

Levin-VGA professional R.G.B. separated capture boards

(1) Introduction

Levin-VGA is a RGB high-speed and high-resolution capture board based on PCI (PCI_X) bus. It can capture standard and non-standard signals from the RGB camera and signal sources, or from the three synchronous and independent monochrome video sources. It can be applied to high-accuracy and high-resolution image processing and medical imaging.

(2) Performance:

- To input standard and non-standard video, to real-time capture RGB video signals or one channel monochrome video.
- Buffer, three high-speed 8 bit A/D converter. Resolution up to $2048 \times 2048 \times 8 \times 3$
- Data clock up to 205M, the maximal resolution of VGA up to 1600×1200 , 75field
- Sampling rate can be adjusted.
- Three independent resist-confusion filters can adjust bandwidth.
- The brightness and contrast of video signals from RGB source can be adjusted.
- Image format: RGB24bit or RGB32bit and GRAY8bit, applicable to PCI display card or AGP display card.
- Detect the line and field feature of signal sources automatically.
- Can capture single field, single frame, interval frame
- External trigger video input control, external trigger hardware acquisition control

Levin-D10

(1) Introduction

Levin-D10 is a display card based on PCI interface chip set developed by us. Levin-D10 displays data in memory on the progressive and interlaced monitor in the display rate customers required. The video interface of its hardware supports standard VGA pin (R, G, B, HS, VS) output and standard BNC pin (CVBS) output. The display resolution is up to 2048×1024 . The data rate can be chosen from tens of types between 10.64MHz and 239.625MHz. This display card also has many display functions for the professional customers, such as lookup table, graphics overlay, cursor overlay and so on. Levin-D10 can be connected to various professional monitors and can simulate many kinds of non-standard video sources. It is applied to medical treatment, scientific research and so on.

(2) Performance:

- 8Bit A/D converter
- Display resolution up to 2048×1024
- The range of data rate: 10.64MHz to 239.625MHz; can simulate video signals of more than 700 data rate
- Progressive or interlaced display mode
- The video interface of its hardware supports standard VGA pin (R, G, B, HS, VS) output and standard BNC pin (CVBS) output.
- Four pages of color lookup table ($4 \times 256 \times 32$ Bit): Each lookup table can consist of 256 kinds chosen casually from $256 \times 256 \times 256$ kinds of color.
- Cursor overlay

(3) Software

Application platform of software: Win98, Win 2000, WinXP

(4) Application

Video printer, signal simulating and so on

Levin-M10/M20

(1) Introduction

Levin-M10/M20 is a high-precision and professional frame grabber for monochrome video acquisition. Levin-M10 is a standard frame grabber for monochrome video acquisition, while Levin-M20 is a non-standard one. Image data is captured into memory in the mode of Scatter/Gather DMA, no occupying the time of CPU.

(2) Performance

Levin-M10

- 8Bit A/D converter
- 4 analog input channels can be switched by software
- Filter
- High precision and high S/N ratio
- Image resolution: 768×576 (PAL), 640×480 (NTSC)
- Data rate: 5M-30MHz (sampling rate in the peak value can reach 30MHz)
- Brightness and contrast can be adjusted by software
- Capture single field, single frame, successive frame, interval frame, neighboring frame
- Control interface: 2 TTL input (can connect with external trigger), can chose one input and one output
- Line and field synchronization and composite synchronization output

Levin-M20 has the whole function of Levin-M10. It can capture standard and non-standard video signals. Meanwhile, it has the functions as follows:

- The range of data rate: 5MHz-80MHz
- Image resolution up to 2048×2048
- It has the function of inspecting video signals automatically, which inspects line frequency and field frequency. It also can decide the size of effective image and display the effective image automatically.
- Definition: 500lines (horizontal)
600lines (vertical)
- Power consumption up to 2.8W

(3) Software

Support operating system such as Win98, Win2000, Linux, Dos and so on

(4) Application

Industrial inspection: PCB board, semiconductor chip, industrial pipelining, ?

Biomedicine: electronic micrograph, B ultrasonic wave, X ray machine, CT machine and so on

CT: Toshiba TCT-300EZ, TCT-700S

X ray machine: Daojin DR3000, Philips Intestines and stomach machine

Military industry: signal acquisition for radar

Levin-RGB10/RGB20

(1) Performance

Levin-RGB10/RGB20 is a high-precision frame grabber for RGB color separated signals. Levin-RGB10 is a standard frame grabber for RGB color separated signals. Levin-RGB20 is a non-standard one. The two types of frame grabbers can capture standard or non-standard RGB separated signals from cameras and signal sources. Image data is captured into memory of a host computer in the mode of Scatter/Gather DMA, no occupying the time of CPU.

(2) Performance:

Levin RGB10:

- 8Bit A/D converter
- Real-time capture and display of RGB separated video signals, or single monochrome video signal.
- 3 8Bit A/D. Resolution up to $768 \times 576 \times 8 \times 4$
- The brightness and contrast of RGB three inputted signals can be adjusted independently.
- Can capture single field, single frame, interval frame, successive frame
- Control interface: 2 TTL input (can connect with external trigger)

Levin RGB20

- Data clock: 5MHz-40MHz
- The VGA image which can be captured: $800 \times 600 \times 32\text{Bit} \times 60\text{Hz}$
- Definition: 500lines (horizontal)
600lines (vertical)
- Power consumption up to 2.3W

(3) Software

Supply operating system, such as Win98, Win2000, WinNT, Linux, Dos and so on

(4) Application

It can be applied to high precision and high-resolution RGB color video acquisition and three-dimensional video analysis, such as acquisition and process of color B ultrasonic wave signals in biomedicine, acquisition of low-rate color radar signals in military industry, for the microscope users and so on.