zBox

(ANY-IMAGE-ANYWHERE)

REAL TIME IMAGE ENHANCEMENT FOR FULL MOTION VIDEO

Z Microsystems

Processes multiple video streams in real–time

Enhances video images for unprecedented clarity

Routes any video source to any combination of displays

Uses touch screen controls to re–route images

zBOX

REAL TIME IMAGE ENHANCEMENT FOR FULL MOTION VIDEO

zBox (Any-Image-Anywhere platform) is a cutting edge image processing system from Z Microsystems. **zBox** combines high performance parallel processing, high speed video switching, and open architecture algorithms to provide enhanced full motion video in real time. It offers unprecedented image clarity, access to multiple views from a single display station, and the ability to route video streams on–demand. **zBox** can process multiple video input streams and route them to any combination of configured displays or network connections.

Open Architecture / Algorithm Friendly

At the heart of this system is an open architecture that taps into a wide variety of image processing algorithms that are commercially available.

The **zBox** System publishes the hardware and software interconnect specifications and assists third party developers in porting their image processing algorithms to **zBox**.

Advanced image processing algorithms by:

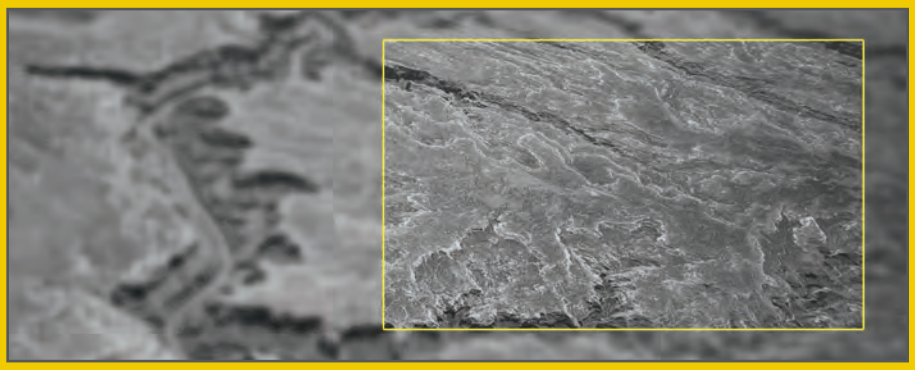
- Enhanced Video Devices (San Diego, CA)

EXECUTE ALGORITHMS IN REAL TIME

Fog and Haze

Track Moving Objects

Sand Storms



Manage Multiple Live Feeds

- SET Corporation (Arlington, VA)

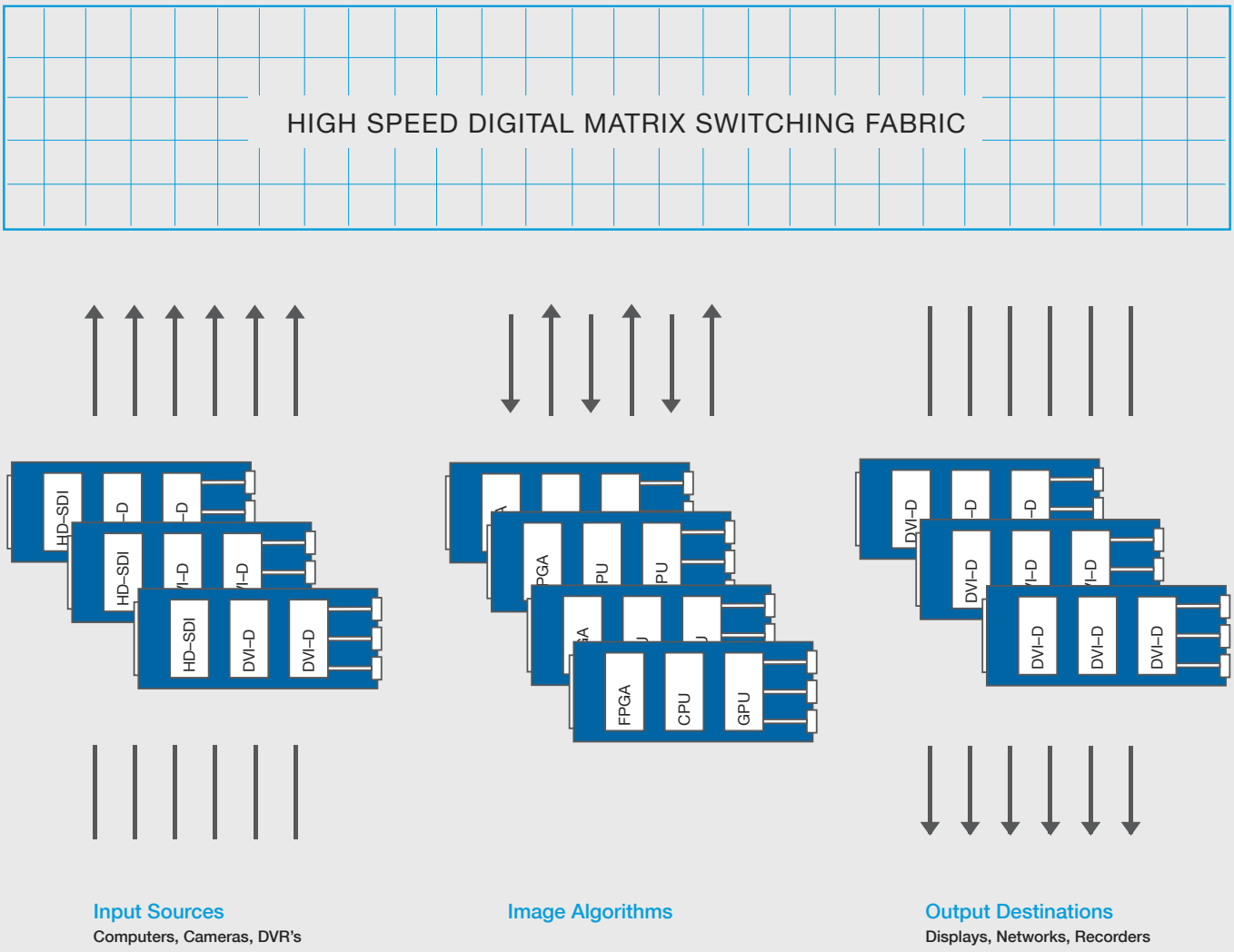
Configurable Systems Architecture

System designers choose from a growing set of functional circuit cards to field solutions tailored to the application.

18 card slots switching up to 54 digital streams through image processing algorithms executing on powerful FPGA's, CPU's, and GPU's.

zBox Image Processing and Routing System

zBox is an exceptionally designed, large scale, video enhancer and router capable of a wide range of flexible functionality, including iterative processing. **zBox** can route any video source through any number of image processing algorithms, then output the video stream to any monitor, network, recorder, or similar device. **zBox** can route multiple sources to one monitor, or to virtual screens within a monitor. Operators can turn image functions on or off, or swap the primary and picture-in-picture (PIP) windows using the touch screen. Touch sensitive areas on the display, called virtual buttons allow users to select new video streams on demand.



zBox System

4U 19" Rack Mount 45lbs

A complete **zBox** system consists of an 18–slot chassis, redundant power supplies, two switching fabric cards, and up to 18 slide–in PCA function cards. Each of the 18 card slots supports up to three input or output video ports for a total switching capability of 54 ports. The function cards can be mixed (any card, any slot) with minor limitation.

Configurations

Power Budget (Configuration Dependent)*

		Power Estimates
AIA-CHS-0218-02	18 Card Slots for Function Cards. Redundant Fabric Cards	50W Baseline Chassis (two fabric swiching cards)
AIA-PSP-AC650	650W AC Power Supply	
AIA-PSP-DC550	550 W DC 28V Power Supply	
Function Cards		
AIA-VIP-DVDVDV	VIP — Video Input Ports: 3xDVI-D (HDMI Connectors)	15W
AIA-VIP-SDDVDV	VIP — Video Input Ports: 1xHD-SDI (BNC), 2xDVI-D (HDMI)	15W
AIA-VOP-DVDVDV	VOP — Video Output Ports: 3xDVI-D (HDMI Connectors)	20W
AIA-ALG-A300	ALG — FPGA Mix, Scale, Blend, Algorithm	Max 50W

* Preliminary data subject to change
* Q1 2011 Availability

Specifications

AIA-CPU-i72508*	CPU — COM Express Intel Core i7 2.53 GHz 8GB	Max 50W
Environmental		
Operating Temp	0° to + 50°C	
Non-Op Temp	-40° to + 70°C	
Operating Humidity	Up to 95% Non-Condensing, 40°C 48 hours. Optional conformal coating to meet full MIL-STD-810F	
Non-Op Altitude	Up to 40,000 ft.	
Operating Altitude	Up to 10,000 ft.	
Vibration	MIL-STD-167	
Shock	30 g's, Saw-tooth, 11ms	
Fungus	Non-Nutrients/Contaminants	
Regulatory		
EMI	MIL-STD-461E, RE101, RE102 (Fixed- Navy and Air Force levels), RS101, RS103 (up to 60 v/m). CE102, CS101, CS114, CS115, CS116	
Quality/Workmanship		
IPC / ISO 9001:2008 and applicable section of MIL-HDBK-454		

* Test Results Pending
* Preliminary specifications subject to change

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