

i960[®] KA/KB 32-Bit Embedded Microprocessors

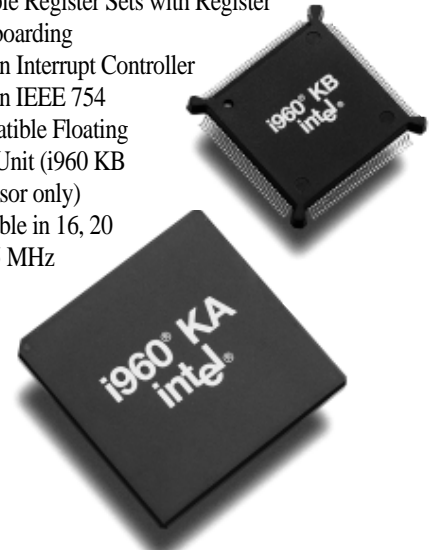
Product Overview

The i960[®] KA/KB embedded RISC processors were introduced in 1988 as the first members of the Intel i960 32-bit microprocessor family. They are based on the family's high-performance, common core architecture and are capable of execution rates in excess of 9.4 MIPS. The i960 KA/KB processors are well-suited for a wide range of embedded applications, including page printers, image processing, industrial control, robotics and telecommunications products.

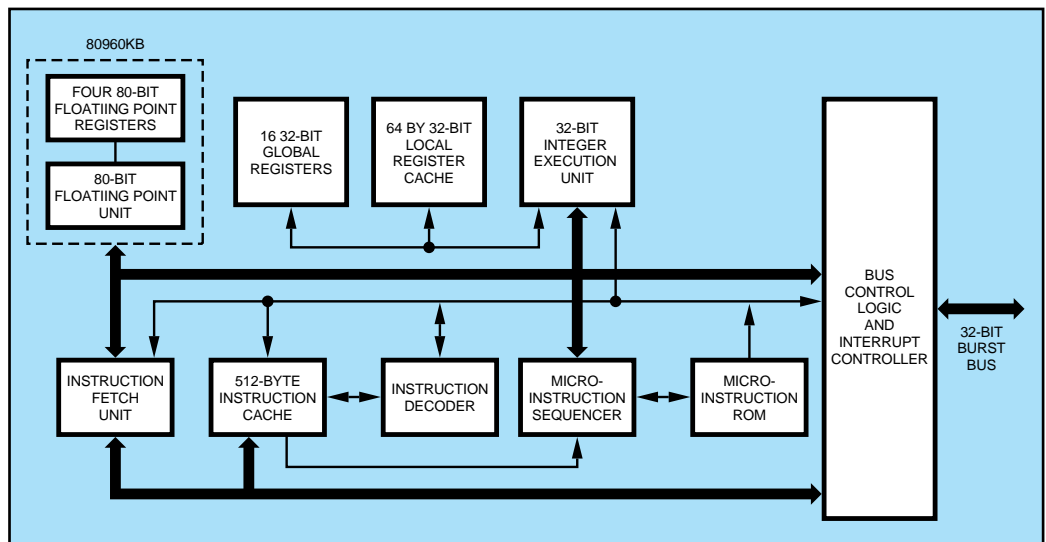
The i960 KB processor is pin-compatible with the i960 KA processor and integrates an IEEE 754 compatible floating point unit. The i960 KA/KB processors are object code-compatible with all of the i960 microprocessor family members, including the low-cost i960 SA/SB processors; the superscalar i960 CA/CF processors; and the military i960 MC processor, enabling a strong growth path in both performance enhancement and cost reduction.

Product Highlights:

- High-Performance 32-bit Embedded Architecture
- 512-byte Direct Mapped Instruction Cache
- 4 Gigabyte, Linear Address Space
- Multiple Register Sets with Register Scoreboarding
- Built-in Interrupt Controller
- Built-in IEEE 754 Compatible Floating Point Unit (i960 KB processor only)
- Available in 16, 20 and 25 MHz



The i960[®] KA and i960 KB processors are available in 132-lead Pin Grid Array (PGA) and 132-lead Plastic Quad Flat Pack (PQFP) packages.



i960[®] KA/KB Microprocessor Block Diagram

Features

- High-Performance 32-bit RISC Processor
 - 25 MIPS burst
 - 9.4 MIPS sustained
- Integrated Interrupt Controller
 - 4 direct interrupt inputs
 - 256 interrupt vectors
 - 32 priority levels
 - 8259A support
- 32-bit Address Space
- Integrated FPU (i960 KB processor only)
 - Full IEEE 754 Compatible
- Integrated 512-byte Instruction Cache
 - Direct mapped
 - Parallel load/decode for uncached instructions
- Large Register Set
 - 16 32-bit Local registers
 - 16 32-bit Global registers
- Integrated 256-byte Register Cache
 - Four local on-chip register sets
 - Register scoreboarding
- Object-code Compatible with other i960 Products such as the i960 SA/SB and the i960 CA/CF processors.
- System Level Testing
 - ONCE Mode
 - Integrated debug and tracing
- Integrated Self-Test
- Full Solutions960™ Program Support Including:
 - Evaluation Board Debug Tools
 - C Compiler Operating Systems
 - Assemblers Support Components
- Complete Technical Services

Benefits

- Brings high performance to your design.
- Reduces board level costs by reducing chip count.
- Offers flexibility in memory mapping peripherals and memory components.
- Provides high speed arithmetic without additional parts.
- Fast execution for critical routines.
- Fewer memory accesses means faster execution.
- Fast context switching for critical routines.
- Offers a strong growth path and cost reduction path for the future.
- Makes testing and debug of surface mount systems possible using ICE™ In-Circuit Emulator.
- Aids in assuring system reliability.
- Provides a complete development environment from hardware debug to software development and debug.
- Helps you get to market sooner.

Support Information

Product and Sales Information	Intel product information, sales office and distributor phone numbers.	800-628-8686
Literature Department	To order Intel product literature.	800-548-4725
Development Tools Hotline	Technical applications support for Intel development tools.	800-843-4481
FaxBack Service	Automated response system that faxes Intel documents to your fax machine at no cost. For a listing of all i960 micro-processor documents, order FaxBack service document #2068.	800-628-2283
Applications Bulletin Board Service	24-hour access via modem to publicly available technical information. For a complete listing of all files available on BBS, call the FaxBack service and request catalog #6 (BBS Master File Listing).	916-356-3600

Phone numbers listed above are for U.S. and Canada only.

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January 1994

Order Number 272233-003

Printed in U.S.A./i960-282.0/0194/10K/HP DP

 Printed on Recycled Paper

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