

High-Speed VME-Based Graphics Processor

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Abstract

We will present a unique architecture for high speed symbol oriented graphics systems with specifics of its implementation on three graphics engines. This architecture is based upon the principal of copying pre-calculated bit mapped patterns. After the basic pattern set has been generated, any pattern can be scaled, rotated, color translated, and copied onto the screen at rates up to 9 million pixels per second. Two of the engines are now commercial VME bus products. The higher performance system will be demonstrated running a printed circuit design program. In practice the graphics engine is driven by two 68020 CPU's running Forth software. These share some code in common memory and communicate via bus memory and mail box hardware.