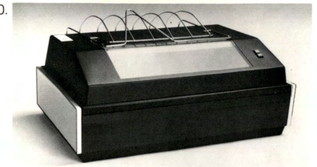
PERIPHERALS

19.

20.



21.

22.

23.

PTR-300B Line Printer (photo #20). Impact line printer, 300 lpm. 132 columns. Tractor feed. Solid characters.

AP-44 Mini Line Printer (photo #21). Dot matrix printer. 44 column. 55 cps. Uses standard paper. Requires parallel interface.

Disk Drives

FDC 2-2 Dual Floppy Disk Drive. Single cabinet IBM 3741 compatible disk drives with power supply. Phase-locked loop.

FDC 2-1 Single Floppy Disk Drive. Single cabinet IBM 3741 compatible disk drive with power supply. Phase-locked loop.

FDC Floppy Disk. Single IBM 3741 compatible disk drive with power supply to expand FDC 2-1 to a 2-2.

PCS-80/25A & B. Dual drive single and double density floppy disks with power supply and DIO disk controller.

PCS-80/26A & B. Add-on unit for PCS-80/25A & B. Dual drive single and double density floppy disks with power supply. Does not include DIO interface.

Terminal Systems

CRT-2480A Video Display/Keyboard Terminal (photo #23). 12" CRT. 24 line. 80 characters per line. ASCII keyboard.

HCT-30A Printer Keyboard. Popular matrix type hard copy terminal with stand. 132 columns. 30 cps.

HCT-45A Printer/Keyboard. Popular daisy-wheel type hard copy terminal. 132 columns. 45 cps.

IKB-I Intelligent Keyboard (photo #22). Microprocessor based intelligent keyboard with on-board ROM. Parallel and RS-232 interfaces. User programmable key functions. Upper and lower case ASCII encoded. Upper case only mode and direct scan mode.

MDM-300A Modem/Acoustic Coupler. 300 baud.

MDM-1200A Modem/Acoustic Coupler. 1200 baud.

Printers

PTR-45A Serial Printer (photo #19). Daisy-wheel character printer. 45 cps. 132 column.

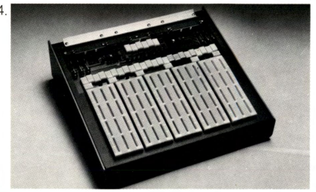
PTR-45A-TF. Printer PTR-45A with tractor feed option.

PTR-300A Line Printer. Impact line printer. 300 lpm. 80 columns. Tractor feed. Solid characters.

19. Serial Printer PTR-45A.
20. Impact Line Printer with tractor feed (PTR-300B).
21. Serial Mini Printer (AP-44).
22. Intelligent Keyboard (IKB-1).
23. Video Display/Keyboard Terminal (CRT 2480A).

INTELLIGENT BREADBOARD SYSTEMS

24.



Connect to any S-100 bus computer for design of digital logic circuitry.

BBC-5 Breadboard Console (photo #24). Used with PIO-6-6 to provide six 8-bit parallel I/O ports. Provides access to 48 lines of TTL I/O. Power regulators. LED level indicators. Sockets for forty 16-pin I.C. plug-in devices.

BBC-3 Breadboard Console. 3 component strip version of BBC-5.

BBCM. Expansion module to convert 3 component strip breadboard console to 5 component strips.

24. Intelligent Breadboard Console (BBC-5).

SOFTWARE

PGM-1A Self-Contained System. Assembler, Editor, Debugger, Loader, Monitor. Furnished on paper tape with source listing. Also available on tape cassette and EPROM.

PGM-2A Tape Cassette Operating System. Enhanced PGM-1A for tape cassette. Available in TARBELL standard.

PGM-4A Paper Tape Bootstrap Loader. EPROM bootstrap loader for paper tape programs.

PGM-5A Tape Cassette Bootstrap Loader. EPROM bootstrap leader for tape cassette. Available in TARBELL standard.

PGM-6A Advanced Self-Contained System. Enhanced assembler, line editor and extensive debugging facilities. Furnished on paper tape with source listing. Also available on tape cassette and EPROM.

DOS-A Floppy Disk Operating System. Assembler, debugger, editor and utilities on diskette.

BASIC. Interactive or compiler with scientific and/or commercial features. (PRINT USING), 14-digit precision, random and sequential user disk files.

BASIC 4-A Language Interpreter. 4K high-level language. Available on paper tape, tape cassette and EPROM.

BASIC 8-A Language Interpreter. 8K high-level language, supporting most elements of the BASIC language.

BASIC 9-A Language Interpreter. 9K high-level language, includes BASIC 8-A features plus supports tape cassette source program storage.

FORTRAN IV. Level 2 ANSI compiler. Generates assembler language in relocatable form. Linking loader/linkage editor included.

Extended BASIC Language Interpreter. Stand-alone and disk oriented versions available.

SOCKET SETS AND CABLES

25.

Socket Sets

Socket sets for printed circuit boards facilitate installation and removal of individual semiconductor components, promoting easier board maintenance. Socket sets are available for all IMSAI boards.

Cables

Cable A. 16" flat cable to carry signals from SIO and MIO interfaces to cabinet back frame.

Cable B. Flat cable which connects PIO-4-4 to rear of computer mainframe chassis for peripheral devices.

Cable C. 4½' cable to connect floppy disk drives, modems or terminals. 25-pin male miniature D connectors at both ends.

Cable D. Extension cable. Same as Cable C but with 1 male, 1 female connector.

Cable L. Video cable to connect VIO to cabinet back frame. Has male BNC connector.

Cable M. Cable set which connects MIO board to rear of computer mainframe chassis for cassette recorder. Has miniature phone jacks.

Cable R. 5' flat cable which connects 3 ports of the PIO 6-6 to Intelligent Breadboard System.

Cable S. 5' flat cable which connects data and address lines of PIO 6-6 board to Intelligent Breadboard System.

Cable AF. 18" flat cable to connect MPU-B to cabinet backframe.

25. Cables—male and female, single and dual ribbon flat cables.

IMSAI OWNERS MANUALS AND BOOKS

IMSAI Owners Manuals

IMSAI. IMSAI 8080 Microcomputer System user manual.

VDP-80. IMSAI Video Data Processor (VDP-80) operators manual.

PCS-80. IMSAI Personal Computing System (PCS-80) user manuals (80/10, 11, 14, 15, 25, 26, 30, 34, and 35).

8048. IMSAI 8048 Control Computer user manual.

BBS. IMSAI Intelligent Breadboard System user manual.

MULT. IMSAI Shared Memory Facility user manual.

LPTR. IMSAI Line Printer System user manual.

DOS-A. IMSAI (DOS-A) Floppy Disk Operating System user manual.

FDS. IMSAI Floppy Disk user manual.

DYRAM. IMSAI Dynamic RAM System user manual.

Books

INASM. *Intel 8080 Assembly Language Manual.* How to program the 8080/8085 in assembly language.

INTEL. *Intel 8080 Microcomputer System User Manual.* Complete specifications on Intel 8080A and all associated Intel memory and peripheral chips.

INVOLI. *Introduction To Microcomputers,* Vol. I. Basic microcomputer book.

INVOLII. *Introduction To Microcomputers,* Vol. II. Describes more than 20 microprocessor families.

TTLSU. *Supplement To TTL Handbook.* Adds more than 7400 series descriptions. 400 pages.

BASICP. *BASIC-Plus Language Manual.*

8080P. *8080 Programming For Logic Design.* How to implement digital and combinatorial logic using an 8080 microcomputer and assembly language.

WHAT. *What To Do After You Hit Return.* A book of computer games.

MY. *My Computer Likes Me When I Speak In BASIC.* An introduction to the BASIC language.

IMSAI®

The Standard of Excellence in Microcomputer Systems.

IMSAI Manufacturing Corporation
14860 Wicks Blvd.
San Leandro, CA 94577
(415) 483-2093 TWX 910-366-7287

IMSAI®

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Short Form Catalog

Fall 1977

SELF-CONTAINED SYSTEMS

1.

2.

• VDP-80/1000 (photo #1)

Single cabinet computer/terminal/mass-storage system. 12" CRT. Dual floppy disks, single or double density 1 megabyte capacity expandable to 4. 32K RAM memory expandable to 196K. 8085 MPU. ASCII keyboard with 12-pad numeric keyboard, 12-pad control keyboard and cursor controls. Supports hard copy printers. DOS,Assembler, Commercial/Scientific BASIC and ANSI level 2 FORTRAN IV software available. Serial I/O (RS-232 and bisynch) and parallel output ports standard.

• PCS-80

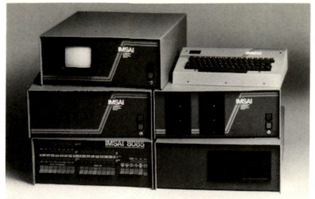
Integrated component system providing wide range of CPU and peripheral options which can be integrated into a single cabinet. Master cabinet (DHMO) allows vertical stacking of 2 component subsystem chassis into single unit.

Computing Units

I-8080 (PCS-80/10). 8080-based mainframe (See Single Board Central Processors, MPU-A). 28 amp power supply. 22-slot mother board. Programmer front panel (CP-A).

I-8085 (PCS-80/14). 8085-based mainframe (See Single Board Central Processors, MPU-B). 28 amp power supply. 22-slot mother board. Programmer front panel. (CP-A).

3.



I-8085B (PCS-80/15). Same as I-8085 except programmer front panel is replaced by operator's front panel (contains only key-lock, reset and interrupt switches). Supplied with 10-slot terminated and regulated mother board.

Peripheral Units

Double Floppy Unit, FDC 2-1&2 (PCS-80/21&22). Single or dual drive. IBM 3741 recording format. ¼ megabyte storage per drive.

Dual Floppy Disk Drive (PCS-80/25A & B). Dual floppy disk drive available in single and double density. 1 megabyte storage per dual double density drive. Controller will support additional dual double density drive and/or up to 3 mini-floppies, single or double density.

Combined Units

Integrated Video Computer (PCS-80/30—photo #2**).** 8085-based CPU, 10-slot terminated mother board. 28 amp power supply. Video interface and 5" CRT. Includes Intelligent Keyboard (IKB-1).

Integrated Minifloppy Computer (PCS-80/35). Same as PCS-80/30 except CRT is replaced by two minifloppies.

Miscellaneous Hardware Options

RM. Rack mount option for standard 19" RETMA cabinet.

EXP-10. 10-slot terminated and regulated mother board.

EXP-22. 22-slot mother board.

EXPM. 100 pin edge conector and card guides connects printed circuit board to mother board.

CP-A (Programmer front panel). 16 address/data switches. 6 control function switches. LED indicators for address, data bus, status, and program output.

PS-8. 8 amp power supply.

PS-28. 28 amp power supply.

FM. Cooling fan recommended for chassis with 5 or more printed circuit boards.

DC. Table top cover for chassis provides dust protection and cool air circulation.

DHMO. Double high mounting option. Will accommodate 2 PCS-80 cabinets mounted in a two-high configuration.

1. Video Data Processor (VDP-80/1000).
2. Integrated Video Computer (PCS-80/30) with Intelligent Keyboard (IKB-1) option.
3. PCS-80 system—representative PCS-80 components.

SINGLE BOARD CENTRAL PROCESSORS

8048 Control Computer (photo #4). Programmable computer and process controller. 22 I/O lines. 5 heavy duty relays. TTY and cassette interface. 24 pad hexadecimal keyboard. 9 digit LED hex display. Requires only power supply (PS-3A) to run.

8048 Express Control Computer (photo #5). Enhanced version of 8048 Control Computer. Includes cabinet, power supply, software and documentation. For use in industrial controls, model railroading, environmental controls and similar applications.

MPU-A. The industry standard. 8080 based CPU. S-100 compatible.

MPU-B. 8085-based CPU. 8080 software and S-100 compatible. 50% faster. 5 vectored interrupts, serial and parallel I/O. ROM monitor firmware. 256 byte RAM memory. Software programmable baud rates (.56-56KB). Requires only power supply and terminal to run.

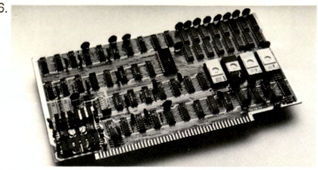
4.

5.

4. 8048 Programmable Computer and Process Controller.
5. 8048 Express Control Computer.

INTERFACES

6.



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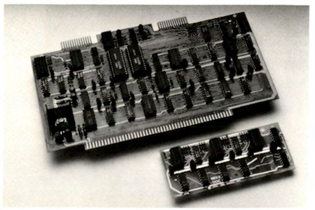

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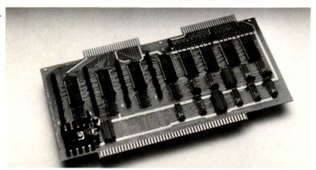

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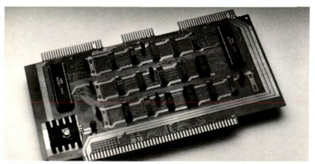


Video I/O (VIO—photo #6**).** 24x80 CRT. Edit and data entry. Protected field. Character and line insert/delete. User selectable font up to 256 characters. Inverse video. Graphics. On board memory refresh directly addressable from CPU. Firmware driver in ROM.

Serial I/O (photo #7)

Interfaces allow user to talk to any commercially available terminal devices, synchronous/asynchronous operation. 0.56 baud to 56 kilobaud transfer rates, user selectable.

SIO 2-1. One channel serial interface board.

SIO 2-2. Two channel serial interface board.

SIOM. One channel serial I/O expansion module (converts SIO 2-1 to two channel interface).

SIOC. Serial I/O clock piggyback board for SIO 2-1, 2-2. Provides for incremental baud selection for non-standard baud rates. (0.5 to 56KB)

Parallel I/O (photo #8)

Interfaces allow user to drive parallel devices. Boards equipped with status and data indicator lights.

PIO 4-1. 1 port parallel interface board.

PIO 4-4. 4 port parallel interface board. 4 separate 8-bit input and output parallel ports.

PIOM. 1 port parallel I/O expansion module (provides single port expansion of PIO 4-1 up to four ports).

PIO 6-3. 3 port parallel interface board. 8-bit ports software selectable for input or output.

PIO 6-6 (photo #9). 6 port parallel interface board. 8-bit ports software selectable for input or output.

PIO 6M. 3 port parallel I/O expansion module (provides expansion of PIO 6-3 to six ports).

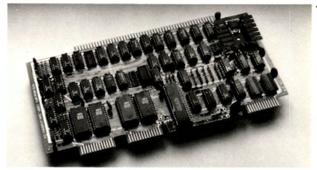
MIO (Multiple Interface—photo #10**).** Single board interface with 1 dual cassette, 2 parallel, 1 serial and 1 control port.

LIF (Line Printer Interface—photo #11**).** Two board set with direct memory access (DMA). Permits high speed line printers to be interrupt driven allowing spooling.

FIF (Floppy Disk Interface—photo #12**).** Two board set with direct memory access (DMA). Can drive up to four drives of PCS-80/21 or 22 single or double floppy unit.

DIO (Disk Interface). Can drive up to 4 standard floppy disks and 3 minifloppies simultaneously. Single or double density. Program controllable. For use with all PCS-80 disk drives, except PCS-80/21 or 22.

10.



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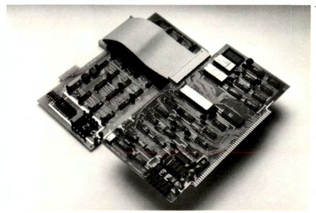

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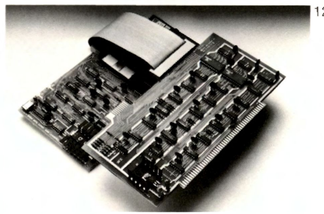
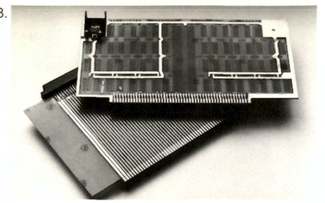


6. Video Interface (VIO).
7. Serial Interface (SIO 2-2) and Serial Clock (SIOC) boards.
8. 4 Port Parallel Interface (PIO 4-4) Board.
9. 6 Port Parallel Interface (PIO 6-6) Board.
10. Multiple Interface Board (MIO).
11. Line Printer Interface (LIF) with Direct Memory Access.
12. Floppy Disk Interface (FIF) with Direct Memory Access.

MISCELLANEOUS BOARDS

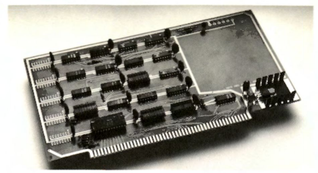
13.



EXT (Extender Board—photo #13**).** Connects to mother board providing extension of a functional circuit board out of the card cage allowing access to circuits for servicing.

GP-88 (General Purpose Prototype Board—photo #13**).** Provides space for up to 31.16-pin plus 3.24-pin or 2.40-pin DIP devices for development of custom circuits. Holes drilled for wire-wrap sockets.

14.

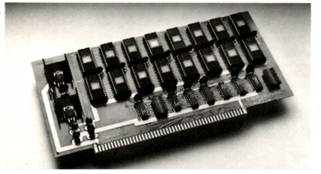


PIC-8 (Priority Interrupt Board—photo #14**).** Includes programmable interval clock. Provides up to 8 levels of vectored priority interrupt.

13. Extender Board (EXT) and General Purpose Prototype Board (GP-88).
14. Priority Interrupt Board (PIC-8).

MEMORY EXPANSION MODULES

15.



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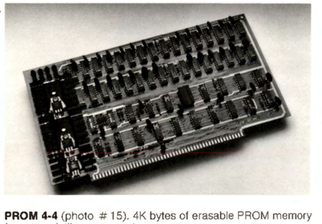
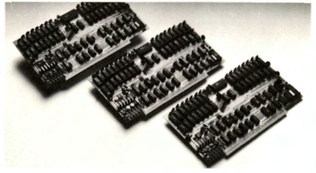


PROM 4-4 (photo #15). 4K bytes of erasable PROM memory for non-volatile program storage.

PROM 4-512. 512 bytes of erasable PROM memory on 4K board.

17.



PROM 16. 16K bytes of erasable PROM memory (2708).

PGMR. Allows user programming of EPROM memory.

MM702-5. PROM memory chip set allows expansion of PROM 4-512 board up to 4K in 512 byte increments.

RAM 4A-4 (photo #16). 4K bytes of static random access memory. Programmable memory protect. LED access indicators. No "wait states."

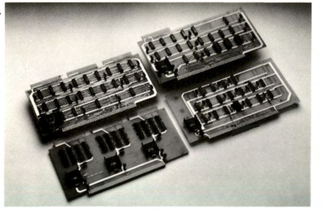
16, 32 and 65K RAM Boards (photo #17). Low power, dynamic random access memory boards. Paging option allows virtual memory addressing in 16K byte increments. S-100 compatible. "Hidden refresh" and no "wait states."

IMM (Intelligent Memory Manager). Memory control board manages up to 1 megabyte of memory in 16K byte increments. Mapping 16K blocks. Read and write protect. Fully vectored interrupts. Real "time of day" clocks. Other multi-user system and software security support.

15. Programmable Read Only Memory Board (PROM 4-4).
16. 4K Random Access Memory Board (RAM 4A-4).
17. 65, 32 and 16K Random Access Memory Boards.

SHARED MEMORY FACILITY

18.



Multiprocessing and Shared Memory

The IMSAI Shared Memory Facility is a multiple port memory system which enables up to 6 IMSAI mainframes to access the same physical block of memory.

SMS (Shared Memory Switch Board). Provides 3 ports of switched bi-directional I/O between memory module and up to three CPU's.

SMC (Shared Memory Controller Board). Implements control and timing functions for Shared Memory Facility.

SMT (Shared Memory Terminator Board). Electrical line terminator board for connecting cables of processors within system.

SMB (Shared Memory Buffer Board). Connects to CPU's local bus to provide multiplexing.

18. Shared Memory Facility (SMF).

IMSAI®

DOMESTIC PRICE LIST

NOVEMBER, 1977

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San Leandro, CA 94577 U.S.A.
Phone: (415) 483-2093
TWX: 910-366-7287

CATALOG NO	DESCRIPTION	KIT PRICE	ASSEMBLED PRICE
	INTEGRATED SYSTEMS		
VDP-80/1000	Video Data Processor. Integrated computer system with 12 inch CRT, keyboard, dual PerSci floppy disk, and mainframe with 8085 processor, 32K of RAM memory and all interfaces housed in single table-top cabinet (must order DOS-A).	N/A	$ 5,995
VDP-80/1050	Same as VDP-80/1000 with 64K of RAM memory.	N/A	$ 6,745
	COMPONENT SYSTEMS		
PCS-80/100	Basic personal cassette system consists of a PCS-80/30, MIO, 8K Cassette BASIC, PGM-2A and RAM 16. Includes necessary cables. (Requires audio cassette recorder).	$ 1,886	$ 2,670
PCS-80/200	Basic personal disk system consists of a PCS-80/34, IKB-1, RAM 16, VIO-B and DOS-A. Includes necessary cables. (Requires a TV monitor).	$ 2,610	$ 3,357
PCS-80/300	Intermediate personal cassette system consists of a PCS-80/30, RAM 32 AP-44, MIO and 8K Cassette BASIC and PGM 2-A. Includes necessary cables. (Requires audio cassette recorder).	$ 2,686	$ 3,732
PCS-80/400	Intermediate personal disk system consists of IKB-1, RAM 32, AP-44, VIO-B, PCS-80/35, DOS-A and Commercial BASIC. Includes necessary cables. (Requires a TV monitor.	$ 3,881	$ 4,915

CATALOG NO.	DESCRIPTION	KIT PRICE	ASSEMBLED PRICE
	PCS-80 MAINFRAMES WITH INTEGRATED PERIPHERALS		
PCS-80/15		$ 799	$ 949
PCS-80/30	Table top version of basic computer system with 5 inch CRT. Includes MPU-B, PS-28, VIO-C, IKB-1, and necessary cables. 10 card capacity.	$ 1,199	$ 1,499
PCS-80/34	Table top version of BASIC computer system with one minifloppy DISK DRIVE. Includes MPU-B, DIO, PS-28 and necessary cables. 10 card capacity.	$ 1,649	$ 1,899
PCS-80/35	Table top version of basic computer system with two minifloppy disk drives. Includes MPU-B, DIO, PS-28 and necessary cables. 10 card capacity.	$ 1,995	$ 2,245
	PCS-80 MAINFRAMES WITHOUT PERIPHERALS		
I-8080 (PCS-80/10)	Table top version of basic computer system with MPU-A, CP-A front panel assembly, and PS-28. 22 card capacity.	$ 699	$ 931
I-8080-OEM (PCS-80/11)	Table top version of basic computer system without front panel. MPU-A and PS-28. 22 card capacity.	$ 629	$ 749
	PCS-80 COMPONENTS AND OPTIONS		
CP-A	Front panel with control switches and indicators for handware/software development.	$ 189	$ 325

Prices, terms and specifications subject to change without notice.

CATALOG NO	DESCRIPTION	KIT PRICE	ASSEMBLED PRICE
	PCS-80 COMPONENTS AND OPTIONS		
DHMO	Double high mounting option. Will mount two PCS-80 cabinets (except FDC 2-1 or FDC 2-2 cabinets) in a two high configuration. When ordered, a single cover is supplied in lieu of the two single-height dust covers. Includes tilt bracket for convenient positioning of IKB-1.	$ 50	$ 50
EXP-4	Four slot mother board (for expanding old IMSAI EXP-6 motherboard).	$ 18	$ 28
EXP-22	Twenty-two slot mother board	$ 65	$ 65
EXPM	Edge connector and card guides	$ 7	$ 15
EXT	Extender board	$ 39	$ 49
FM	Cooling fan for PCS-80 computer mainframes.	$ 29	$ 39
GP-88	General purpose prototyping board.	$ 39	$ 47
MPU-A	8080A Microprocessor board.	$ 190	$ 350
MPU-B	8085 Microprocessor board with 256 bytes RAM, 1K ROM, parallel and serial I/O ports. (Note: This board sold only with systems specified. Refer to "PCS-80 Mainframes with Integrated Peripherals" and "Components System" sections).	N/A	N/A
PIC-8	Priority interrupt/interval clock board.	$ 125	$ 238
PS-8	Power supply assembly (8 amp).	N/A	$ 191
PS-28	Power supply assembly (28 amp).	$ 100	$ 179
RM	Rack mount option. For standard 19" Retma cabinet. When ordered, supplied in lieu of single-height table top dust cover.	$ 20	$ 20
EXPM-5	Set of 5	$ 25	$ 25

CATALOG NO	DESCRIPTION	KIT PRICE	ASSEMBLED PRICE
	SINGLE BOARD COMPUTERS		
8048CC-EROM	EROM version of 8048 Control Computer.	$ 499	$ 549
8048CC-ROM	ROM version of 8048 Control Computer.	$ 299	$ 349
8048-RAM	1K Byte RAM expansion module for 8048CC-EROM or 8048CC-ROM.	$ 35	$ 45
PS-3A	3 amp 5V open frame power supply for 8048CC Control Computer.	N/A	$ 99
IMSAI EXPRESS		N/A	$ 499
	SEMICONDUCTOR MEMORY BOARDS		
RAM 4A-4	4K Byte Static Random Access memory.	$ 139	$ 189
RAM 16	16K byte Dynamic Random Access memory.	$ 449	$ 499
RAM 32	32K byte Dynamic Random Access memory.	$ 749	$ 799
RAM 65	65K byte Dynamic Random Access memory.	$ 2599	$ 2649
PROM 4-4	4K byte EPROM memory board with 4K bytes of 1702A EPROM memory chips.	$ 399	$ 579
PROM 4-512	4K byte EPROM memory board with 512 bytes of 1702A EPROM memory chips	$ 165	$ 247
MM702-5	512 bytes of 1702A EPROM memory chips (for the PROM 512 board).	$ 50	$ 69

Prices, terms and specifications subject to change without notice.

CATALOG NO	DESCRIPTION	KIT PRICE	ASSEMBLED PRICE
	INPUT/OUTPUT INTERFACE BOARDS		
MIO	Multiple I/O board (two parallel, ports, one serial port, one control port and TARBELL tape cassette interface) (order one to three CABLE A's and one or two CABLE M's).	$ 195	$ 350
PIO 4-1	1 port parallel I/O board (one or two CABLE B's required).	$ 93	$ 140
PIO 4-4	4 port parallel I/O board (two CABLE B's required).	$ 156	$ 299
PIO 6-6	Programmable 6-port parallel I/O board (requires two CABLE R's and one CABLE S).	$ 169	$ 279
PIO 6-3	Programmable 3-port parallel I/O board (requires one CABLE R and one CABLE S).	$ 139	$ 239
PIO6M	Expansion module to convert a PIO6-3 to PIO6-6.	$ 54	$ 90
PIOM	1 port parallel I/O expansion module.	$ 22	$ 39
SIO 2-1	One channel serial I/O interface board (one CABLE A required).	$ 125	$ 235
SIO 2-2	Two channel serial I/O interface board (one CABLE A required per channel).	$ 156	$ 299
SIOM	One channel serial I/O expansion module.	$ 47	$ 69
SIOC	Serial I/O clock piggyback board for SIO 2-1 or 2-2.	$ 31	$ 59
	VIDEO INTERFACE BOARDS		
Basic VIO	1K refresh memory, upper case only, all standard screen formats except 80x24.	$ 190	$ 335

CATALOG NO	DESCRIPTION	KIT PRICE	ASSEMBLED PRICE
	VIDEO INTERFACE BOARDS		
VIO-A	2K refresh memory, upper/lower case all standard screen formats.	$ 275	$ 405
VIO-B	2K refresh memory, upper case only. ROM firmware, all standard screen formats.	$ 275	$ 405
VIO-C	2K refresh memory, upper/lower case, ROM firmware, all standard screen formats.	$ 325	$ 465
VIO-AC	Converts VIO-A to VIO-C.	$ 60	N/A
VIO-BC	Converts VIO-B to VIO-C.	$ 60	N/A
VIO-CC	Converts Basic VIO to VIO-C.	$ 150	N/A
VIO-ECG	EPROM character generator.	$ 225	$ 250
	MULTIPROCESSING/SHARED MEMORY FACILITY (All configurations must be reviewed by factory)		
SMS	Port Access Board	$ 325	$ 399
SMC	Port Timing Board	$ 225	$ 305
SMB	Buffer Board (order one per processor)	$ 113	$ 175
SMT	Terminator Board	$ 98	$ 148

Order appropriate number of CABLE H and CABLE Z modules as required by configuration. Custom cables available on special order.

CATALOG NO.	DESCRIPTION	KIT PRICE	ASSEMBLED PRICE
	DISK DRIVES		
DIO	Non-DMA Disk interface ordered with PCS-80/25A & B (PerSci Disk Drives) and/or PCS-80/34, PCS-80/35 (Shugart Mini Disk Drives), requires two slots.	$ 399	$ 599
DIO	Non-DMA Disk interface ordered without PCS-80/25A & B (PerSci Disk Drives) and/or PCS-80/34, PCS-80/35 (Shugart Mini Disk Drives), requires two slots.	$ 599	$ 799
FDC	Calcomp 142 floppy disk drive and power supply (without cabinet) used to expand an FDC 2-1 to a 2-2.	N/A	$ 1095
FDC 2-1 (PCS-80/21)	One Calcomp 142M floppy disk drive, power supply and phase locked loop in a 2-drive table top cabinet (requires FIF plus one CABLE C).	N/A	$ 1295
FDC 2-2 (PCS-80/22)	Two Calcomp 142M floppy disk drives and power supplies, phase locked loop, table top cabinet (requires FIF plus one CABLE C).	N/A	$ 2390
FDD	Standard floppy diskette	N/A	$ 15
FDMD	Mini floppy diskette	N/A	$ 8
FIF	Floppy disk drive interface ordered with FDC 2-1 or 2-2 for use with Calcomp 142M drives (must order DOS-A), requires 2 slots.	$ 399	$ 599
FIF	Floppy disk drive interface for use with Calcomp 142M drives ordered without FDC 2-1 or 2-2 (must order DOS-A), requires 2 slots.	$ 599	$ 799
FRM	Rack mount option for FDC 2-1 or FDC 2-2. When ordered, this is supplied in lieu of the table top dust cover.	N/A	$ 20
MDC	1 Shugart minifloppy disk drive.	N/A	$ 370
MDC-DIO	1 Shugart minifloppy disk drive,DIO, necessary cables, (without power supply and without cabinet).	N/A	$ 770
PDC-A	PerSci Dual floppy disk single density format, DIO, necessary cables (without cabinet and power supply).	N/A	$ 1770
PDC-B	Same as PDC-A with double density format.	N/A	$ 2170
PCS-80/25A	Dual PerSci floppy disk drive, single density format, with power supply in table top cabinet. Includes DIO and necessary cables. Use RM to rack mount.	N/A	$ 1995
PCS-80/25B	Same as PCS-80/25A with double density.	N/A	$ 2395
PCS-80/26A	Expansion unit for PCS-80/25A (without DIO).	N/A	$ 1695
PCS-80/26B	Expansion unit for PCS-80/25B (without DIO).	N/A	$ 2095
	PRINTERS		
AP-44	44 column, 55 cps line printer (requires PIO 4-1 or 4 plus one cable B; or MIO plus one CABLE A; or MPU-B plus one CABLE AF).	$ 499	$ 599
LIF	DMA line printer interface for PTR-300A or B, ordered with printer, (requires 2 slots).	$ 399	$ 599
LIF	DMA line printer interface for PTR-300A or B, ordered without printer, (requires 2 slots).	$ 599	$ 799
PTR-300A	300 lpm line printer, 80 characters per line, (requires LIF; or SIO 2-1, SIO 2-2 or MIO plus one CABLE A; or MPU-B plus one CABLE AF).	N/A	$ 2610
PTR-300B	300 lpm line printer, 132 characters per line, (requires LIF; or SIO 2-1, SIO 2-2 or MIO plus one CABLE A; or MPU-B plus one CABLE AF).	N/A	$ 3656
PTR-45A	45 cps HyType II character printer (requires PIO 4-4 and two CABLE B's).	N/A	$ 2400
PTR-45A-TF	Same as PTR-45A with tractor feed.	N/A	$ 2600

CATALOG NO	DESCRIPTION	KIT PRICE	ASSEMBLED PRICE
	TERMINAL SYSTEMS		
CRT-2480A	Video display/keyboard terminal, 24 lines by 80 columns, with 6' cable, RS-232C serial interface (requires SIO 2-1, SIO 2-2 or MIO with CABLE A; or MPU-B plus one CABLE AF).	N/A	$ 1,595
HCT-30A	Decwriter printer/keyboard hard copy terminal, 30 characters per second, 132 columns, includes 6' cable and stand, RS-232C interface (requires SIO 2-1, SIO 2-2 or MIO plus one CABLE A; or MPU-B plus one CABLE AF.)	N/A	$ 2,630
HCT-45A-TF	Printer/keyboard hard copy terminal, with tractor feed, 45 characters per second, 132 columns, HyType II mechanism, with 6' cable (requires SIO 2-1, SIO 2-2, or MIO plus one CABLE A; or MPU-B plus one CABLE AF).	N/A	$ 3,395
IKB-1	Intelligent Keyboard, mode programmable, upper and lower case ASCII encoded, serial or parallel interface, includes 6' cable (requires SIO 2-1, SIO 2-2, or MIO plus one CABLE A; or PIO 4-4 plus one CABLE B; or MPU-B plus one CABLE AF).	N/A	$ 275
MDM-300A	Modem/acoustic coupler unit (300 BAUD).	N/A	$ 199
MDM-1200A	Modem/acoustic coupler unit (1200 BAUD).	N/A	$ 199

CATALOG NO	DESCRIPTION	KIT PRICE	ASSEMBLED PRICE
	INTELLIGENT BREADBOARD		
BBC-5	Complete breadboard console (requires a PIO 6-6, two CABLE R's, one CABLE S).	$ 435	$ 625
BBC-3	Smaller breadboard console (requires a PIO 6-3 and one CABLE R).	$ 325	$ 532
BBCM	Expansion module to convert a BBC-3 to a BBC-5.	$ 135	N/A
	CABLES		
CABLE A	18" flat cable to carry signals from SIO-2-1, 2-2 and MIO interfaces to cabinet backframe.		$ 18
CABLE B	Flat cable connects parallel I/O board to rear of computer mainframe chassis for peripheral device.		$ 29
CABLE C	4½' cable to connect floppy disk drives, modems, or terminals.		$ 25
CABLE D	5' extension for CABLE C.		$ 35
CABLE H	18" flat cable for Shared Memory Facility.		$ 45
CABLE L	Video cable to connect VIO board to cabinet backframe.		$ 20
CABLE M	Cable set which connects MIO board to cabinet backframe for cassette recorder.		$ 12
CABLE R	5' flat cable which connects 3 ports of PIO-6 board to breadboard system.		$ 35
CABLE S	5' flat cable which connects data and address lines of PIO-6 board to breadboard system.		$ 25
CABLE Z	6' flat cable for Shared Memory Facility.		$ 45
CABLE AF	18" flat cable to connect MPU-B board to cabinet backframe.		$ 18

SOFTWARE

(Available only to owners of an IMSAI Basic Computer System)

CATALOG NO	DESCRIPTION	Paper Tape	Cassette[1]	EPROM[2]	Diskette*	Source Listing	Source Diskette
BASIC 4A	4K BASIC	$ 35	$ 35	$150	N/A	**	N/A
BASIC 8A	8K BASIC	$100	$100	$300	N/A	$100	$500
BASIC 9A	9K audio cassette BASIC	$100	$100	N/A	N/A	$100	$500
BASIC 9B	CP/M version of BASIC	N/A	N/A	N/A	$100	$100	$500
BASIC-C	Commerical Disk BASIC	N/A	N/A	N/A	$150	N/A	N/A
BASIC-E	Extended Disk BASIC	N/A	N/A	N/A	$100	N/A	N/A
DOS-A (CP/M)	Floppy Disk Operating system with assembler.	N/A	N/A	N/A	$150	N/A	N/A
PGM-1A	Self-contained system-assembler, (included at no charge with I-8080).	$ 30	$ 30	$150	N/A	**	N/A
PGM-2A	Tape cassette operating system, TARBELL standard.	N/A	$ 30	$150	N/A	**	N/A
PGM-4A	Bootstrap loader for paper tape.	N/A	N/A	$ 45	N/A	**	N/A
PGM-5A	Bootstrap loader for tape cassette, TARBELL standard.	N/A	N/A	$ 45	N/A	**	N/A
PGM-6A	Advanced self contained system enhanced assembler, line editor and extensive debugging facilities.	$ 65	$ 65	$250	N/A	**	N/A
FORTRAN	FORTRAN IV	N/A	N/A	N/A	$150	N/A	$8500

NOTES:

1) A tape cassette is included in the price of the cassette software.

2) The charge is for programming the PROMs. Order PROM 4-512 for PGM-4A and PGM-5A; order correct number of PROM 4-4 for other EPROM software.

* Specify standard or mini diskette.

** Source listings for these items are included in the documentation.

SOCKET SETS

CATALOG NO		KIT PRICE	ASSEMBLED PRICE
SOC-8048CC	8048 CC board	$ 17	$ 24
SOC-CP-A	CP-A board	$ 11	$ 16
SOC-DIO	DIO boards	$ 30	$ 45
SOC-FIF	FIF boards	$ 30	$ 45
SOC-LIF	LIF boards	$ 30	$ 45
SOC-MIO	MIO board	$ 24	$ 36
SOC-MPU-A	MPU-A board	$ 8	$ 12
SOC-MPU-B	MPU-B board	$ 20	$ 30
SOC-PIC-8	PIC-8 board	$ 6	$ 10
SOC-PIO 4	PIO 4 board	$ 11	$ 17
SOC-PIO 6	PIO 6 board	$ 9	$ 14
SOC-PROM 4	PROM 4 board	$ 4	$ 6
SOC-RAM 4A	RAM 4A board	$ 22	$ 33
SOC-SIO 2	SIO 2 board	$ 12	$ 18
SOC-SIOC	SIOC board	$ 3	$ 5
SOC-VIO	VIO board	$ 25	$ 35

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IMSAI DOCUMENTATION

BOOKS(ALLOW 30 DAYS FOR DELIVERY)

8080P	8080 PROGRAMMING FOR LOGIC DESIGN	$ 8.50
BASICP	BASIC–PLUS LANGUAGE MANUAL	$ 17.00
INASM	INTEL 8080 ASSEMBLY LANGUAGE MANUAL	$ 12.00
INTEL	INTEL 8080 MICROCOMPUTER SYSTEM USER MANUAL	$ 6.00
INVOL I	INTRODUCTION TO MICROCOMPUTERS VOL. I	$ 8.50
INVOL II	INTRODUCTION TO MICROCOMPUTERS VOL II	$ 13.50
MY	MY COMPUTER LIKES ME WHEN I SPEAK IN BASIC	$ 3.95
TTL	THE T.I. TTL HANDBOOK	$ 6.00
TTLSU	SUPPLEMENT TO TTL HANDBOOK	$ 5.00
WHAT	WHAT TO DO AFTER YOU HIT RETURN	$ 8.00

IMSAI OWNERS MANUALS

8048	IMSAI 8048 CC USER MANUAL	$ 20
BBS	IMSAI BREADBOARD SYSTEM USER MANUAL	$ 20
DOS-A	IMSAI DOS-A (CP/M) USER MANUAL	$ 25
DYRAM	IMSAI DYNAMIC RAM SYSTEM USER MANUAL	$ 20
FDS	IMSAI FLOPPY DISK SYSTEM USER MANUAL	$ 25
IMSAI	IMSAI 8080 MICROCOMPUTER SYSTEM USER MANUAL	$ 25
LPTR	IMSAI LINE PRINTER SYSTEM USER MANUAL	$ 20
PCS-30	IMSAI PCS-80/30 USER MANUAL	$ 25
PCS-34	IMSAI PCS-80/34 USER MANUAL	$ 25
PCS-35	IMSAI PCS-80/35 USER MANUAL	$ 25
PCS-PUM	IMSAI PCS-80 PERIPHERAL UNIT MANUAL	$ 25
MULT	IMSAI MULTIPROCESSOR(SHARED MEMORY)USER MANUAL	$ 20
VDP-0M	IMSAI VDP-80 OPERATORS MANUAL	$ 25
VDP-TM	IMSAI VDP-80 TECHNICAL MANUAL	$ 25

IMSAI DOCUMENTATION CHAPTERS

4K Documentation	N/C
8K Documentation	N/C
9K Documentation	N/C
4K BASIC Source Listing w/ paper tape	$ 14.00
8K BASIC Source Listing Only	$100.00
9K BASIC Source Listing Only	$100.00
AP-44	$ 5.00
Commercial BASIC	$ 5.00
CP-A	$ 5.00
DOS-A (CP/M) Assembler	$ 5.00
DOS-A (CP/M) Dynamic Debugging Tool (DDT)	$ 5.00
DOS-A (CP/M) Editor	$ 5.00
DOS-A (CP/M) Interface Guide	$ 5.00
DOS-A (CP/M) System Alteration Guide	$ 5.00
FIF (IFM-FIB)	$ 5.00
FPS-D	$ 5.00
FPS-U	$ 5.00
IFM	$ 5.00
LIF (IFM-LIB)	$ 5.00
MIO	$ 15.00
Motherboard (EXP 6 & 22)	$ 5.00
MPU-A	$ 5.00
PGM 1A (SCS-1)	$ 5.00
PGM 2A (TCOS)	$ 5.00
PGM 6A (SCS-2)	$ 5.00
PIC-8	$ 5.00
PIO 4	$ 5.00
PIO 6	$ 5.00
PS-28D	$ 5.00
PS-28U	$ 5.00
PROM-4	$ 5.00
RAM 4A	$ 5.00
SIO 2	$ 5.00
VIO	$ 15.00

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Terms: Letter of credit, cash, check, money order, Visa, Master-Charge (include all embossed data on card), 25% non-refundable deposit on C.O.D. orders, 25% cancellation charge on any order. California residents add 6% or 6½% sales tax.