IBM 4300 Series

▶ VM/DOS/VSE System IPO/E that supports DB/DC and DC environments.

Two of the communications-oriented enhancements available with *OS/VS1 Release 7* include: RES (Remote Entry Services), a component of OS/VS1 which allows jobs and commands to be submitted from remote terminals, with output returned; and HRNES (Host Remote Node Entry System), which allows an OS/VS1 system to be a remote job entry station to any MVS/JES2 or SVS/HASP system or to another OS/VS1 system. Operation is not dedicated; batch and on-line applications can be run concurrently.

ACF/VTAM and ACF/TCAM are both supported under Release 7, as is the NCCF (Network Communication Control Facility) and the Cryptographic Subsystem. OS/VS1 Release 7 will support IMS/VS Version 1.1.5, CICS/OS/VS Version 1.4, IMS and CICS Aids, the DL/1 Data Language, VSAM, and the DB/DC Data Dictionary. DMS/CICS/VS, CIS/VS, VSPC personal computing capabilities, and CADAM (Computer-Graphic Augmented Design and Manufacturing system) can be implemented under OS/VS1. The various compilers and utilities are also supported. The System IPO for OS/VS1 includes OS/VS1 Release 7, IMS/VS, ACF/NCP/VS, ACF/VTAM, and CICS/VS.

PRICING

POLICY: IBM offers the 4300 Series on a purchase, lease, or rental basis. The standard IBM lease or rental contract includes equipment maintenance and entitles the customer to unlimited usage each month.

Prime-shift maintenance is included in the rental or lease price. The purchase option accrual equals 60 percent of the monthly charge up to 50 percent of the purchase price.

The current Agreement for Lease or Rental of IBM Machines provides users with a single contract on which they can specify mixtures of rental and leased equipment, each with various terms. CPU's rented under the plan can be terminated or downgraded on 90 days' notice, and all other rented equipment can be terminated or downgraded on 30 days' notice. Base terms and extension terms are specified for each piece of equipment obtained through a leasing agreement. The basic lease term is two years, followed by one-year extension terms.

MAINTENANCE: For purchased, leased, or rented systems, the IBM 4300 Series is under maintenance group D. The minimum period of maintenance service is 9 consecutive hours between 7:00 a.m. and 6:00 p.m. Monday through Friday. Charges for maintenance coverage outside this period are based upon the following percentages of the minimum monthly maintenance charge (MMC) added to the MMC:

	Consecutive hours				
	9*	12	16	20	24
Monday-Friday (until 8:00 a.m. Saturday)	10	12	14	16	18
Saturday (until 8:00 a.m. Sunday)	4	5	7	8	9
Sunday (until 8:00 a.m. Monday)	5	7	9	11	12

*Outside of the hours 7:00 to 6:00 p.m.

For users without a maintenance contract, the 4300 Series is maintained under per-call class 3. Under this class, the per-call charge during regular hours is $83.00 per hour, and during off hours the charge is $96.00 per hour. The hourly rate for IBM Systems Engineering service is $66.00.

SOFTWARE: IBM 4300 users receive DOS/VSE at no additional cost. All other IBM software, including DOS/VSE AF and other licensed program products, is priced separately. In addition, basic monthly charges have been established for maintenance of the IBM system control programs and other licensed program products. The minimum term of agreement is one year. A customer with multiple systems may choose to designate a single system for processor support. Each system control or licensed program run on a processor other than the designated processor is subject to an additional (but reduced) maintenance charge. For maintenance purposes, the problem program is transferred to the designated processor. Charges for software support appear at the end of the equipment price list. An alternative to contracted maintenance is per-call service, charged at the applicable hourly rate. Program service/programming assistance costs $89 per hour during regular hours and $102 per hour otherwise. The initial and prime interface for software problems and their solution is the IBM Support Center.

SUPPORT CENTER: This approach to quick problem-solving via centralized telephone support is the first level of support for the new software products announced with the 4300's as well as older software products. Support for DOS/VS Release 34, OS/VS1 Release 6.7, and VM/370 Release 5 will also be provided from the Support Centers without separate charge until December 31, 1980, one year beyond the deadline for terminating local support. As of January 1, 1981, no further central or local support will be provided for these products. For OS/VS1 Release 6.0, centralized programming services will be available without separate charge until 12 months after the availability of OS/VS1 Release 6.7.

The centralized IBM Support Center provides 24-hour, 7-day customer access by telephone (an 800 number is provided). It utilizes the Software Support Facility data base, which incorporates every problem encountered and resolved (or unresolved) by the central support group. The customer is assisted in making out any APAR (program problem report), and he gets advice on temporary fixes or bypasses.

The Support Center is the first level of support. If it cannot resolve a problem, the customer is put in touch with the Change Team Support Specialist, who is directly familiar with the section of coding relating to the problem being reported. If, after working with this individual, the problem still cannot be resolved, the PSR (Program Support Representative) from the customer's local office will be dispatched to assist. Under the new support plan, many of the facilities that were previously provided by IBM support personnel at no charge will become billable activities.

PREVENTIVE SERVICE ASSISTANCE PROGRAM: This program has been enhanced to improve the handling of Program Update Tapes (PUT's). With the installation of DOS/VSE, OS/VS1 Release 7, and VM/370 Release 6, customers will be provided with integrated and customized Program Update Tapes for SCP's and specified licensed program products. In addition, a common service application vehicle will be provided for each system control program. For DOS/VSE it is MSHP, for OS/VS1 it is SMP4, and for VM/370 it is PLC. Each system PUT will be researched against a master service data base, synchronized to the applicable SCP, field-tested as one package, customized to the SCP and program product profile, and shipped directly to the customer.

Applying system PUT's within an established installation period (normally 75 days) is recommended to increase software stability. Distribution of customized preventive maintenance service tapes including both SCP and program product corrections will be provided only to users of IBM processors on which DOS/VSE, OS/VS1 Release 7, or VM/370 Release 6 is supported. Users of other licensed products will receive the licensed program portion of the ▶

IBM 4300 Series

▶ preventive service updates directly from PID (Program Information Department) on a periodic basis.

EQUIPMENT: The following typical purchase prices include all controllers and adapters. Prices do not include software.

TYPICAL 4331 SYSTEM: Includes a 4331 Processor with 1,048,576 bytes of main memory; a 3262 Printer; two 3278 Displays; two 3310 DASD's (129 megabytes); an 8809 Magnetic Tape Unit; integrated disk, tape, and communi-cations adapters; a 1200-bps communications line, a 3278-2A Console/Keyboard. Purchase price is $123,151; 2-year lease, $3,441 per month; monthly maintenance, $523.50.

TYPICAL 4341 SYSTEM: Includes a 4341 Processor with 2,097,152 bytes of main memory; a 3203 Model 5 Printer; two 3370 DASD's (1,140 megabytes); four 3340 DASD's (280 megabytes); a 3880 Storage Control; a card reader; a card punch; a 3278-2A Console/Keyboard; and systems software. Purchase price is $527,490; 2-year lease, $13,932 per month; monthly maintenance, $1,787.■

EQUIPMENT PRICES**

			Purchase Price	Monthly Maint.	Monthly Rental Charge*	Monthly Lease Charge (2-Year Lease)*
PROCESSORS						
4331 I1		Processor with 524,288 bytes of main memory	$ 68,250	$157.00	$1,992	$1,695
4331 J1		Processor with 1,048,576 bytes of main memory	76,100	168.00	2,227	1,895
4341 K1		Processor with 2,097,152 bytes of main memory	257,250	498.00	7,508	6,390
4341 L1		Processor with 4,194,304 bytes of main memory	288,650	540.00	8,448	7,190

PROCESSOR FEATURES & CHANNELS

Many of the features listed below include microcode as well as hardware.
Microcode is supplied on diskettes.

Model 4331:

			Purchase Price	Monthly Maint.	Monthly Rental Charge*	Monthly Lease Charge (2-Year Lease)*
	1001	Adapter Power Prerequisite	2,520	7.00	75	64
	1002	Adapter Logic Prerequisite	4,620	12.50	137	117
	1901	Control Store Expansion; 65,536 bytes	5,355	36.00	160	136
	2001	Display/Printer Adapter Expansion	1,275	1.50	33	28
	3201	DASD Adapter; for 3310/3340/3370	3,780	3.50	113	96
	3401	Diskette Drive; reads IBM Type 1 Diskettes	3,695	19.00	110	94
	3898	External Signals; for external interrupt	315	0.50	9	8
	3901	5424 Adapter	6,930	8.50	207	8
	3950	1401/1440/1460 Compatibility	—	—	—	—
	4910	8809 Mag Tape Unit Adapter	3,780	3.50	113	96
	5248	Byte Multiplexer Channel	3,695	1.50	110	94
	5531	Power Interface	2,310	1.00	68	58
	5532	Power Interface, Additional	1,155	1.00	34	29
	5550	Printer-Keyboard Mode	—	—	—	—
	6305	System/3 Data Import	—	—	—	—
	7851	3340 Direct Attachment	—	—	—	—
	7901	2311/2314/2319/3310 Direct-Access Storage Compatibility	—	—	—	—
	8701	ECPS:VM/370	—	—	—	—

Model 4341:

	1850	Channel-to-channel adapter	22,050	24.50	659	561
	1870	Block multiplexer channels, additional; group of three	16,950	5.00	508	432
	1890	Channel control unit positions, additional	2,625	8.50	79	67

Console, 4331 or 4341:

3278	2A	CRT display/keyboard	2,680	24.50	87	74
	4633	75-key operator console keyboard (4341)	560	6.50	16	14
	4631	75-key operator console keyboard with I/O interface (4341)	1,160	7.00	36	31
	4632	Same as 4631 without I/O interface (4341)	1,080	7.00	34	29
	4634	Same as 4631 without I/O interface (4331)	1,080	7.00	34	29
	6340	Security keylock	35	NC	35	—

PROCESSOR UPGRADES

		Model I1 to J1	7,850	—	—	—
		Model K1 to L1	31,400	—	—	—

MASS STORAGE

3310	A1	Single disk drive, 64.5 megabytes; with controller; for 4331 only	13,600	55.50	452	385
3310	A2	Two disk drives, 64.5 megabytes each; with controller; for 4331 only	22,600	94.50	751	639

*Rental/lease prices include equipment maintenance.
**See Report 70C-491-05 for prices of the System/370 peripheral equipment.

IBM 4300 Series

EQUIPMENT PRICES**

			Purchase Price	Monthly Maint.	Monthly Rental Charge*	Monthly Lease Charge (2-Year Lease)*
MASS STORAGE (Continued)						
3310	B1	Single disk drive, 64.5 megabytes (for attachment to Model A2)	10,770	42.00	357	304
3310	B2	Two disk drives, 64.5 megabytes each (for attachment to Model A2)	19,770	80.50	656	558
		Model A1 to A2 Upgrade	9,000	—	—	—
		Model B1 to B2 Upgrade	9,000	—	—	—
3340		Direct Access Storage Facility; 34.9 or 69.8 MB per drive:				
		Model A2; Two drives plus control	37,800	96.50	1,234	1,050
		Model B1; One drive	20,790	51.00	690	587
		Model B2; Two drives	26,460	82.50	870	740
3344 B2		Add-on Dual Disk Drive for 3340 Direct-Access Storage Facility; 279.6 MB per drive	31,680	128.00	1,106	941
3344 B2F		Add-on Dual Disk Drive for 3340 Direct-Access Storage Facility with 2MB fixed-head storage; 279.6 MB per drive	41,600	179.00	1,451	1,235
4301		Fixed-Head Feature (for 3340 A2 or B2)	1,795	1.50	52	44
6201		Rotational Position Sensing (for 3340 B1)	718	0.50	21	18
6202		Rotational Position Sensing (for 3340 or A2 or B2)	907	0.50	27	23
6148		Remote String Attachment	—	—	—	—
8150		String Switch	7,560	12.50	246	209
3348		Data Module (for 3340 drives):				
		Model 35; 34,944,768 bytes	1,600	Time & mat'l.	59	50
		Model 70; 69,889,536 bytes	2,200	Time & mat'l.	82	70
		Model 70F; 69,889,536 bytes, of which 502,080 are served by fixed heads	4,400	Time & mat'l.	165	140
3370 A1		Add-On Single Disk Drive, for 4331 or 4341; 571.3 megabytes	36,850	126.00	1,132	963
3370 B1		Add-On Single Disk Drive for attachment to Model A1; 571.3 megabytes	24,570	94.50	754	642
8150		String Switch	4,095	1.50	126	107
3880 1		Storage Control; for 4341 only	65,460	168.00	1,821	1,550
8170		Two-Channel Switch; for 4341 only	6,770	10.50	188	160
MAGNETIC TAPE EQUIPMENT						
8809		Magnetic Tape Units (for 4331 only):				
	1A	First drive; connects to the I/O attachment feature of the 4331	10,960	50.00	364	310
	2	Second, fourth, or sixth drive that attaches to Model 1A or 3	9,730	45.00	324	276
	3	Third or fifth drive that attaches to Model 2	10,960	50.00	364	310
PRINTERS						
3203	5	Line Printer, 1200 lpm	38,320	391.00	1,651	1,405
3289	4	Line Printer, 230 to 400 lpm (print speed is character set-dependent)	13,910	187.00	623	530
	5821	48-char. EBCDIC Print Belt	160	—	—	—
	5822	64-char. EBCDIC Print Belt	160	—	—	—
	5823	94-char. EBCDIC Print Belt	160	—	—	—
3262	1	Line Printer; 650 lpm	14,700	157.00	439	373
	5951	0.079-inch char. height	—	—	—	—
	5950	0.095-inch char. height	—	—	—	—
	5940	48-char. EBCDIC Set	178	—	—	—
	5944	64-char. EBCDIC Set	178	—	—	—
	5946	64-char. EBCDIC Set	178	—	—	—
	5948	96-char. EBCDIC Set	178	—	—	—
PUNCHED CARD EQUIPMENT						
5424	A1	Multi-Function Card Unit, 96-col.	7,810	235.00	421	—
	A2	Multi-Function Card Unit, 96-col.	10,340	350.00	634	—
	6510	5424 Multi-Function Card Unit Attachment; for 4331 only	2,670	6.00	60	—
COMMUNICATIONS EQUIPMENT						
Model 4331:						
	1020	Autocall Unit Interface	462	2.00	13	11
	1601	Communications Adapter, base	3,230	1.50	96	82
	3701	EIA/CCITT interface	462	2.00	13	11
	4695	Line Attachment Base; for clocked modems	462	0.50	13	11
	4696	Line Attachment Base; for non-clocked modems	546	0.50	15	13
	4720	High-Speed Modem Adapter	1,385	2.00	36	31

*Rental/lease prices include equipment maintenance.
**See Report 70C-491-05 for prices of the System/370 peripheral equipment.

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EQUIPMENT PRICES**

		Purchase Price	Monthly Maint.	Monthly Rental Charge*	Monthly Lease Charge (2-Year Lease)*
COMMUNICATIONS EQUIPMENT (Continued)					
4781	1200-bps Integrated Modem; non-switched	701	3.50	20	17
4782	1200-bps Integrated Modem; switched; with auto-answer	903	3.50	26	22
4787	Non-switch with switch network; backup, and manual-answer	955	3.50	27	23
4788	Non-switch with switch network, backup, and auto-answer	1,065	4.00	31	26
4801	Local attachment interface	1,155	3.00	31	26
5650	Digital data service adapter	882	2.50	25	21

Model 4331 or 4341:

For complete pricing data on the IBM 3704 and 3705 Communications Controllers, please
see Reports 70D-491-31 and 70D-491-32.

*Rental/lease prices include equipment maintenance.
**See Report 70C-491-05 for prices of the System/370 peripheral equipment.

SOFTWARE PRICES

		One-Time Charge	Monthly Charge (Prior to 1/1/80)	Monthly Charge (After 1/1/80)	Monthly Licensed Program Support Charge	Monthly Additional Licensed Program Support Charge
5746-XE8	VSE/Advanced Functions, Releases 1 and 2	$ —	$ 130	$ 143	$ 48	$ 28
5746-RC7	Advanced Communications Function for VTAM Entry ACF/VTAM	—	95	104	61	37
5746-TS1	VSE/Interactive Computing and Control Facility	—	60	66	22	13
5746-CE3	VSE/POWER Releases 1 and 2	—	40	—	12	7
5746-RC9	DOS/VSE Remote Job Entry Workstation	—	75	82	—	—
5746-AM5	VSE/3270 Bisync Pass Through	—	100	110	—	—
5746-AM2	VSE/VSAM Releases 1 and 2; VSE/VSAM Space Management for SAM feature	—	35/20	38	18/7	11/4
5746-AM4	VSE/Fast Copy Data Set Program	330	—	—	—	—
5746-UT3	VSE/Data Interfile Transfer, Testing and Operations Utility (VSE/DITTO)	—	26	28	5	3
5746-XE7	VSE/Access Control—Logging and Reporting	—	35	38	17	11
5746-SA1	VSE/Interactive Problem Control System	—	25	27	5	3
5746-RC5	Basic Telecommunications Access Method Extended Support	—	20	22	5	3
5746-AM3	VSE/IBM System/3-3340 Data Import	1,320	—	—	—	—
—	IBM Systems 1401/1440/1460 Emulator	—	100	—	5	3
5748-XX8	VM/Basic System Extensions	—	125	104	33	19
5748-XE1	VM/System Extensions	—	1,200	1,170	148	89
5748-XP1	Remote Spooling Communications Subsystem (RSCS) Networking	—	60	66	28	17
5748-XXC	VM/Interactive File Sharing	—	25	27	12	7
5748-XXB	Display Management System/CMS	—	20	22	7	4
5748-XE4	VM/Directory Maintenance	—	70	77	23	14
5748-XT3	VM/CMS-3270 Display Support and Structured Programming Facility	—	275	302	—	—
5748-SA1	VM/Interactive Problem Control System Extension	—	30	33	5	3
5748-MS1	Interactive Productivity Facility	—	30	33	5	3
5746-XX3	CICS/VS/DOS Enhanced	—	—	357	165	99
5740-XX1	CICS/OS/VS Enhanced	—	1,000	1,100	—	—
5740-XC5	Development Management System/CICS/VS-OS	—	230	253	—	—
5746-XC4	Development Management System/CICS/VS-DOS	—	100	110	57	34
5740-XXF	DB/DC Data Dictionary for OS/VS	—	580	638	—	—
5746-XXC	DB/DC Data Dictionary for DOS/VS	—	230	253	66	39
5746-LM3	DOS FORTRAN IV Library Option 1	—	33	30	5	3
5746-CB1	DOS/VS COBOL Compiler and Library	—	141	137	17	11
5746-LM4	DOS/VS COBOL Library	—	28	25	5	3
5736-PL1	DOS PL/1 Optimizing Compiler	—	210	187	44	26
5736-LM4	DOS PL/1 Resident Library	—	45	44	5	3
5736-LM5	DOS PL/1 Transient Library	—	28	25	5	3
5736-PL3	DOS PL/1 Optimizing Compiler and Library	—	283	256	55	33
5746-RG1	DOS/VS RPG II	—	100	104	5	3
5746-SM2	DOS/VS Sort/Merge (Version 2)	—	135	126	22	13

MARCH 1980

IBM 4300 Series

New Product Announcement

Recent weeks have seen IBM announce new hardware and software capabilities for the 4300 Series computers. The hardware additions came in the form of expanded mass storage capabilities, while the software announcement concerned new releases of TCAM and VTAM.

HARDWARE: The IBM 3880 Storage Control that was announced with the 4300 Series computers has been enhanced to permit the attachment of 3330/3333 Disk Storage Units and 3350 Direct Access Storage Drives to the 4341 Processor. IBM plans to make first deliveries of the 3880 with 3330/3333 and 3350 capability in the fourth quarter of 1979. A fully equipped 3880 can attach the 3330/3333, 3340/3344, 3350, and 3370 disk drives. The 3350, however, is not supported in 333X Model 1 or Model 11 compatibility mode.

Each of the two storage directors of the 3880 attaches to a block multiplexer channel of the 4341 Processor. Up to four strings of direct-access storage devices can be attached to each storage director. Strings of 3333/3330 DASD's can be mixed with 3850 strings in any combination. Within a 3333/3330 string, 3333 Models 1 or 11 can attach 3380 Models 1, 2, or 11 in any combination. The 3340/3344 cannot be intermixed on a storage director with 3330/3333 or 3350 drives. Storage directors may be attached to either a 1- or 2-megabyte block multiplexer channel.

The original 3880 announcement allowed for the attachment of a two-channel switch pair option. IBM has now increased the number of switch pair options to two. A 3880 with both of the two-channel switch pair options installed allows up to four channels to be switched to each storage director. Therefore, a total of eight channels can have access to the 3880. Each two-channel switch pair may be connected to a configuration control panel via an optional remote switch attachment.

A maximum of four 3333 Model 1 or Model 11 and/or 3350 Model A2 units can be attached to each storage director. Each 3333 can attach up to three 3330's, Model 1, 2, or 11. Each 3350 Model A2 or A2F can attach up to three 3350's, Model B2, B2F, C2, or C2F. A storage director can attach up to four 3340 Model A2 units, and up to two of the 3340's can attach 3344's. If 3340's and 3344's are intermixed on a storage director, a maximum of 28 drives can be attached to that director; if only 3340's are attached, up to 32 drives are allowed.

The 3880 is supported under DOS/VSE, VM/370 Release 6, OS/VS1 Release 6.7 and Release 7.0, and OS/VS2 Release 3.8. The 3340/3344 is not supported under OS/VS2 when attached to the 3880.

SOFTWARE: IBM plans to release new versions of ACF/TCAM (ACF/TCAM Version 2 R3), ACF/VTAM (ACF/VTAM/VS), NTO, and ACF/NCP (ACF/NCP/VS R3) beginning in mid-1980. The new versions will be available for users of the OS/VS1, MVS, and DOS/VSE operating systems. The aim of the new TCAM/VTAM versions is to provide increased flexibility through additional computer terminal links, improved reliability through user programming of alternate data paths, and enhanced functions in multiprocessor networks through greater latitude in the placement of points of control. Automatic use of alternate data paths is particularly valuable when unrecoverable error transmissions are encountered.

Automatic rerouting is an attractive feature of the packet-switched public networks (such as Telenet and Tymnet) that was previously unavailable with SNA networking. This, along with the other new features, may be seen as an effort by IBM to meet the needs of large-volume communications users who have been considering a move to the X.25-supported networks. IBM has not yet offered any communications support for the X.25 packet communications protocol.

Other features of the new TCAM and VTAM releases will add enhanced monitoring of network activity, error recording, and operator alert for possible problem areas.

The new Network Control Program release ACF/NCP/VS R3, operating in conjunction with ACF/TCAM Version 2 R3 and ACF/VTAM/VS, will reportedly enhance networking of 370X nodes and provide facilities for specializing communications lines and incorporating multiple data routes. Networking of 370X nodes is enhanced by the ability of up to eight IBM computers to control interconnected controllers and terminals. IBM claims that one or more computers or

IBM 4300 Series

New Product Announcement

controllers may be taken out of service and returned with a minimum disruption to data communications during the transition. With specialized lines, users would select a data path depending on the type of traffic (i.e., interactive, batch, etc.) Extensive interconnection between hosts and nodes includes parallel links between 3705 controllers and provides network backup if one node should fail. These two features should increase network efficiency and reliability.

The NTO Release 2 program product offers IBM large-system users a significant enhancement: support for start-stop terminals. The terminals supported include the IBM 2740 and 2741 and other teletypewriter devices. Since NTO Release 2 will be supported by CICS/VS, some terminals currently supported by BTAM can now also be supported by ACF/TCAM Version 2 R3, ACF/VTAM/VS, and ACF/NCP/VS R3. An intermediate release, ACF/NCP/VS R2.1, in conjunction with the IBM Network Problem Determination Application (NPDA), will provide facilities to collect and organize error statistics from the network.□

EQUIPMENT PRICES

		Purchase Price	Monthly Maint.	Rental* (short-term lease)	Rental* (2-year lease)
3880	Storage Controller, Model 1	$65,460	$168	$1,821	$1,550
6148	Remote Switch Attachment	NC	NC	NC	NC
6149	Remote Switch Attachment, additional	NC	NC	NC	NC
8170	Two-Channel Switch Pair	6,450	35	176	150
3863	2400-bps Modem	2,240	12	75	64
3864	4800-bps Modem	3,675	21	130	111
3865	9600-bps Modem	5,565	30.50	207	176

*Rental and lease charges include equipment maintenance.

SOFTWARE PRICES

		Monthly License Charge	Date Available
5735-RC2	ACF/VTAM/VS Release 3 under MVS	$264	4th qtr. 1980
5735-RC2	Under OS/VS1	264	2nd qtr. 1981
5746-RC3	Under DOS/VSE	93	1st qtr. 1981
5746-RC3/02	ACF/VTAM/VS Release 3 Networking feature under MVS	660	4th qtr. 1980
5746-RC3/02	Under OS/VS1	660	2nd qtr. 1981
5746-RC7	Under DOS/VSE	176	1st qtr. 1981
5735-RC3	ACF/TCAM/Version 2 R3 under MVS	495	4th qtr. 1980
5735-RC3	Under OS/VS1	495	1st qtr. 1981
5735-RC3/02	ACF/TCAM/Version 2 R3 Networking feature under MVS	880	4th qtr. 1980
5735-RC3/02	Under OS/VS1	880	1st qtr. 1981
5735-XX1	ACF/NCP/VS R2.1	132	2nd qtr. 1980
5735-XX1	ACF/NCP/VS R3	132	2nd qtr. 1981
5735-XX7	NTO Release 2	110	1st qtr. 1981
5735-XX8	NPDA	32	3rd qtr. 1980
	Support programs for installation of NCP programming	35	—