

NAS Advanced Systems

New Product Announcement

NAS has announced two additions to its Advanced Systems product line: the entry-level AS/9000N and the dual-processor AS/9000DPC. The new processors offer AS/9000 users a growth path comparable to that offered for the AS/3000, AS/5000, and AS/7000 Series. The AS/9000N can be upgraded to an AS/9000, which in turn can be upgraded to an AS/9000DPC.

NAS also announced some significant enhancements to the AS/7000 Series and AS/9000 Series systems, including additional channels for the AS/7000DPC, an extended channel capability for the AS/9000 Series, data streaming support for the AS/7000 Series and AS/9000 Series, and an MVS/SP Assist feature for the AS/7000 and AS/9000 Series. In addition, the maximum main memory on the original AS/9000 processor was increased from 16 to 32 megabytes, while the purchase price was lowered from \$3,950,000 to \$2,975,000.

AS/9000DPC (DUAL PROCESSOR COMPLEX): Announced on January 29, 1981, the AS/9000DPC is a tightly-coupled dual-processor system with a minimum of 16 megabytes of main memory, expandable to 32 megabytes in 4-megabyte increments. Standard features include 64K bytes of buffer storage per processor, one high-speed arithmetic unit per processor, 16-way main memory interleaving, data streaming, 16 I/O channels, an extended channel capability that supports up to 16 additional I/O channels, and two Service Processor Consoles. Each console features two 20-inch, 4-color display units. The System/370 Extended Facility and Virtual Machine Assist (VMA) are also provided. Options include the new MVS/SP Assist feature, extended addressing, support for up to 10 Channel-to-Channel Adapters, and up to two console printers per console.

NAS states that the AS/9000DPC offers 1.7 to 1.9 times the processing power of the AS/9000 uniprocessor when similar configurations run the same programs in a multiprogramming environment. The AS/9000DPC is expected to compete with the IBM 3081. An AS/9000 with a minimum of 16 megabytes of main memory, 16 I/O channels, and the extended channel capability can be field-upgraded to an AS/9000DPC. Furthermore, the AS/9000DPC can be reconfigured to operate as two independent uniprocessors, a capability that is not available on the IBM 3081. The AS/9000DPC will be available in the fourth quarter of 1981. Purchase prices range from \$5,550,000 for a minimum configuration to about \$6,565,000 for a configuration with 32 megabytes of main memory, 32 channels, and MVS/SP Assist.

AS/9000N PROCESSOR: The AS/9000N, announced on February 10, 1981, provides an entry-level system for the AS/9000 Series. The new processor offers a performance level of 2.0 to 2.4 times the AS/7000 and is aimed at the IBM 3033 market. According to NAS, the AS/9000N offers slightly better performance than the 3033 uniprocessor.

In its minimum configuration, the AS/9000N includes four megabytes of main memory and six I/O channels. Main memory can be expanded in 4-megabyte increments to a maximum of 24 megabytes. The number of I/O channels can be increased to a maximum of 16. Standard features include one Service Processor Console with two display units, a high-speed arithmetic unit, the System/370 Extended Facility, and Virtual Machine Assist. Optional features include the extended channel capability, data streaming, MVS/SP Assist, support for five Channel-to-Channel Adapters, and up to two console printers.

The AS/9000N, which will be available in the fourth quarter of 1981, can be field-upgraded to an AS/9000. A minimum configuration with 8 megabytes of main memory and 12 I/O channels is required for the upgrade. Purchase prices for the AS/9000N range from \$1,995,000 for a minimum configuration to approximately \$3,325,000 for a system with 24 megabytes of main memory, 16 I/O channels, the Extended Channel Adapter, data streaming, and MVS/SP Assist.

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EXTENDED CHANNEL CAPABILITY: On January 29, 1981, NAS announced an extended channel capability for the AS/9000 Series. The new feature consists of the Extended Channel Group, which provides an additional Input/Output Processor with eight channels, and an Extended Channel Adapter, which is a prerequisite to the Extended Channel Group. The Extended Channel Adapter is standard on the AS/9000DPC and optional on the AS/9000N and AS/9000. With the extended channel capability, the AS/9000 can support up to 24 I/O channels, instead of the previous maximum of 16 channels. The maximum number of I/O channels on the new AS/9000N is 16, and the maximum number on the new AS/9000DPC is 32. The extended channel capability will be available in the second quarter of 1982.

For the dual-processor AS/7000DPC, NAS announced an Additional Channel option that expands the maximum number of I/O channels from 16 to 24. The new feature also permits channels to be attached to both processors. Previously, one processor handled all I/O activity. The additional channel capability is scheduled for third quarter 1981 delivery.

DATA STREAMING: A data streaming feature will be available for all AS/7000 Series processors in the third quarter of 1981 and for all AS/9000 Series processors in the fourth quarter of 1981. The data streaming feature permits the use of IBM 3375 and 3380 disk drives with the Advanced Systems computers.

Data streaming can be added to a maximum of two block multiplexer channels on the AS/7000N, four on the AS/7000, and six on the AS/7000DPC. For the AS/9000 Series, data streaming will be available on up to six block multiplexer channels without the extended channel capability. With the extended channel capability, data streaming will be available on all block multiplexer channels. Data streaming is standard on the AS/9000DPC and optional on the other AS/9000 systems and on the AS/7000 systems.

MVS/SP ASSIST: The MVS/SP Assist feature, which is similar to IBM's 3033 Extension feature, will be available for all AS/7000 Series and AS/9000 Series systems. MVS/SP Assist consists of hardware and microcode designed to further improve performance on systems using IBM's new MVS/SP Release 3, which provides improvements in system throughput and reliability, availability, and serviceability (RAS) activities. MVS/SP Assist enhances paging operations, I/O processing, real storage management activities, and cross memory services. The delivery data for MVS/SP Assist will be announced in the first quarter of 1982.

EQUIPMENT PRICES

		<u>Purchase</u>	<u>Monthly* Maint.</u>
AS/9000N	Processor with 4 megabytes of main memory, 6 I/O channels, and one Service Processor Console	\$1,995,000	\$ 9,953.00
AS/9000	Processor with 8 megabytes of main memory, 12 I/O channels, and one Service Processor Console	2,975,000	11,015.00
AS/9000DPC	Dual Processor with 16 megabytes of main memory, 16 I/O channels, and two Service Processor Consoles	5,555,000	16,640.00

Processor Options:

Four megabytes of main memory for AS/9000 Series	140,000	230.00
Extended Addressing for AS/9000 Series; allows expansion of main memory beyond 16 megabytes	90,000	TBA
Additional Channel Capability for AS/7000DPC; for 16 to 24 channels	TBA	TBA
Additional Channel Group for AS/9000N; for 6 to 12 channels	240,000	208.50
Additional Channel Group for AS/9000N and AS/9000; for 12 to 16 channels	200,000	208.50
Extended Channel Group for all AS/9000's; 8 channels; requires Extended Channel Adapter	150,000	TBA
Extended Channel Adapter (included on AS/9000DPC)	50,000	TBA
Data Streaming for AS/7000 and AS/9000 Series (included on AS/9000DPC)	40,000	110.00
MVS/SP Assist for AS/7000 and AS/9000 Series; requires Extended Channel Adapter	60,000	—
AS/9000N to AS/9000 Upgrade	600,000	—
AS/9000 to AS/9000DPC Upgrade	1,950,000	—

*Maintenance charges for 24 hours/day, 7 days/week coverage.
TBA—To be announced.■