

## ID MOS Digital I.P. SHORTFORM

**IM176:** Rapido4X Microcore

### PRODUCT DESCRIPTION

---

**RAPIDO4X** is a high performance 4-bit microprocessor core. It is designed specifically to be embedded in both ASIC and FPGA.

### FEATURES

---

- Harvard Architecture
- 4-bit Internal Data Bus Structure
- One Accumulator (A)
- One Index Register (Rapido4B only) for Faster Data Accesses
- A Boolean Processor Implemented (Optional - Rapido4B and Rapido4NIB )
- 51 Instructions
- High Code Density
- Program Memory up to 512 Words
- RAM Memory up to 256 Bytes
- 3-level Hardware Stack
- One Maskable Interrupt
- Output for Halt-and-catch-fire Instruction
- Synchronous and Static VHDL Design
- No Internal Three-state Busses
- ASIC/FPGA Synthesis Library Independent
- Prototype System on SILWAY MSOS Emulator
- Software: assembler, debugger, disassembler

### TYPICAL APPLICATIONS

---

- Automotive
- Consumer Electronics
- Industrial Processes Automation
- Home Automation

### BLOCK DESCRIPTION

---

