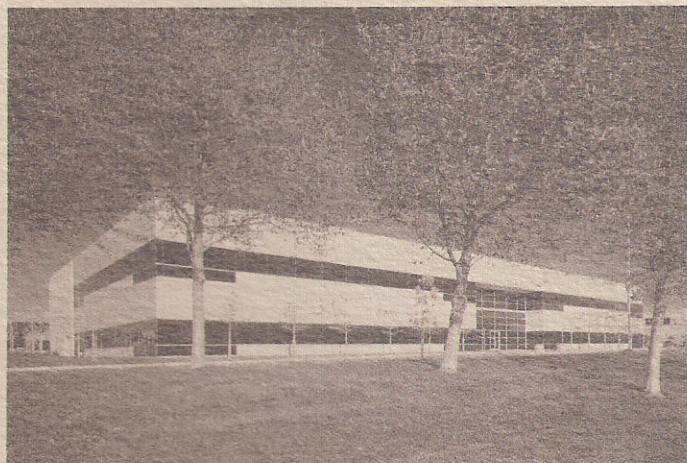
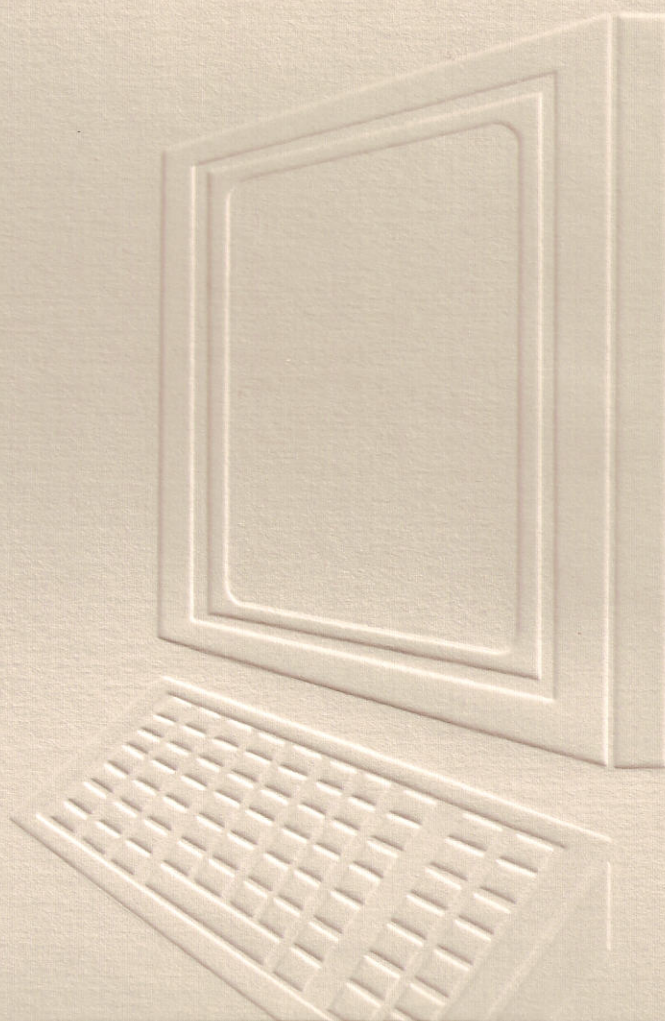


Advanced Logic Research, Inc.



Advanced Logic Research, Inc., located in Irvine, California is a manufacturer of high quality IBMTM Compatible Computer Systems in one of the fastest growing high technology centers in the United States.

Advanced Logic Research started as a research and design group, offering complete computer systems to meet the growing needs for enhanced computer in a variety of market places. Advanced Logic Research has manufacturing facilities located in the United States and Singapore, shipping products to customers throughout the world. The strength of Advanced Logic Research is further enhanced by Wearne Brothers, a 300 million dollar public corporation. This Wearne association assures Advanced Logic Research the ability to offer competitive products in the ever changing market place.



Advanced Logic Research, Inc.

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PRESS RELEASE

FOR IMMEDIATE RELEASE



ANNOUNCING ALR's "MICROFLEX 7000" THE HIGHEST PERFORMING 25 MHZ 80386-BASED MICRO CHANNEL PRODUCT ON THE MARKET TODAY! PRODUCT ON DISPLAY AT BALLY'S HOTEL IN BOOTH #1110

Las Vegas, NV, Nov. 14, 1988-- Advanced Logic Research, Inc. today announced its new Micro Channel product line, the "MicroFlex 7000." Dave Kirkey, vice president of sales at ALR states, "The MicroFlex 7000 is the first 25MHz, 80386-based Micro Channel computer to compete with IBM's Model 70-A21, however, the MicroFlex 7000 proprietary 128-Kbyte cache memory and 128-bit data path will give users a much higher performing system than its competitors." Kirkey continues to say, "In keeping with ALR's philosophy of manufacturing true industry standard computers, we intend to offer customers both MCA- and AT-bus architectures. ALR is licensed to manufacturer and sell computers that are covered by IBM's patents."

ALR's MicroFlex 7000 is the first of the 80386 PC systems to implement the 128-bit bus design and offer 128-Kbyte 25 nanosecond static cache memory standard. ALR's "pre-fetched" proprietary cache design increases memory performance 30% over comparable 32-Kbyte, 32-bit cache systems. Two MicroFlex 7000 models announced are the MicroFlex 7000-120A21 and MicroFlex 7000-300A31. Both models include 2-Mbytes of 80 nanosecond 128-bit page-mode RAM memory expandable to 16-Mbytes on the system board by using IBM-compatible 2-Mbyte Single In-line Memory Modules (SIMM) available from ALR or IBM. Kirkey says "ALR's system provides twice the on-board RAM compared to IBM's system." Both ALR MicroFlex 7000 models incorporate a 16-bit VGA (video graphics array) on the motherboard supporting up to 800 X 600 resolution and provides CGA, EGA, MCGA and VGA software mode compatibility. The minicomputer-styled chassis of the MicroFlex 7000 can accommodate a total of five drives: three half-height drives accessible from the front panel, one internal full-height bay and one internal half-height 3 1/2-inch device space. A 1.44 Mbyte 3 1/2-inch floppy disk drive is standard with

-- more --

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ALR's MicroFlex computers. An optional 150-Mbyte tape back-up unit is also available from ALR.

For mass-storage requirements, the MicroFlex 7000-120A21 features a 120-Mbyte <28ms ESDI hard disk drive and a fast access 1:1 interleave ESDI hard disk controller with 16-Kbyte look-ahead cache. For the users requiring larger disk storage, ALR's MicroFlex 7000-300A31 incorporates a high speed 300-Mbyte <15ms ESDI hard disk drive and a new ESDI controller with 1:1 interleave and up to 32-Kbyte look-ahead cache.

Standard features of the MicroFlex 7000 include one RS-232C asynchronous serial port, one Centronics-type parallel port and an IBM-compatible mouse port. Both MicroFlex models incorporate a socket for an Intel 25-MHz 80387 or the Weitek 3167 math coprocessors.

The retail price for the MicroFlex 7000 model 120A21 is set at \$9,499 and \$12,499 for Model 7000-300A31. The MicroFlex 7000 supports SCO's XENIX, Novell Netware, MS-DOS, and OS/2 operating systems. MicroFlex units will be available for shipment in January 1989 through selected ALR dealers. ALR provides a standard 12-month warranty. Extended and On-site warranty options are provided by Intel, ALR's third-party service vendor, and available through ALR and ALR authorized dealers. ALR's MicroFlex 7000 units will be on display at Comdex in booth number 1110 at the Bally's hotel.

For further information contact:

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PRESS RELEASE



FOR IMMEDIATE RELEASE

ALR'S NEW FLEXCACHE SX386 MACHINE COMBINES 80386SX AND 82385 CACHING POWER TO OUTPERFORM COMPAQ'S DESKPRO 386S BY 35%

Las Vegas, NV, Nov. 14, 1988 -- Advanced Logic Research, Inc. today announced the FlexCache SX386 microcomputer based on Intel's 16MHz 80386SX microprocessor. "The FlexCache SX386 features an Intel 82385 cache controller with 16-Kbyte 35 nanosecond cache memory and provides two-way set associative caching, transferring twice the amount of data into cache at one time and eliminating over 95% of all wait-states the CPU would typically experience when seeking data directly from the main memory," said Dave Kirkey, vice president of sales at ALR. Kirkey continues to say, "ALR's FlexCache SX386 will cost less and outperform current competitors' 386SX models on the market today. System tests show ALR's FlexCache SX386 is approximately 35% faster than Compaq's DeskPro 386s."

The FlexCache SX386 is an extension of ALR's SX386 product line. A six-slot backplane houses one serial and one parallel port as well as circuitry for the floppy and hard disk controllers. The "modular" CPU card provides for easy servicability and, it has an upgradable path to 20MHz 80386 microprocessing technology.

The FlexCache SX386 is packaged in a small footprint design measuring only 6x15x17-inches which is 30% smaller than typical AT systems. The standard memory configuration of the FlexCache SX386 includes 1-MB of RAM expandable to 8-Mbyte on the CPU card, with a total of 16-Mbytes of system memory for high-performance applications. The FlexCache SX386 comes standard with an 80386SX modular CPU card, Intel's 82385 cache controller with 16Kbytes static RAM, 1-Mbyte RAM, 1.44-Mbyte 3.5-inch floppy drive, one serial and one parallel port and 5 AT-compatible expansion slots. An

-- more --

enhanced model is available with 40 Mbyte <28 hard disk subsystem, 1:1 interleave with full track buffering and a data transfer rate of 500 kilobytes per second.

The FlexCache SX386 chassis is designed to accommodate four 5.25 or 3.5-inch devices providing even greater expandability than Compaq's Deskpro 386s. The FlexCache SX386 is an excellent choice for high-powered business users whose application needs grow as their business matures. The user can choose a 16MHz 80386SX or a 20MHz 80386 CPU configuration for CAD/CAM, desktop publishing and scientific/engineering math-intensive applications.

The FlexCache SX386 computers are offered in two CPU configurations with a suggested list price beginning at \$2,595 for the FlexCache SX386 basic model 10 with 1 Mbyte of RAM, 1.44-Mbyte 3.5-inch floppy disk drive, and a 101-key enhanced keyboard. ALR will make available an enhanced FlexCache SX386 model 40 that will include a 3.5-inch and a 40-Mbyte 28 millisecond hard disk drive priced at \$3,799. As a limited time introductory offer, the FlexCache SX386 and ALR's VIP SX386 computers will be shipped with Quarterdeck's DESQview 386 and QEMM. The new FlexCache SX386 computers will be available for shipment in January 1989 through select ALR authorized resellers nationwide. Also available from ALR is a complete line of desktop microcomputers, multi-user systems and complete network solutions certified by Novell. ALR's FlexCache SX386 units will be on display at Fall Comdex in booth #1110 at the Bally's hotel. For more information contact:

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PRESS RELEASE



FOR IMMEDIATE RELEASE

ANNOUNCING ALR'S VIP SX386 MACHINE-- AN INNOVATIVE DESIGN IN A SMALL FOOTPRINT COMPUTER UTILIZING INTEL'S 80386SX PROCESSOR AND 82385 CACHE CONTROLLER

Irvine, CA, Nov. 8, 1988 -- Advanced Logic Research, Inc. today announced the release of its first microcomputer based on Intel's 16MHz 80386SX microprocessor, 82385 cache controller with 16-Kbyte 35 nanosecond cache memory, and ALR's famous FlexCache architecture. "The VIP SX386 is the first 80386SX computer on the market to use a cache management scheme, increasing its performance by 30% over Compaq's 80386SX, the Deskpro 386s," said Dave Kirkey, vice president of sales at ALR. The VIP SX386 is packaged in a new small footprint design measuring only 4.5 x 15 x 17-inches and is 40% smaller than Compaq's Deskpro 386s. The standard configuration of the VIP SX386 includes a 16MHz 80386SX CPU, an 82385 cache controller, 512-Kbyte RAM expandable to 8-Mbyte on the CPU card, a 1.44-Mbyte 3.5-inch floppy disk drive and five AT-compatible slots.

"One of the key features of this computer is the size and power available to the user," says Dave Kirkey. "The VIP SX386 gives users the capability to customize and/or expand the system to meet most application requirements while retaining total IBM AT-compatibility," Kirkey added. The new VIP SX386 "modular" plug-in CPU provides the user with an upgradable path to 80386 technology for future systems, CAD/CAM, desktop publishing and scientific/engineering math-intensive applications.

-- more --

The 5-slot backplane offers even greater expandability by providing a total of five AT-compatible expansion slots. "Typically, the serial port, AT-compatible disk controller and floppy controller occupy up to three slots on a standard AT-compatible computer. ALR has embedded these features onto the backplane of the VIP SX386, leaving valuable slot space for the addition of internal modems, data communications and interconnect boards that the user may need," states Kirkey.

The two VIP SX386 computers offered carry a list price of \$2,395 for the basic model with 512-Kbyte RAM, 1.44-Mbyte 3.5-inch, PS/2-compatible floppy disk drive, floppy disk controller with circuitry on board, hard disk controller, and a 101-key enhanced keyboard. ALR will make available an enhanced model that will include a 3.5-inch 40-Mbyte 28 millisecond embedded hard disk drive priced at \$3,695. The new VIP SX386 units will be available for shipment in December 1988 through select ALR authorized resellers nationwide.

The VIP SX386 can function as a powerful personal computer or can be incorporated into a network installation using ALR's Ethernet or ARCNET adapter cards. With ALR's DXLAN solution, the VIP SX386 supports DOS-to-UNIX communications. Also available from ALR is a complete line of desktop microcomputers, multi-user systems and complete network solutions certified by Novell. ALR's VIP SX386 units will be on display at Fall Comdex in booth #1110 at the Bally's hotel. For more information contact:

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PRESS RELEASE



FOR IMMEDIATE RELEASE

ADVANCED LOGIC RESEARCH, INC. SIGNS NATIONWIDE THIRD-PARTY SERVICE AGREEMENT WITH INTEL CORPORATION

Irvine, CA, Nov 8, 1988 -- Advanced Logic Research, Inc., a personal computer manufacturer, today signed an agreement with Intel Corporation to offer nationwide "Carry-In" warranty service on a wide variety of ALR products. The ALR/Intel maintenance program will also offer optional "On-Site" service provided by Intel for selected ALR products on a nationwide basis. Presently Intel has over 50 service offices throughout the U.S. with more planned. Warranty contracts are available through ALR and ALR authorized dealers.

"Selecting Intel as ALR's third-party service vendor was an easy decision for ALR. Intel is a well known player in the microcomputer arena and with top level experience in desktop publishing, multi-user and networking environments, we felt the match was perfect," says Dave Kirkey, vice president of sales at ALR. Kirkey continues to say, "As ALR products move into the corporate marketplace, it is important for ALR to provide our customers and dealers with a dedicated vendor service they can rely on. ALR will be able to provide service throughout the continental U.S. basin, thus making serviceability more convenient for our customers who are not at local site."

A typical fee for the first year is \$40 a month for On-Site coverage. This represents coverage for ALR's model 386/220 with a 40-Mbyte hard disk drive. Optional extended warranty coverage for both "Carry-In" and "On-Site" are presently being set.

-- more --

Advanced Logic Research, Inc. designs, manufactures and distributes a full line of 80286 and 80386 microcomputer products, including standalone personal computers, multi-user platforms and total network solutions. ALR products have gained worldwide acclaim for their performance and competitive pricing.

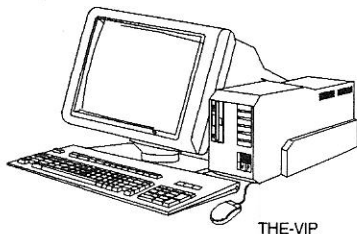
A promotional program for the ALR/Intel Maintenance service will be announced at Fall Comdex, Las Vegas, NV., November 14-18th. Persons interested in ALR/Intel Maintenance Program should plan to visit ALR at Fall Comdex in the Bally's Hotel, booth #1110.

For further information contact:

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or Genny Ortegon
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- compact design
- 3 high-performance processors to chose from: 80386SX 16-MHz with 82385 cache controller and 16-KB cache RAM, 80386 20-MHz, and 80286 12.5-MHz
- 5-slot backplane with floppy/hard disk controller circuitry on the backplane
- four 16-bit and one 8-bit slots
- 40-MB embedded hard disk drive with access time of < 28ms
- serial port (mouse port)
- universal input power supply (110/220VAC)
- Phoenix BIOS
- compatible with industry-standard hardware and software
- serviceability



VIP SX386 with optional monitor and mouse

VIP SX386 PERSONAL COMPUTER

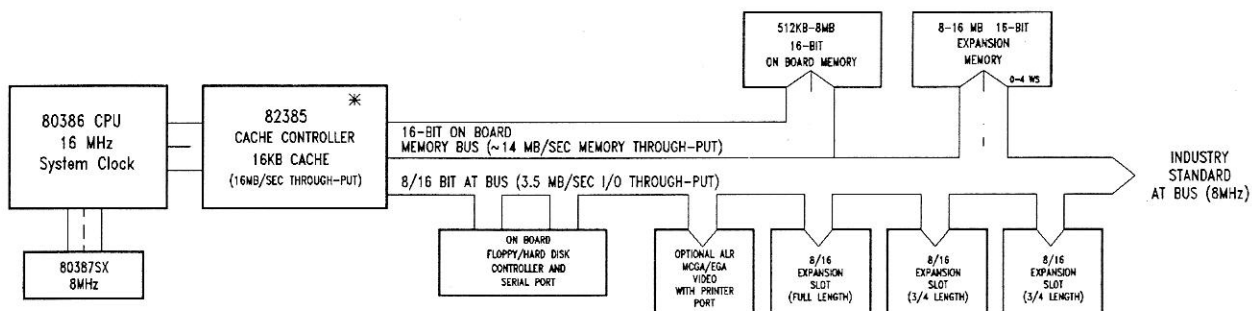
ALR's SX386 personal computer (PC) is the first 80386SX-based microcomputer that incorporates the 82385 cache controller with 16-KB 35ns cache RAM and dual bus architecture. Packaged in a newly-designed chassis measuring only 4.5"W x 7" H x 15" D, it features a modular plug-in CPU board and a 5-slot backplane. The system backplane contains an AT-interface hard disk controller, floppy disk controller, and serial port, eliminating the need to occupy valuable slots.

The VIP SX386 includes a 1.44-MB 3-1/2 inch IBM PS/2-compatible floppy disk drive, 512-KB RAM expandable to 8-MB on the CPU card, and a 101-key enhanced keyboard. An enhanced SX386 version comes with a 40-MB (< 28ms) embedded hard disk drive.

The SX386 can function as a powerful standalone personal computer or can be incorporated into a network installation using ALR's Ethernet or ARCNET adapter cards.

Features	Benefits
plugable CPU card	flexible modular design; easily serviced; easily upgraded - 80386SX 16-MHz - 80386 20-MHz - 80286 12.5-MHz
cache memory controller with 16-KB cache RAM	eliminates wait states 95% of the time; approximately 35% faster than the Compaq DeskPro 386s
3-1/2 inch 1.44-MB floppy disk drive	PS/2-compatible; allows more data storage per floppy
small foot print	4.5" x 15" foot print, (50% smaller than typical AT systems)
quiet operation	50% quieter than typical AT systems
wide video options	supports monochrome (HGC), EGA, VGA video with parallel printer port

ALR VIP SX386 Architecture



ALR'S VIP SX386 ARCHITECTURE.

*NOTE: 82385 CACHE CONTROLLER CAN CACHE FROM 0-16KB OF MEMORY.

SX386ARC

General CPU/Memory

Performance

Using Power Meter Version 1.5, a product of Database Group, Inc., rating CPU/Memory in Power Meter Performance Index (PMU).

ALR VIP SX386 (16-MHz)	394 PMU
Compaq Portable 386 (20-MHz)	369 PMU
IBM PS/2 Model 80-071 (16-MHz)	308 PMU
Compaq DeskPro 386s (16-MHz)	243 PMU
NEC PowerMate SX (16-MHz)	238 PMU
ALR FlexCache 25386 (25-MHz)	700 PMU
ALR FlexCache 20386 (20-MHz)	558 PMU
Compaq DeskPro 386/20 (20-MHz)	552 PMU
ALR FlexCache 25386 (25-MHz)	5.98 MIPS
ALR FlexCache 20386 (20-MHz)	4.71 MIPS
ALR VIP SX386 (16-MHz)	3.42 MIPS
NEC PowerMate SX (16-MHz)	2.53 MIPS
Compaq DeskPro 386s (16-MHz)	2.49 MIPS

TECHNICAL SPECIFICATIONS

Processor	Intel 16-bit 80386SX CPU with 16-MHz system clock (VIP SX386) Intel 32-bit 80386 CPU with 20-MHz system clock (VIP 20386) Intel 16-bit 80286 CPU with 12.5-MHz system clock (VIP 12286)
Cache	Intel 82385 cache controller with 16-KB 35ns cache RAM
Coprocessor (optional)	Intel 80387SX support with 16-MHz (VIP SX386) Intel 80387 support with 20-MHz (VIP 20386) Intel 80287 support with 8-MHz (VIP 12286)
Memory	512-KB of RAM expandable to 8-MB on the main system board (VIP SX386) 1-MB of 32-bit 80ns RAM expandable to 10-MB with optional RAM-PAK (RAM-PAK available on VIP 20386) 512-KB of RAM expandable to 5-MB on the main system board (VIP 12386)
Expansion Slots	Five industry-standard PC/AT-compatible slots consisting of one 8-bit and four 16-bit slots
Storage Devices	1.44-MB 3-1/2 inch floppy disk drive with connector on board 40-MB < 28 ms hard disk drive (Model 40)
Hard Disk Controller	embedded on the hard drive; circuitry on the backplane
I/O Ports	one serial
Physical Dimensions	7" H x 4.5" W x 15" D
Weight	17 lbs.
Power Supply	65 watts
<i>AC Input</i> <i>DC Output</i>	100 VAC to 260 VAC (universal input) 2.5A @ + 12VDC $\pm 5\%$.3A (max.) @ -12V $\pm 10\%$ 6A (max.) @ 5V $\pm 5\%$.3A (max.) @ 12V $\pm 10\%$
Temperature	0 to 40 degrees C
Humidity	0 to 90% non-condensing
Altitude	8,000 feet

Versions of the VIP Personal Computers

Standard Configuration

Version Model	VIP 12286		VIP SX386		VIP 20386	
	10	40	10	40	10	40
80286 12.5-MHz CPU card	X	X				
80386SX 16-MHz CPU card			X	X		
80386 20-MHz CPU card					X	X
82385 cache controller with 16-KB 35ns cache RAM			X	X		
80287 8-MHz support	X	X				
80387SX 16-MHz support			X	X		
80387 20-MHz support					X	X
Phoenix BIOS	X	X	X	X	X	X
5-slot backplane	X	X	X	X	X	X
AT-interface floppy controller	X	X	X	X	X	X
AT-interface hard disk controller	X	X	X	X	X	X
one serial port	X	X	X	X	X	X
512-KB of 16-bit system memory	X	X	X	X		
1-MB of 32-bit system memory					X	X
memory expansion (max.)	5	5	8	8	10*	10*
1.44-MB 3-1/2" floppy drive	X	X	X	X	X	X
AT-type 3-1/2" embedded hard drive (40-MB)		X		X		X
101-key enhanced keyboard	X	X	X	X	X	X
real-time clock	X	X	X	X	X	X
65-watt universal input power supply	X	X	X	X	X	X

*requires ALR RAM-PAK

Versions of the VIP Personal Computers

Enhanced Configuration - Options

Version Model	VIP 12286		VIP SX386		VIP 20386	
	10	40	10	40	10	40
ALR 256-KB memory module	X	X	X	X	X	X
ALR 1-MB memory module	X	X	X	X	X	X
ALR RAM-PAK					X	X
80287 8-MHz coprocessor	X	X				
80387SX 16-MHz coprocessor			X	X		
80387 20-MHz coprocessor					X	X
Hercules-compatible MGA with parallel printer port	X	X	X	X	X	X
enhanced graphics adapter (EGA) with parallel printer port	X	X	X	X	X	X
video graphics array (VGA) with parallel printer port	X	X	X	X	X	X
monochrome monitor	X	X	X	X	X	X
EGA or VGA color monitor	X	X	X	X	X	X
floppy/hard disk controller	X	X	X	X	X	X
tape backup system	X	X	X	X	X	X
network interface card	X	X	X	X	X	X
Ethernet	X	X	X	X	X	X
ARCNET	X	X	X	X	X	X
integrated tilt stand	X	X	X	X	X	X

ORDERING INFORMATION

VIP SX386	Model 10	\$2,395.00
	Model 40	\$3,695.00
VIP 20386	Model 10	\$2,695.00
	Model 40	\$3,995.00
VIP 12286	Model 10	\$1,795.00
	Model 40	\$3,095.00

MICROFLEX 7000 COMPETITIVE FEATURES COMPARISON

MFGR	ALR	IBM	TANDY
Model Model #	MICROFLEX MC7000	PS/2 70-A21	5000MC
CPU	80386	80386	80386
Speed (MHz)	25	25	20
Wait States	0	0	0
Co-Processor	80387, WT3167	80387	80387,WT3167
Real Time Clock	Yes	Yes	Yes
BIOS	Phoenix	ABIOS	Phoenix
Standard RAM	2MB (80ns)	2MB (80ns)	2MB (100ns)
Maximum RAM on Board	16MB	8MB	8MB
Cache Memory	128Kb (25ns)	64Kb	32Kb (35ns)
Cache Control	82385	82385	82385
ALR Proprietary Cache Controller	Yes	No	No
Floppy Drive	1.44, 3.5"	1.44, 3.5"	1.44 , 3.5"
Hard Drive (MB)	120, 300	120	40,80,110,120,140, 170,344
Internal Hard Drive Expansion	400, 600	none	none
Hard Disk Speed	< 28, < 15ms	23ms	15ms
Controller Type	ESDI	ESDI	ESDI,SCSI,ST506
Keyboard	101	101	101
Disk Cache (H/W)	32KB	none	none
Graphics on Board	VGA	VGA	VGA
Resolution	600 x 800	640 x 480	640 x 480
Serial Port	1	1	1
Parallel Port	1	1	1
Mouse Port	1	1	1
Total Slots	8	3	5
32-bit	3	2	2
16-bit	5	1	3
Operation System Support	MS-DOS OS/2 XENIX AIX	MS-DOS OS/2 AIX	MS-DOS MS OS/2 XENIX
Util/Setup	POS	POS	POS
**Pricing	\$9,499-\$12,499	\$11,295	\$4,999-\$7,398

**Pricing depends on model configuration

ALR 80386SX FEATURE COMPARISON

Features & Options	ALR VIP SX386	ALR FlexCache SX386	COMPAQ Deskpro 386s	NEC PowermateSX	EVEREX STEP 386 is
CPU	80386SX	80386SX	80386SX	80386SX	80386SX
Speed (MHz)	16/8	16	16	16	16
Wait States	0	0	0	0	0
CoProcessor	80387SX	80387SX	80387SX	80387SX	80387SX
UpGradable CPU	80386, 20 MHz	80386, 20 MHz	none	none	none
RT Clock & Bat	Yes	Yes	Yes	Yes	Yes
RAM (Std)	512KB	1 MB	1 MB	2 MB	1 MB
Memory Expansion on board	8MB	8 MB	1MB	2MB	4MB
Memory Expansion	16 MB	16MB	13MB	16MB	16MB
Memory Cache	16KB	16KB	none	none	none
Floppy Drive (Std)	1.44MB	1.2MB 1.44MB, 360KB	1.2MB 1.44MB, 360KB	1.2MB 1.44, 360KB	1.44 MB
Disk Drive (Std) access	0/40MB < 28 ms	0/40 MB < 28 ms	0/20/40MB < 29/29 ms	42/140MB 28/18ms	40/80/160 MB
Disk Controller	embedded AT	MFM	embedded AT	ST506, ESDI	n/a
Tape MB (Opt)	40 MB	40 MB	40/130MB	40MB	n/a
Keyboard	101	101	101	101	101
Graphics	VGA (opt)	VGA (opt)	VGA	VGA (opt)	none
Resolution	600 x 800	600 X 800	640 x 480	640 x 480	none
Serial	1	1	1	1	1
Parallel	0	1	1	1	1
Total Slots	5	6	5	6	8
16-bit	0	1 (CPU)	1	1	0
8/16 bit	4	5	4	4	6
8-bit	1	0	0	1	2
Dimensions (H X W X L)	7 X 4.5 X 15	6 X 15 X 17	5.9 X 14.8 X 15.8	6.3 X 16.5 X 16.5	n/a
Operating System (opt.)	MS-DOS, OS/2 XENIX	MS-DOS, OS/2 XENIX	MS-DOS, OS/2 XENIX	*MS-DOS,*GW BASIC *WINDOWS/386	n/a
Setup Utilities	Setup	Setup	Setup	Setup	Setup
Warranty (months)	12	12	12	12	12
MSRP	\$2,395 \$3,695	\$2,595 \$3,799	\$3,799-\$4,799 \$5,199	\$4,495	**\$3,299 \$3,899, **\$5,099

* Introductory promotion offer

** 1 MB and 4 MB options available

- modular design
- 32-bit 16-MHz 80386SX CPU
- 82385 cache controller with 16-KB cache RAM
- 6-slot backplane with integrated on board I/O
- five 16- or 8-bit expansion slots
- one serial port
- one parallel port
- 1-MB on board memory expandable to 8-MB; maximum 16-MB with expansion card
- high-performance MFM controller with look-ahead cache and 40-MB hard disk drive < 28ms (Model 40)
- Phoenix BIOS
- compatible with industry-standard hardware and software

FlexCache SX386

The FlexCache SX386 is an extension of ALR's SX386 product line. It uses the new 80386SX microprocessor, 82385 cache controller with 16-KB cache RAM, and ALR's famous FlexCache dual bus architecture. Another key feature of the FlexCache SX386's performance is its *two-way set associative* cache design. This is better than *direct mapping* at the same cache size. Additionally, *associative mapping* implements the "least recently used" (LRU) algorithm which replaces entries on a LRU basis to improve efficiency of the hit rate.

A six-slot backplane features the plug-in SX386 CPU card. The system backplane houses serial and parallel ports as well as circuitry for the floppy and hard disk controllers. A 1.2-MB 5-1/4 inch floppy disk drive comes standard. So does 1-MB of high-speed RAM, expandable to 8-MB on board and 16-MB with optional memory expansion card.

The 6" H x 15" W x 17" D chassis accommodates four internal 5-1/4 or 3-1/2 inch storage devices. An enhanced version comes with a high-performance MFM controller, look-ahead cache and 40-MB (< 28ms) hard disk drive.

Features

Benefits

plugable CPU cards

flexible modular design; easily serviced; easily upgraded

cache memory controller with 16-KB cache RAM and two-way set associative

eliminates wait states 95% of the time; approximately 35% faster than Compaq's DeskPro 386s

four internal storage devices

allows for maximum configuration flexibility

small footprint

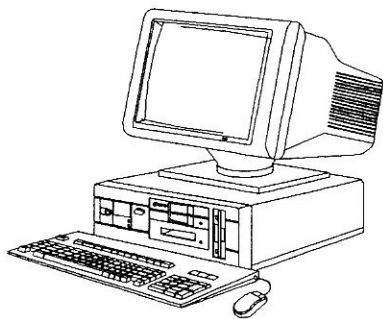
6" H x 15" W x 17" D (30% smaller than typical AT systems)

integrated on board I/O controllers

save valuable slots

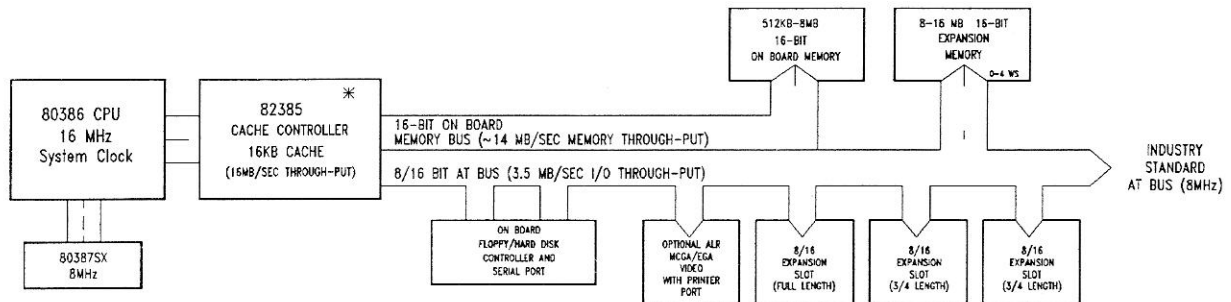
front-mounted power switch

easier access



FlexCache SX386 with optional monitor and mouse

ALR FlexCache SX386 Architecture



ALR'S VIP SX386 ARCHITECTURE.

*NOTE: 82385 CACHE CONTROLLER CAN CACHE FROM 0-16KB OF MEMORY.

SX386ARC

General CPU/Memory

Performance

Using Power Meter Version 1.5, a product of Database Group, Inc., rating CPU/Memory in Power Meter Performance Index (PMU).

ALR FlexCache 25386 (25-MHz)	700 PMU
ALR FlexCache 20386 (20-MHz)	558 PMU
Compaq DeskPro 386/20 (20-MHz)	552 PMU
ALR FlexCache SX386 (16-MHz)	394 PMU
Compaq Portable 386 (20-MHz)	369 PMU
IBM PS/2 Model 80-071 (16-MHz)	308 PMU
Compaq DeskPro 386s (16-MHz)	243 PMU
NEC PowerMate SX (16-MHz)	238 PMU
ALR FlexCache 25386 (25-MHz)	5.98 MIPS
ALR FlexCache 20386 (20-MHz)	4.71 MIPS
ALR FlexCache SX386 (16-MHz)	3.42 MIPS
NEC PowerMate SX (16-MHz)	2.53 MIPS
Compaq DeskPro 386s (16-MHz)	2.49 MIPS

TECHNICAL SPECIFICATIONS

Processor	Intel 32-bit 80386SX CPU with 16-MHz processor clock
Coprocessor (optional)	Intel 80387SX support with 16-MHz
Memory	1-MB of RAM expandable to 8-MB on the main system board; up to 16-MB with optional expansion memory card
Expansion Slots	Five industry-standard PC/AT-compatible slots consisting of one 8-bit and four 16-bit slots
Storage Devices	1.2-MB 5-1/4 inch floppy disk drive 40-MB < 28 ms hard disk drive (Model 40)
Hard Disk Controller	high-performance 1:1 interleave MFM controller with look-ahead cache (Model 40)
I/O Ports	one serial port and one parallel port
Physical Dimensions	6" H x 15" W x 17" D
Weight	35 lbs. (max.)
Power Supply	150 watts
<i>AC Input</i>	110 or 220 Volts
<i>DC Output</i>	4.2A @ +12V $\pm 5\%$.3A (max.) @ -12V $\pm 10\%$ 18A (max.) @ 5V $\pm 5\%$.3A (max.) @ -5V $\pm 10\%$
Temperature	0 to 40 degrees C
Humidity	0 to 90% non-condensing
Altitude	8,000 feet

- IBM® PS/2™-compatible Micro Channel 32-bit architecture
- Phoenix BIOS
- 80386 32-bit CPU with 25-MHz system clock
- ALR proprietary 128-bit "pre-fetch" cache 128-KB 25ns static RAM cache
- optional 80387 or Weitek 3167 coprocessor
- 2-MB of 128-bit 80ns dynamic RAM expandable to 16-MB
- automatic memory configuration upon power-up
- up to 5 internal peripheral devices
- eight slot expansion: three 32-bit and five 16-bit slots
- shock-mounted 120-MB (< 28ms) or 300-MB (< 16ms) hard disk
- 1.44-MB 3-1/2 inch floppy
- 1:1 interleave ESDI hard disk controller with up to 32-KB look-ahead cache and up to 1.815 KB/sec transfer rate
- 16-bit VGA on board
- one serial, parallel, mouse, and keyboard ports
- rugged floor standing system with easy access to peripherals
- dual fan for system reliability

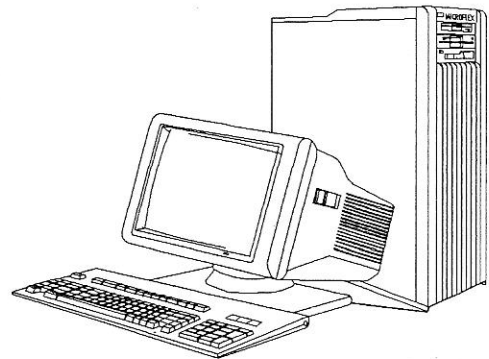
MicroFlex 7000

The MicroFlex 7000 is ALR's IBM PS/2-compatible Micro Channel-based system. It enhances IBM's PS/2 series by providing a 32-bit 80386 25-MHz processor with the enhanced ALR proprietary memory architecture of a wider cache bus and larger cache size. Its design is based on a 128-bit bus and 128-KB of 25ns static cache memory on the system. On board sockets are also available for Intel®'s 80387 or Weitek's 3167 coprocessor.

Features	Benefits
IBM PS/2-compatible Micro Channel bus architecture	32-bit I/O bus with DMA operation; allows multiple intelligent I/O processors to run simultaneously
32-bit 25-MHz 80386 CPU	25% faster than standard 20-MHz systems
128-bit 128-KB pre-fetch cache	each access results in a 128-bit RAM access to the 128-KB cache; offers more efficient memory management for multi-user, multi-tasking environments; supports current 8-, 16-, and 32-bit software
fast ESDI disk controller with up to 32-bit cache and speed of up to 1.875 KB/sec	50% faster than standard ESDI disk controller
up to 600-MB internal disk storage; over 2-GB external disk storage	perfect for large multi-user/network applications
up to 16-MB of 32-bit 80ns static RAM on system board	large memory capacity assures future investment in software operating systems (requiring large amounts of memory) and applications; no memory expansion card necessary
enhanced 16-bit VGA on board	provides up to 800 x 600 graphics resolution
8-slot expansion	upward expandability through IBM PS/2-compatible expansion slots
3-1/2 inch 1.44-MB floppy disk drive	PS/2-compatible; allows more data storage per floppy

TECHNICAL SPECIFICATIONS

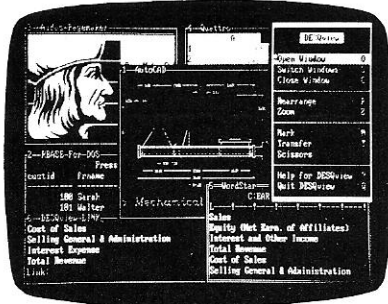
Processor	Intel 32-bit 80386 CPU with 25-MHz system clock
Cache	ALR proprietary "pre-fetch" 128-KB 25ns static RAM cache
Coprocessor (optional)	Intel 80387 or Weitek 3167 support with 25-MHz system clock
Memory	2-MB of 32-bit 80ns RAM expandable to 16-MB on the system board (IBM™-compatible SIMMs)
Video	On board VGA supporting 16-bit 800 x 600 graphics resolution with connectors; supports both multi-sync and VGA monitors
I/O Interface	One mouse port, one serial port, one parallel port
Expansion Slots	IBM-compatible Micro Channel slots consisting of three 32-bit and five 16-bit slots
Storage Devices <i>Standard</i>	1.44-MB 3-1/2 inch floppy disk drive 120-MB < 28 ms (Model 7000-120A21) 300-MB < 16 ms (Model 7000-300A21)
<i>Optional</i>	1.2-MB 5-1/4 inch floppy disk drive, 150-MB streamer tape, 120-MB < 28ms fixed disk drive, 300/600-MB < 16 ms fixed disk drive
Hard Disk Controller	1:1 interleave ESDI controller up to 32-KB cache and transfer rate of up to 1.875 KB/sec
Physical Dimensions	17.5" D x 23" H x 7.4" W
Weight	70 lbs. (max.)
Power Supply <i>AC Input</i> <i>DC Output</i>	200 watts 110-VAC or 230 VAC 20A @ 5V 7.3A @ 12V .5A @ -5V .5A @ -12V
Temperature	0 to 40 degrees C
Humidity	0 to 90% non-condensing
Altitude	8,000 feet



MicroFlex 7000 with optional monitor

Multi-User XENIX/UNIX & DOS Networking Solution

- Colorgraphics MS/PC-DOS workstations use multi-user XENIX system as a file server
- allows MS/PC-DOS commands for accessing remote XENIX hosts through NETBIOS and LAN Manager
- Telnet - terminal emulation into XENIX system using TCP/IP
- FTP - file transfer between multi-brand systems supporting TCP/IP
- eliminates the need for a gateway between users and network resources
- supports SMB, Advanced NetWare, and LAN Manager servers
- compatible with windowing software such as Desqview
- IEEE 802.3 Ethernet standard
- high-performance 10 Mbit/sec transfer rate
- ALR's quality and service



Windows-compatible

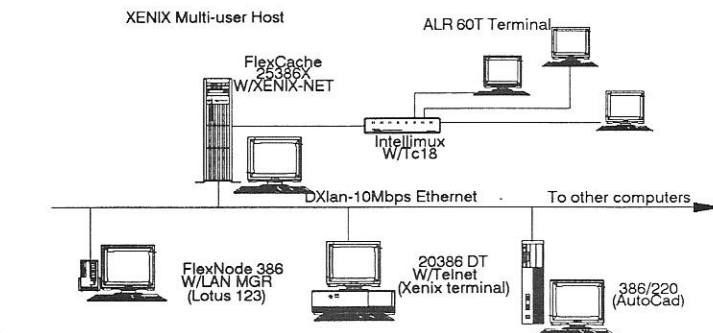
ALR DOS-XENIX-LAN (DXlan)

DXlan is a unique high-speed (10 Mbit/sec), cost-effective Ethernet solution that connects MS/PC-DOS workstations to a multi-user SCO XENIX system. MS/PC-DOS workstations can now access the SCO XENIX multi-user host as a file server by using simple DOS commands (for example, dir, copy, rename). The same MS/PC-DOS workstations can access an optional Novell server. Thus, DXlan brings the best of LAN and XENIX multi-user solutions together for total connectivity. With the Ethernet network, connectivity to other mini-computers and mainframes is also available.

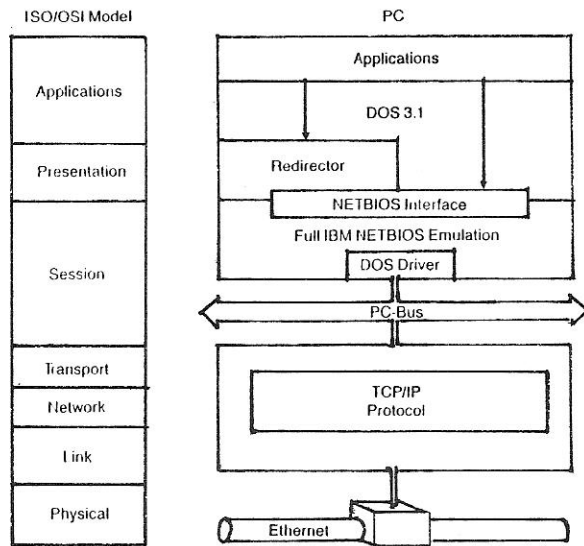
The LAN hardware is an IEEE 802.3 Ethernet standard. It operates at 10 Mbit/sec using CSMA/CD protocol. It has a maximum distance of 1000 feet when used without repeaters. The card has a DB-15 connector for external transceiver and BNC connector using the on-board transceiver for direct connection with an RG-58 coax cable. For the SCO UNIX host, ALR offers an intelligent Ethernet card. This card has a 16-bit 80186 CPU and 256K buffers to satisfy the high traffic load of a server. For the DOS workstation, ALR offers a cost-effective, 8K buffered, shared memory Ethernet card.

ALR offers a full range of LAN software support that covers the entire ISO/OSI model. ALR offers TCP/IP for the link, network and transport layers, and NETBIOS for the session layer. At the presentation layer, ALR offers SCO XENIX-NET to provide file-and-resource sharing for the multi-user host. For the DOS workstation, ALR offers an MS-NET compatible LAN Manager. This allows a DOS command to access a remote multi-user host acting as a file server. Optional software such as Telnet and FTP help expand the functionality of the DOS workstation. Telnet provides terminal emulation to other hosts that support TCP/IP. FTP provides file transfer capability between heterogeneous computer systems that support TCP/IP ranging from mini-computer to mainframes.

ALR's DXlan works with other ALR products to provide a complete connectivity solution. Users can choose from ALR's 20386X and 25386X SCO UNIX platform, Genesys NOVELL server, and workstations from its many personal computers such as the DART, Flexnode, and 386s.



Color graphics-MsDos/PCDos workstations,\$595 per connection on the workstation.



FTP: File transfer software
Telnet: Terminal emulation

SCO XENIX-NET: provide file and resource sharing
MS-NET: LAN manager function for DOS workstations

NETBIOS: DOS file access support over the network

TCP: Data packets processing

IP: address resolution

Ethernet card: intelligent version for server; standard version for workstations

Multi-User SCO XENIX HOST

ALR MS-DOS Workstation

LAN Hardware: high-performance intelligent Ethernet card

Cost-effective buffered Ethernet card

LAN Software: TCP/IP w/ NETBIOS for SCO UNIX
Telnet
FTP
SCO XENIX-NET v 1.2

TCP/IP with NETBIOS for MS-DOS
Telnet for MS-DOS
FTP for MS-DOS
MS-NET compatible LAN Manager

Other Software Required: SCO UNIX/386 v 2.2

MS-DOS or PC-DOS 2.0 or later

Optional Software: None

Desqview for multi-windowing

Suggested Computer System: ALR 20386X and 25386X

ALR DART, FlexNode, 386s

Ordering Information

Suggested List Price

Starter Package:	One server kit: intelligent Ethernet card with TCP/IP, FTP, Telnet and XENIX/NET 386 for SCO XENIX/386	\$2,160.00
	One workstation kit: Ethernet card with TCP/IP for MS-DOS	\$ 595.00
Other Required Software::	SCO XENIX 386 v2.2	\$ 695.00
	SCO XENIX-NET/386 v1.2 (single server license)	\$ 695.00
	MS-DOS/PC-DOS 2.0 and above	\$ 125.00
Optional Software:	Telnet and FTP for MS-DOS/PC-DOS	\$ 75.00

For additional workstation or fileserver, the workstation kit and server kit can be purchased separately, as needed.

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ALR DXlan - VP/IX Comparison

Feature	ALR DXlan	Phoenix VP/IX
Processing	Distributed (multiple processor)	Single processor
User System	Any PC or PC/AT	Terminal
Performance (speed)	10 Mbit/sec	9.6 Kbit/sec
Graphics Support	Yes	No
Memory Requirement Per User	512-KB	1-MB/session on the host
Maximum Number of Users	≤ 20 (limited only by Ethernet specification)	≥ 10 (due to performance penalty)
Overall System Performance (degrading with increasing number of users)	Minimum	Fast
Compatibility with PC Software	More	Less
Connectivity to Other Systems (DEC, IBM, HP)	Yes	No
Can co-exist on the same network as Novell, using TCP/IP (Novell compatible)	Yes	No
Cost Per User	\$595	More