

At a Glance

Thumb Squeezes ARM Code Size	1
Advanced RISC Machines has invented a new 16-bit instruction set, called Thumb, that can be translated with minimal hardware into 32-bit ARM code. Thumb improves code density and reduces system cost, particularly if 16- or 8-bit devices are used.	
Editorial: Embedded Products Drive MIPS Success	3
MIPS processors are primed for success in various embedded video applications, but its desktop processors are not faring as well.	
Most Significant Bits	4
Cyrix lays out M1 production plan; Intel continues P7 program(s); HP tapes out PA-8000; SPEC95 benchmarks nearly complete; VLSI to sell NexGen chip set; TI gains 486DX2 design.	
Pentium Is First CPU to Reach 0.35 Micron	10
Intel has jumped to an advanced 0.35-micron process about a year ahead of its main rivals, fueling higher performance, lower costs, and increased production capacity.	
NEC Plunges into PDA Processor Market	12
The R4100 delivers respectable performance while consuming just 120 mW, making the new MIPS chip perfect for portable devices.	
ISSCC '95 Foreshadows Gigachip Era	14
The recent International Solid State Circuits Conference featured 1-Gbit DRAMs, processors that exceed one billion operations per second, and a number of other novel devices.	
New Algorithm Improves Branch Prediction	17
As processors use deeper pipelines and wider issue paths, branch-prediction accuracy becomes critical. Intel's P6 processor is the first to use a two-level prediction algorithm, invented by Yeh and Patt, that can deliver accuracy well in excess of 90%.	
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