ANNOUNCING THE MICRODATA OEM PERIPHERALS GROUP.

COMPLETE WITH THE FRESHEST LINE OF PRODUCTS IN THE BUSINESS.

Microdata

YOU NEEDED A NEW APPROACH TO PERIPHERALS.

AND THAT'S EXACTLY WHAT WE HAVE.

Microdata got a fresh start in peripherals. Not by dusting off some printed circuit boards and a lot of products that didn't sell anyway.

Instead, we began with a new look at your total requirements. And we've met them with the most advanced, most thoroughly proven peripherals around.

These include the first 5440 disc drives designed for 200 tpi operation from the very beginning. The first magnetic tape transport with OPTO signal isolation. The first industry standard drive-mounted magnetic tape data formatter.

These firsts won't be our last. We're constantly upgrading existing products and developing new ones to meet your ever-expanding needs. We're in this business by popular demand. And we're in it in a big way.

The Microdata OEM Peripherals Group has our full corporate backing to provide the kind of peripherals and service you require. It's a complete engineering, production, marketing and support team that you can draw on for anything from initial interface design to field service.

It's also fully staffed with people who know where you're at. They understand your need for quality equipment with a realistic price. That's value. And that's exactly what the new Microdata OEM Peripherals Group has to offer.

Microdata peripherals weren't born yesterday. R&D goes back several years, while our overall manufacturing and quality control experience stretches back much farther. We've continuously refined these products until the time they were ready to live up to your demanding standards for reliable operation and total performance.

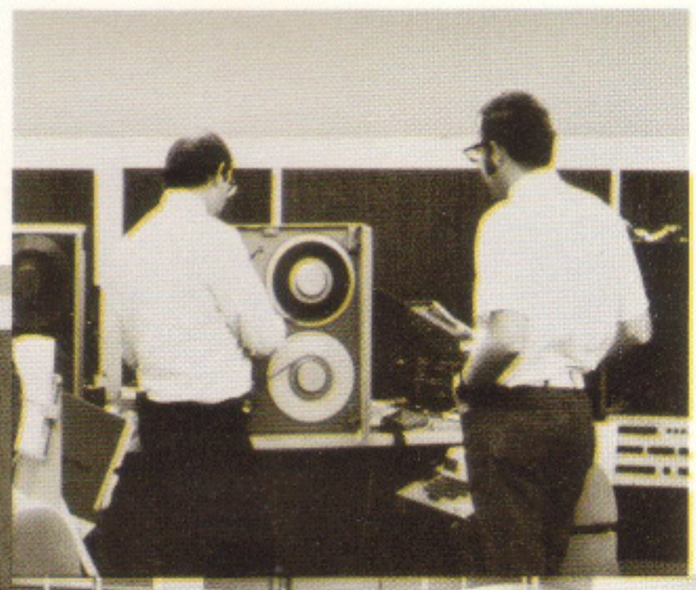
That time is now. Those products are as follows...

■ Microdata's single- and dual-disc drives provide on-line storage for 2.5 to 10 megabytes, using the popular 5440 cartridge. We supply dependable drives with 1500 rpm rotation and 100 tpi recording capacity, as well as the newest 2400 rpm and 200 tpi operation.

■ Microdata's 10-1/2″ tape transports come in all standard densities, with your choice of 7 or 9 tracks, in NRZI and PE (phase-encoded) recording formats. And you can select from a variety of factory-set speeds, ranging from 25 through a full 45 ips.

■ Microdata's data formatters can mount right inside our tape transports. Or you can purchase the formatters separately, in 1 x 1 and 1 x 4 NRZI and PE configurations.

Throughout the line, simple, sensible design increases MTBF. It's easy for you to pick up on our performance, because all interfaces are industry standard for fast system integration. In fact, we're a direct plug-to-plug replacement for the units you may be using now. And we have an unmatched combination of high-performance features nobody can touch.



PROVEN PERIPHERALS.

WITH PERFORMANCE TO MATCH.

Microdata disc drives help your system deliver all it promises.

For super-fast response to computer requests, we've cut average access time to a mere 35 milliseconds. This speed starts with a Microdata exclusive – our powerful, modular ceramic linear motor.

A lightweight positioning mechanism with high motor efficiency results in excellent speed, accuracy and interchangeability.

A high-speed photo-optical system, using a shutter approach, holds accuracy to within ±50 microinches repeatability of the nominal track center. Microdata's phase-locked variable frequency oscillator (VFO) locks onto the tracks to synchronize data recovery electronics with the data on the disc. The data recovery electronics along with extremely precise head positioning reduces error rate to less than 1 in 10^{12}.

Complete temperature compensation assures interchangeability of media between different Microdata drives. In fact, we guarantee this interchangeability.

Another big built-in benefit is the massive, one-piece aluminum mainframe casting. For proper alignment, assemblies are bolted to its precision-machined surfaces, which are held to tolerances of 0.005″. Then the casting is shock-mounted in the unit for smooth, accurate, vibration-free operation in the rack.

We've also designed in the extra security of write protect switches to prevent accidental erasure or over-writing. And we've included interlocks to protect the drive against other operational errors.

We even protect against errors being generated by brownouts. When voltage drops or power fails completely, Microdata disc drives automatically retract the head and protect the recorded data. So there's absolutely no danger of head crash or drag over the disc.

Our reliable, rational design has produced a MTBF of over 5,000 hours. On the mechanical side, we get this reliability by reducing the number of moving parts. In the electronics, we use integrated circuits wherever possible and provide modular packaging with plug-in PC cards. We've also incorporated LED circuit monitors to speed troubleshooting and decrease MTTR. And throughout the drive, a system of absolute air filtration constantly cools and purges components even when the spindle is not rotating.

Interface is industry standard, and compact size combines with slide mounting for easy assembly. The entire unit, including its integral power supply, is only 8-3/4″ high. Plug-in PC modules mean fewer wiring interconnections.

And transport select lines provide easy daisychain operation of up to four drives from a single controller.

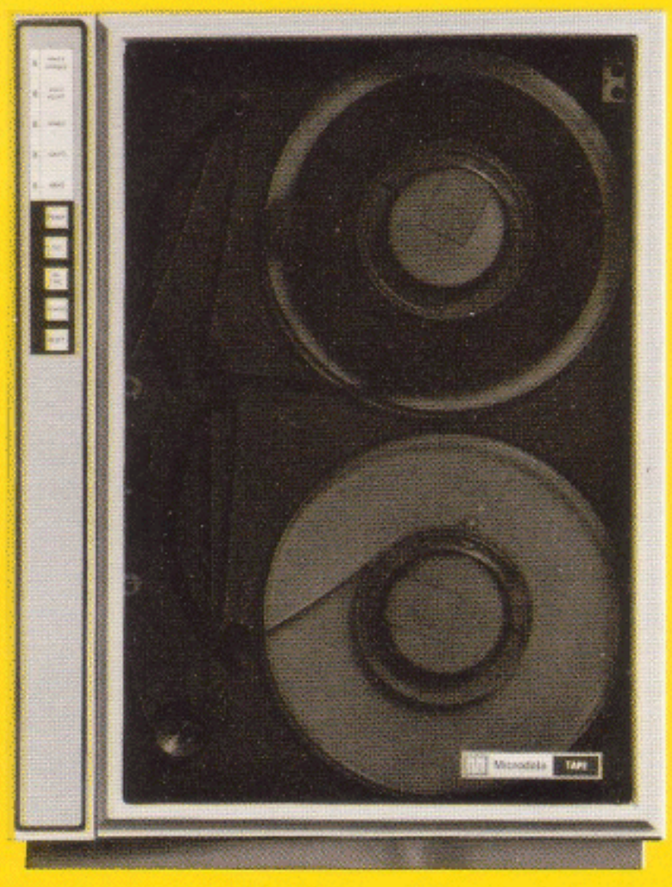
That's just part of the story. We'd like to tell you the rest on a face-to-face basis. Including some figures to round out this list of...

Condensed specifications

Capacity: 5.0 or 10 megabytes (characters) per drive
Cartridge type: 5440 15″ removable cartridge
Disc speed: 1500 or 2400 rpm
Transfer rate: 1,562 Mbits/second or 2.5 Mbits/second
Minimum seek time: 8 msec
Average seek time: 35 msec
Average rotational delay (latency): 20 msec or 12.5 msec
Number of cylinders: 204 or 408 per disc
Error rate
- **Recoverable:** less than 1 bit in 10^{10}
- **Non-recoverable:** less than 1 bit in 10^{12}

Dimensions: 8.75″ H x 19″ W x 28″ D
Weight: 140 lbs.
Environment (Operational)
- **Temperature range:** 55° to 95°F
- **Humidity range (RH):** 10% to 80% (non-condensing)

Power requirements:
115 vac ± 10% at 3A
230 vac ± 10% at 1.5A
50 to 60 Hz



Microdata tape transports give you a fast start towards a better system.

Microdata's 10-1/2″ tape transports have transfer rates as high as 72,000 characters per second. High speed file search is standard, and the Microdata transport features a rapid 200 ips rewind/fast forward.

The entire drive is human-engineered for quiet running and simple, foolproof operation. To guard against accidental erase, file protection is standard. And built-in failure protection provides an important added safeguard.

Precision control over tape speeds of 25 to 45 ips comes from an optical tachometer and fully controlled dynamic braking. Encoder-controlled speed assures both short and long-term stability.

Our exclusive PE deskew provides a wider range of data recovery than any other unit on the market. On our NRZI version, a proprietary deskew provides deskewing in both forward and reverse. Both deskewers result in better recovery, even from marginal tapes.

OPTO signal isolation represents another unique Microdata approach, separating the noisy power ground from signal grounds. And we manufacture all of our transports with ceramic tape guides for longer tape life.

The backbone of Microdata's tape transport is a sturdy, one-piece I-beam casting for rigidity and enduring precision tape tracking. With it, we've combined a simple mechanism to minimize moving parts. For example, our direct drive motors eliminate bothersome belts and pulleys that wear out and cause adjustment problems.

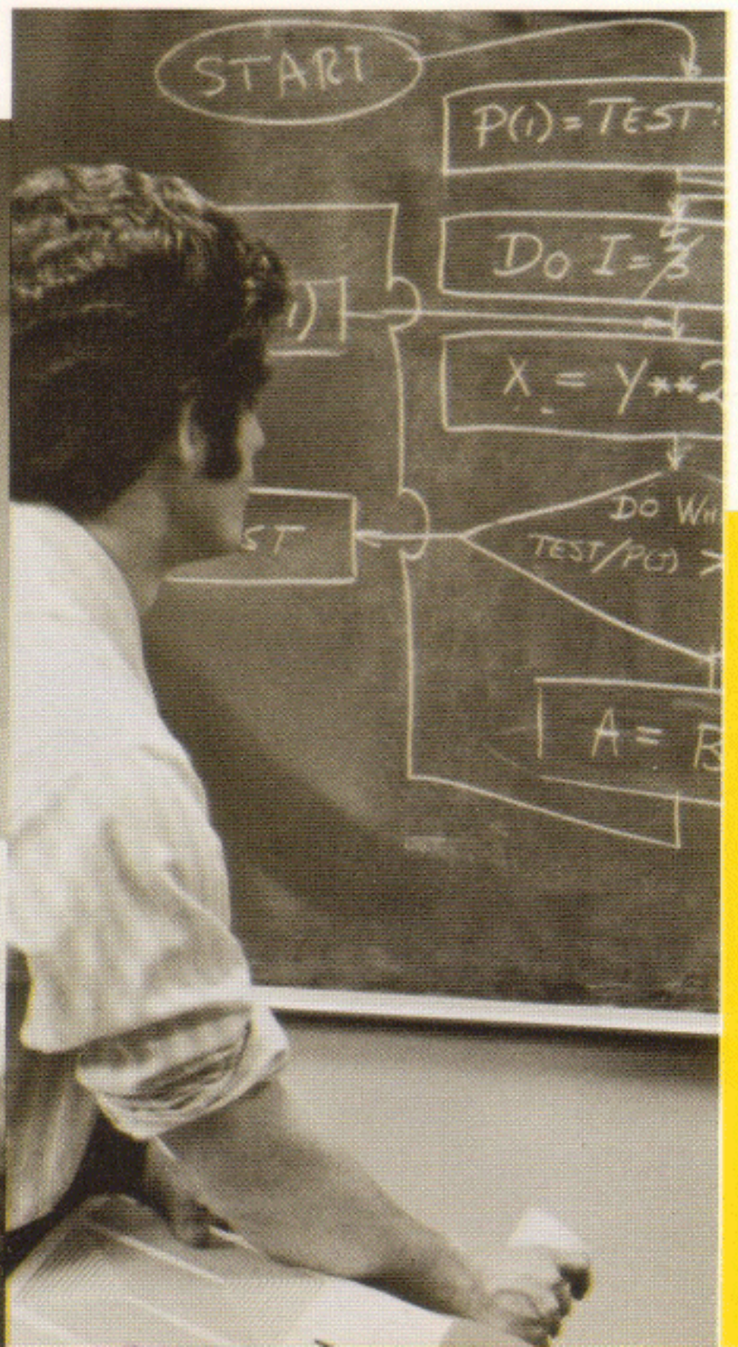
Other low maintenance features cut down on routine servicing. These include such nice touches as lubed-for-life drive motors and brushless speed tachometers. Also, we've used long-lasting LEDs instead of incandescent lamps, with their frequent replacement problems.

The MTBF on our tape transport is over 4,000 hours. When units do require maintenance, modular packaging and simple access assure maximum uptime. For example, the hinged front panel swings fully open for plenty of working space around all mechanical and electronic components.

Our advantages are obvious. And they're easy to achieve because Microdata tape transports are plug-to-plug compatible with your system. Compact size – just 24″ high x 11″ deep – further simplifies integration. Large PC modules and flat ribbon cables speed interconnections. And you can easily daisychain up to four units for operation from a single controller.

Here's the kind of performance you can expect…

Condensed specifications
Reel size: 10-1/2″
Tracks: 7 or 9
Formats: NRZI or PE
Densities:
NRZI: 200, 556 or 800 bpi (dual-density write)
PE: 1600 bpi (single-density write)
Tape speed: 25 to 45 ips
Rewind/fast forward: 200 ips
Data transfer rate
At 25 ips, 1600 bpi (PE):
40,000 characters/second
At 45 ips, 800 bpi (NRZI):
36,000 characters/second
Tape drive and guidance geometry: IBM-compatible
Read thresholds: computer selectable
Magnetic head assembly: 7- or 9-track, dual gap, read/write/erase



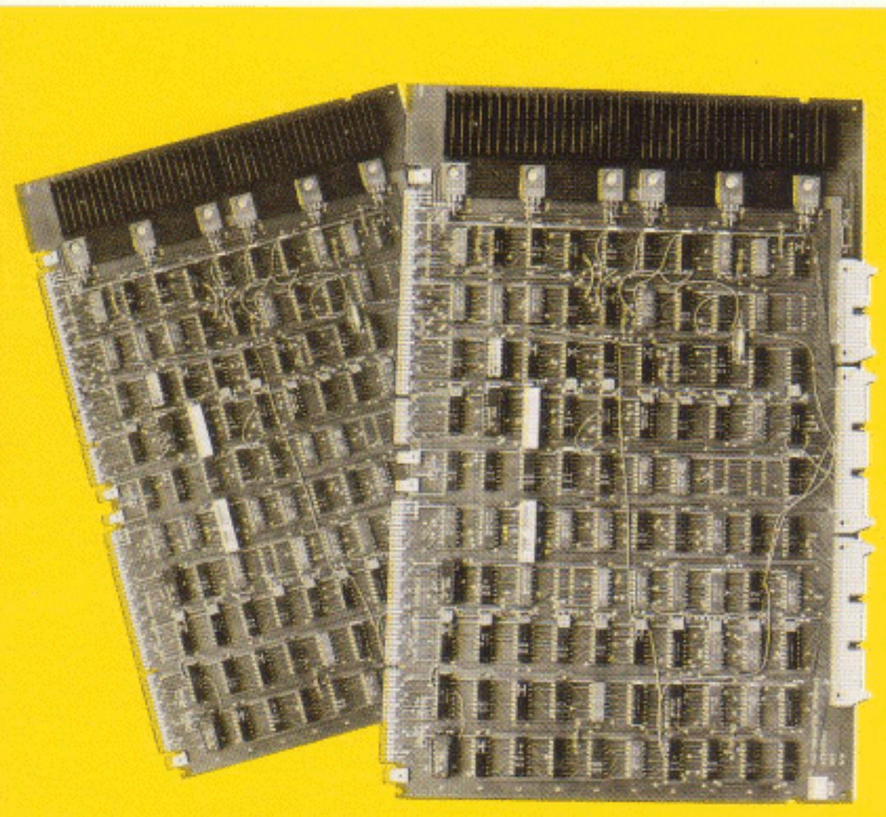
Microdata data formatters mount right in your tape transport.

We built the first industry-standard data formatter that saves rack space and installation costs by going directly inside the tape transport. It's fully compatible with present tape operation, and it's available in both NRZI and PE configurations. Our data formatter provides complete control and delivers full tape transport/formatter status information to the controller. Control logic interprets controller commands and generates control signals to time, sequence and carry out the various tape transport/formatter operations. Control capabilities include tape transport selection, tape motion, write record, read record, erase record, file mark search, IRG detect, and error detection.

Our formatters interface with any industry-standard tape transport, but are at their best when teamed with ours. Microdata tape transports have spare card spaces for complete mounting and d-c power provisions, and we can ship them with formatters already installed.

With Microdata formatters, you can daisychain up to four tape transports. And on our PE model, a formatter addressing capability permits the use of two formatters per controller, for a total of up to eight tape transports! Our PE formatter also lets you mix any two standard speeds on the formatter, and tape transports with single- and dual-gap tape heads.

Condensed specifications
Tape speed: 25 to 45 ips
Number of tracks: 9
Tape head: dual gap on NRZI, single or dual on PE
Tape density: 800 bpi on NRZI: 1600 on PE



WE'RE BUILDING A NAME IN PERIPHERALS.

STEP BY STEP.

We know the kind of quality you're after. And we build it into all of our products.

Microdata manufactures practically everything that goes into our peripherals, right down to the printed circuit boards. We maintain complete, direct control of all critical tolerances. And we hold to ultratight testing and inspection standards over everything from incoming raw materials to the finished product.

Most of our manufacturing is concentrated in a large, modern facility in Southern California. We've integrated our management, engineering, production, and quality control functions to assure a good flow of quality products.

As part of our corporate commitment to peripherals, we've more than doubled our manufacturing capacity. We've invested a lot in mortar, machines and manpower to provide faster turnaround on peripheral shipments.

It's an investment that really pays off for you.

WE'VE SUPPORTED OUR OEM PERIPHERALS GROUP.

SO IT CAN SUPPORT YOU.

The new Microdata OEM Peripherals Group inherited a fully established, up-and-running service network. Our products have been installed all over the world, and we follow up to make sure that each user gets all the performance we've built in, year after year.

We've made a good thing even better by expanding our existing service system...strictly in support of our peripherals. For example, in the United States alone, Microdata has well over thirty sales representatives and service centers. And we're adding new ones all the time.

COMBINE OUR GROUP EFFORT WITH YOURS.

The Microdata OEM Peripherals Group is geared up to interface with your people on every level, including engineering, marketing and customer service. We'd like to sit down soon, explore your OEM requirements, and see how we can fit into your total operation.

If you want to talk price and delivery, if you want to see a product demonstration in your office, or if you simply want more detailed literature on Microdata peripherals, contact us today.

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