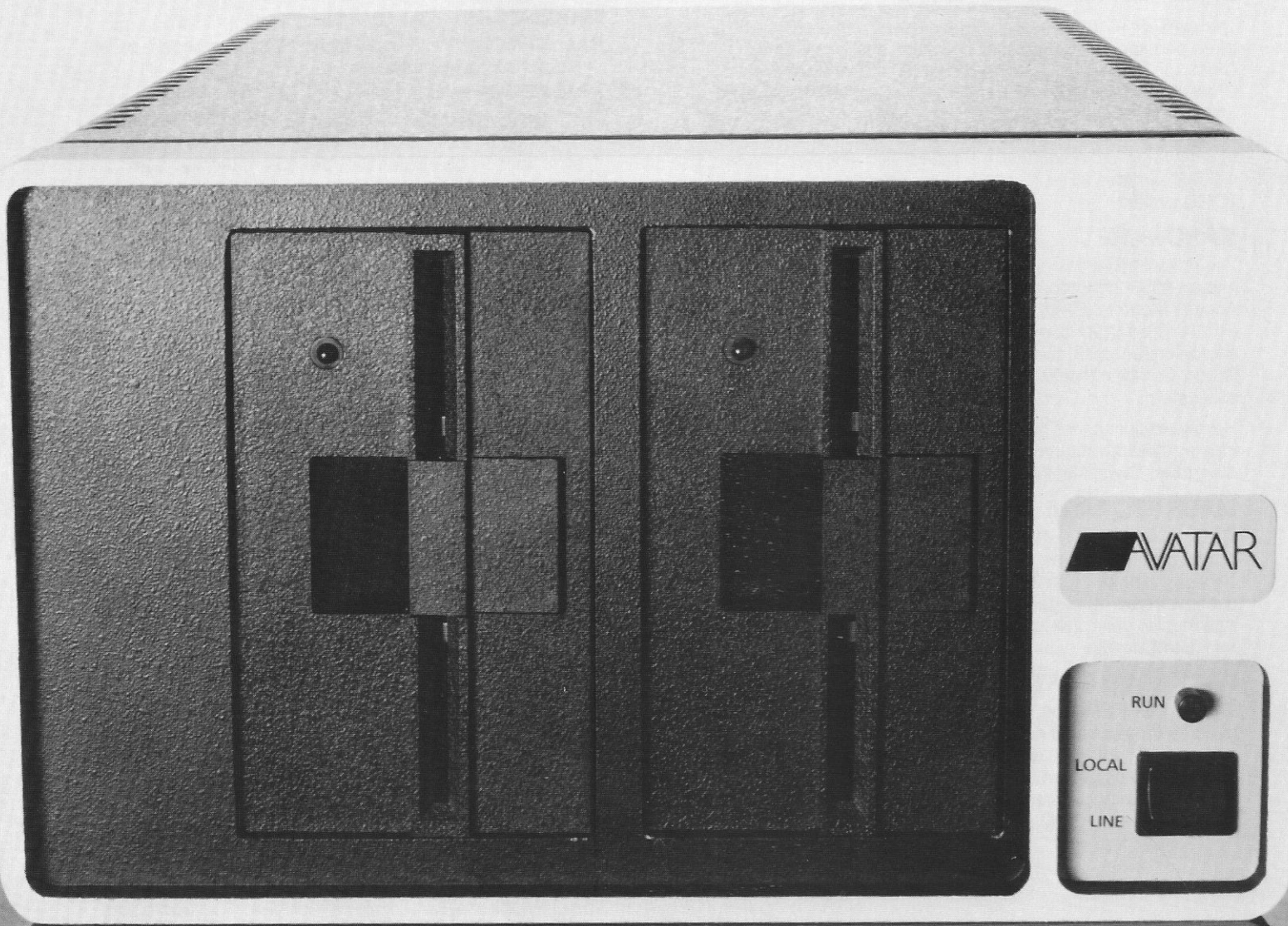# TC100 SYSTEMS

The AVATAR™TC100 Universal Terminal Converter is a self contained dual microprocessor-based system that turns a previously dedicated dumb terminal into a fully functional, stand-alone intelligent workstation with personal computing capabilities. With the AVATAR's combination of hardware and proprietary software, any manufacturer's terminal can look like an ANSI-standard terminal, capable of running application programs, from any developer, that are written to defacto standard microprocessor operating systems like CP/M® or MS/DOS®. The AVATAR TC100 allows terminal users to maintain their terminal's existing connection to a host computer, provides access to public information databases or remote computer systems, and features data and file transfer between the host computer and the TC100 system.

The AVATAR TC100's shared memory architecture divides job processing and input/output tasks between the two microprocessors. With the AVATAR TC100 in place, externally connected to the terminal, users can locally develop programs, including those with large memory or database management requirements, or run applications like word processing or electronic spreadsheet at faster execution speeds than on single processor systems. Users can store and maintain data files locally, and use low-cost dot matrix or letter-quality printers to produce local hardcopy on demand. In addition, a terminal type-ahead feature lets users input data quickly, up to 80 characters ahead of what is viewed on the screen.

The AVATAR TC100 system provides users with a choice of three popular microprocessor operating systems—CP/M, CP/M-86® and MS/DOS. With over 2000 currently available CP/M-based programs, and a wide variety of MS/DOS-based and IBM PC® -compatible software available, TC100 users can select the programs that best meet their requirements. In addition, any application software supplied with single processor AVATAR systems will run, without user modification, on any TC100 system.

HARDWARE

The AVATAR TC100 is built using both a Z80A microprocessor and an 8088-2 microprocessor, with 128K bytes of Random Access Memory (RAM) and 8K bytes of Read Only Memory (ROM). The TC100 also includes a battery-operated time-of-day/calendar clock, two asynchronous serial ports, a serial RS232-C printer/modem interface, power supply and diskette subsystem.

Hardware options for the AVATAR TC100 include a Centronics-type parallel printer interface and an add-on Winchester hard disk drive. The system is expandable to 256K bytes of memory.

MASS STORAGE

The AVATAR TC100 system supports single- or double-sided, 48 or 96 TPI (tracks-per-inch) diskettes that provide a formatted capacity ranging from 205K bytes to 1.6M bytes of storage. For users with rapidly expanding database requirements, an add-on Winchester hard disk is available with 5, 10 or 20 megabytes of formatted storage capacity.

PACKAGED SOFTWARE

With an AVATAR TC100, a wide variety of dumb terminals can execute thousands of currently available application programs from leading software developers. In fact, all AVATAR TC100 systems are packaged with a comprehensive set of the industry's most popular software and utilities, including 8-bit and 16-bit versions of CP/M.

The CP/M operating system includes several proprietary enhancements that improve system performance. These include a universal terminal handler and a buffered disk I/O capability.

The CP/M-86 operating system is compatible with CP/M, which simplifies converting CP/M-based software to run on 16-bit systems. Commands, high-level language programs and calls for system services will execute or respond with little or no modification in both systems.

The AVATAR also supports MS/DOS and a wide range of IBM-PC-compatible programs. MS/DOS records the time and date for every file, so users can track file content modification, examination or addition.

Application and development software is also included, for users who want to access personal computing capabilities immediately:
—WordStar® is a powerful word processing system with an integrated print capability.
—CalcStar® is a sophisticated electronic spreadsheet and financial modeling program.
—CBASIC®, a commercial dialect of the BASIC programming language, is designed for users who desire to develop specialized programs.

TECHNICAL SPECIFICATIONS

PROCESSORS: Z80A and 8088-2 CPUs.

RAM MEMORY: 128K bytes dynamic RAM, standard. Additional 128K bytes optional.

ROM MEMORY: 8K bytes.

TERMINAL AND HOST PORTS: Two RS232-C compatible, 300-9600 baud, keyboard programmable. The host and terminal port characteristics are automatically set at installation and retained in non-volatile memory.

AUXILIARY PORT: RS232-C compatible, 300-9600 baud, keyboard programmable with modem control.

OPTIONS: Parallel (Centronics-type) printer interface, and Winchester hard disk drive.

CLOCK: Time-of-day/calendar clock (battery maintained)

DISKETTE CAPACITY: One or two 5-¼" floppy disk drives, single or double sided, 48 or 96TPI, providing from 205K bytes to 1.6M bytes of total formatted capacity.

SIZE: 7-¾" high × 12-¼" wide × 12-¾" deep.

WEIGHT: 20 lbs.

POWER: 115VAC/230VAC, 50/60 Hz. Maximum dissipation 85 watts.

ENVIRONMENT: (Operating) 10°-40°C, 20%-80% relative humidity, non-condensing
(Storage) 10°-50°C, 5-95% relative humidity, non condensing.
(Shipping) -40° to 50°C.

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