

IBM PS/2® MODEL 30-COMPATIBLE SYSTEM CONTROLLER

FEATURES

- Controls 8086 CPU speed at 8 MHz or 10 MHz
- Generates programmable fast and normal timing for memory and I/O
- Supports 256k- or 1M-bit DRAMS
- Supports up to 8M bytes of additional memory
- Arbitrates the system bus among the CPU, DMA, math coprocessor, and DRAM memory refresh cycle
- Provides four channels of DMA as well as burst mode

DESCRIPTION

The CMOS VL82C031/OTI-031 is the System Controller device in the three-chip VLSI/OTI PS/2 Model 30-compatible chip set. the other two devices are

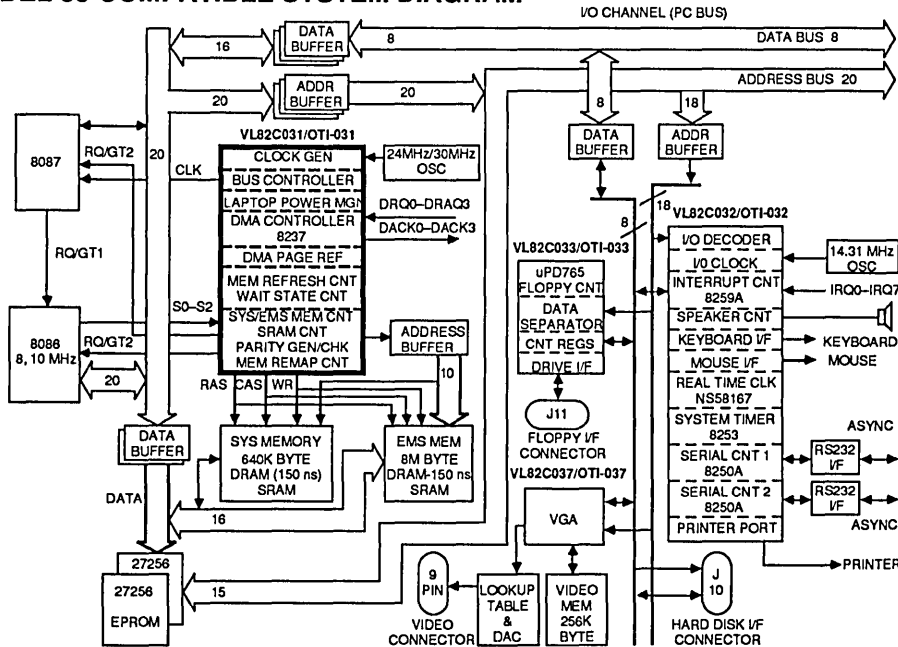
the VL82C032/OTI-032 I/O Controller and the VL82C033/OTI-033 Floppy Disk Controller and Data Separator.

The chip set integrates logic and functions on PS/2 Model 30-compatible systems to the point of reducing the printed circuit board device count by half, when memories are excluded. Further, while offering complete compatibility with the PS/2 Model 30-compatible system, the VLSI/OTI chip set improves system performance by allowing 10 MHz operation with no "wait states" (using 150 ns DRAMS), supports an additional 8M-bytes of memory using EMS (Expanded Memory Specification) 4.0, and controls system speed as necessary for optimum performance.

A fourth device, the VL82C037/OTI-037 VGA Video Graphics Controller is also used in the PS/2 Model 30-compatible system and provides high resolution graphics of 800 x 600 elements with 256 colors. Graphic capabilities of this resolution are usually found only on more expensive systems.

The VL82C031/OTI-031 provides the PS/2 Model-30 compatible system with the dual speed control, 8 MHz or 10 MHz, necessary to operate the system at peak performance. The device also controls memory, I/O, parity, address paths, data paths as well as handling four channels of direct memory access. The VL82C031/OTI-031 is available from both VLSI Technology Inc. and Oak Technology, Inc. in an industry-standard plastic 100 pin flat pack.

PS/2 MODEL 30-COMPATIBLE SYSTEM DIAGRAM



ORDER INFORMATION

Part Number	Package
VL82C031-FC	Plastic Flat Pack

PLEASE CONSULT DATA SHEET FOR DETAILED INFORMATION

Notes: Operating temperature range is 0°C to +70°C. IBM PS/2® is a registered trademark of IBM Corp.