UM8237A/8237A-4/8237A-5

Programmable DMA Controller (DMAC)

ADVANCED PRODUCT DESCRIPTION

Features

- Enable/Disable control of individual DMA requests
- Four independent DMA channels
- Independent autoinitialization of all channels
- Memory-to-memory transfers
- Memory block initialization
- Single 5V power supply
- High performance: transfers up to 1.6M bytes/second with 5MHz 8237A-5
- Directly expandable to any number of channels
- End of process input for terminating transfers
- Software DMA requests
- Independent Polarity control for DREQ and DACK signals
- Available in EXPRESS
  – Standard Temperature Range

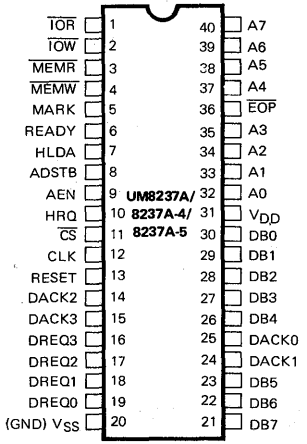
General Description

The UM8237A Direct Memory Access Controller (DMAC) is a peripheral interface circuit for microprocessor systems. It is designed to improve system performance by allowing external devices to directly transfer information from the system memory. Memory-to-memory transfer capability is also provided. The UM8237A offers a wide variety of programmable control features to enhance data throughput and system optimization and to allow dynamic reconfiguration under program control.

UM8237A is fabricated in Si-Gate NMCS process with each channel has a full 64K address and word count capability.

The 8237A-4 and 8237A-5 are 4 MHz and 5 MHz selected versions of the standard 3 MHz 8237A respectively.

Pin Configuration



Block Diagram