



You're looking at the first full-scale, 16-bit computer to be designed for widespread OEM use.

Widespread because we gave it an unheardof combination: big power to handle the
toughest jobs, and a small price tag to handle
a lot of jobs. Specifically, NAKED MINI\*/LSI
is the first computer powered to satisfy 90% of
all minicomputer applications—yet priced as
low as \$990 in OEM quantities of 200. And that
price includes 4K words of memory.

As a result, NAKED MINI/LSI will be
going more places than computers could ever

As a result, NAKED MINI/ESI will be going more places than computers could ever go before. Doing the job of expensive computers, but at a much lower cost. Doing a better job than hardwired circuitry, yet at similar or lower cost. Even doing jobs that before couldn't economically be done at all.

NAKED MINI/LSI belongs in any system that needs certain things happening in certain ways at specific times. NAKED MINI/LSI lets you plug in the intelligence you need to monitor, sequence and control effectively.

For the first time, OEM's can think of using a computer for 1-on-1 applications: smart terminals, key-to-disc data entry systems, automated bank tellers, delivery truck routing devices, continuous inventory control at fast-food outlets and other point-of-sale situations, information displays, communications concentrators, building security systems, laboratory instruments, patient monitoring systems, and classroom learning machines. Even vending machines and gas stations can now have their own computer.



# The head of the family: LSI-1.

Naked Mini/LSI-1 is a fully-operational 16-bit computer that measures 1"x 15"x 17" and weighs 4 lbs. The 7-chip MOS/LSI processor, memory, DMA, and full instruction set are all on a single card. There's no need for a chassis or motherboard, even to accommodate up to 8K of memory and all of the most common options.

It's truly the computer that's a component. To use it, just plug it into one connector in your product. It's powered by your existing system supply.

### The faster of the family: LSI-2.

LSI-2 uses the same family design as the LSI-1, but runs faster. For example, it can execute a full word multiply (a standard hardware feature in both processors) in less than 15 microseconds.

Except for its greater speed, the LSI-2 is completely compatible with the LSI-1. This means that user programs run correctly in either processor, and one can be substituted for the other without program changes.

Any combination of memories in any mix of types and speeds can be used with either processor. This means the user can configure exactly the combination which best suits his needs now, and later change the combination to meet new needs merely by exchanging or adding the appropriate processor or memory boards.

# ALPHA/LSI

If you need either the NAKED MINI/LSI-1 or LSI-2 installed in its own fully-encased mainframe chassis, we can do that too. It's called ALPHA/LSI-1 or ALPHA/LSI-2, and includes power supply, a control console with a new hexadecimal data input keyboard, and LED binary displays. It can be easily expanded to 256 K words of 16-bit memory. And as many peripheral controllers and special-purpose interfaces as you need.

### Why we did it: The Great OEM Gap.

Other minicomputer companies don't understand the OEM. They're too busy building end user systems with lots of peripherals, special features and more speed and software than the job needs right now.

We on the other hand fill the companies of t

We, on the other hand fill the gap. Because we specialize in the design and manufacture of OEM computers. And we're the only ones who do. Our computers are high quality, reliable and most important, low priced. And we don't cut corners. By designing strictly for OEM's and selling in volume, our costs are lower all the way down the line.

We don't try to cover everything. That's why we're the NAKED MINI Company.

## Specifications.

#### Memory

Word Size: Memory Size: Addressing: Memory Parity: 16 bits/word 1,024 to 262,144 words Both word and byte Available option which adds one bit per byte

#### **Functional**

Instructions:

168 distinct basic instructions, plus many variations through address modes

Index Register: Indirect Addressing:

Single word for almost all instructions 768 words or bytes Instruction Format: Direct Addressing: Indirect Addressing: Power Fail Restart:

Standard Multi-level

Real Time Clock: Autoload:

32,768 words or 65,536 bytes Available option Available option Available option

### Physical

Dimensions: 1.5" 8.7" 8.7" 15.0" 19.5" 16.9" 18.5" NAKED MINI/LSI-1: /LSI-2: ALPHA LSI-1 & 2: Weight: NAKED MINI/LSI-1:

ALPHA/LSI-1:

I/LSI-1: 7.5 lbs., with full complement of options /LSI-2: 29.0 lbs., with full complement of options 66.5 lbs., with full complement of options, power supply, and panel 67.0 lbs., as above

/LSI-2:

## **Environmental**

Temperature: Humidity:

0° to 50°C

90% (non-condensing)

#### Software

Real Time Executive (RTX) includes modular Input/Output (IOX) and Communications (COMX) subsystems

subsystems
Disc Operating System
Magnetic Tape Operating System
Cassette Operating System
Easter Operating System
Cassette Operating System
EASIC: Advanced, Extended and Multi-User versions
FORTRAN

Conversational Assembler in addition to standard batch Assembler

Assembler
Utility and Library programs
Quality Control Diagnostic (QCD) programs

File Managers 360 Cross Assembler

All specifications subject to change without notice.

## Input/Output

	LSI-1 with memory speed of			LSI-2 with memory speed of		
	980	1200	1600	980	1200	1600
I/O Transfer Rates (words/bytes/sec) DMA (std)	1,020,000	833,000	625,000	1,020,000	833,000	625,000
DMA (Interleaved)	1,666,000	1,429,000	1,250,000	1,666,000	1,429,000	1,250,000
Block I/O (std)	131,000	131,000	131,000	411,000	408,000	400,000
Programmed I/O (Std; via registers)	34,000	34,000	34,000	130,000	125,000	112,000
Programmed I/O (Std; direct to memory)	24,000	24,000	24,000	90,000	83,000	70,000
Direct Memory Channels (Std; multiple device capability without multiplexer); total	26,000	26,000	26,000	80,000	73,000	62,000

Conditional I/O:

Maximum number of I/O devices addressable:
I/O Word Length:

Priority Levels: Interrupts:

Standard

248

248
8 and 16 bits
5 standard (2 internal; 3 external)
Fully vectored; 6 standard;
additional provided by all
standard I/O options

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