

The Most Advanced CCTV DVR Board

- Complete Security System on a Board
- 16 Channels Video
- True 480 IPS Record & Live Display
- On-Board Compression & Decompression
- Highly Integrated Hardware Features
- Low Power Consumption
- Extensive Software Tools



The new **Exacq eDVR** Series of video compression boards have been designed specifically for CCTV applications. The highly-integrated Exacq eDVR incorporates all functions necessary for a high-end DVR system onto one board, enabling DVR systems with smaller footprints, lower cost, lower power consumption, higher reliability, higher performance, and easier OEM integration.

Complete Security System On A Single-Slot Board

Exacq eDVR implements all DVR components on a single-slot PCI board:

- hardware compression and decompression
- 16-input at 480 ips* @ CIF resolution
- video inputs
- video outputs
- alarm inputs
- alarm outputs
- audio inputs
- audio output
- relay outputs
- UART-enabled RS-232/422/485 for PTZ/POS/ATM
- watchdog circuit
- button input
- LED outputs
- Temperature Sensor
- EEPROM for configuration & security settings

Hardware Compression & Decompression

On-board hardware video compression ensures full frame-rate recording at all times, regardless of host processor load, number of remote viewing connections, or any other system-level activity. On-board hardware video decompression enables powerful search functionality, such as the ability to "scrub" rapidly forward and backward through 16 channels of video simultaneously on a frame-accurate basis.

True 480 IPS Recording

Exacq eDVR enables true 480 ips recording* on 16 channels of video while simultaneously displaying 16 live channels of 480 ips video. On-board hardware compression ensures recording and display are never compromised during heavy system activity.

32-Input 960 IPS System in a 2U-Height Chassis

The high level of integration on the Exacq eDVR enables a fully-capable 32-channel DVR implementation with two eDVR 4000 boards in a small enclosure, such as a 2U-height rack-mount chassis or a small embedded industrial chassis, significantly lowering cost, heat, footprint and power requirements for larger, enterprise-level systems.

Hardware Video Masking

User-definable region in each video channel can be masked in hardware, preventing that area from being compressed, recorded, or passed-through; necessary in banking, correctional or other applications where privacy regions are a requirement.

Does Not Require Expensive, High-Speed Host Processor

With the on-board video compression and decompression handling the bulk of the processing requirements, a true 480 ips 16-channel DVR system can be built on inexpensive, low-power platforms, such as Intel Celeron-powered motherboards or standard embedded processors. At full rate recording of 16 channels, processor load on a Celeron 700 is under 7%.



Low Power Consumption

Exacq eDVR boards run cool with low power requirements. Multiple eDVR boards can reside in a standard industrial rackmount or desktop chassis with no requirements for additional power or cooling.

Digital Crosspoint Switch

Independent multi-picture D1 streams consisting of any combination of inputs are delivered to each compression engine, each encoder, and each VGA display creating a true crosspoint switch.

OSD/Graphics Capability

Robust OSD and graphics on video outputs include definable fonts, colors, points, lines, borders

Cross-Platform Development Environment

A complete Software Development Kit is included utilizing cross-platform tools with extensive sample code in WxWidgets, VB.net and C#. Fully supported under Microsoft Windows XP, Windows XP Embedded and Linux.

Video Analysis Optimized

Real-time video acquisition into host RAM with callback notification is ideal for video analysis software such as object tracking, advanced motion detection and behavior analysis.

General Purpose Serial API for Third-Party Integration

General-purpose Serial API is included for third-party integration of PTZ, POS, ATM, Access Control, and any serial transactional events.

Exacq eDVR Product Family



eDVR 4000
480 IPS at 16-channel CIF Resolution



eDVR 1000
120 IPS at 16 channel CIF Resolution

Video Inputs

- 16 video inputs on header connector
- Analog composite video input – NTSC (30fps) / PAL (25 fps) 75 ohms
- Software control of brightness, contrast, hue, saturation, and sharpness per channel
- EEPROM for storing configuration, calibration and security settings

Video Outputs

- 2 switched multi-picture composite and S-video outputs with graphics and text OSD on header
- Live multi-picture display on encoded outputs (1, 4, 6, 7, 9, 10, 13, 16)
- Explicit support for 4 VGA display devices

Video Analysis

- Real-time video acquisition into host RAM for analysis with callback notification for object tracking and advanced motion detection

Compression & Playback

- 4 MPEG-4 Compression Chips (1 chip on eDVR 1000)
- Each MPEG-4 chip supports 4CIF (720x480) resolution @ 30 fps
- Adjustable frame rate (30 to <1 fps) per camera
- Adjustable image resolution including 4CIF, 2CIF, CIF, QCIF and variable
- Compression throughput examples with 16 video channels:
 - CIF (352 x 240) = 480 (16 x 30 fps)*
 - 2CIF (720 x 240) = 240 (16 x 15 fps)*
 - 4CIF (720 x 480) = 120 (16 x 7.5 fps)*
- Multiple boards per system
- Frame allocation according to channel importance
- Multiplex any 16 video inputs to any compression channel
- Video Motion Detection (VMD) with definable mask per camera

I/O Triggers & Controls

- 16 TTL alarm inputs and 16 TTL alarm output on header
- 1 relay contact closure output
- Switched video outputs based on alarm events
- EIA232, 422, 485 for PTZ, POS and other serial integration on header connector
- Integrated Watchdog circuit
- Button switch input
- Integrated temperature sensor/alarm
- 2 LED outputs
- SDK callback for board events including video loss, input alarm, temperature, button press

Audio

- 4 channel audio encoding on header connector
- Audio and video recording & playback synchronization
- 1 channel audio output

Software

- Windows XP DLL & Linux platform support
- Cross-platform Application Programming Interface
- General-purpose serial API for third-party integration
- Digital video recording and playback sample application with source code

Video, Audio & I/O Terminal Panel

- Optional video and I/O terminal panel and ribbon cables for integration into system chassis

Power & System Requirements

- eDVR 4000: 1.9A at 5V, 2.6A at 3.3V, 18W total
- eDVR 1000: 1.9A at 5V, 1.4A at 3.3V, 14W total
- Minimum processor: Intel Celeron 700 or equivalent



* eDVR 1000 framerate is one-fourth this amount

22 August 2005