

# Zilog

**SYSTEM 8000:  
CHALLENGING THE MINIS**

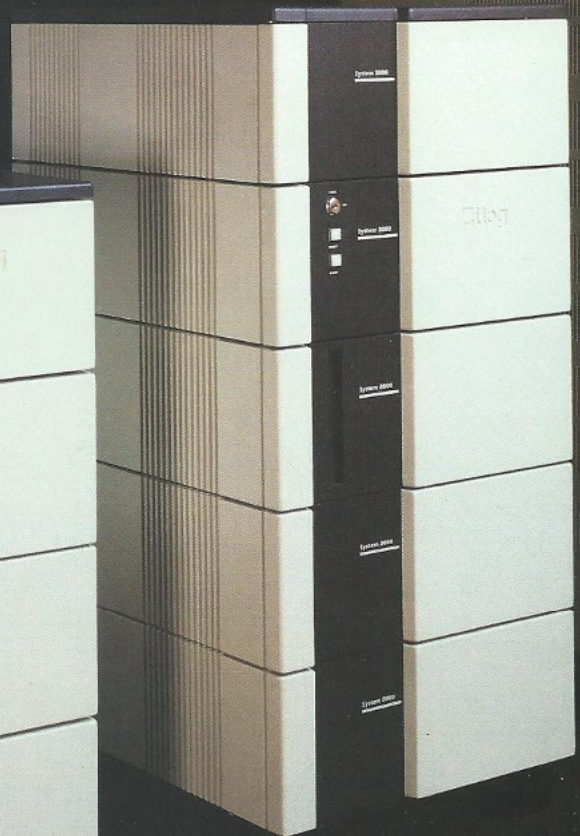




MODEL 11



MODEL 21



MODEL 31  
WITH OPTIONAL  
EXPANSION CHASSIS





# Zilog SYSTEM 8000

**M**inicomputer power. Microcomputer prices. The System 8000 Family from Zilog. Sophisticated multi-user "Supermicros" that do the job you always thought you needed a minicomputer for.

These modular, general-purpose systems feature basic performance levels and upgrade options to start you on the road to meeting all your application needs, from technical to commercial.

And built-in compatibility with more than enough popular high-level languages and application packages to take you the rest of the way.

### Protecting Your Software Investment

With protection of your investment in mind, Zilog designed all System 8000 family members with identical CPU board, peripheral controllers, and system software.

That means programs you develop for one System 8000 model can run on any other System 8000 model - with no modification or recompilation! Start with our compact eight-user system. When your application needs grow, move up to one of our 16- or 24-user models - your software goes with you!

### Designing Hardware to Complement Software

The heart of the System 8000 is the UNIX\* operating sys-

tem, the Bell Laboratories operating system whose power, flexibility and widespread acceptance have earned it status as a *de facto* standard for 16-bit computers. Zilog is committed to supporting the current Bell Laboratories version of UNIX.

Zilog licensed UNIX, enhancing it for increased efficiency, reliability and ease of use. Then we designed System 8000 hardware specifically to maximize the performance of the UNIX operating system.

The result is a hardware and software combination unequalled in its ability to deliver the flexibility, growth and performance you've come to expect from far more costly minicomputers.

Taking advantage of Zilog's expertise in VLSI technology, System 8000 architecture is based on the 16-bit Z8001\* microprocessor, known for its high throughput and reliability. It features a large eight megabyte program address space not found even in many minicomputer architectures.

Complementing this powerful CPU is an advanced memory management scheme, and full error-correcting memory to insure virtually fault-free processing. Intelligent Winchester disk and magnetic tape controllers free the CPU to devote its resources to the best possible performance of the user's application.

MODEL 31  
WITH OPTIONAL  
NINE TRACK TAPE DRIVE

\*UNIX is a trademark of Bell Laboratories. Zilog is licensed by AT&T





MODEL 11

Our "growth machine" evolves as your needs evolve. Almost every facet of this truly modular system is upgradable.

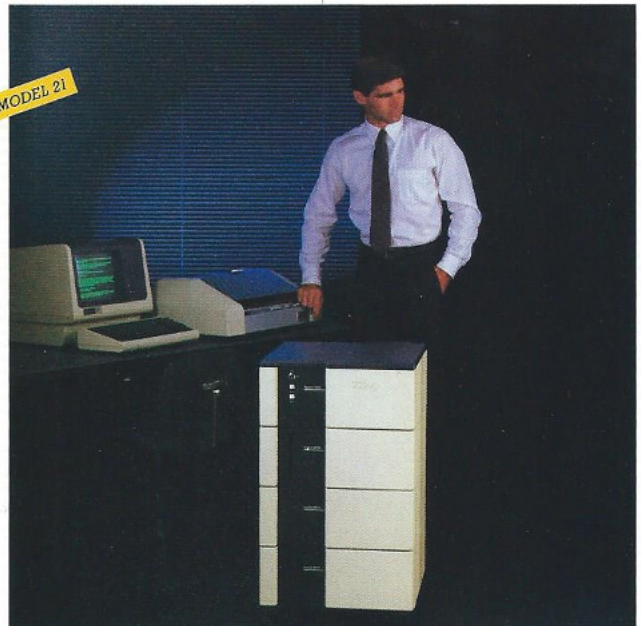
Start with eight users and grow easily to 16 or 24.

Begin with a spacious 10-slot card cage and add an optional expansion chassis for a total of 18 available slots. Since not all slots are pre-defined for specific card types, it's easy to add new options as they become available.

Expand from 1 megabyte ECC memory to four megabytes. Or quadruple the Model 21's standard 32 megabytes of Winchester-disk storage to 128 megabytes.

Besides the cartridge tape drive common to all System 8000 Family members, the Model 21 offers an optimal industry-standard 1600-bpi nine-track tape for added backup protection and media exchange.

MODEL 21



Zilog's compact, eight-user system, measuring only 8 x 26 x 18 inches, easily fits beside a desk or under a table for quiet, inconspicuous operation in the office environment.

The Model 11's six-slot card cage lets the user start with 256 kilobytes of memory and grow to a full megabyte. Compact 5¼-inch Winchester disk drives provide up to 36 megabytes of storage capacity. And a 17 megabyte cartridge drive far surpasses flexible disks for fast, reliable backup protection. Common to all System 8000 models,

this medium makes it easy to move your applications as your needs grow.

Like all System 8000s, the Model 11 incorporates Zilog's Z-Bus Backplane Interconnect (ZBI™), a true 32-bit bus that will let you implement future Zilog high-speed 32-bit processors and peripheral controllers when they become available.



## THE SYSTEM 8000 FAMILY

	Model 11	Model 21	Model 31
CPU slots	6	10	10
Maximum slots	6	18	18
Memory type	Parity (ECC option)	ECC	ECC
Standard memory	256 KB	1 MB	1 MB
Maximum memory	1 MB	4 MB	4 MB
Standard disk	18 MB	32 MB	80 MB (SMD- compatible)
Maximum disk	36 MB	128 MB	320 MB
Standard users	8	8	8
Maximum users	8	24	24
Backup	17-MB tape cartridge	17-MB tape cartridge	17-MB tape cartridge
9-track tape	N/A	Optional	Optional
Intelligent Communications Processor (ICP)	Optional	Optional	Optional



MODEL 31  
WITH OPTIONAL  
EXPANSION CHASSIS

The System 8000 Family's top performer, Model 31, offers all the features of the Model 21 plus dramatically enhanced disk-storage capabilities.

Designed into the Model 31 is a high-speed 80 megabyte industry-standard *Storage Module Disk (SMD)* drive. Because this machine can expand to accommodate up to four such drives, it can offer as much as 320 megabytes total storage—capacity unprecedented in a microcomputer-based system!

But the user gains far more from this than just increased capacity. With its extremely high throughput rate, the SMD drive serves as an ideal storage complement to UNIX, significantly enhancing the performance of applications running under the powerful multi-user operating system.

Requirements for high-capacity backup protection and inter-system media exchange have grown more pressing as computer use has proliferated. Zilog's 9-track magnetic tape drive option effectively addresses these needs on System 8000 Models 21 and 31.

Up to two industry-standard 1600-bit-per-inch 9-track tape drives, each storing 44 megabytes of data on a 10.5-inch 2400-foot tape reel, can be configured with the System 8000.

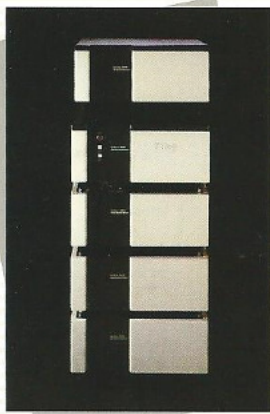
These IBM-compatible, ANSI-standard drives offer either automatic streaming mode (100 inches per second) or start-stop mode (12.5 inches per second), as well as built-in self-diagnostics.

And compatibility with phase-encoded and NRZI standards provides a highly practical means of transporting System 8000-based data to and from other computers.



NINE TRACK TAPE





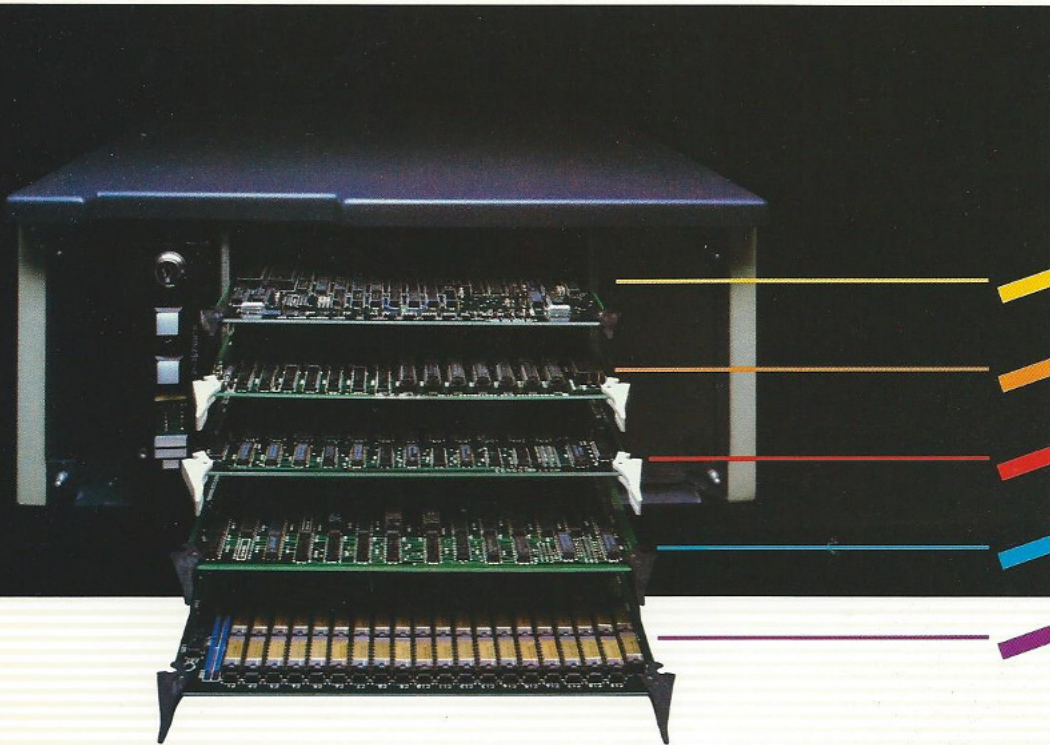
**M**ODULARITY PLUS  
Designed with the future in mind, the System 8000 gives you growth potential on three levels.

Board-level modules plug easily into the 10-slot card cage to add such options as a nine-track tape controller, SMD controller, eight-user upgrades or communication functions.

An expansion chassis providing eight additional

slots and stacks right on top of the system.

And the accessory modules in the lower part of the cabinet can be replaced with extra disk tape modules—using only a screwdriver. For users who don't require that added disk storage, accessory modules serve as convenient storage space for disks, tapes, documentation and program listings.



CPU Board with 6 MHz Z8001A CPU, three Z8010A Memory Management units, eight RS232C serial ports with modem control, one parallel printer interface and bootstrap monitor and power-on diagnostic in EPROM.

Winchester Disk Controller Board supports up to four drives, with Z80B intelligent controller, full track buffering, and multi-sector reads and writes.

Cartridge Tape Controller Board supports up to four drives with Z80B intelligent controller, bad tape handling, CRC checking and track switching.

ECC Controller Board (Error Checking and Correcting) memory controller controls and refreshes up to four memory array boards including single-bit error correction and logging.

ECC Memory Array Board available as 512 KB and 1 MB array boards utilizing 64 K RAMs.

Optional Boards such as extra memory arrays, Serial Interface, SMD (Storage Module Disk) controller, nine track controller and Intelligent Communications options can be added in the remaining slots and optional expansion chassis.

Zilog

S Y S T E M 8 0 0 0

Software at Every Level

**S**ystem 8000 users benefit from a three-tiered array of software tools that addresses their needs at all levels:

- UNIX, the most powerful and widely-used 16-bit operating system on the market;
- A comprehensive set of high-level languages that provides integrated tools for diverse applications; and
- A wide range of compatible packages developed by and available from third party software vendors.

**UNIX: Bringing Minicomputer Software Power to Micros**

Originally developed for use on minicomputer systems, the UNIX operating system has become an effective ally of microcomputers in their challenge to the minis.

The heart of UNIX is its "kernel," which provides a true multi-tasking, multi-user execution environment that secures each user's application against interference from other users. Such features as a tree-structured file system and background processes ensure ease of use.

Zilog's own enhancements to the kernel, among them a record-locking mechanism, make our implementation of UNIX a highly efficient base for business applications. And our insistence on compatibility means applications that run on other UNIX systems will run on the System 8000.

Surrounding the kernel is a set of system utilities unrivalled by other operating systems in either quantity (more than 200) or quality.

Zilog supplies the complete UNIX system. We've rounded out Bell Labs' already powerful set of offerings with such features as a full-screen editor, automatic system

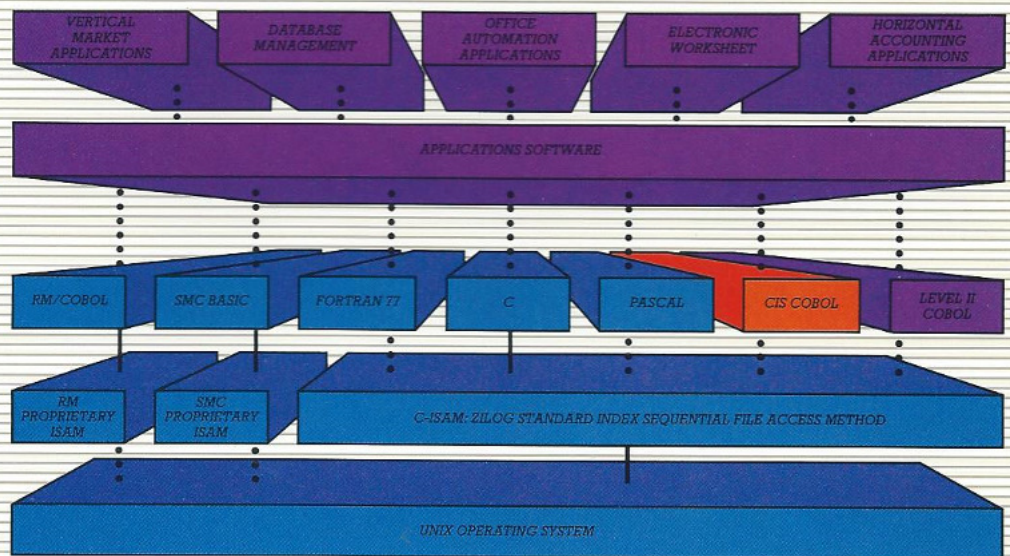
bootstrap and file system maintenance. So even casual users can operate the System 8000 with confidence.

**Software Options Maximize Flexibility**

Diverse high-level language options for the System 8000 Family provide access to applications spanning the range from commercial to technical.

Commercial users can start with RM/COBOL—the most popular COBOL for microcomputers today. Or they can select CIS COBOL, with its sophisticated development tools.





- Offered by Zilog
- Offered by Zilog (U.K.) Ltd.
- Offered by Third Party Vendors

Extending System 8000's usability in commercial environments is SMC BASIC, a standard not only on microcomputers but also on popular minicomputers such as those that run the Business Basic (BBIII) language. Your software investment is secure when you make the move from your minicomputer to Zilog's cost-crunching "supermicro."

For the technical software user we've ported Pascal and FORTRAN 77, substantially enhancing both while maintaining compatibility with existing standards.

The System 8000 software picture wouldn't be complete without the many additional tools and applications available through outside vendors. Our new third party software directory - free for the asking - will tell you all about these offerings: they range from COBOL program generators to data base management systems, vertical market applications, report writers, electronic worksheets, word processing packages and horizontal accounting packages.

So whether you're developing new applications for the System 8000 or transporting existing ones to take advantage of "supermicro" power, Zilog's vast array of software offerings lets you make the most of your effort.

# Zilog

an affiliate of **EXON** Corporation

## *Corporate Headquarters*

Zilog, Incorporated  
1315 Dell Avenue  
Campbell, California 95008 U.S.A.  
Phone: 408 370 8000  
TWX: 910 338 7621

## *European Headquarters*

Zilog (U.K.) Limited  
Zilog House  
43-53 Moorbridge Road  
Maidenhead  
Berkshire, SL6 8PL England  
Phone: 0628 392000  
Telex: 848609

## *France*

Zilog  
31, Place des Corolles  
Cedex 31  
92098 Paris La Defense  
France  
Phone: 1 334 60 09  
Telex: 611445F

## *West Germany*

Zilog GmbH  
Eschenstrasse 8  
D-8028 TAUFKIRCHEN  
Munich, West Germany  
Phone: 89 612 6046  
Telex: 529110 Zilog d.

## *Japan*

Zilog, Japan K.K.  
Konparu Bldg. 5F  
2-8 Akasaka 4-Chome  
Minato-Ku, Tokyo 107  
Japan  
Phone: 81 03 587 0528  
Telex: 2422024 A/B: Zilog J

UNIX is a trademark of Bell Laboratories.  
RM/COBOL is a registered trademark of Ryan-McFarland Corp.  
CIS COBOL is a registered trademark of MicroFocus, Inc.  
LEVEL II COBOL is a registered trademark of MicroFocus, Inc.  
SMC BASIC is a trademark of Science Management Corporation.

This document is subject to change without notice.

Printed in USA

00-1106-02 © 1983 by Zilog, Inc.