Integrated Device Technology, Inc.

# 16-BIT CMOS MICROPROCESSOR SLICE

**ADVANCE INFORMATION**
**IDT49C403**
**IDT49C403A**

MICROSLICE™ PRODUCT

## FEATURES:

- Monolithic 16-bit CMOS $\mu$P slice
- Replaces four 2903As/29203s and a 2902A
- Fast
  —20% faster than four 2903As/29203s and a 2902A
- Low-power CMOS
  —Commercial — 150mA (max.)
  —Military — 200mA (max.)
- Performs binary and BCD arithmetic
- Expandable two-address architecture with independent, simultaneous access to internal 64 x 16 register file
- Word/BYTE control
- Expanded 4 word x 16-bit Q Register
- Performs BYTE swap operation
- Fully cascadable without the need for additional carry-lookahead
- Incorporates three 16-bit bidirectional buses
- High output drive
  —Commercial — 24mA (max.)
  —Military — 20mA (max.)
- Available in 108-pin grid array and 144-pin leaded chip carrier
- Military product 100% screened to MIL-STD-883, Class B

## DESCRIPTION:

The IDT49C403/A are high-speed, fully cascadable 16-bit CEMOS™ microprocessor slices. They combine the standard functions of four 2903s/29203s and one 2902, with additional control features aimed at enhancing the performance of all bit-slice microprocessor designs.

Included in these extremely low-power, yet fast, IDT49C403 devices are: 3 bidirectional data buses, 64 word x 16-bit dual-port expandable RAM, 4 word x 16-bit Q Register file, parity generation, sign extension, multiplication/division and normalization logic. Additionally, the IDT49C403s offer the special feature of enhanced byte support through both Word/BYTE control and BYTE swap control.

The IDT49C403s easily support fast 100ns microcycles and will enhance the speed of all existing quad 2903A/29203 systems by 20%. Being specified at an extremely low 150mA maximum (commercial), the IDT devices offer an immediate system power savings and improved reliability.

The devices are packaged in either 108-pin PGAs or 144-pin leaded chip carriers. Military product is 100% screened to MIL-STD-883, Class B, making it ideally suited to military temperature applications demanding the highest level of performance and reliability.







Printed in U.S.A.

## FUNCTIONAL BLOCK DIAGRAM