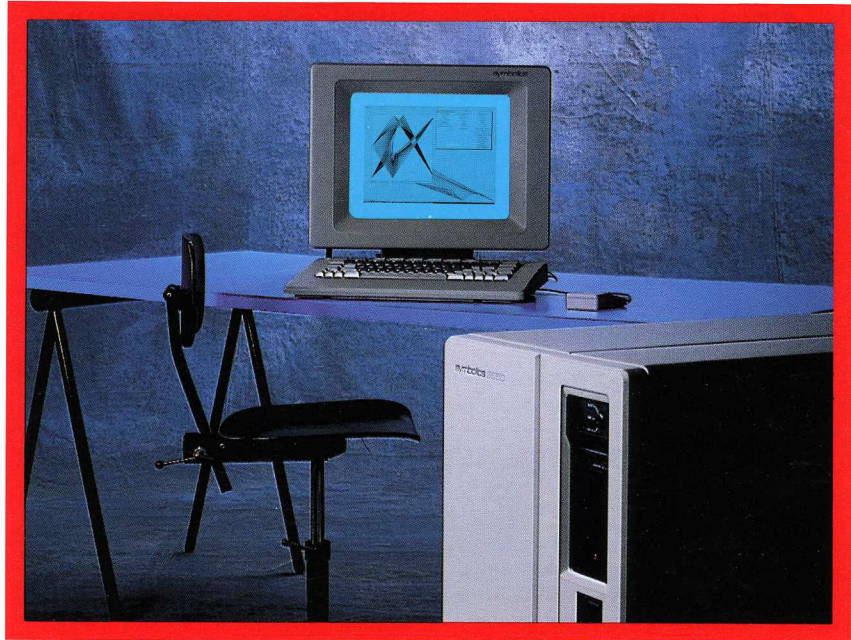


symbolics™



SYMBOLICS 3650 SYSTEM

The Symbolics 3650™ processor is the newest mid-range system in Symbolics' powerful 3600 family of symbolic processors. Designed specifically as a mid-range development or applications delivery system or as a file server for smaller networks, the 3650 system offers performance, power, and expansion capabilities.

The Compact, Expandable, Mid-Range System

Symbolics' new 3650 system uses VLSI/CMOS and gate-array technology to pack power and performance into a small box. The 3650 processor offers many expansion slots for memory, color, mass storage, and other options.

Gate-array processor technology makes the 3650 system a highly flexible, mid-range system that can satisfy varied applications development and delivery needs with multiple expansion possibilities.

A High-Performance File Server for Local-Area Networks

High performance and a built-in Ethernet interface, coupled with Symbolics' advanced network services and protocol products, make the 3650 system an ideal file server for small local-area networks. The 3650 system can be used within the Symbolics environment, moving programs and data quickly and inexpensively among several 3600 family development systems. Optional TCP/IP protocol support, DECnet™ software, and the Symbolics SNA Facility also let the 3650 system perform in other vendors' environments.

Powerful Applications Development Environment

The 3650 system supports Genera™ software—the sophisticated and powerful development and applications environment that has made the 3600 family of systems the most widely used symbolic processors available today.

The Genera software environment includes Symbolics Common Lisp™, a superset of Common Lisp. With such extensions as Flavors object-oriented programming, networking, window management, graphics, multitasking, multilanguage programming, editors, debuggers, and electronic mail, the Genera environment is a rich foundation for developing and delivering applications.

SYSTEM CONFIGURATION

The 3650 system is available as a base unit, which includes the processor, I/O controller, backplane, cabinet, Ethernet, and a disk. System console (with keyboard and mouse) and memory are added to fit the needs of the application. Specific features of the system include:

- Genera software can address up to 8 Mwords (32 Mbytes) of memory in Release 6.1 and up to 15 Mwords (60 Mbytes) in Release 7.0.
- Two RS232C serial I/O ports.
- Built-in Ethernet interface.
- 368 Mbyte disk (unformatted capacity).
- 15 expansion slots for additional options.

FEATURES AND FUNCTIONS

Symbolics 3600 family is based on a proprietary 36-bit tagged architecture with runtime data typing, dynamic storage allocation, dynamic linking, multitasking in a single address space, and object-oriented programming. In total, these features create a high-performance environment with productivity gains for programmers as well as applications users.

Symbolics' Hardware Architecture

- The 3650 system's single-board processor is possible through VLSI/CMOS implementation of the Symbolics 3600 proprietary architecture using gate-array technology. This implementation opens the door to high performance and custom VLSI implementations at a lower cost, delivered in smaller packages.
- Modular I/O architecture makes the system more flexible, less costly, and easier to expand.
- 36-bit, stack-oriented tagged memory architecture is designed specifically to support the Genera software environment.
- Hardware-assisted parallel execution of runtime data-type checking, garbage collection, and instruction prefetch give 3650 system users fast response times, increased data integrity, and overall high performance.
- A demand-paged virtual memory capability gives the 3650 system the ability to handle large, complex problems with superior performance and response.

The Genera Software Environment

Symbolics Genera software provides all of the tools necessary for a productive software engineering environment. The Genera environment encourages rapid prototyping, incremental software modification, easy maintenance, and overall project synchronization.

- Sophisticated operating system environment is written entirely in Lisp.
- Genera software is designed to provide fast interactive response to system developers and applications users.
- Highly flexible user interface, with a variety of window configurations and menu styles, is under programmer control.
- Operating system and utilities are documented and can be modified.
- Complete set of the Symbolics documentation is available in hardcopy or online through the award-winning Document Examiner.[™]
- Concurrent execution of application processes in multiple languages is supported.
- Standard program-development utilities are window-oriented, support fill-in-the-blank command completion, and can be keyboard and mouse activated.

Symbolics High-Level Language Environment

Genera software supports a multilanguage environment wherein the full suite of software tools and development utilities are available to all supported languages. Routines and programs written in various languages can be combined into large application systems and can call each other.

- Support for industry-standard high-level languages including Symbolics Common Lisp, Zetalisp,[®] FORTRAN-77, Pascal, Ada,[®] and Prolog.
- Applications written in supported languages will run and take immediate advantage of the symbolic processing environment when ported to the 3650 system.

Symbolics Network Environment

- Uniform system commands, regardless of the protocol used, make the system easy to use.
- Symbolics' optional SNA Facility, DECnet software, and TCP/IP (the DoD DARPA standard) protocol support permit communication with a range of systems.
- Built-in Ethernet support.
- Multiple protocols are supported simultaneously and selected automatically over Ethernet cable or serial I/O ports for a transparent user interface.
- Built-in Chaosnet software lets several Symbolics hosts communicate.

3650 SYSTEM OPTIONS

- Double-precision Floating Point Accelerator.
- Up to 16 Mwords (64 Mbytes) memory in increments of 1 and 2 Mwords (4 Mbytes and 8 Mbytes, respectively).
- 368 Mbyte Fixed Disk.
- 1/4-inch cartridge tape drive.
- Industry-standard, 9-track, 1/2-inch magnetic tape drive.
- Symbolics DMP1 Dot-Matrix Printer.
- Symbolics LGP2 Laser Graphics Printer.
- Color capability, including 8-bit, 24-bit, CAD Buffer, and Frame Grabber Graphics System.
- High-resolution monochrome console with keyboard and mouse (console includes one RS232C serial I/O port).
- High-resolution color console (with keyboard and mouse) and one RS232C serial I/O port.

PHYSICAL OPERATING ENVIRONMENT

| | |
|--------------------|--|
| Dimensions: | 30" H x 17.5" W x 31" D (76.2cm x 44.5cm x 78.7cm) |
| Weight: | 227 lbs (102 kg) |
| Voltage: | 115 V ($\pm 10\%$) at 7.5 amps typical (20 amps maximum) 230 V ($\pm 10\%$) at 3.8 amps typical (10 amps maximum) International power configurations also available. |
| Frequency: | 60 Hz |
| Power: | 1500 Watts maximum (5100 BTU/hr) |
| Temperature: | 32-90 degrees F (0-32 degrees C) |
| Relative Humidity: | 15-80% |
| Power Receptacle: | 3-Prong NEMA L5-30R |

For more information on the Symbolics 3650 system or other symbolic processing products from Symbolics, Inc.

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