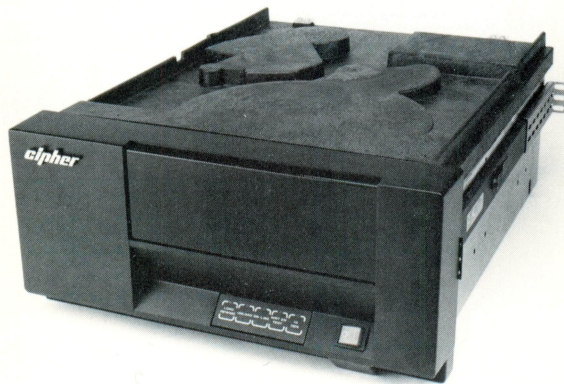


cipher[®]
data products, inc.

**Microstreamer[®] —
The Standard For
1/2-Inch Tape Drives**



Microstreamer

Original Equipment Manufacturers (OEMs) who require ANSI/IBM compatible ½-inch tape drives choose Cipher's Microstreamer over 90 percent of the time. With over 20,000 units shipped, the Microstreamer has become an industry-wide standard. The reasons for this overwhelming acceptance are simple: the Microstreamer is a compact, low-cost, streaming drive that provides high-performance secondary storage for a great variety of computer systems.

Because the Microstreamer is an industry standard, it ensures long-term hardware utility, wide-range system compatibility, and a universally recognized recording format. This acceptance provides software and database interchange with other systems worldwide for years to come. Even data files that have been archived for a number of years are still useful, because of standardized formats.

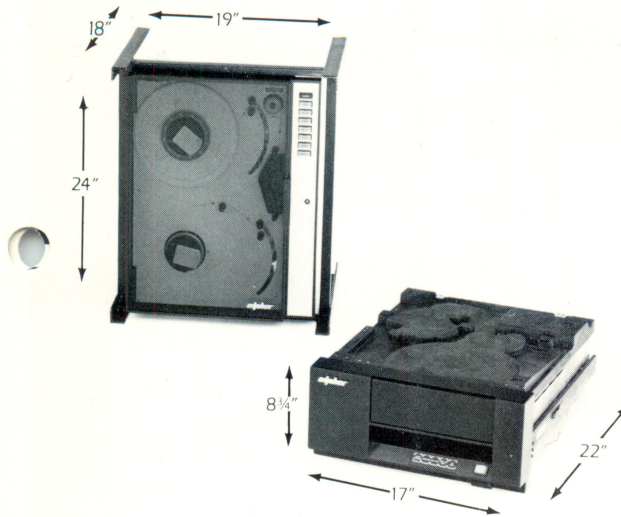
In order to become a standard for the industry, a secondary storage device must satisfy a number of OEM criteria, including:

- Compact size
- Format compatibility
- High capacity
- Low price
- Easy operation
- Wide versatility
- Low user costs
- Simplified maintenance

The Microstreamer satisfies all these criteria in the following ways.

Compact Size

The height of the Microstreamer is approximately one-third the height of the typical conventional tape drive. This compact design allows the unit to fit easily into the standard, typically-used, 19-inch EIA rack, which eliminates the need for an additional cabinet to accommodate the tape drive.



Format Compatibility

The Microstreamer, with Cipher's 1600/3200 bpi dual density option, provides IBM/ANSI-compatible 1600-bpi read/write capability, plus an IBM-compatible 3200-bpi software-selectable format. This selection of widely compatible formats meets standardization needs and offers invaluable interchangeability features.

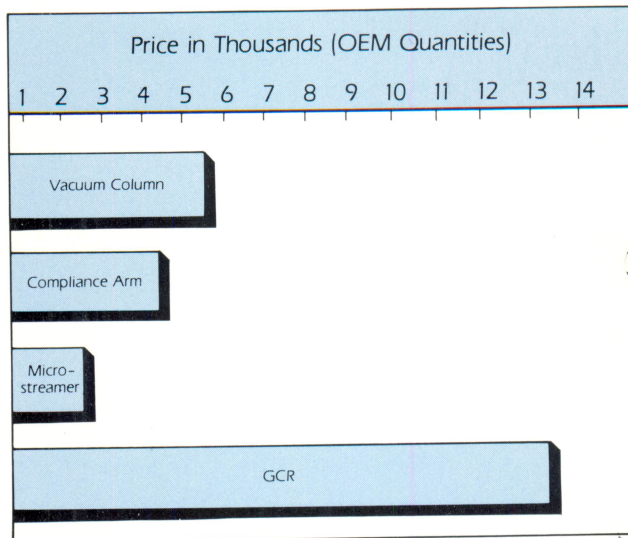
High Capacity

Like many equivalent tape drives, the Microstreamer has a storage capacity of 46 megabytes (unformatted). However, unlike other drives, the addition of the low-cost 1600/3200 bpi dual density option increases the capacity to 92 megabytes, and 1-mil. tape raises that capacity to a maximum of 138 megabytes.

Data Density	1.5-mil. tape	1-mil. tape	
	2400-ft.	3200-ft.	3600-ft.
1600 bpi	46 mb	61 mb	69 mb
3200 bpi	92 mb	123 mb	138 mb

Low Price

The purchase price of the Microstreamer averages 40 percent less than most high-performance conventional tape drives, because of the simplified mechanics used for streaming drives. The percentage of savings is even greater when compared to the average GCR.



Easy Operation

The Microstreamer is designed with a patented automatic front tape loading process and automatic threading of any standard-size reel. In addition to simplifying the loading procedure, this process prevents costly operator-caused loading errors and excessive handling of the tape media.

Wide Versatility

Designed with 25-ips and 100-ips operating speeds, the Microstreamer provides unusual flexibility. With the 25-ips speed, the drive is compatible with standard start/stop software. At 100 ips for 1600 bpi and at 50 ips for 3200 bpi, it can respond to high-speed operations. Speeds can be switched at any time by entering a simple software command.

Low User Costs

In addition to the low original price, extra major savings can be realized through: (1) compatibility with existing start/stop software at 25 ips, so massive patches are not required, and (2) appreciably lower repair costs, because of an unusually long (5,500 hours) Mean-Time-Between-Failure (MTBF) and short Mean-Time-To-Repair (MTTR).

Simplified Maintenance

The Microstreamer is equipped with automatic self-testing that generates a series of tests when the drive is turned on. The drive also contains built-in diagnostics that allow qualified technicians to do in-depth fault isolation using the front panel keys and LEDs. Once a problem is identified, the major parts are accessed easily without removing the drive from the rack.



Contact Cipher today for information on the Microstreamer —the recognized standard for 1/2-inch tape drives... or on a wide selection of other 1/2-inch tape drives and 1/4-inch cartridge tape drives from Cipher.



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