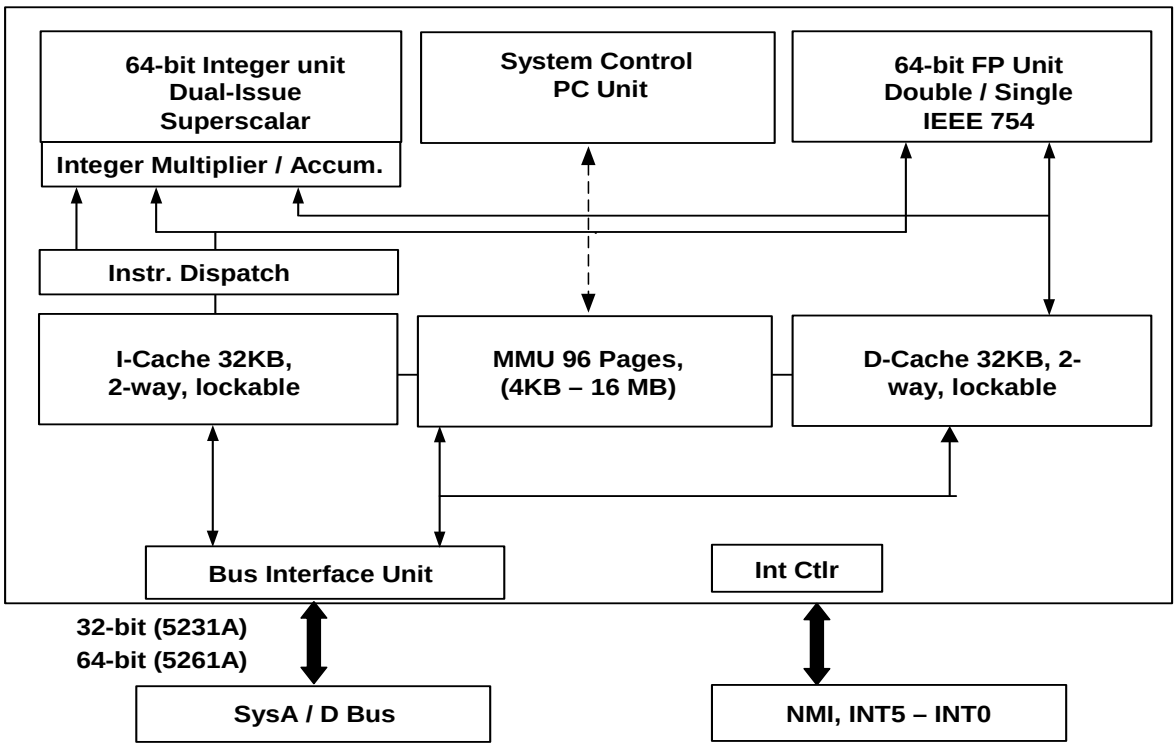
64-Bit MIPS RISC Microprocessor with 32/64-Bit System Bus

FEATURES

- Dual-Issue 64-bit Superscalar architecture
  - High-performance 64-bit integer unit
  - High-throughput fully pipelined 64-bit floating point unit (IEEE754)
- High performance SysAD interface
  - 32-bit or 64-bit multiplexed system address/data bus for optimum price/performance
  - Available with 32-bit or 64-bit external bus interface
  - Supports fractional clock ratios
  - IEEE 1149.1 JTAG boundary scan
- Integrated primary caches
  - 32KB instruction - 2-way set associative
  - 32KB data - 2-way set associative
  - Virtually indexed, physically tagged
  - Write-back and write-through on per-page basis
  - Pipeline restart on first double word for data cache misses
- 64-bit MIPS instruction set architecture
  - Floating point multiply-add instruction increases performance in signal processing and graphics applications
  - Conditional moves to reduce branch frequency
  - Index address modes (register + register)
- Integrated memory management
  - Fully associative joint TLB (shared by I and D transistors)
  - 48 dual entries map 96 pages
  - Variable page size (4KB to 16MB)
- Embedded application enhancements
  - Specialized DSP integer Multiply-Accumulate instructions (MAD/MADU) and 3 operand Multiply instruction (MUL)
  - Instruction and Data cache locking by set
  - Optional dedicated exception vector for interrupts

Device	CPU Frequency (MHz)	I/D Cache	External Cache Support	External Bus Width	External Bus Frequency (MHz)	VccInt (V)	VccIO (V)	Package
RM5231A	250, 300, 350	32K/32K	No	32-bit	100	1.65/1.8	2.5/3.3	128 QFP
RM5261A	250, 300, 350	32K/32K	No	64-bit	125	1.65/1.8	2.5/3.3	208 QFP

BLOCK DIAGRAM



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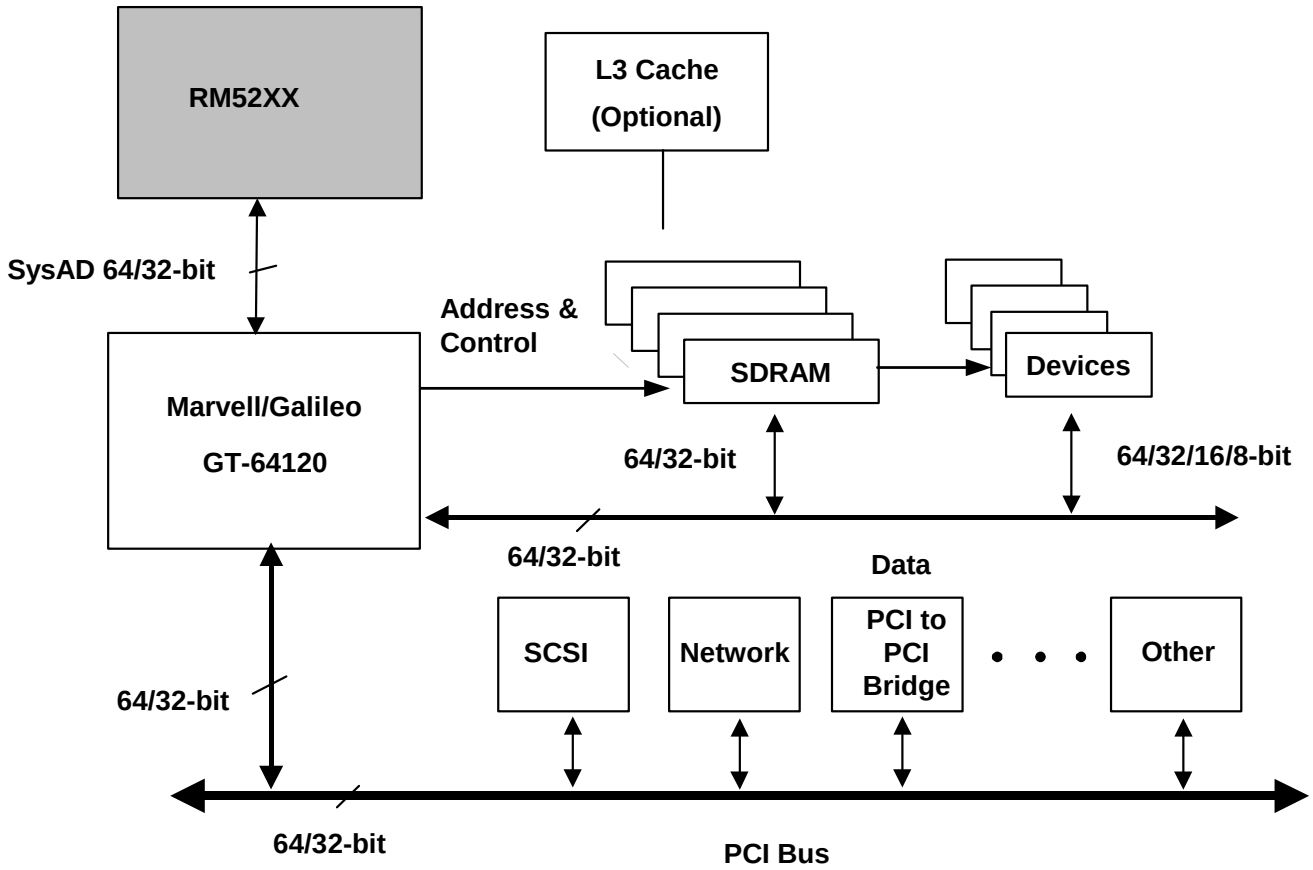
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DEVELOPMENT TOOLS

- Operating Systems:
  - Linux by MontaVista and Red Hat
  - VxWorks by Wind River Systems
  - Nucleus by Accelerated Technology
  - Neutrino by QNX Software Systems
- Compiler Suites
  - Algorithmics
  - Green Hills Software
  - Red Hat
- Evaluation Boards and Companion Chips
  - Algorithmics:
    - P-6032 (RM5231A): 32-bit, 33MHz PCI
    - P-4052 (RM5231A): 32-bit, 33MHz PCI
  - Galileo Technology
    - EV-64120A: (RM5261A): 32/64-bit, 33/66MHz PCI
    - EV-64115 (RM5231A): 32-bit, 33/66MHz PCI
  - V3 Semiconductor
    - V320USC (RM5231A): 32-bit, 50MHz PC
    - V340HPC (RM5261A): 64-bit, 66MHz PCI
  - Logic Analyzers and Emulation
    - HP
    - Tektronix
    - Corelis
    - Crescent Heart Software

TYPICAL APPLICATION



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