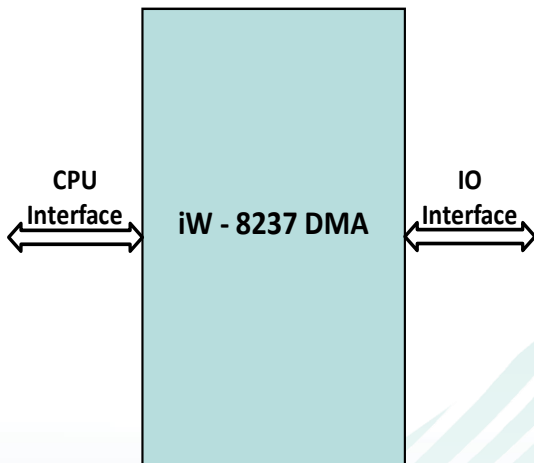


## iW- 8237 DMA Controller IP



iW-DMA Controller is a peripheral core for microprocessor systems. It controls data transfer between the main memory and the external systems with limited CPU intervention.

### Applications

Used as Direct Memory Access Unit for 8080/85 and 8086/88/286 microprocessors

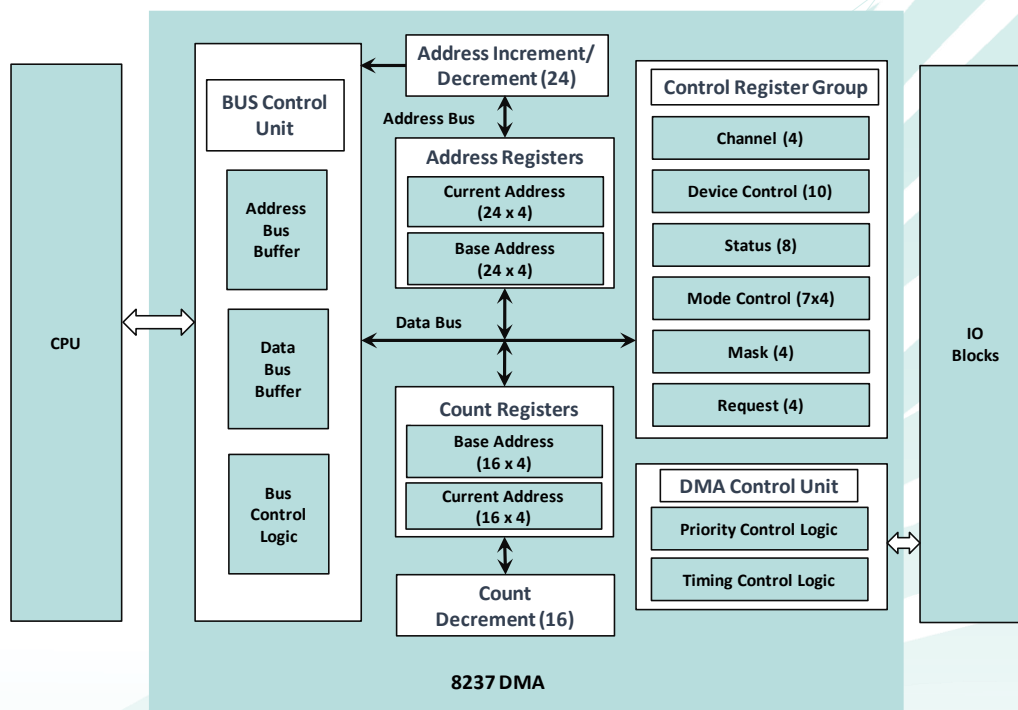
### Highlights

- Compatible with 8237 and uPD71071
- The controller can improve the system performance by allowing external devices to transfer data directly to or from system memory
- Multi-mode programmability allows the user to select from three different transfer modes

### Features

- 24-bit length address register
- 16-bit length count register
- 4 independent DMA channels
- 4 clock / 1 bus cycle
- Byte transfer / word transfer selectable
- Three transfer modes
  - o Single transfer mode
  - o Demand transfer mode
  - o Block transfer mode
- Two bus modes
  - o Bus release mode
  - o Bus hold mode
- DMA request maskable on an individual channel basis
- Software DMA request in uPD71037 mode
- Auto initialization function
- Transfer address incrementing/decrementing
- Two kinds of channel priority order
  - o Fixed priority
  - o Rotating priority
- TC\_N output at the end of transfer
- Forced service termination by END\_N input
- Cascading capability
- I/O – memory and memory – I/O transfer capability

## iW 8237 DMA IP block diagram



### Deliverables

- RTL source code or Netlist
- IP example design
- IP datasheet
- Integration Manual

### Licensing Options

- Non-Transferable: Single Project/Product Netlist License – Single Site or Multi Site
- Non-Transferable: Multi Project /Product Netlist License – Single Site or Multi Site
- Non-Transferable: Single Project/Product RTL Source Code License – Single Site or Multi Site
- Non-Transferable: Multi Project/Product RTL Source Code License – Single Site or Multi Site

### Technical Support

iWave provides comprehensive support during your system integration & validation.

- The Client may open a new support incident by emailing to a technical support engineer
- iWave's response time shall be within 24 hours of the initial call, with the details of the action plan to resolve
- Support assistance shall be delivered by telephone, email and/or remote assistance via a web meeting
- iWave shall provide remote debugging support irrespective of the time zone/ region

iWave Systems, a leading FPGA design house enhances your design productivity by providing an extensive suite of proven, optimized and easy-to-use FPGA IP Cores along with reference designs to complement and quicken your applications development. Our extensive suite of IP Cores covers all key markets and applications. Along with the rich set of FPGA IP cores, iWave offers custom FPGA designs tailored to meet the client specifications which includes RTL Design, Integration of iWave's or 3rd Party IP Cores on our FPGA SOMs with Carrier Card/ Custom Hardware/ Off-the-Shelf Evaluation Kits to provide end-to-end solutions targeting Low-Power, High-Performance and Optimized Designs

#### iW- 8237 DMA Controller FPGA IP

The IP can be ordered online from the iWave Website <http://www.iwavesystems.com/product/8237-dma-controller/> / Or from our Local Partners in your region <http://www.iwavesystems.com/about-us/business-partner.html>

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