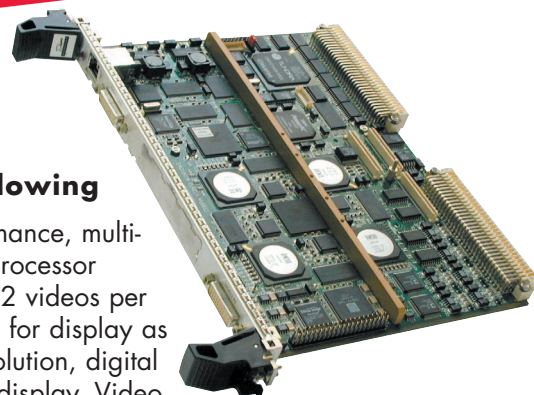




Cobra Video Windowing

- ◆ Single-slot VME video windowing card
- ◆ 12 video input lines
- ◆ Accepts composite TV, S-Video or RGB to 1600 x 1200
- ◆ Up to 4 fully scalable and moveable windows
- ◆ DVI or analogue graphics input for overlays/background
- ◆ DVI or analogue video output
- ◆ Fully configurable over VME, RS-232 or Ethernet
- ◆ Web based control interface provided
- ◆ Screen capture facility
- ◆ VME card or standalone 2U box-level product
- ◆ Alpha blending and video cross mixing (Cobra Ax variant)



Cobra Video Windowing

Cobra is a high-performance, multi-input, video windows processor that can accept up to 12 videos per card and select up to 4 for display as windows on a high-resolution, digital flat panel or analogue display. Video inputs can be TV, RS-170, RS-343, STANAG or high-resolution RGB up to 1600 x 1200. In addition to the video inputs an overlay or background high-resolution graphics signal may be input to the card as separate DVI or analogue RGB video. The card supports a wide variety of display configurations including quad-video, picture-in-picture, full-screen zoom and with the Cobra-Ax variant, alpha blending and cross mixing of video sources.

Cobra requires only power from the VME bus and may be completely controlled over the Ethernet, RS-232 or VME interfaces. Multiple video sources may be input and selected under software control for display in multiple windows. The output video may be displayed on a CRT, flat-panel monitor or projector, using either the analogue RGB output or, for optimum image quality, the direct digital DVI output.

Cobra Video Overlays

In addition to the multiple channels of video and RGB that are normally displayed as windows, Cobra has a separate input for graphics overlay or background. This may be driven from any industry standard graphics card providing an RGB or DVI graphics video from resolutions of VGA up to UXGA (1600 x 1200). Chroma keying techniques are used to allow the graphics signal to overlay the video windows. This technique allows any X-Windows or Microsoft Windows application to use the Cobra to provide video in a window, by keying the normal graphics output of the computer with the video windows picture created by the Cobra. When supplied with the optional desktop enclosure, Cobra forms a self-contained video windowing sub-system that may be used with any PC or workstation computer.

Learn More

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Cobra Video Windowing

Because the graphics card is decoupled from the video display processor, there is considerable flexibility to choose a graphics hardware and software solution that supports the required target platform such as X-Windows, OpenGL, VAPS, Intermaphics or ODS.

With Cobra handling multiple video inputs, other Curtiss-Wright cards can provide radar scan-conversion display allowing integrated video + radar + multi-layer graphics displays for complete command and control solutions.

Cobra Screen Capture

A unique feature of Cobra is the capability to capture the video and graphics data for transfer to a remote host for printing or occasional recording. Cobra faithfully captures the full screen with no loss of detail, allowing screen shots to be captured, under software control, of an individual video window or the full screen.

Table 1: Cobra Configurations & Versions

Cobra 100	No. of Windows	1
	No. of VME slots	1
	Video Input Connection	Rear P2
	Alpha Blending/Cross Mixing	No
Cobra 200	No. of Windows	2
	No. of VME slots	1
	Video Input Connection	Rear P2
	Alpha Blending/Cross Mixing	No
Cobra 400	No. of Windows	4
	No. of VME slots	1
	Video Input Connection	Rear P2
	Alpha Blending/Cross Mixing	No
Cobra AX	No. of Windows	4
	No. of VME slots	1
	Video Input Connection	Rear P2
	Alpha Blending/Cross Mixing	Yes

Notes: Each variant mentioned above can be supplied with dual or quad RGB input via the front panel. Quad RGB input versions require 2 VME slots. Dual RGB input versions also have 4 composite video inputs on the front panel. All variants have a maximum of 12 video input lines whether input is from rear or front-panel. All variants have DVI-I graphics input.

Specifications

Video Inputs

- ◆ 12 video inputs configurable as non-interlaced RGB (uses 3 video inputs) Composite (uses 1 video input) or S-Video (uses 2 video inputs)
- ◆ Separate H & V syncs

Overlay/Background Graphics Input

- ◆ DVI-I input (DVI or analogue RGB)
- ◆ Resolutions from 640 x 480 up to 1600 x 1200 (Resolution up to 1280 x 1024 with Cobra Ax)

Video Windows

- ◆ Up to 4 video windows individually scaled and positioned on the output display
- ◆ Position, scaling, freeze frame, brightness and contrast adjustment

Video Mixing

- ◆ Digital video mixing
- ◆ Graphics input overlays video signal using Chroma-key techniques (available on all variants)
- ◆ Alpha blending or video cross mixing with Cobra Ax variant

Video Output

- ◆ DVI-I output (DVI or analogue RGB)
- ◆ Output resolution selectable up to 1600 x 1200, non-interlaced (1280 x 1024 with Cobra Ax)
- ◆ Separate H&V syncs or sync-on-green

Connectors

- ◆ 10/100BASE-T/TX network interface
- ◆ DVI graphics input on front-panel
- ◆ DVI graphics and video output front-panel
- ◆ Video input and output through VME P2 connector
- ◆ Alternative versions of the card have video input on front-panel

VME Interface*

- ◆ A32/A24/A16 master and slave
- ◆ D64/32/16/8 master and slave
- ◆ System controller function

*Note: No VME interface on Cobra 100

Physical and Mechanical

- ◆ Single-width 6U VME module (Quad VGA front-panel input versions require 2 slots)
- ◆ Conformal coating is optional
- ◆ PMC site for expansion
- ◆ Curtiss-Wright Level 0 environmental grade

Electrical

- ◆ Power consumption: 30W typical for Cobra 400

Configuration and Control Interface

- ◆ Programmable power-on configuration control using supplied PC-based application program
- ◆ Command and control interface accessible over Ethernet, VME shared memory or RS-232