensures a smooth migration from analogue to digital technology simply and cost effectively, with low-cost UTP cabling and minimum equipment obsolescence.

Using the latest, state-of-the-art H.264 video compression technology, combined with AAC (Advanced Audio Coding), the e100 delivers the highest quality, real-time video and audio available — with 30%+ bandwidth savings, over standard MPEG4 compression techniques. The e100's video and audio compression is undertaken fully in hardware, meaning guaranteed frame rates, and through-the-box latency, no matter what bit rate you select, or the amount of movement within each scene — unlike many DSP or software based compression products.

From a single video source, the e100 uses its dual streaming technology to generate two totally independent IP video streams. This also allows viewing and recording at two different quality levels. Each stream supports input video rates from 1 to 25/30 images per second, with resolutions up to D1, at data rates ranging from 128Kbps up to Broadcast Quality 6Mbps, with very low latency. The e100 has a built in web server, allowing true out-of-the-box viewing, management and control. A published API is also available, allowing configuration and use within a wide variety of third party and tailor-designed applications.

The e100 can be fully integrated with Synectics' Synergy™ security management software and recording systems, to create a full Virtual Matrix Solution.

### Features

- Single channel, storage efficient, dual stream encoder — enables different image quality / frame rate for live and recorded footage
- Full resolution, full frame-rate performance, over both streams using H.264 — no degradation in performance when dual streaming
- Sub 120ms latency through the box - for the ultimate in PTZ control over IP
- High quality, lip-synched audio with Advanced Audio Coding (AAC)
- Local critical data recording\*
- Basic Motion Detection
- Compact size, with all-passive cooling

\* requires NTP time source

# Specifications

VIDEO	
Video Inputs	1 channel
Analogue	Composite PAL / NTSC
Termination	75 Ohm switchable
Resolution	D1 / 4CIF / 2CIF / CIF
Rate	25 frames (50 fields) PAL / 30 frames (60 fields) NTSC

VIDEO COMPRESSION	
Compression	H.264 baseline profile (MPEG4 part 10)
Output Streams	Dual Stream each @ D1 @25/30 frames per second
Data Rate	128Kbps to 6Mbps per stream
GOP Structure	I & P (with configurable length)
Input to Ethernet Latency	120ms

AUDIO	
Input	Mono
Sampling Rate	24KHz 16-bit resolution
Compression	AAC (Advanced Audio Coding)
Data Rate	12Kbps to 256Kbps
Line In	2V RMS, 3.5mm jack
Line Out	1V RMS, 3.5mm jack
Microphone in	200mV max Programmable Gain +16db to +32db, Terminal blocks
Speaker Out	1.9W into 4kOhm Terminal blocks

AUXILLARY POWER IN	
Power Input	12VDC 12W, PSU provided

NETWORK	
Interface	Fast Ethernet 10/100Mbps auto select
Protocols Supported	RTP/RTSP, TCP/IP, UDP, IGMP V2/V3

ALARMS	
In	4 opto isolated alarm inputs, contact closure
Out	1 relay output, rated 1A @ 24V

PORTS	
COM Ports	RS232/RS485/RS422 Software switchable on terminal blocks
USB	USB 2.0 Full Speed 12Mbps
Ethernet	10/100Mbps

ENVIRONMENTAL	
Size	120mm (L) x 90mm (W) x 30mm (H) (4.72"x3.54"x1.18")
Weight	200g (0.44lbs)
Operating Temperature	0°C to +55°C ambient (32°F to 131°F)
Storage Temperature	-40°C to +100°C (-4°F to 212°F)
Humidity	80% atmospheric noncondensing

## Additional Features

- USB port
- Fast Ethernet interface
- Alarm inputs & relay out
- Serial data port
- Video Motion Detection (VMD)