



matrox
electronic systems ltd.

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PIP-512

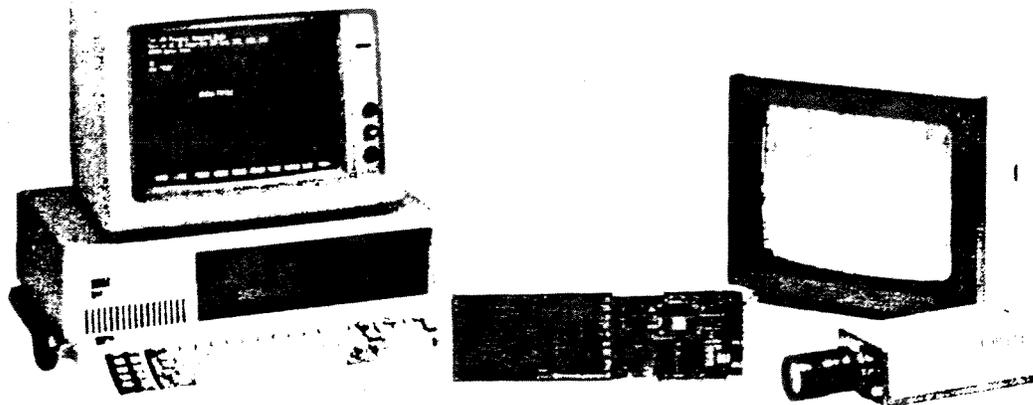
REAL-TIME IMAGE DIGITIZER FOR THE IBM PC

- 512 x 512 display resolution
- 8 bit/pixel
- Optional 1024 x 1024 image buffer
- 16.7 million color lookup-table
- Video keyer & Write mask
- Continuous or one-shot frame grab
- IBM PC, AT and XT compatible
- CMOS design requires only 15 watts
- Occupies a single expansion slot
- 8-bit flash frame grabber
- Internal or gen-lock sync
- Low cost

The MATROX PIP-512 is a full-feature image digitization and display module for your IBM PC, AT, XT or plug-compatible computer. This card has all the high-performance features characteristic of top-of-the-line image processing systems such as real-time 8-bit digitization, a 512 x 512 video buffer, multiple input and output lookup tables, a write-protect mask, and color display.

Equally important, the PIP-512 integrates easily into a PC system. It occupies only one expansion slot and consumes a mere 15 Watts of power. Diagnostic support is built into the hardware. As a result, the diagnostic program, PIP-TEST, is capable of detecting over 95% of all possible problems.

PIP-EZ, a software package conceived to help the programmer to develop an application, is supplied free of charge. PIP-EZ consists of an installable device driver under PC-DOS and applications libraries for all major DOS language (BASIC, PASCAL, FORTRAN, and C).



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Figure 15. Matrox PIP-512 brochure

• PIP-512 FEATURES •

High Speed A/D Converter	A flash A/D converter digitizes RS-170/330 signals in real-time (1/30 sec) to 256 discrete intensity levels.
Sync Control	Both an internal crystal generated sync and PLL genlock to an external signal are supported.
Display Resolution	512 × 512 pixels
Bits/pixel	8
Refresh Rate	50Hz or 60Hz interlaced
Image Buffer Capacity	PIP-512: 512 × 512 PIP-1024: one 1024 × 1024 frame or four 512 × 512 frames
Input Lookup Tables	Eight independently-selectable lookup table maps.
Color Output	Three lookup tables and three D/A converters allow for the display of 256 colors or shades of grey from a palette of 16.7 million colors.
Transparent Memory Access	The Video RAM can be accessed at all times without causing interference on the screen.
Write Protect Mask	Individual planes can be protected from overwriting. Protected planes can be used for graphics, and text.
Pan & Scroll	The PIP-512 provides programmable roam capabilities to a resolution of 8 pixels horizontally and 16 lines vertically.
DMA Capability	Any DMA channel can be used to copy data to and from main memory. An interrupt on completion allows the CPU to continue with other work during the transfer.
I/O Interface	Sixteen I/O registers are used to control each PIP-512. Only one location is taken up in the 10-bit I/O map used by older controllers to ease integration.
Power Consumption	Extensive use of CMOS technology keeps the power consumption down to a mere 15 Watts.
Applications Software	PIP-EZ, a driver package compatible with PC-DOS (versions 2.0 and above) and all major languages (BASIC, C, PASCAL and FORTRAN) aids the user to bring up an application quickly and painlessly.
Diagnostics	A sophisticated diagnostic program aided by hardware support detects more than 95% of all possible faults without the use of either a camera or a monitor.

Figure 15. Matrox PIP-512 brochure (cont'd)