

Products > MIPS-based Processors

The ABC7000 and ABC5200 families of processors have become the world leaders in 64-bit RISC shipments. These products have captured a majority of the world's supply of routers on the control plane, networked printers, and networked set-top-boxes. Our commitment is to offer our customers higher performance MIPS-based processors with seamless pin- and software-compatible upgrade capabilities.

ABC5200 Family - The ABC5200A devices extend the Superscalar architecture of the ABC5200 family, enabling the simultaneous execution of one integer and one floating-point instruction in a single microprocessor clock cycle. Like their predecessors, the devices are true 64-bit microprocessors with 64-bit data paths, 64-bit ALUs, 32-bit external access on the ABC5231A and 64-bit external access on the ABC5261A. The chips include independent 32KB instruction and 32KB data caches and provide external peripheral and memory access at bus speeds exceeding 100MHz. Most notably, these capabilities and features have been maintained while the microprocessor clock speed has been increased from 250MHz to 400MHz and the power consumption has been reduced by 70 percent. ABC, Inc. is the first MIPS licensee to fabricate its microprocessor, in mass production, using Taiwan Semiconductor Manufacturing Company's (TSMC) advanced 0.18m "LV" process, a process purposefully developed to optimize and extend the extremes of both performance and power.

ABC7000 Family - The newly expanded ABC7000 family features the industry leading ABC7000A, ABC7000B and ABC7065A MIPS CPUs. ABC is the only remaining MIPS RISC vendor to manufacture L2 cache enabled microprocessors for LAN and WAN internetworking applications. All ABC7000 family CPUs implement true superscalar 64-bit architectures and enable the simultaneous execution of two integer instructions or one integer with one floating-point instruction. The processors are equipped with 64-bit data paths, dual 64-bit ALUs, 64-bit FPUs and 64-bit system interfaces via the multiplexed address and data system bus (SysAD). CPU performance ranges from 250 MHz to 500 MHz, with SysAD capability up to 125 MHz. Power dissipation for this caliber of processor remains an industry benchmark, typically less than 3.5 W at 400 MHz. All processors are equipped with 256 KB of integrated L2 cache, as well as 16 KB each for independent L1 instruction and data caches. The ABC7000A and ABC7000B additionally contain an L3 cache controller for access of up to 8 MB of external cache.

ABC9000 Family - The ABC9000x2 Integrated Multiprocessor is ABC's next generation high performance MIPS-based processor, and continues ABC's leadership in the rapidly evolving networking and communications market. The ABC9000x2 is a scalable multiprocessing architecture that solves the industry-wide problem of slow data transfers between processors in cache coherent systems and offers greater throughput efficiencies over single CPU products. Anchored by dual CPU cores running at 1 GHz, the ABC9000x2 achieves maximum performance while drawing only five watts of power. The gigahertz CPU speed and low power is achieved using TSMC's 0.13 micron high performance process. The twin CPUs connect to high-speed memory and I/O interfaces through a multiport, shared memory fabric. High speed I/O connectivity, which includes a very high performance 500 MHz HyperTransportTTM bus interface, positions the ABC9000x2 to target key applications such as core routers, edge routers, remote access products and enterprise servers.