The DMP-51/52 MP 14-pen plotter from Houston Instrument is compatible with more than 200 commercially available software programs and can be interfaced with any computer featuring an RS-232-C port.

Video RAM has multiport architecture

Texas Instruments is introducing a multiport video RAM that combines a 64K-bit dynamic RAM with a 256-bit shift register. According to the company, the device, designated the TMS4161, is the first MOS memory product designed primarily to enhance the performance and reduce system costs of medium-to-high-resolution bit-mapped graphics display systems. It is also intended to serve the needs of a variety of other applications that require sequential data streams combined with random access capability.

The dual-ported nature of the TMS4161 allows a graphics (or host) processor to operate on the DRAM portion of the device while the shift register simultaneously and asynchronously provides pixel data to refresh the display. The integrated RAM and shift register eliminate significant amounts of external hardware, thus simplifying system design and reducing cost.

The multiport architecture with the fast on-chip shift register allows the TMS4161 to be configured to support dot rates from 5 MHz to well beyond 150 MHz. It can support interlaced or noninterlaced displays as well as a variety of screen configurations.

A wide transfer path within the TMS4161 multiport video RAM allows 256 bits of data to be transferred from the DRAM array to the shift register (or vice versa) in a single memory cycle. Internally the shift register is then disconnected from the memory array. The data can then be shifted out of the TMS4161 video RAM via the serial port at frequencies up to 25 MHz while normal DRAM accesses take place.

The on-chip shift register is equipped with separate serial input and serial output ports, allowing simultaneous shift in and shift out of data. The shift register can also be used to write a fixed pattern of data to the memory array in 256 cycles.

The TMS4161 is initially offered in a 20-pin dual-in-line package and is guaranteed for operation from 0° to 70° C. The maximum access time from RAS is 150 nanoseconds for the TMS4161-15 and 200 nanoseconds for the TMS4161-20.

The TMS4161 multiport video RAM is available from TI and its authorized distributors. Pricing in 100-piece quantities is $9.90 for the 150-ns video RAM and $9.00 for the 200-ns version.

Please address all inquiries to Texas Instruments Semiconductor Group, Literature Response Center (SC-449), PO Box 809066, Dallas, TX 75380-9066.