

A SOLUTION PROVIDER FOR THE OEM MARKET





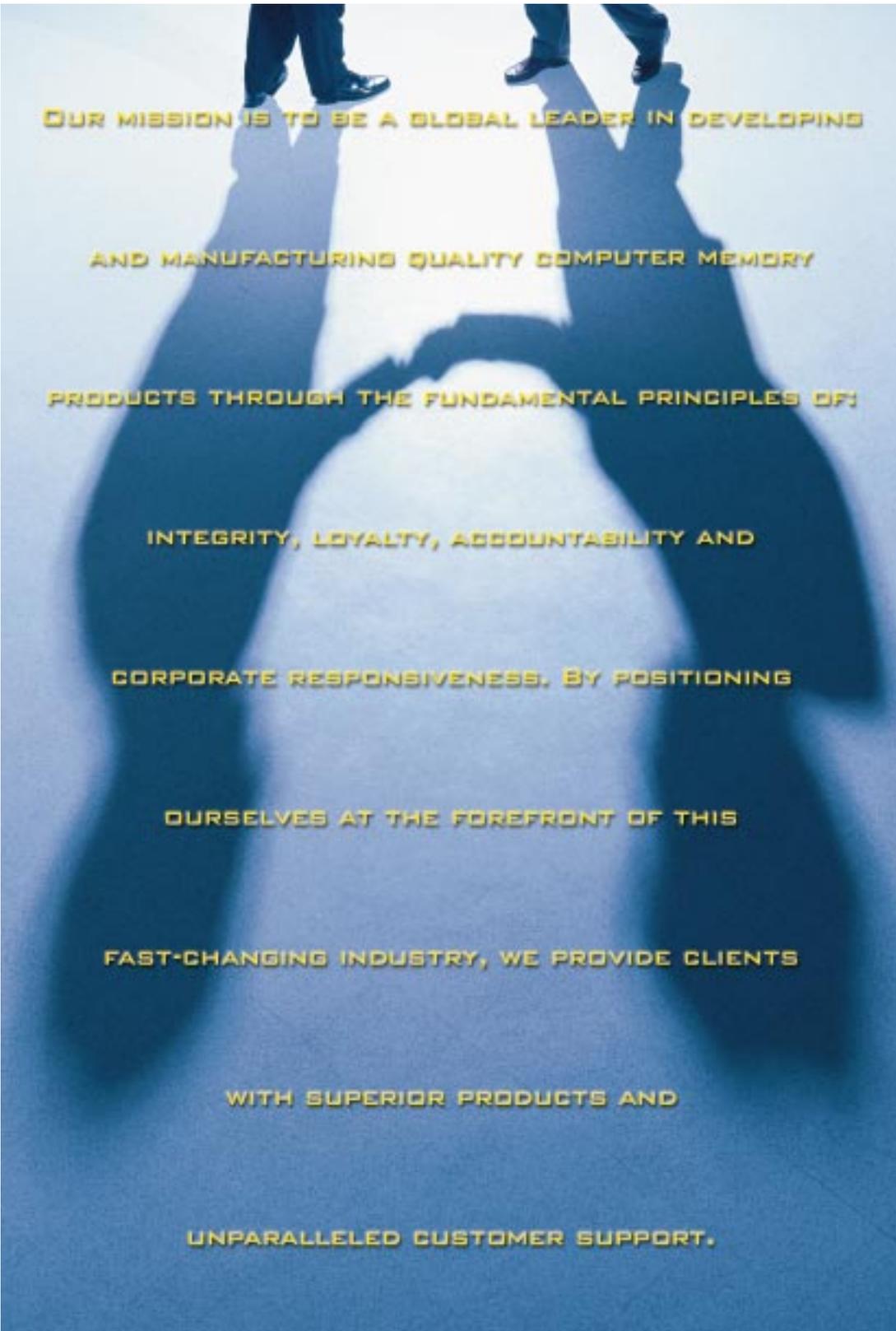
## Overview

Founded in 1988, Advantage Memory Corporation is a leader in the design and development of memory upgrade products for many of the world's largest system integrators, distributors and original equipment manufacturers (OEMs).

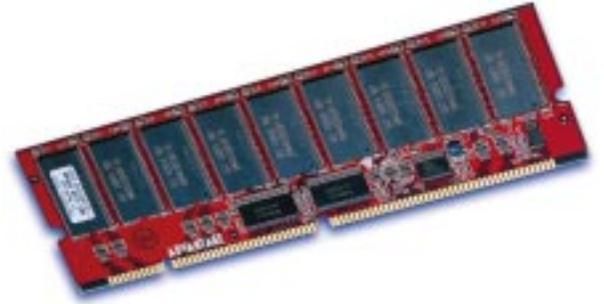
Advantage Memory's OEM strategy is characterized by a commitment to quality, technical ingenuity, fast time-to-market, build-to-order flexibility and unrivaled customer service. By consistently surpassing our customers' requirements and offering a wide breadth of products and services, Advantage has earned a reputation as a total solution provider for the OEM market.

Advantage offers one of the most extensive lines of memory products available to the OEM customer. In addition to industry standard solutions, Advantage provides custom solutions and engages in joint development projects. Advantage delivers memory in SIMM, DIMM, SO-DIMM, RIMM, PC-Card and custom form factors that use the latest RDRAM, SDRAM, SGRAM, DDR-DRAM, DRAM, SRAM and FLASH memory technologies.

With our specialized design skills, strategic supplier relationships, high-speed manufacturing capabilities and stringent testing, Advantage is well positioned to surpass demand expectations in the ever-changing OEM marketplace.



OUR MISSION IS TO BE A GLOBAL LEADER IN DEVELOPING  
AND MANUFACTURING QUALITY COMPUTER MEMORY  
PRODUCTS THROUGH THE FUNDAMENTAL PRINCIPLES OF:  
INTEGRITY, LOYALTY, ACCOUNTABILITY AND  
CORPORATE RESPONSIVENESS. BY POSITIONING  
OURSELVES AT THE FOREFRONT OF THIS  
FAST-CHANGING INDUSTRY, WE PROVIDE CLIENTS  
WITH SUPERIOR PRODUCTS AND  
UNPARALLELED CUSTOMER SUPPORT.

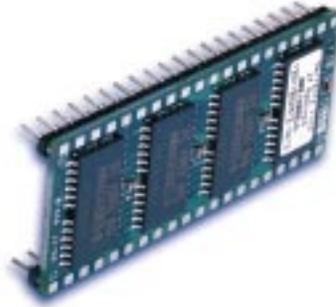


## Engineering

To best serve our clientele, the OEM Division has an engineering team dedicated to industry standard and custom products. We use the latest design tools to build leading-edge memory products according to JEDEC and customer specifications. Even with memory modules called "industry standard", there is still room to evaluate client feedback and guide our designs accordingly. For example, even though the Intel™ PC-100 specifications are strictly detailed, Advantage has found techniques to further optimize designs.

A custom memory product is the appropriate solution when a memory subsystem has a requirement that cannot be met by an industry-standard module or product obsolescence occurs. Often such applications require increased reliability, higher bandwidth or additional functionality. Traditionally, custom designs were equated with high costs and sourcing concerns. Advantage has overcome these challenges to make custom memory products a cost-effective solution while guaranteeing an ample supply line.

No matter what the project, Advantage makes a concerted effort to understand the application and requirements beyond the documented specifications. Our focus is on working with each individual customer to ensure that not only the product specifications, but all the product requirements, meet or exceed expectations.



## Design Validation

As part of our ISO 9001-registered quality system, Advantage has the appropriate design review and process control procedures in place to ensure that the products we produce meet all specified design requirements. Once a design is complete, it undergoes a series of tests to validate the design in a variety of environments and applications. In Advantage's Environmental Test Facility (ETF™) each new design must pass a 48-hour, four-corner test while running extensive memory diagnostics. Additionally, state-of-the-art test tools are used to check for shorts, opens, clearance problems, signal delays, capacitance and impedance of nets.



## Supply Base

Receiving chips directly from major DRAM manufacturers such as Samsung, Toshiba and Hitachi eliminates any concerns, such as used, damaged or off-spec DRAM. Maintaining these strong supplier relationships also ensures a reliable supply of products regardless of market conditions. In addition, Advantage evaluates suppliers through a rating system that compares and rates vendors based on their defect rate and delivery schedules. Advantage will not purchase from suppliers who fail to adhere to our strict quality criteria.





## Manufacturing

Advantage's Build-to-Order manufacturing facility is designed to deliver required capacity quickly, while maintaining strict OEM quality standards. Numerous controls are established throughout the manufacturing process to guarantee consistent quality. Key data is fed back into our statistical process control (SPC) program to guarantee high quality output and continual process improvement.

The capability of each step within the process is thoroughly evaluated and assessed on a regular basis. From solder printing to module packaging, every step is under constant analysis. With this type of attention to detail, Advantage Memory has attained continual improvement in the yield of our production.

ESD protection is present throughout the facility. We have implemented numerous controls to ensure component handling meets EIA-625 requirements for handling Electrostatic Discharge Sensitive Devices. Combined with many other control processes, Advantage maintains the highest quality standards throughout the manufacturing process.

## Testing

Every product coming off the production line is subjected to a full set of parametric and functional tests. Advantage memory testing includes both AC and DC parametric tests to design specifications, as well as functional tests using industry standard algorithms that detect a full range of failure modes. Leading edge testers exercise the modules "At-Speed" while measuring crucial timing characteristics. Every module that passes our stringent testing is identified by special lot code and tracking number labels.

## Quality

At Advantage, we believe in defect prevention rather than defect detection. Quality cannot be achieved simply through numerous inspection points; it must be built into the process. This starts with initial customer contact, continues throughout the design phase, and is confirmed during the initial product verification. It is then validated by target-system testing and monitored through in-process inspections.

Advantage's ongoing commitment to total quality includes: a statistical process control program, a continuous calibration program, a preventive maintenance program and an employee job awareness program. Complete test and burn-in is supported by a failure analysis group and reliability monitors. A dedicated product development group supports a variety of customer needs and is committed to 100% customer satisfaction.

Advantage Memory's in-process inspection techniques focus on detecting trends as early as possible to allow sufficient time to make corrections. Throughout the manufacturing and testing process, data is analyzed using statistical process control. If at any time a process is determined to be "out of range", the process is stopped and corrective action is taken immediately. Combined, these measures ensure that Advantage's product is manufactured with as little variation as possible.

Even with Advantage Memory's stringent quality controls, each Advantage module can be tracked by the build number, serial number and board number to assure complete accountability. In the rare event of material defects or design changes, Advantage can quickly locate each affected module and resolve the issue immediately.





## High-Density Modules

As densities increase beyond levels previously thought possible, the challenge becomes to develop high-density products that are cost effective and reliable. This need has been realized both in the use of industry standard solutions, and in the design of custom products. Through experience and innovation, Advantage has become an expert in developing high-density standard and custom form factor assemblies.

## Special Services Team

Typically, systems using standard memory modules have little trouble with the operation of the memory. However some platforms are more susceptible to failure or are sensitive to the varying characteristics of DRAM from manufacturer to manufacturer. Some DRAM is less tolerant of noise on control, data and address lines, or timing variations which may cause unexpected errors. Whatever the case, our memory knowledge and years of experience will help you identify and resolve these potential problems.

## Self Qualification

Most organizations conduct thorough qualification testing prior to placing a manufacturer's part number on an Approved Parts List (APL). This often tedious and time consuming process requires engineers to conduct a series of tests, rather than focusing on product development. Advantage Memory resolves this problem by conducting self-qualification programs for OEM customers, eliminating the workload and cost associated with this process.

UNLOCK  
THE  
POTENTIAL

## Materials Programs

Advantage recognizes the potential for material management techniques to reduce the cost of ownership of memory products. We provide a variety of programs including MRP schedule sharing, auto replenishment, consignment inventory and bonded stock to achieve cost benefits from material management. Advantage's OEM division will create a program to meet your specific requirements.

## Long-Term Supply

Often the key problem with memory is not the proper functioning, but ensuring a reliable, long-term supply. In an environment where Moore's Law governs, how do you guarantee the long-term availability of a particular memory technology? To overcome this challenge, Advantage utilizes an innovative design approach that incorporates the latest technologies while maintaining consistency in design techniques. Contact the OEM Division for more information about our product life extension solutions.

## AMC Logistics

Advantage offers services tailored to your specific logistical and delivery needs. Our customized service offerings include EDI order placement, procurement assistance, inventory audit and control mechanisms, bar coding with UPC or client part number, custom retail and bulk packaging, and drop ship delivery. These services are designed to make working with Advantage easier and more cost-effective.