6U VME REAL-TIME VIDEO WINDOWING SYSTEM

RGB/VIEW 8000
Multi-input Display Processor with Keyer

**Displays up to Six
Real Time Inputs**

**Compatible with
Graphics Inputs up to
1920 x 1200 Pixels**

**RGB, DVI, NTSC/PAL
and S-Video Inputs**

**Windows Independently
positioned and Scaled**

**Pan and Zoom Within
Windows**

Chromakey Overlays

**Control over VMEbus,
RS-232 Port and Ethernet**

**Frame Grabbing over
VMEbus and Ethernet**

The RGB/View® 8000 controller displays multiple real-time video and graphicswindows on a high resolution monitor. Each window can be independently positioned, scaled to any size, overlaid with computer graphics or overlapped with other windows. In addition, the user can pan and zoom within each image.

The system was developed for applications requiring the simultaneous real-time display of high quality video and computer-generated images. The RGB/View 8000 offers up to four scaleable video inputs, one scaleable high resolution RGB/DVI input and one background signal on a single VME board.

The RGB/View processor guarantees real-time video performance under all conditions. Its architecture has a unique advantage: the multi-image display imposes no burden on the host CPU, frame buffer or bus.

Features include frame grabbing of individual inputs or the combined screen image, over the VMEbus or Ethernet port, a fully digital signal path available with DVI input and output, and a chroma key for overlays.

In typical operation, the 8000 is genlocked to an input signal displayed in the background. Overlaying of signals is supported using a chromakey technique. The user chooses a "key" color in the background to specify where it is transparent; the result is that portions of the background signal, as thin as a single line, appear over the windowed video. If no background signal is required, the output of the 8000 can be "free run" to a user defined specification.

Excellent video quality, real-time performance, a unique set of features and compatibility with virtually all VME CPU and graphics boards makes the RGB/View 8000 the finest video windowing systems available.

Specifications

High Resolution Computer Inputs

Number (max)	2 RGB analog or 1 RGB analog plus 1 DVI digital
Configuration	1 high resolution input window plus background

RGB Analog

Video level	Nominal 0.7 V pk-pk (1.0 V composite pk-pk)
Input impedance	75 ohms
Sample rate	Up to 205 MHz
Horizontal scan rate	15 kHz to 100 kHz interlaced or non-interlaced
Frame rate	Up to 100 Hz
Resolution	640 x 480 to 1920 x 1200 pixels
Sync	3 wire (sync on green, bi-level or tri-level), 4 wire (separate composite sync), 5 wire (separate H and V sync)
Sync level	0.3 V p-p (3 wire bi-level), 0.6 V p-p (3 wire tri-level), 1 to 5 V (4 and 5 wire)

DVI Digital

Connector type	DVI-I (integrated analog/DVI 29 pin connector)
Maximim bandwidth	1.65 Gbps/channel (DVI single link)
Resolution	640 x 480 to 1600 x 1200

VideoInputs

Number	4 composite or 2 S-Video
Video level	Composite 1.0 V pk-pk nominal
Format	625 line PAL, 525 line NTSC
Input impedance	75 ohms
Connector type	SMA

High Resolution Output

RGB Analog

Video level	Nominal 0.7 V pk-pk
Ouput impedance	75 ohms
Sample rate	Up to 205 MHz
Sync	3 wire (sync on green), 4 wire (separate composite sync), 5 wire (separate H and V sync)
Sync level	0.3 V p-p (3 wire) 5 V (4 and 5 wire)
Resolution	640 x 480 to 1920 x 1200

DVI Digital

Maximum bandwidth	1.65 Gbps/channel (DVI single link)
Resolution	640 x 480 to 1600 x 1200

Functions

Windows	Position, priority, scaling, pan and zoom, aspect ratio, ID, freeze frame
Image control	Brightness, contrast, gamma, hue, saturation, sharpness and test pattern
Frame grab	Capture single frames from any input or the combined screen image; transfer over VMEbus or Ethernet network port
Chroma key	Single bit keyer with interactive adjustment or user-defined key color

Other

Power	< 35W
Cooling	200 lfm (min) across board
Control	VME, RS-232, Ethernet 10/100 BASE-T
Bus	VME 32 slave
Size	6U x 160 mm
Slots	1