New PW164 ImageProcessor from Pixelworks™ Extends Family of Single-Chip Display Controllers

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Tualatin, Ore., August 16, 1999—Pixelworks, Inc., the inventor of the ImageProcessor and the emerging leader in interfacing flat panel displays, today announced the release of the PW164 as the latest addition to its line of highly integrated, single-chip flat panel display ImageProcessors. The PW164, the third new ImageProcessor delivered by Pixelworks in the last year, delivers low-cost, full-featured and interface-independent display controllers in multiple configurations, targeting XGA- and SXGA-resolution systems — specifically the rapidly growing LCD monitor market.

The PW164 extends Pixelworks' line of hardware- and software-compatible single-chip, flat panel display controller solutions into the most cost sensitive, high volume segments of the flat panel display markets. Pixelworks ImageProcessors, including the new PW164, provide unsurpassed image quality and ease of use, but now at even more competitive price points. Using the PW164, manufacturers can achieve controller board costs of less than $60 — a significant reduction from the $200 to $400 costs of only a year ago.

"Pixelworks' highly integrated, high performance ImageProcessors have been embraced by the flat panel display industry," said Allen Alley, CEO of Pixelworks. "Within our line of ImageProcessors, the PW164 allows us to extend state-of-the-art performance even further into the highest growth segments of the market, including the popular XGA-resolution LCD monitors."

The PW164 ImageProcessor utilizes the proven architecture of its predecessors, the PW364 and PW264 integrated circuits (ICs). The development process for the chip was reduced to less than six months by leveraging the common architecture and features introduced in the PW364. The PW164, with samples available now and volume shipments scheduled for September, follows the PW364 that shipped in December 1998 and the PW264 that shipped in February 1999.

About the PW164 ImageProcessor The PW164 ImageProcessor minimizes the amount of external components on the circuit board. With the incorporation of the frame buffer, resizing circuitry and microprocessor and peripherals into the chip, the circuit board size is reduced, leading to lower costs. Following is a list of key features of the PW164 ImageProcessor:

- Image Scaling — The PW164 supports input graphics resolutions from VGA to UXGA. Pixelworks uses patent pending image resizing technology to expand or shrink the input image to match the resolution of the display.
- Maximum Interface Flexibility — As do all Pixelworks ImageProcessors, the PW164 works with any input source or interface standard. The IC operates in either analog or digital interface environments, ranging from the standard 15-pin VGA interface to the latest DVI standard for digital displays.
- Intelligent Video Processing — The PW164 supports multi-standard video, including DTV, HDTV, NTSC, PAL and SECAM. The PW164 does all the processing required, including deinterlacing.
- Frame Rate Conversion — Using integrated, on-chip synchronous DRAM (SDRAM), the PW164 allows savings in memory costs and eliminates frame tear artifacts.
- Automatic Image Optimization — Pixelworks has developed a proprietary technology that automatically and continually adapts in real time to provide an optimal image. No manual adjustments, such as "sync," "phase," "position," "clock" and "tracking", are necessary. This will make products using Pixelworks ImageProcessors as easy to connect as today's auto-synch CRT monitors.
- Fully Customizable On Screen Display — The PW164 includes a complete On Screen Display Controller (OSD) as well as a unique WindowsÒ based application that allows customers integrating the PW164 into their display products to quickly develop and implement their own unique user interfaces.
- Unique On-chip Microprocessor and Memory — The "system-on-a-chip" architecture features an embedded 80186-compatible microprocessor complete with peripherals.
- Complete Reference Software — The Pixelworks Developer Kit, which now supports the PW164 in addition to the PW364 and PW264, includes all of the source code necessary to implement the most common display systems such as LCD monitors and projectors, thus dramatically reducing time to market. In addition, the Developer Kit provides sophisticated, easy-to-use tools such as a reference design and complete software design environment which deliver clear product differentiation through rapid customization of features, performance, and look and feel with the fastest time to market.

The entire family of highly integrated ImageProcessors are produced using a state-of-the-art .25-micron embedded DRAM process.

Depending on configuration, the PW164 is available in either a 256-pin tape ball grid array (TBGA) or 352-pin TBGA package. Customer shipment of display systems using the PW164 will start in the fourth quarter of 1999.

About ImageProcessor Technology As the inventor of ImageProcessors, two-year-old Pixelworks is leading a transformation in the display technology industry toward integrated technology solutions for interfacing flat panel displays. ImageProcessor "system-on-a-chip" integrated circuits (ICs) are the world's first and only single-chip display controllers. ImageProcessors enable flat panel display products that deliver unsurpassed image quality

regardless of input source format, with no user intervention, at the lowest cost.

ImageProcessors replace several discrete components, meaning dramatically lower cost electronics and faster time to market. By developing a common image processing platform, with complete reference software source code available, that is usable in any flat panel device, Pixelworks is lowering the cost of entry and speeding product introductions for LCD monitors, LCD projectors and "hang-on-the-wall" televisions.

Pixelworks' vision is to provide the display industry with a common architecture for display controller electronics that results in lower system costs and faster time to market," said Alley. "In some cases ImageProcessors have reduced the development cycle from 12 months to less than three. In this fast-paced market, that has a huge impact on competitiveness."

About Pixelworks, Inc. Pixelworks Inc., headquartered in Tualatin, Oregon, is a privately held fabless semiconductor company founded in 1997. The company, which invented the breakthrough ImageProcessor, is a leader in the area of "system-on-a-chip" levels of integration for enabling the future of display technology such as flat panel monitors and televisions. Pixelworks was named as one of Red Herring's "Ten to Watch" for 1999, a recognition of companies in the early stage of development that show promise of growing into global technology leaders.

For more information about Pixelworks, call 503-612-6700 or visit the company's Web site at http://www.pixelworksinc.com