



XPress TX 400

16 Channel, High Frame Rate, Video Compression Board with Audio

Integral Technologies OEM Products Group introduces the XPress TX-400, a 16-channel, PCI-bus video capture and compression engine that records up to 120 sustained images per second. Utilizing dual **TriMedia™ video processors** and the Integral Technologies **iVEX Compression Technology**, XPress TX-400 greatly improves image quality while lowering stored image size, allowing for a cost-effective and versatile digital recording system. XPress TX-400 also incorporates a live, multi-picture video output with OSD for connection to an NTSC or PAL monitor. And, because all of this is done within the XPress TX hardware resources, XPress TX-400 needs no host CPU intervention. Whether your system is handling input triggers, motion detection, or network activity, XPress TX-400 continues to provide robust recording without sacrificing system performance.

XPress TX-400 Features

- Multi-channel PCI compression board
- Integral Technologies' iVEX Compression Technology
- TriMedia VLIW Video Processor
- Up to 120 unique images per second switching and recording
- Up to 16 composite video inputs (32 with optional XMUX)
- 4 bidirectional audio channels
- Activity detection
- Multiple board support
- Software playback of video while continuing to record compressed video
- Configurable multi-picture video output
- 16 alarm inputs
- 16 alarm outputs
- On-board watchdog
- 1 composite output with OSD, selectable as full frame or multi-picture
- Windows® 2000 and XP drivers
- Available SDK with sample applications

Applications

- Digital Video Recording
- Traffic Surveillance
- Video Streaming
- CCTV

Integral Technologies iVEX Compression Technology

Integral Technologies new iVEX Compression Technology is a proprietary compression that increases video quality while reducing overall video storage. Using a frame differencing algorithm, iVEX Compression Technology compares successive captured images and applies compression to only the parts of the image that change, dramatically lowering the average frame size. iVEX Compression Technology is fully programmable to suit any application. Choose between constant video quality or specify a target frame size.

High-Quality Video Storage From Up To 16 Cameras

XPress TX-400 allows for complete configuration and control for up to 16 composite cameras in NTSC or PAL video formats. Cameras can be viewed and recorded at video rates up to 120 images per second (100 PAL) at configurable video resolutions. On-board time-base correction guarantees robust recording from any combination of camera inputs.

Video Output

XPress TX-400 provides a composite video output with on-screen display (OSD) that allows viewing from any connected camera on an NTSC or PAL monitor. The output can be switched to a programmable multi-picture output that allows viewing in many configurations. Select between single camera, 2x2, 3x3, or 4x4 format. Several other output configurations also available.

Programmable Control

User control of brightness, contrast, hue, saturation, and sharpness is independent between camera inputs. Video compression and switching parameters can be programmed to be associated with alarm inputs, so that increased quality or frame rate can be obtained during an alarm event. An on-board watchdog timer allows for detection of system activity to guard against costly lockups.

Alarm Triggers

Up to 16 input triggers provide alarm or event verification and can be configured to be assigned to a particular camera or group of cameras. Triggers can be activated by a variety of input devices including sensors, motion detectors, proximity switches, and contact closures. Triggers can be configured to control the preferred video display or recording options or activate external events. The output triggers consist of 15 TTL triggers and 1 relay contact closure.

Software Developers Kit

Like all Integral Technologies frame grabber products, a comprehensive software developers kit is available that provides access to the features of the XPress TX-400 hardware. The SDK includes DLLs for Microsoft Windows 2000 and XP operating systems. Source code samples are included in both Visual C or Visual C++ to provide insight to various hardware functions of the XPress TX-400. Samples include video-in-a-window control, video compression, video output control, and more. As always, Integral Technologies provides experienced and knowledgeable technical support at no charge to developers using the XPress TX SDK.

Specifications

Video Inputs

- 16 composite inputs
- NTSC or PAL software selectable
- Fast switching of video inputs at frame rates up to 120 images/sec
- Genlocks to any NTSC/PAL video source
- Software control of brightness, contrast, hue, and saturation
- EEPROM for storing configuration and calibration settings

Video Output

- One switched composite video output with OSD, available in either full-frame or multi-picture format
- Real-time multi-picture output configurable to 2x2, 3x3, 4x4 and more
- NTSC or PAL software selectable

Video Compression and Playback

- Integral Technologies iVEX Compression Technology, a proprietary frame differencing compression
- Software selectable compression settings. Choose from constant quality or constant frame sizes from 3K-20K per image
- Variable video input resolution control up to 704x280 image size
- Variable compression ratio change for specific video inputs based on triggered events
- Compress and store video at frame rates up to 120 images/sec

Audio

- 4 bidirectional ports
- 8-22 KHz sampling rate

I/O Triggers and Controls

- 16 input triggers, software definable as combination of normally open or closed
- 16 output triggers - 15 TTL and 1 relay contact closure
- On-board watchdog timer

Processing Control/Activity Detection

- Two on-board TriMedia VLIW Processors
- Control of video inputs, compression settings, activity and motion detection

Software Included

- Windows 2000 and XP drivers
- XPress XVCR digital video compression Windows application

Software Developers Kit

- Windows 2000 and XP DLLs
- Extensive sample applications with source code
- XPress XVCR application source code

Optional XMUX

- Connects to XPress TX-400 for video expansion and termination for up to 32 camera inputs
- Provides connection for an additional 4 video outputs with OSD.