HC Series™ Disk Drives

- 40, 90, 150, 310 and 380MB capacities

- Average access times as low as 10 to 17 milliseconds

- ESDI interface

- 50,000-hour MTBF

- Over 900KB/second data transfer rate; even higher with disk caching (included)

- For use in IBM's PS/2-60 and 80, PC-AT, compatible 286 based systems, Compaq's 386 and other 386 based systems

- DOS, XENIX and SCO XENIX 286 and 386 compatible

- Novell certified for NetWare 2.1 and compatible with NetWare 2.0 SFT, IBM, 3Com, and other major LANs

- 3-year replacement warranty

Capacity, performance and reliability. Store large amounts of data quickly and efficiently with full confidence in its integrity. HC Series drives, available in 40 to 380MB capacities, are perfect for all applications with large storage and high performance requirements. Ideal for 386 based network servers such as the IBM PS/2 Model 80.

Hardware for your sophisticated software. Disk-intensive applications such as networking, CAD/CAM, CAE and desktop publishing will benefit from the capacity and performance of the HC Series drives. With the HC Series, over 750MB can be mounted internally in one desktop computer while an additional 750MB can be installed in CORE's Peripheral Storage System 217.

Advanced technology. ESDI interface, voice coil head positioning, highest grade media surfaces, dedicated servo surface, auto park and lock, and full-shock mounting guarantee fast, accurate and reliable drive performance for your entire system. An HC Series drive, with an average access time of 10 to 17ms, coupled with an HC Controller, allowing data transfer rates to exceed 900KB/second, produces the highest performing drive systems on the market today.

Enhanced performance. Attached to the exclusive HC Controller, the HC Series drives can be formatted at a 1:1 interleave. With a CORE HC Controller, data can be transferred to the processor five times faster than with standard IBM PC-AT controllers and more than 2 times faster than the IBM PS/2.

Unconditional warranty. Every CORE HC Series hard disk drive is backed by our full three-year, direct-replacement warranty.

Specifications

PERFORMANCE	HC40 FULL-HEIGHT	HC90 HALF-HEIGHT	HC150 FULL-HEIGHT	HC310 FULL-HEIGHT	HC380 FULL-HEIGHT
Formatted Capacity (MB)	40.4	91.0	156.1	311.0	379.5
Transfer Rate (Mbits/sec)	10	10	10	10	10
Access Time (msec) Track-to-Track	4	4	4	3	3
Average	10	16	16	16	16
Average Latency (msec)	8.34	8.33	8.34	8.96	8.33

FUNCTIONAL

Rotational Speed (rpm)	3597	3600	3597	3348	3600
Cylinders	564	969	968	1582	1412
Heads	4	5	9	12	15
Sectors/Track	35	35	35	32	35
Sector Size (bytes)	512	512	512	512	512
Interface	EDSI	ESDI	ESDI	ESDI	ESDI

RELIABILITY

MTBF (power-on hrs)	50,000	50,000	50,000	50,000	50,000
Preventative Maintenance	none	none	none	none	none

DC POWER REQUIREMENTS

Idle (5v) (amps max)	0.8	1.3	0.8	1.6	0.8
(12V) (amps max)	1.4	1.7	1.4	2.5	2.0
Start (5V) (amps max)	1.4	1.7	1.4	1.6	1.4
(12V) (amps max)	4.5	4.5	4.5	5.0	4.5

PHYSICAL

Shock Limits
  operating
    shock (intermittent):   not exceeding 2g
    maximum duration: 10ms
  non-operating
    shock (intermittent):   not exceeding 2g
    maximum duration: 10ms
Vibration Limits
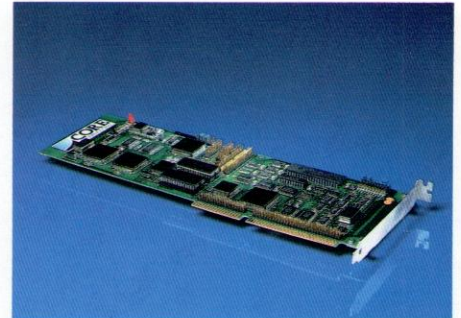 operating   5-22 Hz @ 0.25mm displacement
                              22-500 Hz @ 0.25 g
  non-operating   5-22 Hz @ 0.50 mm displacement
                              22-500 Hz @ 1.00 g

DIMENSIONS

	FULL-HEIGHT		HALF-HEIGHT	
Height	3.25 inches	8.255 cm	1.625inches	4.13 cm
Width	5.75 inches	14.605 cm	5.75 inches	14.605 cm
Depth	8.00 inches	20.32 cm	8.00 inches	20.57 cm
Weight	7.30 pounds	3.3 kg	3.8 pounds	1.72 kg

Specifications subject to change without notice.

CORE's HC Controller increases system performance.

To order contact:

    CORE International
    7171 North Federal Highway
    Boca Raton, Florida 33487
    407/997-6055
    Fax: 407/997-6009
    Telex: 315 809 CORE INTL DEBE

CORE International regional offices:

Eastern Regional Office:
    70 Seaview Avenue
    Stamford, CT 06902
    203/357-1339

Central Regional Office:
    Elk Grove, IL 60009
    312/439-0511

Western Regional Office:
    11835 West Olympic Blvd. #225
    Los Angeles, CA 90064
    213/312-8130

Southern Regional Office:
    7171 North Federal Highway
    Boca Raton, FL 33487
    407/997-6055

To order any CORE International product in Europe, contact:

    CORE International Europe
    118, rue de Tocqueville
    75017 Paris, France
    1/42.27.29.22

CORE International United Kingdom branch office:

    CORE International (U.K.) Ltd.
    Kingswick House
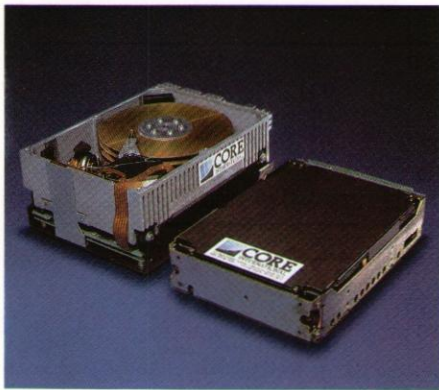   Sunninghill, Berkshire SL5 7BH
    0990 23491

or contact any CORE International authorized distributor.

ATplus Series™ Disk Drives

High speed, medium capacity hard disk drives in full and half-height versions.

- Choice of capacities:
  30, 40 and 72MB full-height
  32 and 43MB half-height

- Access times as low as 21ms

- Universal ST506 interface

- Compatibility with popular computers, operating systems and networks

- High 50,000-hour MTBF; 3-year warranty

- Easy installation

Performance upgrade. CORE International's ATplus family of hard disk drives provides fast, reliable hard drive upgrades for medium capacity storage requirements from 30MB to 72MB.

ATplus series hard disk drives are designed for users who need to expand or upgrade an IBM PS/2; 386 AT-type machine; IBM PC/AT; PC/XT or compatible while avoiding extensive hardware investments. The superior capacity and speed of the ATplus series over "standard" drives provide exceptional performance for applications such as database environments, CAD, CAM, desktop publishing, networking and other storage-intensive tasks.

The reliability of advanced technology. The more information stored on a single device, the more important it is for the device to be exceptionally reliable. All ATplus series drives incorporate features to provide greater speed and capacity while enhancing data integrity. For example, voice coil head positioning, high-grade ferrous oxide media and a dedicated servo surface help ensure fast, error-free performance. In addition, automatic Park and Lock and full shock mounting help protect data. ATplus Series drives offer the longest current Mean Time Between Failure (MTBF) rate in the industry—50,000 hours, backed by a three-year replacement warranty.

Choices. ATplus hard disk drives are available in both full-size and half-height models, providing maximum adaptability and flexibility for expansion and upgrade. Full-size ATplus drives are available in 30, 40, and 72MB; half-heights offer 32 and 43MB capacities.

Requiring but half the space, ATplus series half-height drives offer the same speed and reliability as their larger counterparts. The drives are designed for use in environments where small size, light weight and portability are beneficial.

For example, where expansion space is limited, such as with today's more compact computers, replacing a "standard" full-size drive with an ATplus series half-height immediately provides the additional performance and capacity needed. In addition, there's room left for a COREtape backup system, or even another half-height drive if further expansion is required.

ATplus half-height drives economize on size and weight by leaving such things as power supply and controller to the host system. So in addition to enhancing internal expansion capabilities, the savings in weight and size can bring the same conveniences to external expansion- with the added benefit of portability. For example, when the drive is mounted externally in a half-height cabinet, security for sensitive data is

improved by providing the ability to easily remove and secure the entire unit. This portability can also facilitate physically sharing the unit among multiple users. Moving the external drive from one machine to another can be a decided advantage in circumstances where the purchase of multiple units is impractical. For machines with insufficient power supplies, for example, IBM's PC, PS/2-30 and PS/2-50, CORE International has a lightweight, external cabinet that houses the device and supplies the required power. All ATplus Series hard disk drives are compatible with popular half and full-size expansion units, including CORE International's PSS 217 Peripheral Storage System.

Fast data transfer. Controllers are interfaces providing communication between a drive and CPU. A slow controller can adversely affect the data transfer rate of even the fastest drive. CORE International's optional high-capacity controller enables ATplus Series drives to perform at maximum. For example, the average IBM PC/AT compatible 5MHz controller has an interleave of 3:1 and transfers data at about 165KB/second. CORE International's high-capacity 10MHz controller card supports an ST506 interface to provide up to a full 500KB/second transfer rate, with an interleave factor at the performance limit of 1:1. This means faster data management and less waiting for drives and network queues. Both ESDI and ST506 interfaces are available on the same controller card. An RLL controller card is also available, enabling some users to increase an ATplus Series hard drive's rated capacity and transfer rate by approximately 50 percent.

Overcoming limitations. ATplus Series hard drives are shipped with CORE International's GIGAfile software, which overcomes the 32MB DOS limitation. Files can be expanded across as many as eight physical devices, which the

computer "sees" as a single virtual device. Users can stretch files up to 1,000MB -- one billion characters, to provide maximum flexibility for large databases, multiuser environments, networking and other high-volume applications.

Unprecedented warranty. Reliability is determined by the average time between failures for a device, rated as MTBF. The typical MTBF for hard disk drives is 15,000 to 20,000 hours. Statistically, with an average use of 2,000 hours per year, 4.1 out of every 10 drives with a 15,000-hour MTBF will fail during a four-year period. Drives with a 50,000-hour MTBF will have only 1 in 10 drives develop problems in the same period.

The MTBF for all CORE International ATplus drives is 50,000 hours. In addition, the drives and your investment are backed by a three-year warranty providing complete replacement.

Compatability. ATplus half and full-height hard disk drives are compatible with the following:

● Computers and Peripherals:

—IBM Personal Computer XT
—IBM Personal Computer AT
—IBM Personal System/2 (all models)
—386 AT-type machines
—Compaq computers
—CORE International PSS 217 Peripheral Storage System
—Compatibles to all the above

● Operating systems:

—DOS
—XENIX (both IBM and SCO)

● Networks

—IBM Token Ring and PC Network
—Novell NetWare 2.1, 2.0A and higher
—SFT I & II
—3COM
—Other major LANs

PERFORMANCE		AT32 Half-Height	AT30 Full-Height	AT40 Full-Height	AT43 Half-Height	AT72 Full-Height
Formatted Capacity (MB)	MFM	31.9	31.9	40.2	42.9	72.3
	RLL	48.7	48.7	61.5	65.7	107.0
Transfer Rate (Mbits/sec)		5	5	5	5	5
Access Time (msec) Track-to-Track		5	5	5	5	5
Average		21	21	26	26	26
Average Latency (msec)		8.34	8.33	8.33	8.34	8.33
TECHNICAL						
Rotational Speed (rpm)		3597	3600	3600	3597	3600
Cylinders		733	733	924	988	924
Heads		5	5	5	5	9
Sectors/Track		17	17	17	17	17
Sector Size (bytes)		512	512	512	512	512
Interface		ST506/412	ST506/412	ST506/412	ST506/412	ST506/412
POWER REQUIREMENTS						
Idle (max amps)						
5V		0.4	0.75	0.75	0.4	0.75
12V		1.5	2.0	2.0	1.5	2.0
Start (max amps)						
5V		1.0	1.3	1.3	1.0	1.3
12V		4.5	4.5	4.5	4.5	4.5
DIMENSIONS						
Height, inches		1.625	3.25	3.25	1.625	3.25
(cm)		(4.128)	(8.255)	(8.255)	(4.128)	(8.255)
Width, inches		5.75	5.75	5.75	5.75	5.75
(cm)		(14.605)	(14.605)	(14.605)	(14.605)	(14.605)
Depth, inches		8.00	8.00	8.00	8.00	8.00
(cm)		(20.32)	(20.32)	(20.32)	(20.32)	(20.32)
Weight, pounds		3.80	6.70	6.70	3.80	6.70
(kg)		(1.724)	(3.039)	(3.039)	(1.724)	(3.039)
MAINTENANCE						
MTBF (power-on hrs)		50,000	50,000	50,000	50,000	50,000
Preventative Maintenance		none	none	none	none	none
Warranty		3 yrs.	3 yrs.	3 yrs.	3 yrs.	3 yrs.

To order any CORE International product, contact:

CORE International
7171 North Federal Highway
Boca Raton, FL 33487
407/997-6055

Stamford, CT: 203/357-1339
Los Angeles, CA: 213/312-8130
Chicago, IL: 312/439-0511
Sunninghill, Berkshire (U.K.) 0990 23491

In Europe, contact:

CORE International Europe
118, rue de Tocqueville
75017 Paris, France
1/42.27.29.22

or contact any CORE International Authorized Dealer or Distributor.

2/88   PN 703034

OPTIMA Series™ Disk Drives

Economical high speed, medium capacity hard disk drives.

- Economical mass storage
- High reliability— 2-year warranty
- 35,000-hour MTBF
- Choice of capacities:
    30 and 40MB half-heights
    70MB full-height
- Low 26ms average access time
- Universal ST506 interface
- Compatibility with popular computers, operating systems and networks
- Easy installation- internal or external
- COREfast high-speed backup software included

Performance and price. CORE International's OPTIMA hard disk drives provide economical, reliable upgrades and replacements for medium capacity mass storage requirements from 30MB to 70MB.

OPTIMA series hard disk drives are designed for users who need high reliability with limited investment in upgrading an IBM PS/2; 386 AT-type machine; IBM PC/AT; XT or compatible.

The low price, two-year warranty and greater speed of the OPTIMA series over "standard" drives provide exceptional performance and value for all applications.

Reliability. All OPTIMA series drives incorporate the same quality engineering as other CORE International drives, enabling the OPTIMA series to deliver exceptional speed and capacity while enhancing data integrity. Voice coil head positioning, high-grade ferrous oxide media and a dedicated servo surface help ensure fast, error-free performance. Automatic Park and Lock and full shock mounting help protect data. With OPTIMA series drives, low price doesn't mean low reliability.

Versatility. OPTIMA hard disk drives are available in both half-height and full-size models, providing maximum adaptability for present and future expansion. Half-height OPTIMA drives, designed for use in environments where small size, light weight and portability are beneficial, are available in 30 and 40MB capacities. The full-size drive is available as a 70MB model with an excellent price/capacity ratio.

OPTIMA half-height drives provide particular value where expansion space is limited, such as with today's more compact computers. Replacing a "standard" full-height drive with an OPTIMA series half-height immediately brings additional performance and capacity. There's also room left for a COREtape backup system, or even another half-height drive if further expansion is required. This helps users pace expansion with budget. In addition, for machines with insufficient power supplies, such as IBM's PC, PS/2-30 and PS/2-50, CORE International provides a small external unit that both houses the drive and provides the required power.

All OPTIMA series hard disk drives are compatible with popular half and full-size expansion units, including CORE International's PSS 217 Peripheral Storage System. The savings in weight and size can bring the additional convenience of portability. When the drive is installed externally in a half-height cabinet, for example, security for sensitive data is improved by providing the ability to easily remove and secure the entire unit. This portability can also facilitate physically sharing the unit among multiple users. Moving the external drive from one machine to another can be a decided advantage in circumstances where the purchase of multiple units is impractical.

Speed. "Controllers" provide communication between a drive and CPU. A slow controller can adversely affect the data transfer rate of even the fastest drive. Although not required for machines with existing controllers, CORE International's optional high-capacity controller enables OPTIMA series drives to perform at maximum. For example, the average IBM PC/AT compatible 5MHz controller has an interleave of 3:1 and transfers data at about 165KB/second. CORE International's high-capacity 10MHz controller card supports an ST506 interface to provide up to a full 500KB/second transfer rate, with an interleave factor at the performance limit of 1:1. This means faster data management and less waiting. Both ESDI and ST506 interfaces are available on the same controller card. An RLL controller card is also available, enabling some users to increase an OPTIMA Series hard drive's rated capacity and transfer rate by approximately 50 percent.

Overcoming limitations. OPTIMA series hard drives are shipped with CORE International's GIGAfile software, which overcomes the 32MB DOS limitation. Files can be expanded across as many as eight physical devices, which the computer "sees" as a single virtual device. Users can stretch files up to 1,000MB -- one billion characters, providing maximum flexibility for large databases, multiuser environments, networking and other high-volume applications.