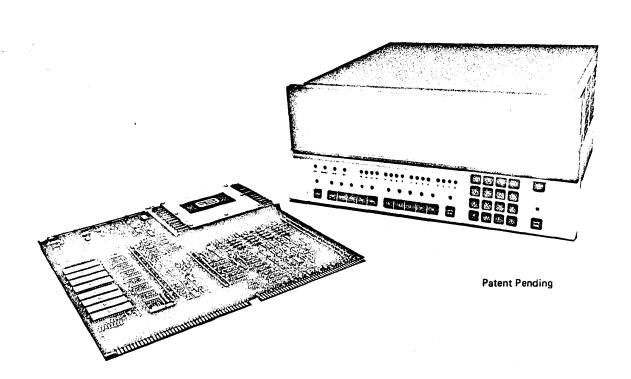


COMPUTER AUTOMATION, INC. the NAKED MINI™company

PRICE LIST

NAKED MINI/LSI

ALPHA/LSI



SEMICONDUCTOR MEMORIES

CORE MEMORIES

L

NAKED MINI LSI central processors have 162 major instructions, including hardware multiply/divide, doubleword normalize, memory scan and extensive byte capability. The five vectored priority interrupts are expandable to 256 and two direct memory channels may be increased to 64. The MaxiBus architecture provides direct memory access as a standard feature. Integral memory is mounted on the processor board. Additional semiconductor and core memories may be added in any combination up to 262,144 words with appropriate expansion chassis. Parity systems are configured only from core memory modules which are not integral. The NAKED MINI LSI is available only in minimum quantities of ten units.

MODEL	DESCRIPTION	PREREQ	REQ'D SLOTS	LIST PRICE
10110-01	NAKED MINI LSI with 1K 16-bit words of integral semiconductor memory	none	1	\$ 990
10110-02	2K	none	1	1,125
10110-04	4K	none	1	1,200
10100-04	NAKED MINI LSI with 4K 16-bit words of integral core memory	none	1	1,650
10100-08	8K	none	1	2,200
10100-16	16K	none	2	4,300
ALPHA LS				L

ALPHA LSI central processors have 162 major instructions, including hardware multiply/divide, doubleword normalize, memory scan and extensive byte capability. The five vectored priority interrupts are expandable to 256 and two direct memory channels may be increased to 64. The MaxiBus architecture provides direct memory access as a standard feature. The ALPHA LSI includes a chassis with power supply and control console. Five slots are available for processor, memory and option cards. Integral memory is mounted on the processor board. Additional semiconductor and core memories may be added in any combination up to 262,144 words with appropriate expansion chassis. Parity systems are configured only from core memory modules which are not integral.

10210-01	ALPHA LSI with 1K 16-bit words of integral semiconductor memory	none	1	1,780
10210-02	2K	none	1	1,915
10210-04	4K	none	. 1	1,990
10200-04	ALPHA LSI with 4K 16-bit words of integral core memory	none	1	2,440
10200-08	· 8K	none	1	2,990
10200-16	16K	none	2	5,090
10201-04	ALPHA LSI with 4K 16-bit words of core memory with parity	none	2	2,890
10201-08	8K	none	2	3,590
10201-16	16K	none	3	6,290

Semiconductor memories operate at 1,600 nanoseconds read or write cycle. Each memory module requires a full chassis

slot. Parity is not available on semiconductor memories.

11530-01	Semiconductor Memory Module 1K 16-bit words	10xx0-xx	1	930
11530-02	2K	10xx0-xx	1	1,100
11530-04	4K	10xx0-xx	1	1,500

Core memories operate at 1,600 nanoseconds full cycle time. Each memory module requires a full chassis slot. Systems with parity are configured from core memory modules which are not integral.

11510-04 11510-08	8K	10xx0-xx 10xx0-xx	1	2,300
11511-04	Core Memory Module 4K 16-bit words plus parity	10xx0-xx	1	2,200
11511-08	8K	10xx0-xx	1	2,900

PROCESSOR OPTIONS L

requisite for interface is	Restart is mounted on the processor board and is highly recommended for all proper mounting all other processor options. Combinations of these may be defined by a prerequisite for EIA interface. Options must be factory installed. An additional factory retrofit and test.	y adding dash nu	mbers. T	eletype
12500-00	Power Fail Restart (PFR) monitors secondary voltage to provide an orderly shut-down and start-up upon detection of power fluctuations.	10xxx-xx	-	250
12505-01	Basic Variables (BV) permits offset of processor interrupts, separate enabling of power fail interrupt and sense register jumpering for operation without console.	10xx0-xx	-	150
12505-02	Teletype Interface (TTI) for modified ASR 33 or 35. Includes provision for program control on/off, step read and echo. Will control teletype or CRT terminal in half duplex or full duplex mode with current loop interface and selectable baud rate.	12505-01	-	100
12505-04	Real Time Clock (RTC) provides jumper selectable frequencies of 0.1, 1.0, 10.0 KHz, twice the AC line voltage or an external source. Includes two interrupts.	12505-01	-	125
12505-08	Autoload (AL) uses bootstrap and binary loader on 256 x 16 bit ROM to load and execute program or first record from selected peripheral device. Programmed for teletype, paper tape reader, digital cassette, 9-track magnetic tape and moving head disc.	12505-01	-	90
12505-16	EIA RS 232 Interface (EIA) may be added to the Teletype Interface to permit control of CRT terminal with EIA interface.	12505-02	-	75
	D PROCESSOR OPTION COMBINATIONS ng standard combinations of processor options are available on short delivery.			L
		100		050
12505-03	Basic Variables and Teletype Interface (BV/TTI)	10xx0-xx	-	250
12505-07	Basic Variables, Teletype Interface and Real Time Clock (BV/TTI/RTC)	10xx0-xx	-	375
12505-11 12505-15	Basic Variables, Teletype Interface and Autoload (BV/TTI/AL) Basic Variables, Teletype Interface, Real Time Clock and Autoload	10xx0-xx 10xx0-xx	-	340 465
	(BV/TTI/RTC/AL)			
GENERAL	PURPOSE INPUT/OUTPUT OPTIONS			Α
	include control and sense lines and generate interrupts. Each occupies 1/2 slotings and specifications.	and includes mat	ing connec	etor,
13213-00	16-bit Digital Input/Output Module. Includes sense and interrupt lines. Input and output registers may be used as 16-bit words or 8-bit bytes. DTL/TTL compatible.	10xx0-xx	1/2	500
13214-xx	32-bit Relay Output Module. Operates as one 32-bit, two 16-bit or four 8-bit outputs. Has two interrupt lines00 has 1/2 amp 10 watt relay, -10 has 1 amp 10 watt relay and -20 has 1 amp 30 watt relay.	10xx0-xx	1/2	750
13215-00	32-bit Relay Input Module. Operates as one 32-bit, two 16-bit or four 8-bit inputs. Has two interrupt lines.	10xx0-xx	1/2	750
13216-00	64-bit Output Module. Output used as 64-bit word or groups of 32, 16 or 8-bits with individual strobes and senses. Has one interrupt line.	10xx0-xx	1/2	500

MODEL	DESCRIPTION	PREREQ	REQ'D SLOTS	LIST PRICE
				Α
13219-00	64-bit Input Module. Used as a single 64-bit input or in groups of 32, 16 or 8-bits with individual strobes and acknowledges. Has one interrupt line.	10xx0-xx	1/2	\$ 500
13220-00	16 Channel Priority Interrupt. Provides 16 priority interrupts with acknowledge lines. Permits momentary signals to initiate interrupt action.	10xx0-xx	1/2	500
13222-00	I/O Driver Module. Drives the computer I/O bus up to 25 feet. Buffers internal I/O bus from external noise. Allows multiple CPUs to share common I/O device.	10xx0-xx	1/2	500
14223-00	Utility I/O Interface. General purpose interface provides 12-bit parallel transfers of 8 data and 4 control bits. Provides word and end of record interrupts and other control features.	10xx0-xx	1/2	600
TELETYPE	s			N
22204-00	Teletype, modified ASR-33 with paper tape reader/punch and 16 foot cable	12505-02	0	1,400
22204-10	Teletype, modified ASR-35 with paper tape reader/punch and 16 foot cable.	12505-02	0	4,800
22204-30	Teletype, ASR-33 modified for program controlled on/off with paper tape reader/punch and 16 foot cable.	12505-02	0	1,580
PAPER TAI	PES			Α
18223-11	High Speed Paper Tape Reader System. Includes Remex Model 0305 300 character per second reader, interface, cable, software and checkout.	10xx0-xx	1/2	2,430*
× 14223-00	Interface for paper tape reader.	10xx0-xx	1/2	600
x 15223-1x	Cable (6 foot) for paper tape reader10 Digitronics Model 2540 reader, -11 Remex Model 0305 reader.	14223-00	0	150
19223-10	Software for paper tape reader. Input driver description and diagnostic program.	18223-11	-	200**
26223-1x	Checkout and integration of customer-furnished paper tape reader.	15223-1x	-	100**
18223-20	High Speed Paper Tape Punch System. Includes Remex Model 1075 75 character per second punch, interface, cable, software and checkout.	10xx0-xx	1/2	3,780*
14223-00	Interface for paper tape punch.	10xx0-xx	1/2	600
15223-2x	Cable (6-foot) for paper tape punch20 Model 1075 Remex punch, -21 Facit Model 4070 punch.	14223-00	0	150
19223-20	Software for paper tape punch. Output driver description and diagnostic program.	18223-20		200**
26223-20	Checkout and integration of customer-furnished Remex paper tape punch	15223-2x	-	150**
18223-60	High Speed Paper Tape Reader/Punch combination. Includes Remex Model 3075 300 character per second reader and 75 character per second punch in a single chassis, two interfaces, cables, software and checkout.	10xx0-xx	1	5,790*
14223-00	Interface for paper tape reader.	10xx0-xx	1/2	600
14223-00	Interface for paper tape punch.	10xx0-xx	1/2	600
15223-12	Cable (6 foot) for paper tape reader.	14223-00	0	150
15223-20	Cable (6 foot) for paper tape punch	14223-00	0	150
19223-60	Software for paper tape reader/punch combination. Input and Output driver descriptions and diagnostic program.	18223-60	-	250**
26223-60	Checkout and integration of customer-furnished paper tape reader/punch combination	15223-12	-	250**

^{*}Interface and cable only are discountable.

^{**} Software and integration are not discountable

MODEL	DESCRIPTION	PREREQ	REQ'D SLOTS	LIST PRICE
LINE PRINT	TERS			A
18223-30	Line Printer System. Includes Centronics Model 101, 132 column, 165 char/sec, 60-200 lines/minute, ASCII character set, interface, cable software and checkout.	10xx0-xx	1/2	\$ 5,550*
14223-00	Interface for line printer.	10xx0-xx	1/2	600
15223-3x	Cable (6 foot) for line printer30 for Centronics Model 101, -31 for Data Products Model 2310 or 2410.	14223-00	0 .	150
19223-30	Software for line printer. Includes output driver description and diagnostic program.	18223-30	-	300 ř
26223-3x	Checkout and integration of customer furnished line printer.	15223-3x	-	200**
CARD REA	DERS			A
18223-40	Card Reader System. Includes Bridge Model 8000 300 card per min reader, interface, cable, software and checkout.	10xx0-xx	1/2	3,850*
14223-00	Interface for card reader.	10xx0-xx	1/2	600
15223-40	Cable for Bridge Model 8000 card reader (6 foot)	14223-00	0	150
19223-40	Software for card reader. Includes input driver routine and diagnostic program.	18223-40	-	300 **
26223-4x	Checkout and integration of customer furnished card reader.	15223-4x	-	250**
DIGITAL C	ASSETTES			A
18240-01	Single Digital Cassette System. Includes controller for up to four drives, cable, one cassette drive plus software. Read/write at 12 ips, 800 bpi, search/rewind at 120 ips. Each cassette has two independent tracks with	10xx0-xx	1	2,850
	maximum capacity of 260,000 bytes per track unformatted.			
18240-02		10xx0-xx	1	4,550
18240-02 22240-01	maximum capacity of 260,000 bytes per track unformatted. Dual Digital Cassette System. Includes two drives with a maximum capacity	10xx0-xx 18240-02	1	4,550 2,275
	maximum capacity of 260,000 bytes per track unformatted. Dual Digital Cassette System. Includes two drives with a maximum capacity 1.04 million bytes unformatted.			
22240-01	maximum capacity of 260,000 bytes per track unformatted. Dual Digital Cassette System. Includes two drives with a maximum capacity 1.04 million bytes unformatted. One additional Digital Cassette Drive.	18240-02	0	2,275
22240-01 22240-02 19240-00	maximum capacity of 260,000 bytes per track unformatted. Dual Digital Cassette System. Includes two drives with a maximum capacity 1.04 million bytes unformatted. One additional Digital Cassette Drive. Two additional Digital Cassette Drives Software package for digital cassette. Includes tape formatter, I/O drivers, diagnostic and file manager. Supports versions of BETA-8 Assembler and	18240-02 18240-02	0	2,275 3,975
22240-01 22240-02 19240-00	maximum capacity of 260,000 bytes per track unformatted. Dual Digital Cassette System. Includes two drives with a maximum capacity 1.04 million bytes unformatted. One additional Digital Cassette Drive. Two additional Digital Cassette Drives Software package for digital cassette. Includes tape formatter, I/O drivers, diagnostic and file manager. Supports versions of BETA-8 Assembler and Concordance.	18240-02 18240-02	0	2,275 3,975 750**
22240-01 22240-02 19240-00 MAGNETIC	maximum capacity of 260,000 bytes per track unformatted. Dual Digital Cassette System. Includes two drives with a maximum capacity 1.04 million bytes unformatted. One additional Digital Cassette Drive. Two additional Digital Cassette Drives Software package for digital cassette. Includes tape formatter, I/O drivers, diagnostic and file manager. Supports versions of BETA-8 Assembler and Concordance. TAPE SYSTEMS Magnetic Tape System. Includes interface for up to four tape transports, one Pertec Model 7820 read/write tape transport, 12.5 ips, 800 bpi, 9 track,	18240-02 18240-02 18240-0x	0 0 -	2,275 3,975 750**
22240-01 22240-02 19240-00 MAGNETIC 18224-10	maximum capacity of 260,000 bytes per track unformatted. Dual Digital Cassette System. Includes two drives with a maximum capacity 1.04 million bytes unformatted. One additional Digital Cassette Drive. Two additional Digital Cassette Drives Software package for digital cassette. Includes tape formatter, I/O drivers, diagnostic and file manager. Supports versions of BETA-8 Assembler and Concordance. ETAPE SYSTEMS Magnetic Tape System. Includes interface for up to four tape transports, one Pertec Model 7820 read/write tape transport, 12.5 ips, 800 bpi, 9 track, 7 inch reels plus software.	18240-02 18240-02 18240-0x	0 0 -	2,275 3,975 750** A 7,000*
22240-01 22240-02 19240-00 MAGNETIC 18224-10	maximum capacity of 260,000 bytes per track unformatted. Dual Digital Cassette System. Includes two drives with a maximum capacity 1.04 million bytes unformatted. One additional Digital Cassette Drive. Two additional Digital Cassette Drives Software package for digital cassette. Includes tape formatter, I/O drivers, diagnostic and file manager. Supports versions of BETA-8 Assembler and Concordance. TAPE SYSTEMS Magnetic Tape System. Includes interface for up to four tape transports, one Pertec Model 7820 read/write tape transport, 12.5 ips, 800 bpi, 9 track, 7 inch reels plus software. Additional Pertec Model 7820 tape transport only. Magnetic Tape System with one Pertec Model 7840 read/after write. 12.5 ips,	18240-02 18240-02 18240-0x 10xx0-xx	1	2,275 3,975 750** A 7,000*
22240-01 22240-02 19240-00 MAGNETIC 18224-10 22224-10 18224-20	Dual Digital Cassette System. Includes two drives with a maximum capacity 1.04 million bytes unformatted. One additional Digital Cassette Drive. Two additional Digital Cassette Drives Software package for digital cassette. Includes tape formatter, I/O drivers, diagnostic and file manager. Supports versions of BETA-8 Assembler and Concordance. TAPE SYSTEMS Magnetic Tape System. Includes interface for up to four tape transports, one Pertec Model 7820 read/write tape transport, 12.5 ips, 800 bpi, 9 track, 7 inch reels plus software. Additional Pertec Model 7820 tape transport only. Magnetic Tape System with one Pertec Model 7840 read/after write. 12.5 ips, 800 bpi, 9 track, 7 inch reels plus software.	18240-02 18240-02 18240-0x 10xx0-xx 18224-10 10xx0-xx	0 0 -	2,275 3,975 750** A 7,000* 4,380* 7,600*
22240-01 22240-02 19240-00 MAGNETIC 18224-10 22224-10 18224-20 22224-20	maximum capacity of 260,000 bytes per track unformatted. Dual Digital Cassette System. Includes two drives with a maximum capacity 1.04 million bytes unformatted. One additional Digital Cassette Drive. Two additional Digital Cassette Drives Software package for digital cassette. Includes tape formatter, I/O drivers, diagnostic and file manager. Supports versions of BETA-8 Assembler and Concordance. TAPE SYSTEMS Magnetic Tape System. Includes interface for up to four tape transports, one Pertec Model 7820 read/write tape transport, 12.5 ips, 800 bpi, 9 track, 7 inch reels plus software. Additional Pertec Model 7820 tape transport only. Magnetic Tape System with one Pertec Model 7840 read/after write. 12.5 ips, 800 bpi, 9 track, 7 inch reels plus software. Additional Pertec Model 7840 tape transport only. Magnetic Tape System with one Pertec Model 6860, read/write, 37.5 ips,	18240-02 18240-02 18240-0x 10xx0-xx 18224-10 10xx0-xx 18224-20	0 0 -	2,275 3,975 750** A 7,000* 4,380* 7,600* 4,970*
22240-01 22240-02 19240-00 MAGNETIC 18224-10 22224-10 18224-20 22224-20 18224-30	Dual Digital Cassette System. Includes two drives with a maximum capacity 1.04 million bytes unformatted. One additional Digital Cassette Drive. Two additional Digital Cassette Drives Software package for digital cassette. Includes tape formatter, I/O drivers, diagnostic and file manager. Supports versions of BETA-8 Assembler and Concordance. ETAPE SYSTEMS Magnetic Tape System. Includes interface for up to four tape transports, one Pertec Model 7820 read/write tape transport, 12.5 ips, 800 bpi, 9 track, 7 inch reels plus software. Additional Pertec Model 7820 tape transport only. Magnetic Tape System with one Pertec Model 7840 read/after write. 12.5 ips, 800 bpi, 9 track, 7 inch reels plus software. Additional Pertec Model 7840 tape transport only. Magnetic Tape System with one Pertec Model 6860, read/write, 37.5 ips, 800 bpi, 9 track, 10 1/2 inch reels plus software.	18240-02 18240-02 18240-0x 10xx0-xx 18224-10 10xx0-xx 18224-20 10xx0-xx	0 0 -	2,275 3,975 750** A 7,000* 4,380* 7,600* 4,970* 8,900*

^{*}Interface and cable only are discountable.

**Software and integration are not discountable.

MODEL	DESCRIPTION	PREREQ	REQ'D SLOTS	LIST PRICE
14224-00	Interface for up to four Pertec Model 78x0 or 68x0, 9-track transports. Specify type of transport.	10xx0-xx	1	\$ 2,400
15224-x1	Cable (6 foot) for single magnetic tape transport. x specifies type of tape transport. x Model 1 7820 2 7840 3 6860 4 6840	14224-00		190
15224-xy	Cable (6 foot) for multiple magnetic tape transports. x indicates model from above table. y specifies total number of transports in the system.	15224-x1	0	175 per unit
19224-00	Software for magnetic tape system, includes I/O drivers, diagnostic routine and magnetic tape file manager. Supports versions of BETA-8 Assembler and Concordance.	18224-xx	-	750**
26224-10	Checkout and integration of each customer furnished Pertec tape transport.	15224-x1	-	700**
MOVING H	HEAD DISC SYSTEM			A
18520-43	Moving Head Disc System. Includes disc drive having one fixed and one removable disc with 200 cylinders, interface for this unit (also handles three additional 22520-43 disc drives) cable and software. Average track access 38 milliseconds, average latency 12.5 milliseconds, transfer rate 156,000 words per second. Capacity 2.46 million 16-bit words.	10xx0-xx	2	13,200
22520-43	Additional Moving Head Disc Drive. Contains one fixed and one removable disc with combined capacity of 2.46 million 16-bit words, includes interconnecting cable	18520-43	0	11,085
18520-44	Double Density Moving Head Disc System. Includes disc drive having one fixed and one removable disc with 400 cylinders, interface for this unit (and up to three additional 22520-44 disc drives) cable and software. Average track access 38 milliseconds, average latency 12.5 milliseconds, transfer rate 156,000 words per second. Capacity 4.96 million 16-bit words.	10xx0-xx	2	15,800
22520-44	Additional Double Density Moving Head Disc Drive. Contains one fixed and one removable disc with combined capacity of 4.96 million 16-bit words. Includes interconnecting cable.	18520-44	0	12,885
18520-31	Moving Head Disc System. Includes disc drive having one removable disc with 200 cylinders, interface for this unit (also handles three additional 22520-31 disc drives) cable and software. Average track access 70 milliseconds, average latency 20 milliseconds, transfer rate 97,000 words per second. Capacity 1.23 million 16-bit words.	10xx0-xx	2	11,450
22520-31	Additional Moving Head Disc Drive. Contains one removable disc with capacity of 1.23 million 16-bit words. Includes interconnecting cable.	18520-31	0	9,300
14520-00	Interface for moving head disc drive. Controls up to four Diablo Model 31 or two Model 33 disc drives.	10xx0-xx	2	2,400
15520-31	Cables (6 foot) for Diablo Model 31 disc drive.	14520-00	0	150
15520-33	Cables (6 foot) for Diablo Model 33 disc drive	14520-00	0	250
19520-00	Software for Moving Head Disc System. Includes disc formatter, I/O drivers, diagnostic routine and file manager.	14520-00	-	750**
26520-31	Checkout and integration of customer furnished Diablo Model 31 disc drive.	14520-00	-	1,000**
26520-33	Checkout and integration of customer furnished Diablo Model 33 disc drive.	14520-00	-	1,000**

^{**}Software and integration are not discountable.

MODEL	DESCRIPTION	PREREQ	REQ'D SLOTS	LIST PRICE
COMMUN	ICATIONS INTERFACES			Α
4227-1x	Controller for Model 103 and 202 Data Sets with RS 232C interface. Single channel, full duplex non synchronous, 10 or 11 bit frame includes control, status and interrupt lines for all 103 or 202 series data sets. Diagnostic software is provided. Second digit of dash number designates baud rate.	10xx0-xx	1/2	\$ 650
4227-3x	Controller for Model 103 and 202 Data Sets with DTL interface. Diagnostic software is provided. Second digit of dash number designates band rate.	10xx0-xx	1/2	625
5227-xx	Cable (6 foot) for data set controller01 for 103 series data set, -02 for 202 series data set, -03 for CRT.	14227-xx	0	175
4236-1x	Dual Interface for two CRT's or leased line modem. EIA RS 232 interface with two independent half duplex channels each with one output control line and one input status line. Diagnostic software is provided. Second digit of dash number designates baud rate.	10xx0-xx	1/2	575
	-x1 110 baud -x4 600 baud -x7 2400 baud -x2 150 baud -x5 1200 baud -x8 4800 baud -x3 300 baud -x6 1800 baud -x9 9600 baud			
4236-21	Dual interface for two teletype ASR 33s or 35s. 20 ma current loop, 110 baud two independent half duplex channels. Includes circuit for programmed on/off option (requires teletype modification). Diagnostic software included.	10xx0-xx	1/2	500
4236-5x	EIA RS 232 Interface for one CRT at speed specified by x above and one teletype 20 ma current loop interface at 110 baud.	10xx0-xx	1/2	575
4311-00	Synchronous Modem Controller for Model 201 Data Sets. Double buffered full duplex with speeds to 50 kilo-baud. External clocking, programmable sync character and special character detection. Frame size (5,6,7 or 8 bits) and parity (odd, even or none) selectable by jumpers. EIA RS 232 level interface. Diagnostic software is included.	10xx0-xx	1/2	1,200
.4512-xx	Asynchronous Modem Multiplexer. Provides interface for 2 or 4 independent asynchronous Modem Multiplexer. Provides interface for 2 or 4 independent asynchronous mode, variable character size 5 thru 8 bits, parity odd, even or no loop-back, special character detect and variable stop bits. EIA RS 232 or curren set controls optional. Each send or receive speed individually selectable by jump 9600 baud maximum. Multiple vectored interrupts for each line. The following controls of the send of the s	following par one, echoples t loop interfa pers, 75 bauc	rameters: k, diagnos ce. Full d i minimum	full tic ata to
4512-21	Asynchronous Modem Multiplexer for two lines with Current Loop Interface, Data Only	10xx0-xx	1	850
4512-22	Asynchronous Modem Multiplexer for two lines with EIA Interface, Data Only	10xx0-xx	1	850
4512-23	Asynchronous Modem Multiplexer for two lines with EIA Interface and Full Data Set Controls	10xx0-xx	1	950
4512-41	Asynchronous Modem Multiplexer for four lines with Current Loop Interface, Data Only	10xx0-xx	1	1,200
	·	10xx0-xx 10xx0-xx	1	1,200 1,200
4512-42	Data Only			
.4512-41 .4512-42 .4512-43	Data Only Asynchronous Modem Multiplexer for four lines with EIA Interface, Data Only Asynchronous Modem Multiplexer for four lines with EIA Interface and Full	10xx0-xx	1	1,200

m1 D				
	sor Chassis provides five slots, one for the processor board with integral memory a Two fans are housed in the chassis and provision is made for optional control cons			
12034-00	Processor Chassis for ALPHA LSI including motherboard. Requires power supply.	none	-	\$ 275
12907-00	First Expansion Chassis for ALPHA LSI. Same as 12034-00 but includes blank panel with expansion buffer controller and interconnecting cables. Provides five full slots for memory or I/O. Requires power supply.	12034-00	-	500
12097-01	Additional Expansion Chassis for ALPHA LSI. Similar to 12907-00 but connects to first or additional chassis. Requires power supply.	12097-0x	-	500
POWER SU	JPPLIES			I
12044-00	Power Supply for ALPHA LSI. Provides +5V 20 amp, +12V 3 amp, -12V 9 amp Input 115 vac (98-127V RMS), 47-63 Hz single phase. (-01 for 196 to 254V RMS input).	12034-00 12097-0x	-	325
12098-00	Battery Pack for ALPHA LSI. Provides standby power for semiconductor memory. Automatic changeover in event of power loss, output voltage regulation and battery recharging capability are included. Mounted separate from chassis, connecting cables included, batteries supplied by user.	10xx0-xx	-	150
EXTENDE	RS .			A
13265-00	Extender Card. Full Slot, two sided board, reversible for I/O slots or processor slots.	10xx0-xx	1	190
13248-00	Adapter Card. Provides mounting for 216, 116, 816 type I/O card for use with ALPHA LSI or NAKED MINI LSI.	10xx0-xx	1	125
BREADBO	ARDS			A
13234-00	Wirewrap Breadboard Card. Provides 72 low profile sockets for 16 or 14 pin IC's with wirewrap posts on same side of board. Includes mating connector.	12034-00	1/2	450
13234-10	Blank Breadboard Card, without IC sockets or wirewrap pins. Includes mating connector.	12034-00	1/2	100

MODEL

20027

DESCRIPTION

REQ'D

SLOTS

PREREQ

LIST

PRICE

50

A standard Hardware Documentation Manual is provided for each of the first six ALPHA LSI or NAKED MINI LSI systems delivered. In addition, for quantities larger than fifty, a set of reproducible drawings will be provided.

Hardware Manual for ALPHA LSI or NAKED MINI LSI includes
ALPHA LSI or NAKED MINI LSI Programming Reference Manual
Processor Module Logic Diagrams
Option Module Logic Diagrams
Power Supply Schematics
Installation Guide
ASR 33 Teletype Modification Procedure
I/O Interface Design Guide
Processor Mounted Option Interface Descriptions

(7)

STANDARD SOFTWARE

N

A standard Software Documentation Manual and paper tape Program Library are provided free of charge for each of the first six ALPHA LSI or NAKED MINI LSI systems delivered.

20025 Software Documentation Manual for ALPHA LSI or NAKED MINI LSI includes descriptions of:

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BETA 4. Two pass assembler which will operate from paper tape in a minimal 4K system

BETA 8. High performance assembler, supporting all peripherals used for input/output or intermediate storage. Requires 8K memory.

OMEGA. Similar to BETA 4, but provides conversational facility for program creation and correction.

Utilities. Include Bootstrap, Binary and Object Loader, Dump, Source Tape Preparation, Concordance and Debug programs.

Subroutines. Provides subroutines for many common programming requirements. Includes Teletype Utility Package, Fixed Arithmetic, Floating Point Arithmetic and floating point Elementary Trigonometric Functions.

Programming Notes. Helpful hints and comments to assist the user in program development.

Diagnostics. Includes Quality Control Diagnostic (QCD) for central processor and memory plus teletype diagnostic.

20026

Standard ALPHA LSI or NAKED MINI LSI Program Library. Includes the programs described in the Software Documentation Manual, in paper tape form.

75

ADVANCED SYSTEM SOFTWARE

19001-00	Advanced BASIC. Interactive BASIC language with all Elementary and Advanced statements, operating in only 4K of memory with dynamic storage allocation. Calculator Mode for immediate execution of statements is included.	\$	300**
19001-10	Extended BASIC. Includes all the features of Advanced BASIC above, plus Text Variables (string manipulation) and Matrix Operations. This BASIC provides the user with capabilities not usually found in a small machine environment. Runs in 8K of memory.		300**
19001-20	Extended Multiple-User BASIC. Same powerful language as Extended BASIC above. Supports up to eight users, with dynamic core allocation for optimum memory use. Requires 8K memory minimum, 16K recommended.		300**
19003-00	FORTRAN. Similar to ANSI Basic FORTRAN. Not a supported program. Documentation change.		50 *
19004-00	XASM Cross Assembler. Permits assembly of NAKED MINI LSI/ALPHA LSI programs on a large scale IBM System/360 or 370. The cross assembler is written in FORTRAN IV level G.		200
19005-00	RTX Real Time Executive. A modular open-ended system consisting of RTX Nucleus multitasking executive, IOX an input-output supervisor, COMX a communications supervisor, RTDBUG real-time debugging program, plus provision for adding user defined tasks.		300
19007-00	DOS Disc Operating System. An operating system to facilitate batch compilation, assembly and execution of user programs. DOS provides automatic control of job sequencing, input-output, interrupt handling, system program library, file management with sequential and random access methods and on-line operator communication. Specify configuration when ordering.	2	2,000
19007-10	MTOS Magnetic Tape Operating System. Functionally equivalent to DOS, except industry compatible magnetic tape units are used instead of disc for secondary storage.	2	2,000
19007-20	COS Cassette Operating System. Functionally equivalent to DOS, except digital cassettes are used for secondary storage instead of disc.	2	2,000

^{*}Not discountable

^{**}BASIC prices are for a ten year lease. Customer must execute a Software Service and License Agreement, Form 98177-01.

TRAINING

Computer Automation provides regular training courses in both programming and maintenance. A schedule of courses may be obtained from our local sales representative.

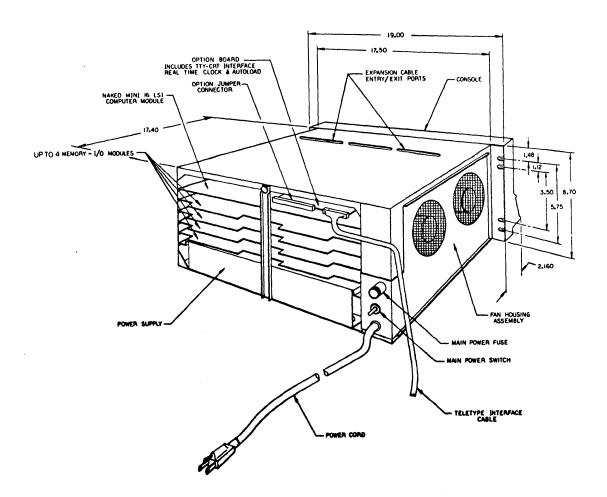
FIELD SERVICE

Computer Automation provides a variety of service arrangements and maintenance alternatives enabling a customer to select a class of service most suitable to his requirements. Contact our local sales representative for details.

FACTORY WARRANTY

All products manufactured by Computer Automation are covered by a one-year warranty of parts and labor, when repairs are performed at Computer Automation, Irvine, California. Customer pays freight to Computer Automation, Irvine. Return freight is paid by Computer Automation.

A thirty-day warranty, from date of shipment, covers peripheral products not manufactured by Computer Automation.



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