

Features

- 4.55 and 9.1 GB formatted disk capacities
- Reliable, sealed media
- Fast access times
- Multisegment read-ahead caching and FIFO buffer on each disk drive
- 3 and 5 year disk drive warranties
- Ultra SCSI-3 bus master controller
- Upgradeable to 3452 redundant storage system
- 7 MB IPC read/write cache, expandable to 15 MB (400-875 tracks)
- Fillable media
- Stand-alone copy utility
- Stand-alone relocating loader (IPCSAL)
- Compatible with MAX IV F.0, MAX 32 B.0, and later OS versions
- Supports File Manager and BIOS volumes
- Supports IPC video display

IPC

3450/346x SCSI-3 Disk Systems

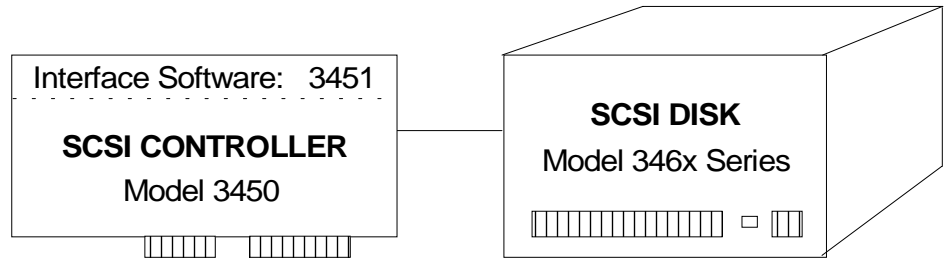


Figure 1: SCSI Disk System

IPC Model 3450/346x Disk Systems provide reliable, high performance, cost-effective storage for MODCOMP computers. They support Ultra SCSI-3 peripherals. A single IPC can support the 3450/346x system plus a wide range of other peripheral devices, including DAT tape, network interfaces with TCP/IP, PLC networks, and multichannel serial asynchronous communications for a total solution to your peripheral needs.

A typical IPC Disk System combines the Model 3450 Controller, the Model 3451 Disk Interface software, plus one or more drives from the 346x family of disk drives.

Model 346x disks currently have capacities ranging from 4.55 GB to 9.1 GB of formatted space per disk drive. New, updated, and improved disk drives are made available as soon as possible in order to provide the best selection for our customers.

All current disk drives employ an Ultra SCSI-3 interface and include a cache data buffer of 512 KB. Each disk drive may be configured with both DOS and MODCOMP partitions, allowing offline use as a DOS-based PC. All disk drives mount in half-height mounting bays in the IPC chassis. Disk power, averaging 11 to 13 watts, is supplied from the internal IPC power supply.

The Model 3450 controller can support up to seven SCSI devices, which may include Model 348x DAT tape drives and other devices in addition to any of the Model 346x disk drives.

The controller is mounted in an expansion slot in the IPC motherboard and is connected to the disk drive with a ribbon cable. An external SCSI connector is also available. The Model 3450 interface includes bus master logic to move data directly to and from memory in the IPC, allowing concurrent operation with other DMA

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transfers and CPU operation. Model 3451 SCSI disk interface software is compatible with a wide range of MODCOMP MAX IV/32 systems. OS support includes complete compatibility for File Manager and BIOS-based disks.

The 3451 software employs a dynamically tuned read/write cache algorithm using the IPC's SIMM memory. The standard IPC provides about 7 MB of cache to keep approximately 400 tracks of the most recently used data accessible in 1 to 2 milliseconds. SIMM can be added to provide caches up to 15 MB. An ad-

vanced hashing algorithm rapidly locates cached data independent of memory size. A real-time display lets you observe cache performance during system operation.

The IPC allows booting of fillable programs like IPCSAL, IPCDTC, and diagnostics. The stand-alone loader (IPCSAL) loads relocatable programs like operating systems and diagnostics. A PATCH utility installs default start-up scripts in IPCSAL to automatically load and start the OS or other programs. An off-line disk-to-tape copy program (IPCDTC),

compatible with MODCOMP's DTC and MAXDTC, supports both IPC and conventional peripherals. It can copy and verify data at 100 MB/minute between two disks and at 30-80 MB/minute between disk and tape. The copy software operates concurrently while the IPC is performing MODCOMP I/O.

The 3451 software is fully interlocked with Models 3135/6/8 UPS to provide continuous operation during loss of AC power and to secure all data via a safe shutdown when and if the UPS battery power is depleted.

| SCSI Disk Drive Model | 3464D | 3466A | 3469 |
|----------------------------------|----------|----------|-----------|
| Formatted capacity (GB) | 4.55 | 9.1 | 9.1 |
| Average seek time (ms) | 9.5/10.5 | 9.5/10.5 | 7.1/7.8 |
| Average latency (ms) | 4.17 | 4.17 | 4.17 |
| FIFO cache (KB) | 512 | 512 | 512 |
| Int. Transfer rate (mbits/sec.) | 108-192 | 108-192 | 120-190 |
| Ext. Transfer rate (mbytes/sec.) | 20/40 | 20/40 | 20/40 |
| Disks | 2 | 4 | 5 |
| Data heads | 4 | 8 | 10 |
| Power dissipation (watts) | 11 | 11 | 13 |
| Form factor | 1" | 1" | 1" |
| MTBF (hours) | 800,000 | 800,000 | 1,000,000 |
| Manufacturer's warranty (yrs.) | 3 | 3 | 5 |

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