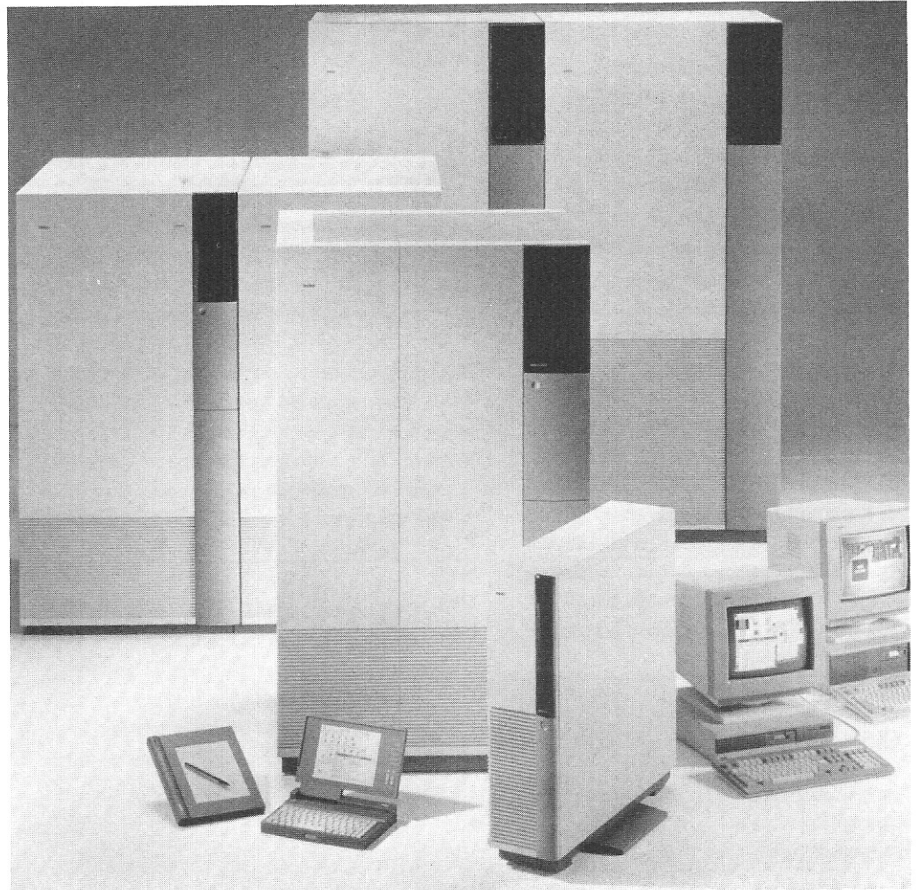


NCR System 3000 Overview

The NCR System 3000 is a seven-level family of general-purpose, scalable, microprocessor-based computers that span a power range from 2.6 MIPS to more than 100,000 MIPS (millions of instructions per second) and are designed to address any computing level or task in business applications. System 3000 is based on Intel™ microprocessors and supports industry-standard operating systems: MS-DOS®, MS-Windows™, PenOS, MS-Windows for Pen Computing™, PenPoint™, OS/2, SCO UNIX®, and UNIX® System V Release 4.0.

SCSI (Small Computer System Interface) is the common device interface supporting magnetic and optical disks, CD-ROMS, tapes, printers, and image drivers. The System 3000 supports an open Micro Channel™ bus for additional add-in controllers.

The System 3000 includes mass storage subsystems based on RAID (Redundant Array of Inexpensive Disks) disk array technology to provide high performance and continuous data availability.



SEVEN LEVELS OF COMPUTING

To provide seven levels of computing, the System 3000 takes advantage of three computing architectures: uniprocessing, tightly-coupled multiprocessing, and loosely-coupled parallel processing. The seven levels of computing are as follows:

Level 1 — System 3100 models include the 3120 Notebook and the 3125 Notepad. The 3120 Notebook model supports DOS, NCR Windows, and OS/2. The 3125 Notepad model supports PenOS, MS-Windows for Pen Computing, and PenPoint.

Level 2 — System 3200 models are entry-level desktop computers, offering a broad performance range, yet packaged in a small-footprint cabinet to save valuable desk space. These models will support DOS, OS/2, SCO UNIX, and UNIX System V Release 4.0.

Level 3 — System 3300 models are powerful desktop systems, offering broad configurability and a wide range of performance, while still maintaining a footprint suitable for office environments. These models support DOS, OS/2, SCO UNIX, and UNIX System V Release 4.0.

SYSTEMS

General Purpose Systems

System 3000 Overview

SPECIFICATIONS

	Model 3120	Model 3125	Model 3320
Processor	i386sx	i386sl	i386sx
Clock Speed	20 MHz	20 MHz	20 MHz
No. of Processors	1	1	1
Optional Coprocessor	i387sx-20	N/A	i387sx-20
MIPS	2.6	3.8	7
I/O Bus	ISA	ISA	Micro Channel, SCSI
Transfer Rate	N/A	N/A	20 MB/sec, 5 MB/sec
Processor Memory Bus	16-Bit	16-Bit	16-Bit
Memory	1 MB, 2 MB, 5MB	2 MB, 4 MB, 8 MB	8 MB (Up to 16 MB) [#]
Memory Type	Parity	Parity	Parity
Interleaving Levels	0	0	0
Cache Memory			
Internal	N/A	16 KB	N/A
External	N/A	N/A	N/A
Cabinet Type	Notebook	Notepad	Desktop
Micro Channel Expansion Slots	N/A	N/A	4
ISA Expansion Slots	0	1	N/A
Power Fail Recovery	N/A	Standard	Optional
UPS	N/A	Internal	External
Implementation	N/A	Ord. Shutdown	Ord. Shutdown
SCSI Adapter(s)	N/A	N/A	1
Mass Storage			
No. of Bays (HH/FF) ¹	1	1	3 HH/0 FH
Internal Fixed Disk	30-60 MB	20 MB	100 MB-300 MB
Internal Flex Disk	3.5 in. 1.44 MB	N/A	3.5 in. 1.44 MB
External Fixed Disk ²	N/A	30 MB/60 MB/120 MB	Up to 5 GB
External Tape	N/A	N/A	150 MB/525 MB QIC/ 2.5 GB (8 mm)
Internal FEPRM	N/A	8 MB	N/A
External Flex Disk	5.25 1.2 MB	3.5 in. 1.44 MB	
Internal Tape	N/A	N/A	120 MB
IC-Card	N/A	2, 4 MB	N/A
Connectivity			
LANs ³	External only	External only	Up to 4
WAN Lines ⁴	Fax/Modem option	Fax/Modem option	Up to 4
TTY Connections			
Direct	External only	External only	Up to 32 ⁷
LAN-based ⁶	External only	External only	
Operating Systems	DOS, OS/2, Windows	PenOS, PenPoint, MS-Windows for Pens	UNIX V.4, SCO UNIX, OS/2, DOS
PHYSICAL SPECIFICATIONS			
	Model 3120	Model 3125	Model 3320
Height	1.7 in. (44 mm)	1.2 in. (30.5 mm)	5.2 in (133 mm)
Width	11.65 in. (296 mm)	11.7 in. (297.2 mm)	15.0 in. (381 mm)
Width with feet			
Depth	8.27 in. (210 mm)	9.8 in. (248.9 mm)	16.6 in. (422 mm)
Weight	5.7 lb (2.54 kg)	3.9 lb (1.78 kg)	23.5 lb (10.7 kg)

System 3000 Overview

Model 3335	Model 3345	Model 3445	Model 3450
i486sx 20 MHz 1 i487sx-20 16	i486 33 MHz 1 Weitek 4167 27	i486 33 MHz/50 MHz* 1/1 to 4* Weitek 4167 27	i486 50 MHz 1 to 4 40-160
Micro Channel, SCSI-II 20 MB/sec, 5 MB/sec 32-Bit	Micro Channel, SCSI-II 20 MB/sec, 5 MB/sec 32-Bit	Micro Channel, SCSI-II 20 MB/sec, 5 MB/sec 32-Bit Dual Bus	Micro Channel-E, SCSI-II 80 MB/sec, 5 MB/sec 32-Bit Dual Bus
Up to 64 MB EDAC/Parity## 0-4	Up to 64 MB EDAC/Parity## 0-4	Up to 128 MB ⁹ EDAC/Parity## 0-4	Up to 256 MB EDAC 0-4
8 KB N/A	8 KB N/A	8 KB N/A	8 KB 128 KB
Desktop 4	Desktop 4	Deskside 7: 6 - 32-Bit 1 - 16-Bit N/A	Deskside 8: 8 - 32-Bit N/A
N/A	N/A	N/A	N/A
Optional External Ord. Shutdown 1	Optional External Ord. Shutdown 1	Optional External Ord. Shutdown 2	Optional Internal Full Recovery 2 Single/Dual
3 HH/0 FH 100 MB-680 MB 3.5 in. 1.44 MB Up to 5 GB 150 MB/525 MB QIC/ 2.5 GB (8 mm) N/A	3 HH/0 FH 100 MB-680 MB 3.5 in. 1.44 MB Up to 5 GB 150 MB/525 MB QIC/ 2.5 GB (8 mm) N/A	6 HH/3 FH or 2 HH/5 FH 213 MB-7.0 GB 3.5 in. 1.44 MB Up to 25 GB 150 MB/525 MB QIC/ 2.5 GB (8 mm) N/A	6 HH/3 FH 327 MB-7.0 GB 3.5 in. 1.44 MB Up to 25 GB 150 MB/525 MB QIC/ 2.5 GB (8 mm) N/A
120 MB/200 MB N/A	120 MB/200 MB N/A	120 MB/200 MB/ 525 MB/2.5 GB (8 mm)/ 1.3 GB DAT (4 mm) N/A	200 MB/525 MB/ 2.5 GB (8 mm)/ 1.3 GB DAT (4 mm) N/A
Up to 4 Up to 4	Up to 4 Up to 4	Up to 4 Up to 4	Up to 8 Up to 4
Up to 64 ⁷ Up to 64	64 ⁷ Up to 64	96 ⁷ 256	96 ⁷ 512
UNIX V.4, SCO UNIX, OS/2, DOS	UNIX V.4, SCO UNIX, OS/2, DOS	UNIX V.4, SCO UNIX, OS/2, DOS	UNIX V.4, SCO UNIX, OS/2, DOS
Model 3335	Model 3345	Model 3445	Model 3450
5.2 in. (133 mm) 15.0 in. (381 mm)	5.2 in. (133 mm) 15.0 in. (381 mm)	29.0 in. (737 mm) 7.5 in. (191 mm)	29.0 in. (737 mm) 7.5 in. (191 mm) 14.0 in. (361 mm)
16.6 in. (422 mm) 21.0 lb (9.5 kg)	16.6 in. (422 mm) 21.0 lb (9.5 kg)	29.5 in. (749 mm) 80 to 125 lb (36.4 to 56.8 kg)	29.5 in. (749 mm) 80 to 125 lb (36.4 to 56.8 kg)

System 3000 Overview

Model 3550	Model 3600	
	AP	AMP
i486 50 MHz 2 to 8	i486 50 MHz 2 to 8 per AP ¹⁰	i486 33MHz 1 per AMP ¹¹
80-320	80-320 each AP	27 each AMP
Micro Channel-E, SCSI-II 80 MB/sec, 5 MB/sec 64-Bit Dual Bus	Micro Channel-E, SCSI-II 80 MB/sec, 5MB/sec. 64-Bit Dual Bus	N/A N/A N/A
Up to 512 MB EDAC 2-4	Up to 512 MB EDAC 2-4	16 MB ECC Yes
8 KB 128 KB read/32 KB write	8 KB 128 KB	4 MB (OS)/8 KB N/A
Floorstanding 16: 16 - 32-Bit	Floorstanding 8 per AP	Floorstanding N/A
Optional Internal Full Recovery 8 Dual	Optional Internal Full Recovery Up to 8 Dual	Optional Internal/External Full Recovery 2 Channels
56 HH/28 FH	4 FH	N/A
327 MB-36 GB 3.5 in. 1.44 MB Up to 50 GB 2.5 GB (8 mm)	Up to 3.2 GB 3.5 in. 1.44 MB Up to 300 GB 1.3 GB DAT (4 mm)	N/A N/A 10 GB per AMP N/A
N/A	N/A	N/A
525 MB ^{###} /1.3 GB DAT (4 mm)	4.6 GB (8mm)	N/A
N/A	N/A	N/A
Up to 8 Up to 12 ⁵	Up to 5 Up to 4	Via AP Via AP
96 ⁷ 1024	N/A ⁸ 1024 per AP	Via AP Via AP
UNIX V.4	UNIX V.4	AMP OS
Model 3550	Model 3600	
56.0 in. (1422 mm) 34.0 in. (864 mm)	56.0 in. (1422 mm) 28.0 in. (711 mm)	56.0 in. (1422 mm) 28.0 in. (711 mm)
28.0 in. (711 mm) 800 lb fully configured (363.6 kg)	36.0 in. (914 mm) 700 lb (1540 kg)	36.0 in. (914 mm) 650 lb (1430 kg)

* 3445 has two processor upgrades:
 - Replacement of 33 MHz processor with 50 MHz processor
 - 50 MHz upgrade that causes the 3445 to have the same specifications as the 3450 except for the internal UPS

System memory can be configured to 16 MB through third-party memory boards

Choice of Parity or EDAC memory
 ### 3550 includes 525 MB internal tape

¹ HH = Half Height, FF = Full Height

² Assumes at least 3 or 4 SCSI ports used for internal devices

³ Any combination of Token Ring/Ethernet

⁴ Use of WAN card (2 lines per card) preempts use of slot for LAN or other purposes

⁵ Use of WAN card (3 lines per card) preempts use of slot for LAN or other purposes

⁶ Using Terminal Server

⁷ Using 16-Port Serial Controller Boards

⁸ All TTY devices are connected via terminal servers or controllers

⁹ 256 MB of memory with MP Upgrade Kit

¹⁰ Up to 256 processors per system

¹¹ Up to 32 processors per system

System 3000 Overview

Level 4 — System 3400 models are the entry into scalable multi-processing systems that use tightly-coupled microprocessor architecture. The single-processor models support DOS, OS/2, SCO UNIX, and UNIX System V Release 4.0. The multiple-processor model supports UNIX System V Release 4.0.

Level 5 — System 3500 models offer mainframe-class reliability, data integrity, configurability, and performance with scalable, symmetric, tightly-coupled multi-processing. These models support UNIX System V Release 4.0.

Level 6 — System 3600 models are the new successors to expensive mainframe clusters. Using loosely-coupled parallel processing, these models are optimized for on-line transaction processing and decision support. These models support UNIX System V Release 4.0.

Level 7 — System 3700 models offer enormous total performance. Configured with up to thousands of processors, these models will support the most demanding enterprise applications. Using loosely-coupled parallel processing, these models are optimized for on-line transaction processing and decision support. These models will support UNIX System V Release 4.0.

OPEN, COOPERATIVE COMPUTING

The NCR System 3000 family of computers is based on NCR's strategy of Open Systems and Open, Cooperative Computing.

Open Systems is defined as a set of standard relationships that enable different computers, subsystems, applications, and system software to operate together. Thus, the NCR System 3000 can be installed without removing all current hardware and starting over. The NCR System 3000 is based on industry standards, permitting its introduction into most computing environments and allowing a gradual transition to Open, Cooperative Computing (OCC).

OCC gives users access to the applications and files distributed across a network of computers, allowing applications to be run anywhere on the network at the request of any authorized user in the network. Users authorized to do so may update files located anywhere in the network.

Client-Server Architecture

OCC is based on the client-server model, which permits one program — the client — to obtain the services of another program — the server. Normally, a server serves multiple clients, and clients can access multiple servers.

The client-server approach permits common application services to be concentrated in the server, placing processing power where it is needed to achieve a more cost-effective computing solution. Programs and data can be partitioned so that they are distributed across the network and throughout the enterprise. The client-server approach using open standards allows for a heterogeneous environment in which there is a maximum availability of software, and in which the equipment of multiple vendors can coexist.

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SYSTEMS

General Purpose Systems

System 3000 Overview

END-TO-END SOLUTION

Designed as a platform to support the components needed to build a complete integrated system, the NCR System 3000 offers networking capabilities and a complete end-to-end computing solution. As such, the NCR System 3000 can provide the following resources and services:

- Networking interfaces and communications
- Graphical user interface and windowing environment
- System and network administration utilities
- Application development environment and programming languages
- Problem-solving and decision-making environment for business professionals and managers
- Relational and object-oriented data bases

		UNIX System V Release 4.0 Operating System							
		OS/2 Operating System							
		DOS Operating System							
		SCO UNIX Operating System							
PenOS PenPoint MS-Windows for Pens									
Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7			
Client/Small Server				Medium to Massive Server					
Portable	Desktop		Desktop Fl. Stndg.	Floorstanding					