

### Description

Designed for professional video surveillance applications, the [VRC7016XE](#) Digital Video Recorder (DVR) PCI Express add-in card features two Exar S7110 software configurable processors and performs H.264 encoding on sixteen channels of up to 960H NTSC/PAL video at full resolution and frame rate.

Extensive video preprocessing coupled with Exar's Intelligent Encoder, gives the VRC7016XE excellent video quality while maintaining high compression levels. This results in tremendous reduction in storage costs for surveillance installations using the VRC7016XE card. The programmable accelerator of the S7110 at the core of the Intelligent Encoder delivers multi-stream encoding of baseline, main and high-profile H.264 Advanced Video CODEC (AVC). In addition, the S7110 video processor drives H.264 Scalable Video CODEC (SVC) compression, enabling flexible and efficient resizing and resampling of multi-stream surveillance video.

The VRC7016XE is a low profile PCIe short form factor card. A high bandwidth PCIe interface provides connectivity to host systems. Exar PCIe add-in cards are available with either a standard height bracket or a low profile bracket. The part number will have an "-H" or an "-L" suffix respectively to designate the bracket type.

The card supports eight or sixteen channels of alarm I/O and an RS-485 interface for remote camera control through an I/O header with one or two optional 8 channel I/O cards. The card also has a debug connector for UART and JTAG interfaces to facilitate hardware and software debugging.

### Typical Application

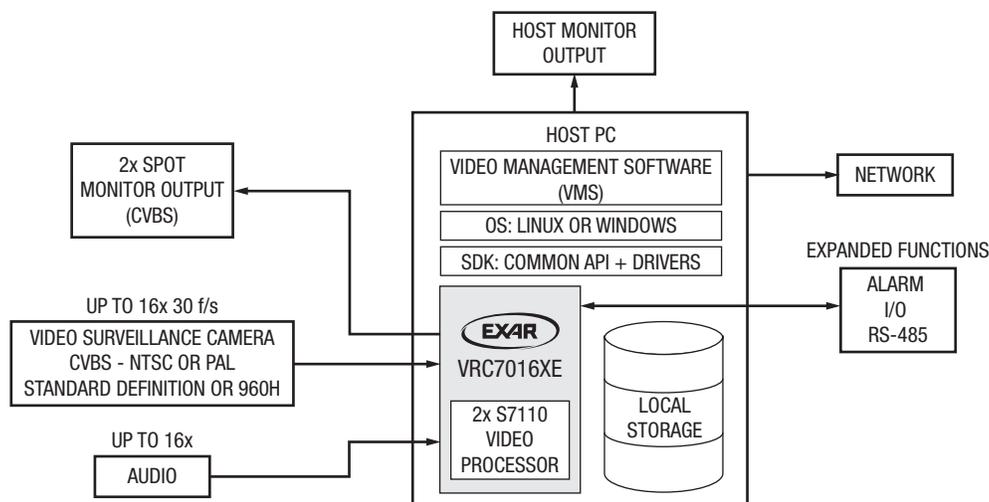


Figure 1. Typical Application

#### FEATURES

- 16 NTSC/PAL video input channels
  - Up to 960H resolution
  - All 16 record/encode at full frame rate
- 16 audio input channels
  - G.711 audio compression
- Audio and video input via external LFH™ connector or internal header
- Video recording resolution:
  - 960H (960x480 NTSC), (960x576 PAL)
  - D1 (720x480 NTSC), (720x576 PAL)
  - CIF (360x240 NTSC), (360x288 PAL)
  - 4CIF (704x480 NTSC), (704x576 PAL)
  - QCIF (180x120 NTSC), (180x144 PAL)
- Baseline, main, high profile H.264 AVC or SVC, MJPEG, MPEG4 video encoding compression formats
- Two CVBS spot monitor and matrix display output
- Rich video preprocessing including de-interlacing, image enhancement, noise reduction, user-defined captioning overlays
- Motion, blind and night detection video analytics
- Motion detection multi-plane user-defined regions of interest
- User-defined privacy regions with macroblock resolution
- Watchdog timer and host reset capability

#### APPLICATION

- PC-based Digital Video Recorder (DVR)
- Hybrid Network Video Recorder (NVR)

## Ordering Information<sup>(1)</sup>

Part Number	Minimum Order Multiple	Description
OEM - VRC7016XE-L	20	16-channel 960H low-profile PCIe DVR card with low-profile bracket
OEM - VRC7016XE-H	20	16-channel 960H low-profile PCIe DVR card with standard-height bracket
CAB - LFH - V16A16S2	-	Cable, LFH to 16 video inputs, 16 audio inputs and 2 SMO
CAB - LFH - V16A16S0	-	Cable, LFH to 16 video inputs, 16 audio inputs
CAB - LFH - V16A0S0	-	Cable, LFH to 16 video inputs
EVK-VRC7016XE	-	VRC7016XE evaluation kit

**NOTE:**

1. Refer to [www.exar.com/VRC7016XE](http://www.exar.com/VRC7016XE) for most up-to-date Ordering Information.

Please contact [videotechsupport@exar.com](mailto:videotechsupport@exar.com) to request a complete datasheet.



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