
NexGenTM

Agenda

- Company
- Market Opportunity
- NexGen Design Approach and Products
- Product Demonstration
- Strategic Partners
- Future Directions

Company Profile

Corporate Objective:

Achieve sustainable share of the high-performance x86 microprocessor market

by

Utilizing our industry leading processor technologies to deliver 586-class performance to mainstream PC users

Company Profile

- Founded in 1986
- Superscalar high-end x86 project started 1988
- \$90M invested to date
- Principal investors include:
 - Kleiner-Perkins
 - Paine-Webber
 - ASCII
 - Compaq
 - Olivetti
 - Harvard University

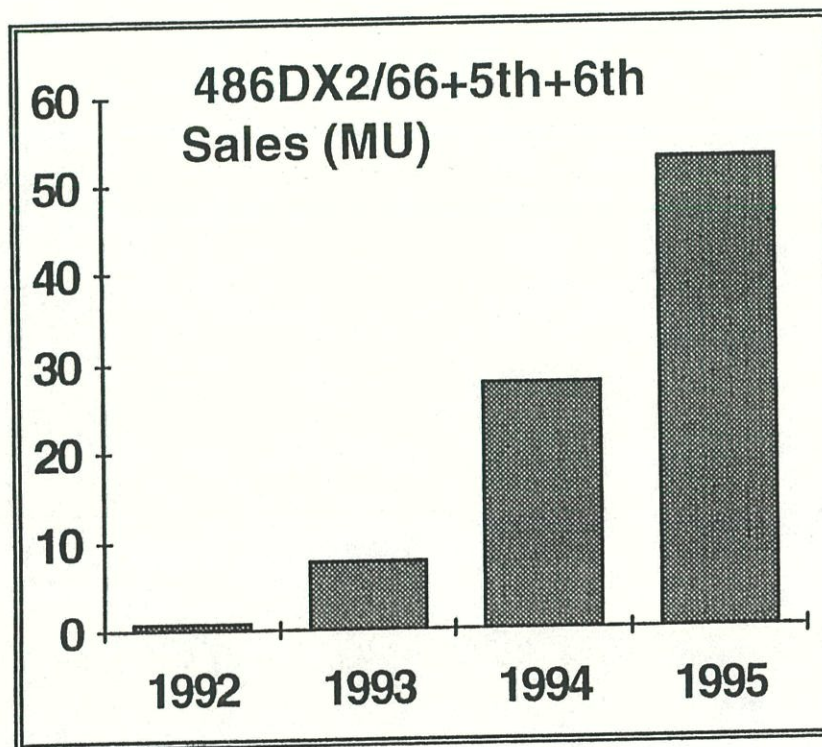
Affordability Driving High Performance Market

- Intense Competition in PC Marketplace
- Trend toward Low-cost, "High Performance CPU" Based systems

	<u>1986</u>	<u>1992</u>	<u>1993</u>	<u>Feb 1994</u>
Product	386	486DX2/66	5th Generation	5th Generation
Vendors	1	29	10	Many
Price	\$6000	\$2200	\$3595-\$18000	\$2495-\$5500

Increasing Demand for High Performance PC's

Affordability Driving High Performance Market



SOURCE: Robertson Stephens, 2/94

Enormous Market Potential

Introducing...

NexGen's Nx586 Family of Microprocessors

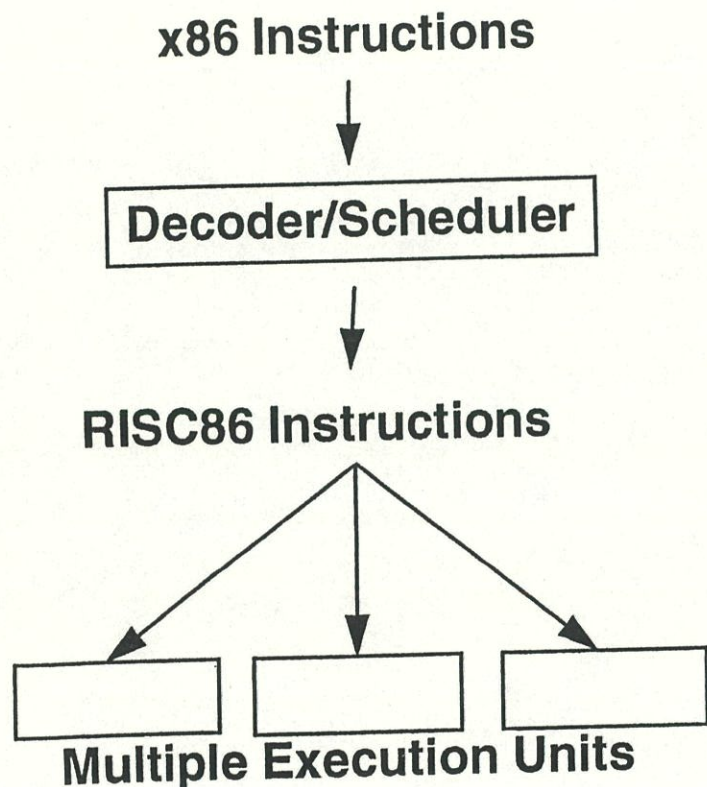
- Highest Level of x86 Performance
 - First product in a new from the ground-up line to incorporate NexGen's patented RISC86™ microarchitecture
 - All major performance elements of 586-class, 5th generation processors
 - Introduced at 60 & 66MHz clock rates
- Fully x86 binary compatible
- Highly affordable, both on a CPU and system level
 - Opens up 586-class performance to mainstream users

NexGen's High Performance Design

	NexGen Nx586	Other 586-class Processors
5th Generation Performance Elements		
Superscalar Execution	■	■
L1 Code and Data Caches on-chip	■	■
Branch Prediction	■	■
64-bit buses	■	■
High Performance Floating Point	■	■
NexGen Advantages		
RISC86™ Microarchitecture	■	
On-chip L2 Write-back Cache Controller	■	
Optional FPU	■	

Most advanced technology in x86 processors

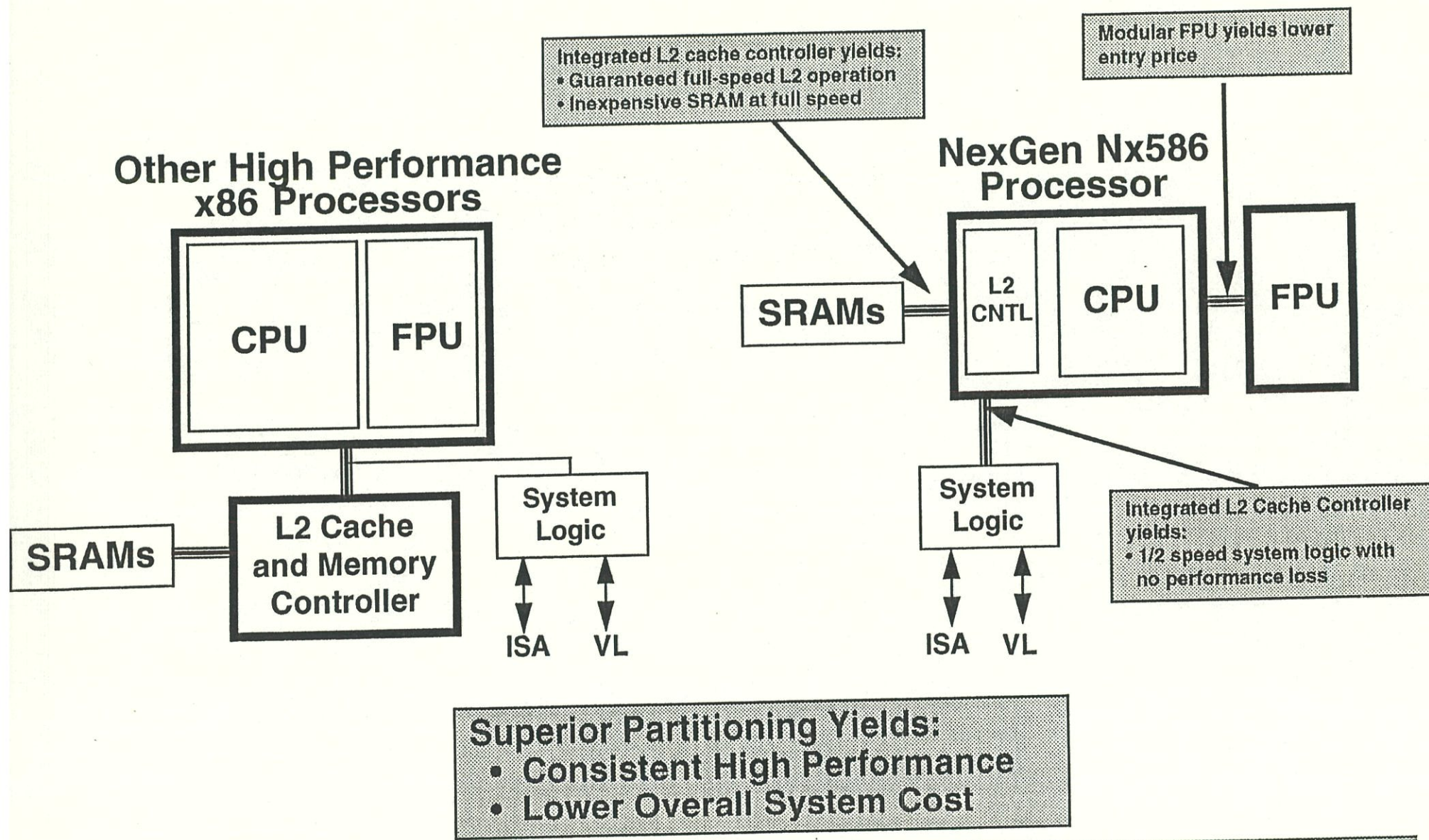
Internal RISC86™ Microarchitecture



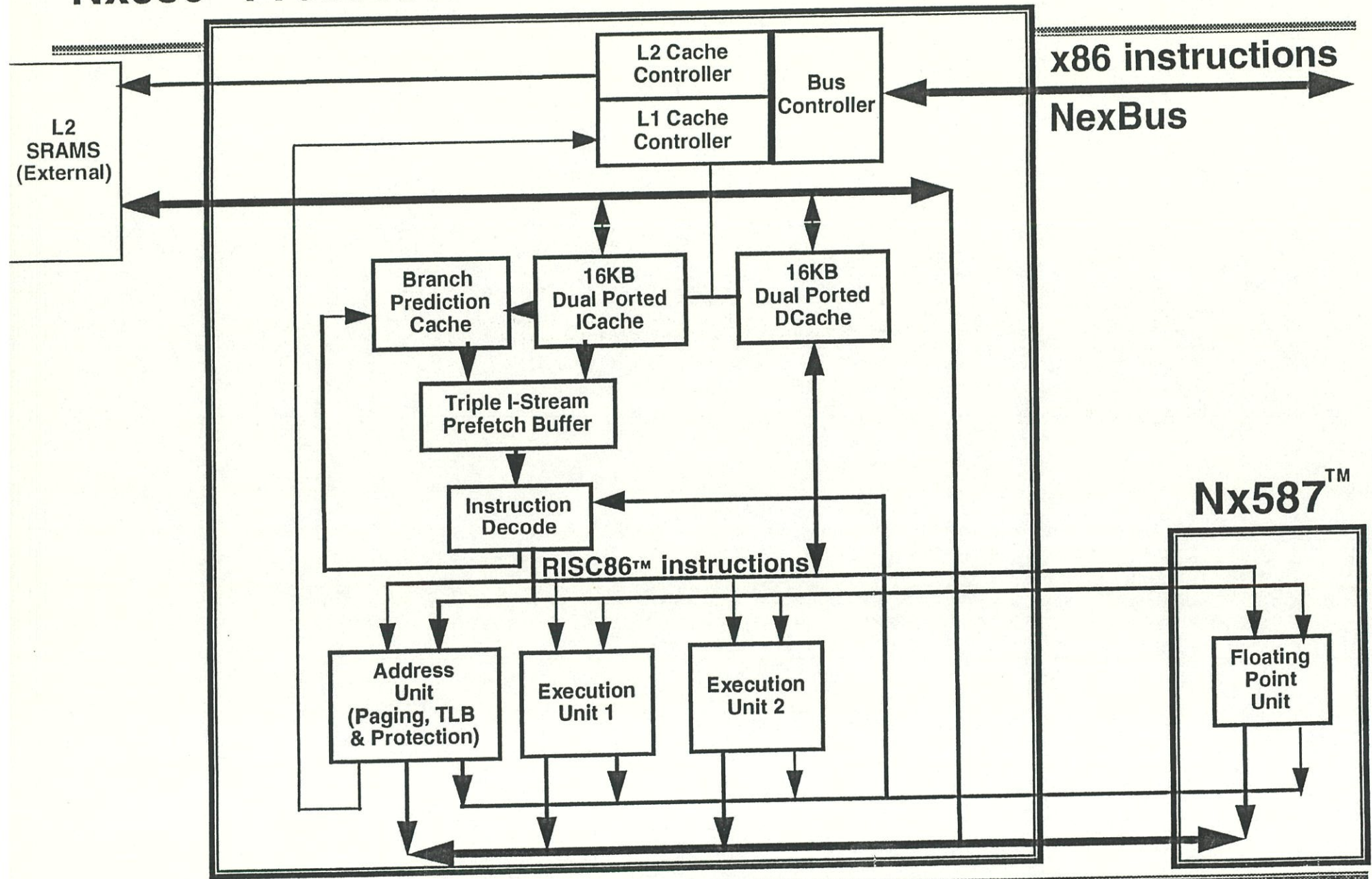
- 1) Direct hardware support for x86 architecture
==>> Designed from the ground-up to be an x86 performance processor
- 2) Includes register renaming and speculative execution to reduce interlocks between execution units
==>> Higher x86 Performance
- 3) Reduced hardware to implement execution units
==>> Less chip space to add units
==>> Easier to add additional units
- 4) Execution units can be specialized
==>> Add those units which relieve bottlenecks

Easily extensible for future products

Superior L2 Cache & FPU Partitioning



Nx586™ Processor



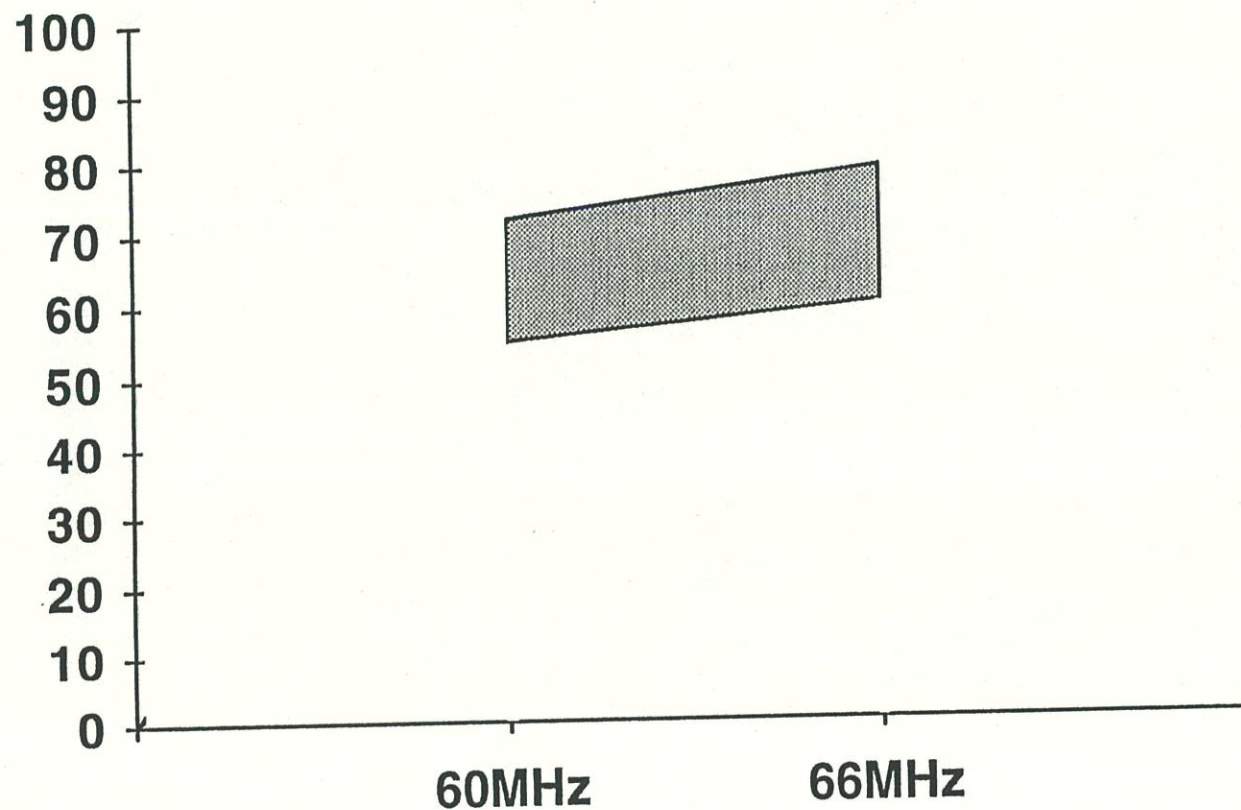
Nx587™

Nx586 Processor Benchmark Performance

<u>TEST</u>	<u>Nx586-60</u>	<u>Nx586-66</u>
Landmark 2.0	375	417
PowerMeter 1.81	25.6	28.4
Norton SI 7.0	178	198
BYTE 2.4 Desktop	3.55	3.91
BYTE 2.4 Notebook	8.32	9.15

Nx586 Processor System Performance

Winstone '94 Performance Range



Nx586 Processor Specifications

Clock Rates:	60, 66 Mhz
L1 Cache:	On-chip 16K byte instruction On-chip 16K byte data
L2 Cache:	On-chip write-back controller for 256K or 1M byte L2 cache
Manufacturing Technology:	0.5 micron CMOS
Transistor Count:	
Nx586	3.5 million
Nx587	0.7 million

Compatibility

- 5 years of internal design and simulation
 - Detailed understanding of x86 operations
 - Pre-silicon simulation tests to verify compatible operation
- Major internal application testing
 - Scripts of all major applications & operating systems
 - Automated Testing Equipment
 - External scripts and benchmark
- XXCAL Highest Seal of Compatibility - Platinum (in process)

Fully x86 binary-code compatible



Complete Solution

- System Logic Developed by NexGen
 - NxVL: High performance system logic chip for VL & ISA standard buses
 - 30 to 40 MHz VL Speeds
 - Decoupled VL and CPU buses
 - Multiple VL bus masters and bursting supported
 - NxPCI: High performance system logic chip for PCI & ISA standard buses
 - 33 MHz PCI Speed
 - Decoupled PCI and CPU buses
 - Multiple PCI bus masters and bursting supported
- Reference Motherboard Designs Available
 - NexGen design for maximum performance, lowest cost, highest quality
 - Baby AT form factor enables mainstream PCs
 - Allows reduced R&D expenditure for OEMs
 - Allows fast manufacturing ramp

DEMONSTRATION

Pricing and Delivery

	<u>Price (1KU)</u>	<u>Availability</u>
Nx586-60	\$460	Q2
Nx587-60	\$128	Mid-'94
Nx586-66	\$506	Q2
Nx587-66	\$128	Mid '94
NxVL	\$ 86	Now
NxPCI	\$TBD	2nd Half, '94

Basic PC System Cost

Nx586-60, 256KB L2 Cache, 8MB DRAM, 2 VL Slots, 6 ISA Slots

<u>Product</u>	<u>Make and Model</u>	<u>Manufacturer's Price</u>			
Processor	NexGen Nx586-60	460.00			
ChipSet	NexGen NxVL	86.00			
Harddisk	Maxtor 7345AT, 340MB, 15mS	207.00			
Monitor	Generic 14" 1024x768 NI	203.00			
Video	ET4000-W32 w/1MB VLB Vide	98.50			
DRAM	8MB	245.00			
Cache	CMOS 256KB-15nS	32.00			
MotherBoard	Basic	89.00			
Desktop Case	Generic	30.00			
Power Supply	Generic 200W	17.00			
I/O Adapter	Generic and VLB	23.00			
Keyboard	Mitsumi	14.00			
Mouse	Generic Serial	5.00			
3.5" Floppy	Teac	28.00			
Bundled Software	MS Windows 3.1, MSDOS6.2	<u>30.00</u>			
Total		1567.50			
Gross Margin		21%	427.50	17%	327.50
Sales Price		1995.00			1895.00

Board and OEM Partners

Board Manufacturers

- Relationships established with motherboard companies
- 1992 Volume: 5,000,000
- 10 Companies have motherboards built and running; ready for orders
- Set up for quick turnaround production

OEM Manufacturers

- Currently in evaluation at several dozen PC manufacturers
- Worldwide Scope

Future Directions

- NexGen 's RISC86™ Microarchitecture Easily Extensible
- Next Generation Product (Nx686™ microprocessor)
 - In development for more than 2 years
 - Performance goal: 2-4X Nx586

Prepared to compete for the long run

Summary

- Well financed and managed company
- Leading edge technology today and tomorrow
- NexGen Nx586 Family - 5th generation performance for mainstream users
- Strategic and influential partners
- Well positioned for future growth