Full resolution H.264/AVC Encoding/Decoding systems

No more tradeoffs! Now you can reliably deliver outstanding video quality even with bandwidth constraints. **MV401EXP-H264** and **MV410EXP** broadcast A/V encoder/decoder pair are the state-of-the-art broadcast and multimedia content processing devices. They are designed to operate using the Internet or IP over satellite links. The **MV401EXP-H264** encoder is tuned up for the newest H.264 video (also known as MPEG4 part 10 or AVC) and MPEG4 AAC audio formats. The **MV410EXP** is a dedicated multi-format broadcast quality A/V decoding device used on the receiving end. It is capable of converting compressed video and audio contents obtained from the IP network link to digital or analog signal suitable for studio monitors, VTRs, switches and other professional equipment. Based on solid-state memory embedded design, MV401EXP-H264 and MV410EXP systems consistently perform A/V encoding, streaming, reception and decoding day after day. The new compression technology allows users to transmit several times more channels over the same network or satellite bandwidth than currently used for MPEG2! This not only saves time and money but also provides greater room for future expansion of channels.

To maintain the highest quality of compressed video stream the **MV401EXP-H264** encoder uses real time video filtering, adaptive noise reduction and de-interlacing hardware. The filtering greatly improves compression ratio and permits more efficient network bandwidth utilization. The advanced model the encoder enables users to select ASI output instead of standard IP over dual Gigabit Ethernet ports. IP streaming supports **RTP unicast** and **UDP multicast** modes right out of the box. Specially optimized encoding and streaming software minimize the end-to-end latency to as low as 200 ms.

In addition to remote configuration GUI, both encoder and decoder support **IPMI** technology for remote monitoring of internal temperature and voltage sensors inside the box. Automatic **Watchdog** function ensures that a system reboots and resumes operation quickly in case of an unexpected problem. Also available are emergency system shutdown/reset functions.

- Embedded, *power-on-and-forget* technology for dedicated encoding and decoding
- MV401EXP-H264 encodes live H.264 video at full D1 resolution and up to 4 channels of MPEG AAC audio
- Adaptive spatial and temporal video noise reduction filter and de-interlacing hardware
- Low-latency unicast and multicast IP streaming of H.264/AAC encoding unit
- Encoding bitrate can be selected from 0.3 to 3.0 Mbps depending on application
- Dual Gigabit Ethernet LAN ports provide additional performance and redundancy
• Selection of DVB-ASI stream output is available (optional)
• MV410EXP decodes H.264 video at up to full D1 resolution and multi-channel audio
• Support variety of resolutions, bitrates and frame rates
• Interfaces to most analog and digital A/V equipment
• Recent configuration protection mode is available for reliable, optimal performance
• Low-profile 1U rack-mounted design for reduced cost-per-channel
• Convenient LCD and front panel control buttons (optional)
• Remote operation/configuration and status monitoring via LAN/Internet
• Emergency RS232 console connection can be used in case of network troubles

MV401EXP-H264 Encoder
• Ultra slim profile 1U rack mount case
• Automatic encoding/streaming after power on
• H.264 (Main profile) Video Encoding
• MPEG1 Layer 2 or MPEG4 AAC (Main or Low profiles) Audio Encoding
• Analog video and audio output to monitor
• Optimized for the full D1 resolution encoding
• 720x480, 30 fps in NTSC / 720x576, 25 fps in PAL
• Dual-stereo channel audio encoding capability
• Half-D1 and CIF resolutions are available to conserve channel bandwidth
• Adaptive video noise reduction and de-interlacing hardware
• Low-latency RTP, UDP unicast/multicast or ASI streaming (MPEG2 TS)
• Supports DHCP and static IP assignment
• Configurable with Remote Desktop or VNC software
• Real time system status monitoring via LAN (IPMI)
• Status notifications and alarms via SNMP, e-mail
• Additional Options (specify when ordering):
  - DVB-ASI output
  - LCD front panel and control buttons
  - Remote storage of encoded contents

SDI Audio Inputs (selectable):
Balanced analog audio (4 mono/2 stereo channels)
AES/EBU digital audio
Content Delivery (selectable):
Dual Gigabit Ethernet ports
DVB-ASI (optional)
Outputs (simultaneous):
Composite video and mono audio connections to monitor

Local Control:
Two-line LCD panel and control buttons (optional)
RS232 port for emergency configuration console

Video Inputs (selectable):
Composite
S-Video
Component (YUV/RGB with Int. or Ext. sync)

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**MV401 EXP-H264 / MV401exp MV410 EXP-WM9**

**MV410 EXP Decoder**
- Ultra slim profile 1U rack mount case
- Automatic connection/decoding after power on
- H.264 (Main profile) Video Decoding
- MPEG1 Layer 1, 2 or MPEG4 AAC (Main or Low profiles) Audio Decoding
- Full resolution, 720x480 in NTSC / 720x576 in PAL or scaled up Half-D1, CIF
- Full frame rate, 29.97 fps in NTSC / 25 fps in PAL
- Genlock reference signal input
- Aux input for emergency pass-through video feed
- Provides multiple simultaneous digital and analog A/V outputs
- Supports DHCP and static IP assignment
- Configurable with Remote Desktop or VNC software
- Real time system status monitoring via LAN (IPMI)
- Status notifications and alarms via SNMP, e-mail

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**Application Examples:**