

# CD22/14

## DUAL DISK STORAGE SYSTEM

*The CD22/14 Dual Disk Storage System is a low cost, high capacity plug-for-plug replacement for the IBM Model 2314-1 (nine-spindle), 2314-A Series (one to nine spindles) or the 2314B/2319B (three, six or nine spindle) Direct Access Storage Facility.*

*The system is comprised of two major components. The first is a highly reliable Dual Disk Drive—the CalComp CD22—and the other is the high performance CalComp CD14 Controller.*

*A CD22 Dual Disk Drive is composed of two spindles, each capable of storing up to 29,176,000 eight-bit bytes per 2316-type disk pack, for a total of 233,408,000 eight-bit bytes per nine-spindle system. Average access time is 35 milliseconds. The single-spindle version is the CD22S and is used to configure a system with an odd number of disk drives.*

*Operational with one or more CD22 Dual Disk Drives, the CD14 Controller can provide up to 233 million bytes of on-line storage (eight-spindles) and has provision for a spare spindle. Data transfer rate is 312,000 bytes per second. Special features of the CD14 permit servicing of the system without interfering with system operation. A dual-channel switch feature permits a CD14 Controller to operate between any two IBM Selector channels (either two channels on the same computer or channels on different computers).*

*The CD22/14 System is functionally interchangeable and program-compatible with the corresponding IBM system. The data format is variable, and is controlled by the CD14's internal microprogram with the record length specified by the computer.*



**THE CD22/14 DUAL DISK STORAGE SYSTEM**

# CD22/14 DUAL DISK STORAGE SYSTEM SPECIFICATIONS

## TRANSFER RATE

312,000 bytes per second

## ROTATIONAL SPEED

2400 rpm (25 milliseconds per revolution)

## ACCESS TIME

Track-to-track	12 milliseconds
Average	35 milliseconds
Maximum	65 milliseconds

## START/STOP TIMES

Start-up time	22 seconds
Stop time	12 seconds

## COMPATIBILITY

IBM 2314-1, 2314-A Series or 2314B/2319B Direct Access Storage Facility  
IBM 2316 Disk Pack or equivalent  
CalComp CD12 Disk Drive  
IBM System 360/30 (and above) and System 370

## POWER REQUIREMENTS

208 v or 230 v ac ( $\pm 10\%$ ) 3-phase; 60,  $\pm 0.5$ , Hz ( $50 \pm 0.5$  Hz available); **CD14**: Run Current 2.2 amps rms; **CD22**: Run Current (per drive) 4.3 amps rms per drawer; Start Current (per drive)—20 amps rms, 7 sec. **CD22S**: Run Current 4.3 amps rms; Start Current 20 amps rms, 7 sec.

## OPERATING ENVIRONMENT

Temperature: 60 to 90 degrees F. Maximum rate of change  $15^\circ$  per hour. Relative Humidity: 10 to 80%. Rate of change shall not cause condensation.

## HEAT DISSIPATION

CD22:	4600 BTU/hr (two spindles)
CD22S:	2300 BTU/hr (single spindle)
CD14:	1250 BTU/hr

## DIMENSIONS:

CD22 and CD22S:  
32-in. wide; 33-in. deep, 60.5-in. high.  
Floor space required—7.33 sq. ft. (with side panels)

CD14:  
30-in. wide; 34-in. deep, 60.5-in. high.  
Floor space required—6.67 sq. ft. (with side panels)

Total floor space for controller and nine-spindle system: 43.32 sq. ft. (cabinets bolted together with no panels between)

## SHIPPING WEIGHT

CD14	—525 lb. shipping; 425 lb. operating.
CD22	—950 lb. shipping; 850 lb. operating.
CD22S	—610 lb. shipping; 510 lb. operating.



CALIFORNIA COMPUTER PRODUCTS, INC.  
2411 West La Palma Anaheim, California 92801  
Tel. (714) 821-2011 TWX 910-591-1154