AVC-VPX

8x D1 Video Frame Grabber 3U VPX card

Advanced Micro Peripherals
THE EMBEDDED VIDEO EXPERTS

The AVC-VPX is a high-performance 8-channel video capture and overlay controller on a 3U VPX module. The AVC-VPX provides a powerful and flexible solution for capturing up to eight concurrent analog video inputs for local system display or software analysis and processing. The AVC-VPX is ideal for SWaP optimized, mission-critical applications.

The AVC-VPX allows each of the 8 video channels to be captured at full D1 size, all at full frame rate. The captured video data can be streamed continuously to system memory or disk for either immediate local display or further processing. The capture engine of the AVC-VPX features hardware color space conversion to present the captured video data in the format best suited to the end application.

The AVC-VPX is supported by drivers for Windows and Linux.

Live Frame Capture

up to 8 full size D1

PAL/NTSC/RS-170

video inputs at full

frame rate.

Conduction cooled

3U VPX module

PRELIMINARY INFORMATION (Rev A.00)
Subject to change without notification

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OpenVPX™

AVC-VPX

8x D1 Video Frame Grabber 3U VPX card

Multi-Camera video preview to system VGA

Very Low Latency

Applications

High performance image capture

Vehicle-based Video Capture

Real-time Situational Awareness

Law Enforcement

Crime Scene Recording

Remote Video Surveillance

Multi-camera Security Application

Asset Monitoring

Traffic Monitoring and Control

Video Acquisition and Analytics

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AVC-VPX

Windows

DirectShow

and

Linux V4L

support

Features

8 Live NTSC/PAL/RS-170 video inputs

4 x Audio input

8 x D1 size capture at full frame rate

Windows DirectShow/DirectDraw support

Efficient PCIe DMA cycle operation

Linux Video4Linux support

Drivers for Windows, Linux

Conduction cooled 3U VPX module

Low Power Operation

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Rev A.00

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Technical Specification

VPX Interface

3U VPX (VITA 46)
1x PCIe x1 on VPX-P1 (VITA 46.4)
8x Composite video input on VPX-P2
4x Audio input on VPX-P2
Live video capture to display, memory or disk

Analog Video Input

Front I/O via 8x MMCX connectors.
Up to 8 concurrent composite PAL or NTSC video input channels
Eight 10-bit Analog-to-Digital converters
Anti-aliasing filters on inputs

Video Input Formats

NTSC-M, NTSC-Japan, NTSC (4.43), RS-170
PAL-B,G,N, PAL-D, PAL-H, PAL-I, PAL-M, PAL-CN, PAL-60
SECAM

Video Input Adjustments

Contrast (or luma gain) adjustable from 0 - 255% of original
Saturation (or chroma gain) adjustable from 0 - 200% of original
Hue (or chroma phase) adjustable from –36° to +36°
Brightness (or luma level) can be adjusted from –128 to 127 steps
Software adjustable Sharpness, Gamma and noise suppression

Video Capture Formats

RGB555, RGB565
YCbCr 4:2:2
YCbCr 4:1:1

Audio Inputs

4 mono audio inputs
10-bit Analog-to-Digital Converter per channel

Audio Capture Format

8-bit PCM

System Requirements

Host VGA display (if video preview to host is required)

Environmental

Operating temp –40˚C to +85˚C
Conduction cooled 3U VPX module

Mechanical

3U OpenVPX (VITA 65)

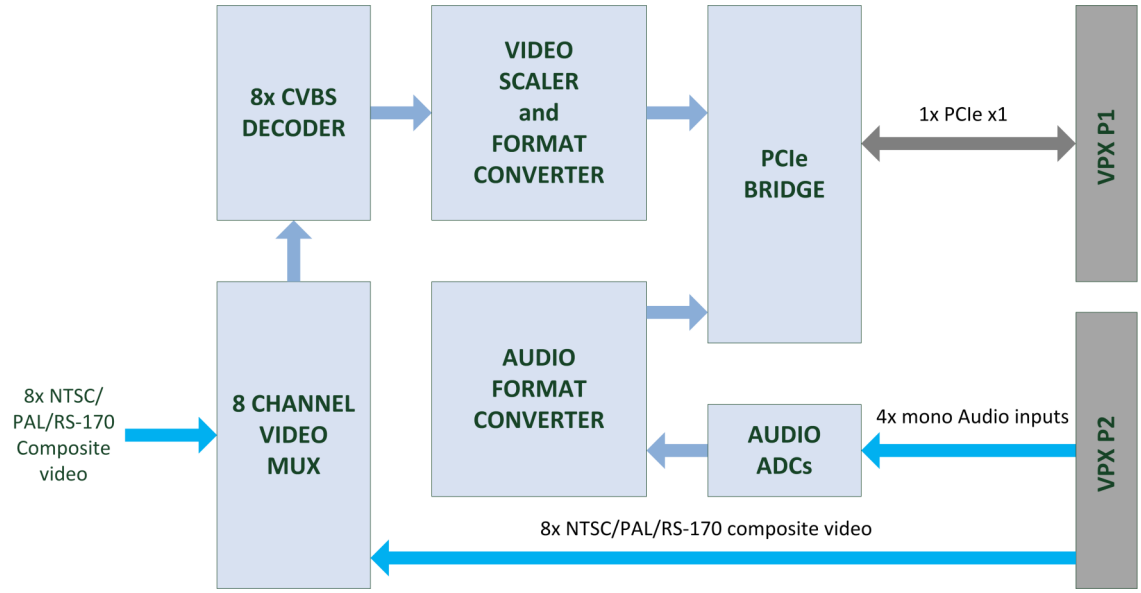
Software Drivers

Drivers for Windows, Linux
Sample video overlay and capture application in C/C++ source code

Ordering Information

AVC-VPX-EXT	Video Capture and Overlay Controller (-40˚C to +85˚C)

Note: All information preliminary and subject to change.



AVC-VPX Functional Diagram

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