ION-E100 Video Encoder Appliance
Single Channel Video Encoding with
High Quality H.264 Compression

IONODES

> The **IONODES ION-E100** video encoder appliance is the ideal video encoding solution for high quality video surveillance applications.

Highlights

- Benefit from broadcast quality video using H.264 compression at 4CIF 30 fps.

- Save valuable storage space for your video archives by using H.264 compression.

- Customize your live streaming and recording scenarios by creating up to three different compression profiles per video stream.

- Ensure reliability through the use of built-in video buffering to micro-SD card.

- Protect your data channels through SSL encryption.

- Easily integrate the appliance into your existing video management solution through the ION API.

High Quality Video Compression

Video is compressed to a high quality digital format and streamed in real-time over IP. Using the H.264 compression codec (MPEG4 Part 10), storage requirements can be reduced by over 50% when compared to a compliant MPEG4 SP codec. Motion JPEG compression profiles are also supported.

Triple-Encoding

The ION-E100's powerful video encoding engine can generate up to three different compression profiles per video input, allowing it to adapt to various streaming and recording environments.

Reliable

Video content can be streamed for recording on a centralized NVR system. Built-in micro-SD storage allows for maximum reliability in situations where loss of video due to network or other breakdowns is unacceptable, by offering local media buffering.

Secure

Built-in encryption capability enables support for encrypted data communication channels and secured administrative interfaces.

Power Over Ethernet

The installer-friendly ION-E100 is Powered over Ethernet (PoE) according to IEEE 802.3af, and can feed an analog camera with power (max 8 Watts total), which eliminates the need for power outlets.

Easy to Manage

The ION-E100's GUI-based web interface makes set-up and management of the appliance nearly effortless. In addition, integration of the ION-E100 into new or existing video management software is simple thanks to the intuitive ION API. The ION API exposes management and streaming functions through standard HTTP and RTSP interfaces and is supported by major NVR vendors such as Genetec and Milestone.

IONODES ION-E100 Video Encoder Appliance Specifications

Standard / Integrated Interfaces

Video In	Single analog video input : NTSC or PAL (BNC)
Audio In	Single analog audio input (3.5mm)
Audio Out	Single analog audio output (3.5mm)
Network	Standard 10/100 Base-T Ethernet port half/full duplex, auto-sensing, RJ-45
Alarm In	Two closure contacts (terminal bloc)
Relay Out	Single output relay contact (terminal bloc)
COM Port	Single serial port (RS422/485) (terminal bloc)

Video Compression

Standards	H.264 High, Main and Baseline profiles Motion JPEG
Data Rate	64 kbps – 6 Mbps per channel (H.264 requires less than 1 Mbps @ 4CIF/30fps)
Resolutions	Full D1 (720x576/480 @ 25/30 fps) 4CIF (704x576/480 @ 25/30 fps) 2CIF (704x288/240 @ 25/30 fps) 2/3 D1 (464x576/480 @ 25/30 fps) 1/2 D1 (352x576/480 @ 25/30 fps) CIF (352x288/240 @ 25/30 fps) QCIF (176x144/120 @ 25/30 fps)
Performance	**Example 1:** 1 output profile at High Profile H.264 with all options turned on @ 30 fps 4CIF 1 output profile at Low Profile H.264 @ 30 fps at CIF 1 output profile at MJPEG @ 30 fps at CIF **Example 2:** 1 output profile at High Profile H.264 with all options on @ 15 fps- 4CIF (for best recording performance) 1 output profile at MJPEG @ 10 fps – 2CIF (for remote)
Delay	< 150 ms

Audio Compression

Standards	Uncompressed PCM High-fidelity AAC-LC G.711

Storage

Internal	One internal micro-SD / SDHC card (2-16GB)

Protocols

Networking	IPv4/v6, UDP, TCP, IGMP, ICMP, ARP, DHCP, DNS
Streaming	RTP, HTTP
Management	RTSP, HTTP, HTTPS, Bonjour, NTP, Telnet, FTP

General Features

System Administration	Web GUI interface (HTTP(s))
Programming Interface	ION API, GENETEC API, PSIA
System Monitoring	Video signal, storage subsystem, power supply, temperature, network monitor
Access Control	Unix credentials, SSL, Basic and Digest Authentication
Audio/Video Buffering	Digitally signed ASF files to the micro-SD card
Long Term System Configuration Memory	System configuration stored on internal flash
Software Update	Fault-tolerant, remote accessible
Alarm Events	Triggered by external input or internal event monitoring
Video Analytics	Limited base model functions will become available via firmware upgrade

Mechanical / Environmental

Dimensions	3.66 in x 1.10 in x 3.21 in
Power	12 VDC on terminal block or PoE 3 - 4 Watts power consumption
Operating Temperature	-10°C to 60°C
Approvals	FCC, CE