

## EZscan™ Universal Video Processor



Back View



Front View

**I/O resolutions up to UXGA**

**User-configurable as 1U rackmount or benchtop unit**

**EZscan™ Configure utility supports user-defined:**

- ✓ **input timing, Area-of-Interest, output timing**
- ✓ **border colors, image flips (left/right, top/bottom)**
- ✓ **Image rotation in 90 degree increments**

**Dynamic controls via RS-232 and USB, including brightness, contrast, area-of-interest, etc.**

**Inputs: DVI-I standard (TMDS and Analog RGB), NTSC/PAL**

**Outputs: DVI-I standard (TMDS and Analog RGB), NTSC/PAL**

**Non-interlaced or interlaced (RS-170, RS-343) Analog RGB I/O**

The EZscan™ Universal Video Processor provides a wide range of video conversion functions.

**Features:** Based on state-of-the-art image processing technology, the EZscan™ capabilities include:

- digitization of computer-generated (DVI, RGB) and specialty (RS-343, RS-170, STANAG) video sources with separate syncs or sync-on-green
- digitization and de-interlacing of consumer video formats, including NTSC and PAL
- generation of monitor (DVI, RGB), TV (NTSC/PAL), and specialty (RS-343, RS170, STANAG) video
- frame rate conversion
- independent horizontal and vertical scaling
- programmable image position within larger background area for both input and output
- incoming video gain and offset adjustments
- fine phase clock adjustment for pixel sampling
- image can be reversed left to right
- image can be flipped top to bottom
- image can be rotated in 90 degree increments
- remote interface for both set-up and operational control
- settings stored in non-volatile memory.

***Do you have a legacy video source that needs to be converted to a video format compatible with a new display or projector product?***

**Example:** Your existing video source is 875 line RS-343. You need to convert to SXGA (1280 x 1024), where the original 1088 x 808 pixels of information in the source are mapped to a 1088 x 808 window within the SXGA output. Use Westar's EZscan™ configuration utility to define the input timing, the output timing, and the area-of-interest (AOI) within the RS-343 source and where to map the AOI within the output resolution

***Do you have a legacy display that needs to be interfaced to a standard PC video format?***

**Example:** Your display requires 875 line RS-343. Your video source is a standard PC video card, generating SXGA (1280 x 1024) video. You want to map 1088 x 808 pixels of information in the source to a 875 line RS-343 interlaced output. Use Westar's EZscan™ configuration utility to define the input timing, the output timing, and the area-of-interest (AOI) within the SXGA source and where to map the AOI to the RS-343 output

### **Unique Video Rotation Capability**

EZscan™ supports video rotation for the following applications: a) to drive displays mounted sideways, b) to rotate video from cameras mounted sideways, but viewed on standard monitors, and c) when video is rendered sideways for side-mounted projectors or displays, but then rotated back for viewing on standard monitors.

### **EZscan™ Operation**

After configuration, the EZscan™ typically operates as follows:

1. Upon power up, the EZscan™ configures itself based on its internal BIOS
2. Prior to detection of valid video, the EZscan™ can drive a user-defined color to your display
3. When valid video is detected, the EZscan™ converts the incoming video per the pre-defined settings contained in the BIOS
4. When video is lost, the EZscan™ can drive a pre-defined color (blue-screen), or some other function as defined in the BIOS created with the configuration utility.

**How to get started**

Please contact us at (636) 300-5164. We will discuss your specific application.

EZscan™ is delivered with a bag containing rackmount ears and feet. You may install either as needed for your application.

**Ordering Identification**

**EZscan™ Specifications**

**Input Specifications** (Subject to change without notice)

Video Type	Standard: Analog RGB (0.7 Volt levels, Interlaced or Non-Interlaced), TMDS, NTSC/PAL
Pixel Rate	Up to 162 MHz
Clocks per Line	Up to 4096
Lines per frame	Up to 2048
Sync Type	HV, Composite Sync, or Sync-on-Green
Phase Adjustments	Sample clock can be adjusted to ensure center sampling
Connectors	DVI-I connector for Analog RGB, TMDS (DVI to HD15 adapters included in delivery) BNC and S-Video connector for NTSC/PAL (cannot connect to RCA and S-Video simultaneously)

**Output Specifications**

Video Type	Standard: Analog RGB (0.7 Volt levels, Interlaced or Non-Interlaced), TMDS, NTSC/PAL
Pixel Rate	Up to 162 MHz
Clocks per Line	Up to 4096 (1600 active)
Lines per frame	Up to 2048
Sync Type	HV, Composite Sync, or Sync-on-Green
Connectors	DVI-I connector for Analog RGB, TMDS (DVI to HD15 adapters included in delivery) BNC and S-Video connector for NTSC/PAL (cannot connect to RCA and S-Video simultaneously) BNC for component output

**Electro Mechanical**

Input Power	IEC Connector, 100-240 VAC, 47-63 Hz, less than 60 Watts
Control	RS-232
Size	Rackmount config: 19"W x 8"D x 1.75"H, Benchtop config: 17.4"W x 8"D x 2.12"H
Weight	Less than 5 lbs.

**Control Ports**

RS-232, USB  
See figure below. Ethernet is for future Growth

**Connector Layout**

**Environmental**

Temperature	Operating 0°C to +50°C; Storage -20°C to +70°C
Relative Humidity	0 to +95%, non-condensing

**Warranty**

One year

**Functional**

Specialty Features  
 Interlaced to non-interlaced conversion, image rotation, image flip  
 Windowing, Programmable border colors, Brightness and Contrast adjustments  
 8 bits per color  
 50% horizontal shrink, 50% vertical shrink  
 Some area-of-interest limits on rotation for pixel frequencies great than 108 MPixels/sec

**Each EZscan delivery includes:**

EZscan unit, (2) DVI to HD15 adapters, rackmount ears, IEC power cable with US plug, and a CD containing the User's Guide and EZscan Configure utility

EZscan Configure Utility allows you to set up the unit for your specific video processing application!

