

ION-E1600 Video Encoder Appliance

High Quality H.264 Video Encoding

IONODES



> The **IONODES ION-E1600** video encoder appliance is the ideal video encoding solution for high quality video surveillance applications.

Modular by Design

Built-in hot-swappable expansion ports allow the ION-E1600 to host up to four video encoder modules for a total of up to 16 analog video channels.

High-Quality Video Compression

Using the H.264 compression codec (MPEG4 Part 10), the ION-E1600 can reduce storage requirements by over 50% when compared to a compliant MPEG4 SP codec. It also supports MJPEG compression profiles.

Triple-Encoding

The ION-E1600's powerful video encoding engine can generate up to three different compression profiles per analog video input, allowing it to adapt to various streaming and recording environments. For example, one high-quality stream could be used for recording, while two lower-quality streams could be used simultaneously to serve various live clients.

Reliable and Secure

The feature-rich ION-E1600 appliance provides high-availability by offering redundant power supplies and a solid state flash based boot medium. Security and tamper protection is also ensured through authenticated access, encrypted communication channels and digital video signatures. As an option, AES-based full video stream encryption is also offered for more demanding applications.

Easy to Manage

The ION-E1600's GUI-based web interface makes set-up and management of the appliance nearly effortless. In addition, integration of the ION-E1600 into new or existing video management software is simple thanks to the intuitive ION API, Genetec API or PSIA. The ION API exposes management and streaming functions through standard HTTP and RTSP interfaces.

Highlights

- Benefit from broadcast quality video on every input 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 high availability through the use of redundant power supplies and network connections.
- Protect your data channels through SSL encryption.
- Easily integrate the appliance into your existing video management solution through the ION API.



IONODES ION-E1600 Video Encoder Appliance Specifications

Standard / Integrated Interfaces

| | |
|-------------|---|
| Network | Single 10/100/1000 Base-T Ethernet port half/full duplex, auto-sensing, RJ-45 |
| USB | Two USB ports (Mouse, keyboard) |
| HDMI output | High definition display for administrative interface and local viewing (camera, tour or sequence driven by Omnicast / VMS) (up to 1080p resolution) |
| COM Port 1 | RS-232 port for interfacing alarm equipment or POS terminals via a DB-9 connector |
| COM Port 2 | Configurable RS-232/422/485 port for PTZ support via terminal strip |

Video Encoder Module Details (ION-E1600-AVM)

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|-----------|---------------------------------------|
| Video In | Four analog video inputs: NTSC or PAL |
| Audio In | Single line level analog audio input |
| Audio Out | Single line level analog audio output |
| Alarm In | Four dry contacts (1 per video input) |
| Relay Out | Single output relay contact |

Video Compression

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|-------------|--|
| 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 | D1, 4CIF, 2CIF, 2/3 D1, 1/2 D1, CIF, QCIF |
| Performance | <p>Example 1:</p> <p>4 output profiles at High Profile H.264 with all options turned on @ 30 fps 4CIF</p> <p>4 output profiles low profile H.264 @ 30 fps CIF</p> <p>4 output profiles at JPEG @ 30 fps at CIF</p> <p>Example 2:</p> <p>4 output profiles at High Profile H.264 with all options on @ 15 fps- 4CIF</p> <p>4 output profiles at MJPEG @ 10 fps – 2CIF</p> |

Protocols

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|------------|--|
| Networking | IPv4/v6, UDP, TCP, IGMP, ICMP, ARP, DHCP, DNS, RTP, HTTP, RTSP, HTTP, HTTPS, Bonjour, NTP, FTP |
| Security | Password protection Basic / digest authentication SSL |

General Features

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|-------------------|---|
| Software | Windows Embedded™ based firmware loaded from internal flash memory |
| System Monitoring | Video input signals, disk subsystem, fans, power supplies, temperature, network monitor |
| Access Control | SSL, basic and digest authentication |
| Software Update | Fault-tolerant, remote accessible |
| Alarm Events | Triggered by external input or internal event monitoring |
| Video Analytics | Video motion detection, object based behavior tracking, etc. (Optional) |
| Video Delay | < 150 ms |

Mechanical / Environmental

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|-----------------------|--|
| Dimensions | Height: 1.75 in Width: 17 in Depth: 14 in |
| Enclosure | Fits into a standard 19-in rack |
| Input Voltage | Dual 12V DC, unit comes with (1) 12 VDC power supply |
| Operating Temperature | 0°C - 50°C |
| Approvals | FCC, CE |

Audio Compression

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|-----------|--|
| Standards | Uncompressed PCM High-fidelity AAC-LC |
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