

68HC11 Grows Up to 16 Bits 1
 Motorola's new 68HC12 instruction set extends the popular 8-bit HC11 design. The new chips maintain compatibility at the assembly code level but are not binary compatible. With the similar bus, peripherals, and programming model, HC11 programmers will feel at home with the new architecture. The first two HC12 devices offer lower performance than Motorola's 68HC16 products, but in price/performance they are competitive with other embedded chips.

Editorial: Bringing High Availability to the Masses 3
 Microsoft's forthcoming WolfPack software allows highly available systems to be built from off-the-shelf components. This technology will move x86 processors into the fault-tolerant market.

Most Significant Labs 4
 Intel, TI enter 3D graphics market; Amdahl picks Pentium Pro; PowerPC 823 focuses on digital cameras; Hyundai adds SPARC to DVD controller; S3 targets business PCs with Trio64V2; PicoPower improves docking chip set; Motorola DSPs reach low-voltage; IBM reveals high-speed SiGe technology.

Mitsubishi Mixes Microprocessor, Memory 10
 Using a standard DRAM process, Mitsubishi has inserted a 32-bit RISC processor and 2 Kbytes of cache into the middle of a 16-Mbit DRAM. The result is the M32R/D, which provides power and footprint advantages for applications that can keep most or all of their code within the 2 Mbytes of on-chip memory.

PowerPC 603e, 604e Hit 200 MHz 13
 Using 0.35-micron technology, Motorola and IBM are now sampling PowerPC 603e and 604e processors at speeds of 200 MHz; these chips should appear in systems in the next few months. The 603e matches up well against the forthcoming Pentium-200, while the 604e has performance similar to that of Pentium Pro.

SiS Rolls Out Pentium, PPro Chip Sets 14
 The number-two system-logic vendor, Silicon Integrated Systems, unveiled three new chip sets that set new standards in integration. Genesis provides system logic and graphics for low-cost Pentium systems, while Trinity and Archer are single-chip system-logic solutions for high-performance Pentium and P6 systems, respectively.

Java Performance Advancing Rapidly 17
 Benchmarks on initial versions of just-in-time (JIT) compilers for Java show their performance to be about half that of optimized C code. Since this performance is likely to improve as JIT technology matures, this gap will leave little room for specialized Java chips.

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