

OVERVIEW

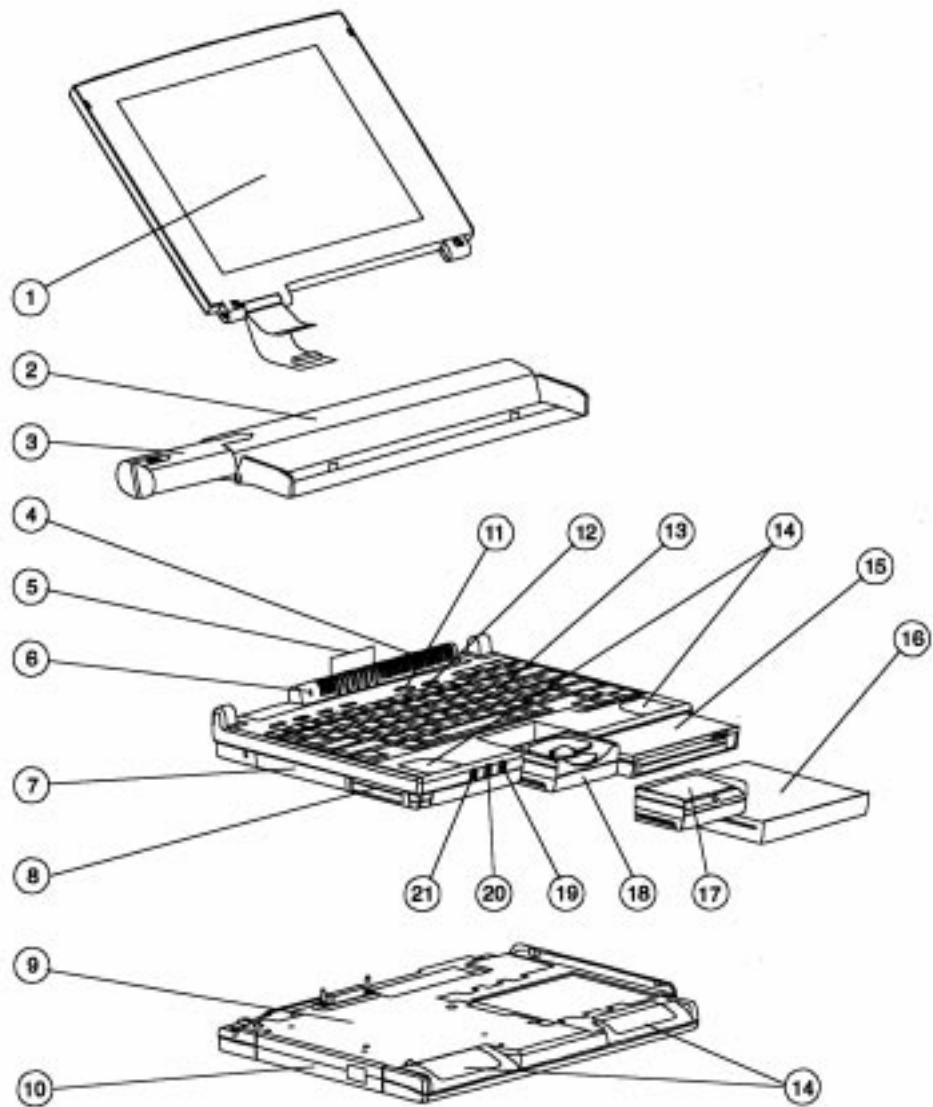
Compaq Armada 4000

BENEFITS AT A GLANCE

- Flexible design allows configuration as a slimline notebook, a full-featured notebook or a robust multimedia notebook
- Intel Pentium® processors 233 or 266 MHz with MMX™ technology and 256 or 512 KB level two cache (model dependant)
- Choice of 12.1-inch high contrast CSTN or CTFT displays (SVGA)
- PCI system bus (some models)
- 64-bit PCI local bus graphics on some models
- 32 MB standard memory expandable up to 96 MB
- Supports up to three Li-Ion batteries for over ten hours of battery life¹
- Up to 500 hours standby
- 3.2- or 4-GB SMART Hard Drives
- Intelligent Manageability for lower total cost of ownership
- Upgradable memory and hard drive
- Full-sized 101-key compatible keyboard
- Optional Mobile CD Unit provides enhanced multimedia functionality
- Optional Pass-Through and Ethernet Convenience Bases
- Modular pointing device: touchpad standard, interchangeable with optional optical trackball
- Sound Blaster Pro-compatible with 16-bit stereo, integrated speakers and microphone
- Full motion video and software MPEG support
- Compaq-unique power conservation features including Hibernation
- Protected by Compaq Services including a three-year, Worldwide Limited Warranty²

¹ When tested in standard configuration using the Ziff-Davis BatteryMark test version 1.0, the battery life of the Armada 4100 will range from 2 hours and 0 minutes to 3 hours and 0 minutes depending on individual usage; the Armada 4200 will range up to 3.9 hours depending on individual usage.

² Certain restrictions and exclusions apply. Consult the Compaq Customer Support Center for details.



Armada 4220T Shown
³ (with Mobile CD Unit)

1. Display
2. Handle with Removable Battery (also provides 10° keyboard tilt and port cover)
3. Li-Ion Battery Handle
4. Heat Pipe Radiator
5. Power/Standby, Battery Charge, Cap Lock, Scroll Lock and Num Lock Status LEDs
6. Microphone
7. SMART Hard Drive
8. PC Card Slots
9. Mobile CD Unit
10. 20X Max³ CD-ROM Drive
11. Standby Button
12. Power Switch
13. Full-Sized Keyboard with Four User-programmable Keys
14. Stereo Speakers
15. Diskette Drive
16. Li-Ion Dual Bay Battery (optional)
17. Touchpad
18. Optical Trackball (optional)
19. Audio-in Jack
20. Headphone Jack
21. Microphone Jack

MODELS

Armada 4210T
290900-001

Armada 4220T
290950-002

STANDARD FEATURES

Flexible Design

Flexible design allows users to configure units according to specific needs, taking with them what they need, and leaving the rest behind:

Notebook Configuration: Provides a full-featured notebook that weighs as little as 6.2 pounds and is less than 1.5 inches thick, with the convenience of a battery in the handle and the flexibility of swapping the Diskette Drive with the optional Li-Ion Dual Bay Battery.¹

Slimline Configuration: From the standard configuration, just remove the Battery Handle, swap the Diskette Drive for the optional Li-Ion Dual Bay Battery, and you have a powerful notebook less than 1.5 inches thick and weighing 5.2 pounds. The optional External Diskette Drive Cable/Caddy is available, providing a no compromise solution. (Armada 4210T and 4220T ship in this configuration and include a Li-Ion Dual Bay Battery and external diskette drive.)

Multimedia Configuration: To the Notebook Configuration, simply attach the optional Mobile CD Unit and you have CD-ROM capabilities, enhanced stereo sound, a MIDI/Joystick port and the ability to add a third battery—all in a notebook that weighs approximately as little as 8.2 pounds and is only 2.3 inches thick.

Processor

Armada 4210T: Intel Pentium processor 233 MHz with MMX™ technology and 512 KB level two writeback cache

Armada 4220T: Intel Pentium processor 266 MHz with MMX™ technology and 512 KB level two writeback cache

Architecture

Armada 4210T and 4220T: PCI System Bus

Display/Graphics

Armada 4210T and 4220T: 12.1-inch color SVGA TFT with up to 800 x 600 resolution in panning mode and 24-bit true color (16.7 million colors internal); PCI local bus graphics with 2-MB EDO DRAM for video memory

Memory

Armada 4210T and 4220T: 32 MB of RAM, expandable to 96 MB (supports FPM and EDO standard memory)

Hard Drives

Armada 4210T: 3.2-GB SMART Hard Drive

Armada 4220T: 4-GB SMART Hard Drive

Optional Hard Drive: 3.2- and 4-GB SMART

Diskette Drive

External Diskette Drive Bay and Removable Bay Diskette Drive

Storage

Up to 4 GB

Multimedia

Compaq PremierSound™ for enhanced stereo audio including integrated 16-bit Sound Blaster Pro-compatible stereo audio, integrated stereo speakers and microphone, software volume control, stereo line in, headphone out, microphone in jacks, software MPEG, NTSC/PAL video output; optional Mobile CD Unit provides 20X Max² CD-ROM Drive, enhanced stereo speakers, MIDI/joy stick port, bay for an additional battery and Wave Table Synthesis

PC Card Slots

Two Type II/One Type III PC Card Slot(s)

Capable of Infrared Communication Port

Capable of IrDA-4 MB/s compatible infrared communication port for wireless communication with infrared devices

Power/Battery Life³

External AC Adapter weighing approximately 10 ounces allows simultaneous system operation and battery charge Li-Ion Battery Handle or Li-Ion Dual Bay Battery provides up to 2.5 hours of battery life; up to 9 hours of battery life can be achieved when using three Li-Ion batteries including standard battery handle and an optional Modular Battery in both the Dual Bay and Mobile CD Unit battery bay (model dependent).

Ships with two batteries dual bay and handle battery.

Integrated Pointing Device

Standard Touchpad is fully interchangeable for optional Optical Trackball

STANDARD FEATURES (cont'd)

Keyboard

101-key compatible keyboard with isolated, inverted-T cursor control keys, right control key, four user-programmable keys; special feature hot keys for instant access to power conservation, QuickLock/QuickBlank, toggle between internal external, or simultaneous displays, speaker volume control, brightness and contrast

Power Conservation

Hibernation, Instant-On via Standby; pop-ups with three presets and one custom level of power conservation

Dimensions (HxWxD)

Notebook Configuration:

1.49 x 11.6 x 10.3 in/3.78 x 29.46 x 26.16 cm

Slimline Configuration:

1.49 x 11.4 x 8.8 in/3.78 x 28.96 x 22.35 cm

Multimedia Configuration:

2.3 x 11.6 x 10.3 x in/5.84 x 29.46 x 26.16 cm

Weight

Notebook Configuration: 6.2 lb/2.83 kg

Slimline Configuration: 5.3 lb/2.42 kg

Multimedia Configuration: 8.3 lb/3.81 kg

Software

Windows 95, Compaq Insight Manager Personal Edition

Interfaces

Infrared, enhanced parallel, serial, external monitor, keyboard/pointing device, AC adapter/automobile adapter, PCMCIA, NTSC/PAL composite TV out, microphone in, headphone out, stereo line-in

Intelligent Manageability

Lowers total cost of ownership by providing enhanced security, asset management and fault prediction

Security Features

Cable lock support; power-on and set-up passwords; ability to disable serial port, parallel port, PC Card slots, diskette drive, diskette drive boot sequence, infrared port

Service and Support

Compaq Services, includes a three-year, Worldwide Limited Warranty⁴, pick-up or carry-in; upgrade to on-site warranty available; lifetime toll-free 7x24 hardware technical phone support

OPTIONS

Memory

8-MB Memory Expansion Kit	217914-001
16-MB Memory Expansion Kit	217915-001
32-MB Memory Expansion Kit	217916-001
64-MB Memory Expansion Kit	287325-B21

Diskette Drives/Hard Drives

Floppy Diskette Drive Caddy	258574-B21
3.2-GB SMART Hard Drive	290873-B21
4-GB SMART Hard Drive	290874-B21

PC Card/Communications

SpeedPaq Cellular PC Card + SpeedPaq 336 Modem	221200-001
Netelligent 56K ⁵ PC Card Modem	295050-001
10/100 TX PC Card UTP Controller	292812-B21
10 T PC Card UTP Controller	292806-B21
10 2 PC Card Coax Controller	292807-B21
10/100 TX PC Card UTP Controller	292813-B21

Upgrade Netelligent 16/4 TR PC Card IBM UTP/STP Controller	301208-B21
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For additional compatible PC Cards, view the Compaq PC Card Solution List on the Compaq website at <http://www.compaq.com/support/techpubs/pcmcia/pccardlist.html>.

Expansion/Convenience Bases

20X Max ² Mobile CD Unit	217929-003
Convenience Base (Ethernet)	217927-001
Convenience Base (Pass-Through)	217928-001

Power

Li-Ion Dual Bay Battery	217935-001
Li-Ion Handle Battery	217930-001
AC Adapter	217931-001
3-Wire AC Power Cord	217932-001
External Battery Charger	217933-001
Auto/Aircraft adapter	296537-B21

Monitors

V55 Color ⁶	308006-001
V75 Color ⁶	307710-001
V90 Color ⁶	305609-001
P75 Color ⁶	307806-001
P110 Color ⁶	284956-001
P1610 Color ^{6,7}	305708-001
TFT450 Flat Panel ⁶	170406-001
TFT500 Flat Panel ⁶	285006-001

Input Devices

Optical Trackball Pointing Device	258793-001
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Display

12.1-inch CTFT SVGA Display	259233-B21
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OPTIONS (cont'd)

Other

Compaq Armada Headset with microphone	220460-001
External Enhanced III Keyboard	110562-001
Compaq Mouse	143315-001

Carrying Cases

A full line of Compaq brand carrying cases are available through Targus/Fabrique. For information please contact Targus/Fabrique at 800-888-5903.

- ¹ Li-Ion Dual Bay Battery standard.
- ² Data transfer rates will vary from 150 KB/s to 3000 KB/s.
- ³ Battery performance will vary depending on model. When tested in standard configuration using the Ziff-Davis BatteryMark test version 1.0, the battery life of the Armada 4100 will range from 2 hours and 0 minutes to 3 hours and 0 minutes depending on individual usage; the Armada 4200 will range up to 3.9 hours depending on individual usage.
- ⁴ Certain restrictions and exclusions apply. Consult the Compaq Customer Support Center for details.
- ⁵ Designed only to allow faster downloads from K56flex compliant sources. Maximum achievable download transmission rates currently do not reach 56Kbps, and will vary with line conditions.
Modem only works with Windows 9.x and Windows NT.
- ⁶ AssetControl monitor. AssetControl features are accessible with Compaq desktops featuring Intelligent Manageability.
- ⁷ Can not be used with the ArmadaStation Monitor Support Stand.

FEATURES

Compaq Armada 4000

Compaq Armada 4210T

Compaq Armada 4220T

System Unit

Microprocessor		
Standard	Intel Pentium® processor 233-MHz with MMX™ technology	Intel Pentium processor 266-MHz with MMX™ technology
Cache	512-KB level 2 writeback	512-KB level 2 writeback
Architecture	64-bit CPU cache and memory bus; PCI local bus graphics	64-bit CPU cache and memory bus; PCI local bus graphics
RAM		
Standard	32 MB	32 MB
Maximum	96 MB	96 MB
Coprocessor	Integrated	Integrated
Advanced Power Management	Yes	Yes

Display

Type	12.1-inch color TFT	12.1-inch color TFT
Resolution	800 x 600 with up to 16.7 million colors	800 x 600 with up to 16.7 million colors
Extended Text	Yes	Yes

Graphics

64-bit PCI Local Bus Video	Yes	Yes
32-bit PCI Local Bus Video	No	No
1024 x 768 External	Yes	Yes

Storage

1.44-MB Diskette Drive	Standard	Standard
Upgradable SMART Hard Drives		
Standard	3.2-GB	4-GB
Optional	3.2-GB, 4-GB	3.2-GB, 4-GB
Mobile CD Unit	Optional	Optional

Interfaces

PC Card	Two Type II/One Type III slot(s)	Two Type II/One Type III slot(s)
Infrared Communication Port	1	1
Enhanced Parallel	1	1
Serial	1	1
External Monitor	1	1
NTSC/PAL Video Output	1	1
External Keyboard/Pointing Device	1	1
Expansion Base Connector	1	1
AC Adapter/Automobile Adapter	1	1
Microphone In	1	1
Headphone Out	1	1
Stereo Line In	1	1

	Compaq Armada 4210T	Compaq Armada 4220T
Monitors		
V55 Color ¹	Optional	Optional
V75 Color ¹	Optional	Optional
V90 Color ¹	Optional	Optional
P75 Color ¹	Optional	Optional
P110 Color ¹	Optional	Optional
P1610 Color ^{1,2}	Optional	Optional
TFT450 Flat Panel ¹	Optional	Optional
TFT500 Flat Panel ¹	Optional	Optional
Keyboard		
101-key compatible keyboard with Inverted "T" Cursor Keys, Hotkeys, Right Ctrl Key and four user-programmable keys	Yes	Yes
External Enhanced III Keyboard	Optional	Optional
Supported System Software		
Software	Microsoft Windows 3.1, Windows 95 OSR2, Windows NT Workstation 4.0	Microsoft Windows 3.1, Windows 95 OSR2, Windows NT Workstation4.0
Physical Specifications		
Dimensions (HxWxD)	1.49 x 11.4 x 8.8 in/3.78 x 28.96 x 22.35 cm	1.49 x 11.4 x 8.8 in/3.78 x 28.96 x 22.35 cm
Weight (shipping)	5.3 lb/2.42 kg	5.3 lb/2.42 kg

¹ AssetControl monitor. AssetControl features are accessible with Compaq desktops featuring Intelligent Manageability.

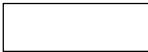
² Can not be used with the ArmadaStation Monitor Support Stand.

MEMORY

Compaq Armada 4000

Compaq Armada 4200

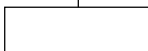
STANDARD
MEMORY

32 MB  System Board

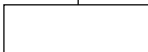
OPTIONAL
MEMORY

ADD


Total Memory

40 MB  8-MB Memory Expansion Kit
(P/N 217914-001)

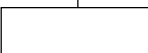
OR

48 MB  16-MB Memory Expansion Kit
(P/N 217915-001)

OR

64 MB  32-MB Memory Expansion Kit
(P/N 217916-001)

OR

96 MB  64-MB Memory Expansion Kit
(P/N 287325-B21)

TECHSPECS

Compaq Armada 4000

System Unit

Dimensions (HxWxD)	1.49 x 11.4 x 10.2 in/3.78 x 28.96 x 25.95 cm
Weight	
Standard Configuration	6.2 lb/2.83 kg
Slimline Configuration	5.3 lb/2.42 kg
Multimedia Configuration	8.3 lb/3.81 kg
Stand-Alone Power Requirements	
Nominal Operating Voltage	14.2 VDC
Maximum Operating Power	35 W
Peak Operating Power	40 W
Temperature	
Operating	5 to 95° F/10 to 35° C
Nonoperating	-4 to 140° F/-20 to 60° C
Relative Humidity (noncondensing)	
Operating	10 to 90%
Nonoperating	5 to 95%
Shock	
Operating	10 G, 11 ms, half sine
Nonoperating	60 G, 11 ms, half sine
Vibration	
Operating	.25 G, 5-500 Oct/Min sweep rate
Nonoperating	1.0 G, 5-500 Oct/Min sweep rate
Maximum Altitude (unpressurized)	
Operating	10,000 ft/3.15 km
Nonoperating	30,000 ft/9.14 km

12.1-Inch Color TFT SVGA Display

Dimensions (HxW)	7.26 x 9.68 in/18.45 cm x 24.6 cm
Diagonal Size	12.1 in/30.7 cm
Mounting	Internal Panel Supports
Number of Colors	64K
Contrast Ratio	Greater than 100:1
Brightness	100 cd/m ²
Pixel Resolution	
Pitch	.3075 x .3075 mm
Format	800 x 600
Configuration	RGB Stripe
Backlight	Edge Lit
Character Display	80 x 25, 80 x 50
Total Power Consumption	3.9 W
Display Inverter Board	
Input Voltage	10-20 Vdc
Output Voltage	600 Vrms
Maximum Input Power	3.2 W
Maximum Output Power	2.5 W

SMART Hard Drives¹

	3.2-GB	4-GB
Formatted Capacity Per Drive	3.3 GB	4.1 GB
Drive Type	65	65
Transfer Rate		
Media	51.7 to 83.4 Mb/s	51.7 to 83.4 Mb/s
Interface	16.6 MB/s	16.6 MB/s
Sector Interleave	1:1	1:1
Seek Times (typical, including settling)		
Track-to-track	4 ms	4 ms
Average	13 ms	13 ms
Maximum	23 ms	23 ms
Disk Rotational Speed	4009 rpm	4009 rpm
Physical Configuration		
Cylinders	6975	6975
Heads	5	6
Sectors per track	144 to 240	144 to 240
Bytes per sector	512	512
Logical Configuration		
Cylinders	6304	7944
Heads	16	16
Sectors per track	63	63
Bytes per sector	512	512
Buffer Size	468 KB	468 KB

Diskette Drive

Diskette Size	3.5-inch
Light	None
Height	.43 in/1.1 cm
Bytes per Sector	512
Sectors per track	
High density	18 (1.44-MB)/15 (1.2-MB)
Low density	9
Tracks per side	
High density	80 (1.44-MB)/80 (1.2-MB)
Low density	80
Read/Write heads	2
Access Times	
Track-to track (high/low)	3 ms/6 ms
Average (high/low)	94 ms/174 ms
Settling time	15 ms
Latency average	100 ms

AC Adapter

Dimensions (HxWxL)	1.42 x 2.83 x 4.69 in/3.6 x 11.9 x 7.2 cm
Weight	.66 lb/.3 kg
Power Supply (Input)	
Nominal Voltage	120 VAC
Current	<1.11 A
Voltage Range	90-265 VAC
Input Frequency	47 to 63 Hz
Power Supply (Output)	
Nominal Voltage	+18.5 +/- 0.25 VDC
Current	40 to 42 W
Temperature	
Normal Operating	140°F/60°C
Operating	41 to 104°F/5 to 40°C
Nonoperating	-4 to 185°F/-20 to 85°C
Relative Humidity	
Operating	10 to 95%
Nonoperating	10 to 95%

Lithium Ion Modular Battery Pack

Dimensions (HxWxL)	.77 x 4.35 x 5.34 in/1.9 x 11.0 x 13.6 cm
Weight	.88 lb/.39 kg
Energy	
Voltage	14.4V
Amp-hour capacity	2.8 Ah
Watt-hour capacity	40 Wh
Temperature	
Operating	50° to 104° F/10° to 40° C
Nonoperating	-22° F to 140°F/-30° to 60°C

Lithium Ion Handle Battery Pack

Dimensions (HxWxL)	.89 x 1.53 x 11 in/1.52 x 3.9 x 27.9 cm
Weight	.88 lb/.39 kg
Energy	
Voltage	14.4 V
Amp-hour capacity	2.8 Ah
Watt-hour capacity	40 Wh
Temperature	
Operating	50° to 104° F/10° to 40° C
Nonoperating	-22° F to 140°F/-30° to 60°C

20X Max² Mobile CD Unit

Dimensions (HxWxD)	.86 x 11.69 x 8.95 in/2.18 x 29.7 x 22.7 cm
Weight	2.0 lb/.91 kg
Power Supply (Input)	
Operating Voltage	100 to 240 VAC
Operating Current	1.10 Amp Maximum
Rated Voltage	100 to 240 VAC
Rated Current	1.0 Amp Maximum
Line Frequency	47 to 63 Hz

20X Max² Mobile CD Unit (cont'd)	Temperature	
	Operating	50 to 95°F/10 to 35°C
	Nonoperating	-4 to 140°F/-20 to 60°C
	Relative Humidity	
	Operating	20 to 80%
	Nonoperating	5 to 90%
	Altitude	
	Operating	10,000 ft/3.15 km
	Nonoperating	30,000 ft/9.14 km
	Shock	
	Operating	5 G, 11 ms, half sine
	Nonoperating	140 G, 2 ms, half sine
	Vibration	
	Operating	0.25 G, 5 to 500 Hz, 0.5 octave/min sweep rate
	Nonoperating	0.75 G, 5 to 500 Hz, 0.5 octave/min sweep rate
20X Max² CD-ROM Drive (included with Mobile CD Unit)	Compatible Disc Formats	CD-ROM (Mode 1, 2 and 3) CD-DA CD-XA ready (Mode 2 Form 1, Form 2) CD-I ready (Mode 2, Form 1 and 2) CD-R (read only) CD Plus Photo CD (single and multi-session) CD Extra
	Center Hole Diameter	15 mm
	Disc Diameter	12 cm, 8 cm
	Disc Thickness	1.2 mm
	Track Pitch	1.6 µm
	Laser	
	Beam divergence	53.5 +/- 1.5°
	Output power	0.13 +/- .1 mw
	Type	Semiconductor Laser GaAlAs
	Wave length	780 +/- 25 nm
	Access Times (typical, including settling)	
	Random	< 150 ms
	Full stroke	< 600 ms
	Audio Output Level	
	Line out	0.7 Vrms
Headphone	none	
Cache Buffer	128 KB	
Data Transfer Rate (typical, including settling)		
Sustained	3.0 MB/s, 20X Outer Diameter 150 KB/s, single	
Asynchronous Burst	8.3 MB/s	
Startup Time	< 10 seconds	

¹ Hard drive specifications may vary slightly depending on vendor.² Data transfer rates will vary from 150 KB/s to 3000 KB/s.