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Part No.	Gates	Part No.	Gates
LP7080L	880	LP7420L	4200
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LP7320L	3200	LP71000L*	10000

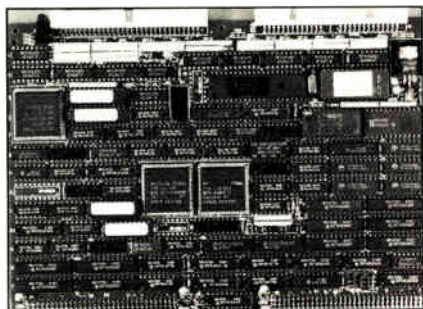
*Available in 1987

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ny. Besides its blazing direct-memory-access rate, the new Xylogics 752 VME HSMD (for high-speed storage-module drive) controller can handle up to two drives, each at a maximum data-transfer rate of 2.4 megabytes/s.

The 752's maximum packet size of 6,144 bytes is considerably larger than other controllers, which typically use either 32- or 512-byte packets. By squeezing data from several disk sectors into one large packet for transmission on the bus, the Dynathrottle eliminates the intersector dead time—bus and central-processor time wasted waiting for the disk drive to find sectors—by 50%.

The controller dynamically assembles packets of one to six sectors worth of data, depending on the amount of data in the FIFO buffer, to send as much data as possible in one burst. Quick data transfer



leaves the bus free for other operations.

Dynathrottle provides continuous transfers through its large word-wide fast buffer instead of the two-step process used in other controllers, where small blocks of data (32, 256, or 512 bytes) are staged from slow dynamic RAM to a small buffer that requires a substantial overhead to refill.

The 752's intelligent read-ahead capability also adds to performance. Using its buffer much like a cache memory, the controller reads more data blocks from the disk than are requested by the read command—continuing to read until the buffer is filled. Many times, a program will eventually issue requests for sequential sectors. When it does, the data will already have been stored in the controller's buffer.

The controller, which is integrated on a standard VMEbus board, supports the full VME 8-, 16-, or 32-bit address and data modes, with the word-size selection being made by software. Besides the 8-K-byte FIFO data buffer, the 752 also has a 2-K-byte command buffer and is driven by microcode. The controller costs \$2,695, and it is available immediately.

—Tom Manuel

Xylogics, Inc. 144 Middlesex Tpk., Burlington, Mass. 01803.

Phone (617) 272-8140

[Circle 340]

BOARD GIVES PC ATs PHOTO-LIKE DISPLAY

By taking full advantage of a high-performance Intel Corp. display-controller chip and squeezing 4 megabytes of video memory on a single board, Univision Technologies Inc. has produced a display controller with 2,048-pixel-by-1,536 line resolution and a blistering fast 200 MHz display rate.

The near-photographic quality of the UDC-800's images is believed to be the highest 8-bit resolution yet for IBM Corp. Personal Computer ATs and compatibles.

SPEED TRIPLED. Pushing resolution above the 1,280-by-640 standard meant adding more memory capacity and designing high-speed circuitry to keep the display screen refreshed. Instead of refreshing a screen of 1 million pixels—a job that can be handled at 60 or 70 MHz—the new controller refreshes 3 million, says Julius Perl, engineering vice president of the Burlington, Mass., company.

Intel's 82786 display controller had to be interfaced with glue logic designed with fast ECL parts to maintain system

performance at 200 MHz. Packing 4 megabytes of memory—a total of 104 memory chips are on the board—posed another problem. Univision Technology solved it by utilizing ZIPs—for zig-zag in-line packaging—which staggers device pins so that even though chip output pins are on 100-mil centers the pin contacts on the board are on 50-mil centers.

CMOS memory chips were used to minimize power consumption and heat production, Perl says. In another space-saving move, designers used surface-mount technology for non-memory chips, says Perl.

The controller's high resolution will open important new applications in the medical-imaging market, by bringing photographic quality to personal-computer screens. "[Resolution of] 1,000 by 1,000 is just not good enough for a doctor to make a diagnosis of a chest X-ray off the screen," Perl says, but "at 2,000 by 1,500, that resolution makes it look like a real X-ray."

Single-quantity pricing is \$6,995 and includes initialization, diagnostics, and a driver for Microsoft Corp.'s MS-DOS operating system. The boards are available now.

— Craig D. Rose

Univision Technologies Inc., 12 Cambridge St., Burlington, Mass. 01803.
Phone (617) 273-5388 [Circle 342]

THIN-FILM DISPLAYS CAN BE CUSTOMIZED

Two thin-film electroluminescent flat-panel displays from Sigmatron Nova Inc. can be adapted to specific applications. Aircraft cockpit displays, for example, can be customized so they are easily read in bright sunlight.

The MDS-23 is a 2-by-3-in. unit and the MDS-35 is a 3-by-5-in. model. Both



have contrast ratios of better than 20:1, a viewing angle exceeding 160°, and better than 2 lumens/W efficiency. Thickness is 0.65 in.

The MDS-23 has a 50-lines/in. resolution and a 96-by-160 dot matrix. The MDS-35 has 64 lines/in. resolution and a

192-by-320 dot matrix. In 100-unit quantities, the MDS-23 costs \$350 and the MDS-35 \$675. Both are available now. Customization takes six to eight weeks from receipt of order.

Sigmatron Nova Inc., 1901 Oak Terrace La., Thousand Oaks, Calif. 91320.

Phone (805) 498-4504 [Circle 345]

TWO-IMAGE DISPLAY GIVES 3-D GRAPHICS

A new graphics display system from Tektronix Inc. gives a viewer three-dimensional perception with liquid-crystal-shutter stereoscopic technology that provides two images, one for the right eye and one for the left.

The SGS 430 system consists of stereoscopic viewing glasses, a graphics adapter card that creates a 512-pixel-by-512-line display, a 3-D color monitor, a modulator-driver, and software for creating stereo views.

Tektronix is targeting applications in computer-aided design, molecular modeling, architectural design, and medical imaging. Available now, the complete SGS 430 system costs \$9,800.

Tektronics Inc., Liquid Crystal Shutter Marketing Div., P. O. Box 500, MS 48-300, Beaverton, Ore. 97077.

Phone (503) 672-5000 [Circle 346]

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