



WESTPOINT



I-5590 "Chameleon" IBM 3422, 3480, 3490 Compatible Tape System

The I-5590 "Chameleon" is a universal tape system for IBM Mainframes and Midrange Systems, providing full backward compatibility for 18 and 36 track tape cartridges as well as for 1/2 inch open reel tapes. StorageTek 9840, NCTP, AIT, DLT, IBM 3570, Optical Disks, DVD and CD's are also supported.

One Size Fits All

There are still millions of 9 track open reel tapes in the archives and 9 track tapes are still used for data exchange. IBM terminated shipment of 9 track tape systems 20 years ago. The existing field units are worn out, short of spare parts, expensive to maintain and consume costly floor space and power. The same is principally true for 18 and 36 track tape cartridge systems.

The I-5590 "Chameleon" is the first and only universal tape system, maintaining all common tape and optical disk formats. By consolidating multiple tape environments with the I-5590 tape system, the user will save a significant amount of money and floor space. Due to the fault tolerant control unit with modern streaming tape unit technology, users will experience better reliability and higher availability.

Full backward compatibility is provided to IBM 3422, 3480 and 3490 compatible tapes. Other supported technologies include StorageTek 9840, NCTP, DLT, AIT, IBM 3570, Optical Disk and DVD.

Connectivity to Mainframes, Midrange Systems, UNIX and Windows NT is provided

via ESCON, Block Multiplex Channel, FIPS 60 Channel and SCSI.

9 Track Open Reel Tape Drive

The I-5590 Model 422 is the only 9 track tape system available with an ESCON interface. It is IBM 3422 compatible and supports all common densities, including 6250, 1600 and 800 bits per inch. Tape speed is 100 inches per second. Modern streaming technology with automatic tape loading is incorporated.

18 Track Cartridge Tape Drive

The I-5590 Model 480 is the only 18 track tape cartridge system available with an ESCON interface. It is IBM 3480 compatible and reads and writes 18 track cartridges. The sustained data rate is 3 MB/s and the native cartridge capacity is 200 MB. IDRC data compression is standard. A 10 Cartridge Autoloader with removable magazine is available as an optional feature.

36 Track Cartridge Tape Drive

The I-5590 Model 490 is IBM 3490 compatible. It writes 36 track tape cartridges and reads 18 and 36 track cartridges.

Highlights

Supported Tape Systems

- Up to 8 Drives
- IBM 3490: 36 Track Cartridge
- IBM 3480: 18 Track Cartridge
- IBM 3422: 9 Track Open Reel
- StorageTek 9840
- AIT2
- NCTP
- DLT
- Magneto Optical Disk
- DVD and CD-ROM

Software Support

- IBM OS/390
- IBM VSE
- IBM VM
- IBM AS/400
- IBM RS/6000
- Siemens BS2000
- UNIX
- Windows NT

IBM S/390 Connectivity

- Mainframes
- ESCON
- Block Multiplex Channel

AS/400 Connectivity

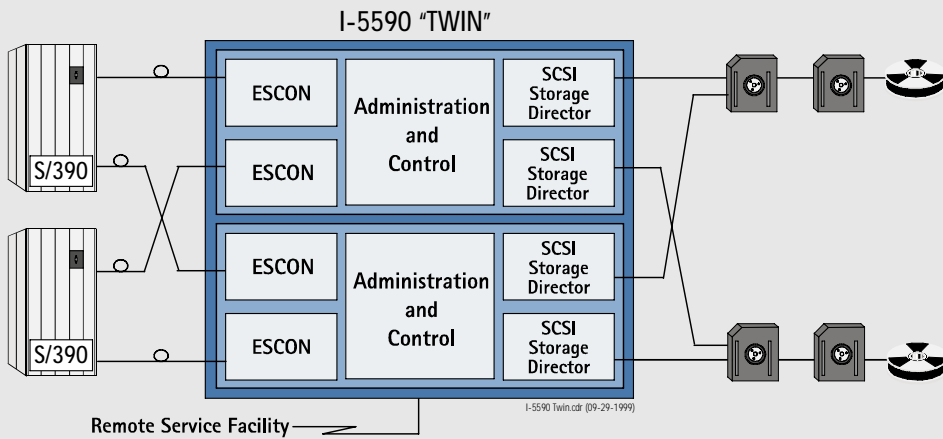
- A/F 6501
- A/F 2621
- A/F 2420
- A/F 2644

RS/6000 Connectivity

- I/F 2416
- I/F 2420

UNIX and WINDOWS Connectivity

- SCSI narrow
- SCSI fast/wide



The sustained data rate is 3 MB/s or 6 MB/s with the Fast Data Rate option. The cartridge capacity is 800 MB native. IDRC data compression is standard. A 10 Cartridge Auto-loader with removable magazine is available as an optional feature.

Magneto Optical Disk System

The I-5590 Model OD supports 5 1/4" Magneto Optical Disks, 12 inch Optical Disks, CD and DVD. The control unit emulates either an IBM 3490 Magnetic Tape System or an IBM 3995 Optical Disk System. The optical disk system is available, as an array with up to 32 drives and as a library system with up to 1,000 optical disks, providing a near online capacity of 5.2 TB native and up to 15 TB compressed.

Optical disk systems provide faster access to data and maintain better data integrity than tape systems. It is the ideal medium for long term archiving. Supported are "Write Once Read Multiple" (WORM) as well as rewritable optical disk cartridges.

Universal Tape Control Unit

The I-5590 "Chameleon" provides an interface between the various tape units for one or more hosts. It is a multiprocessor control

unit, which includes up to four microprocessor based Channel Directors (CD), an Administration and Control Unit (ACU) and one or two Storage Directors (SD).

Two "Chameleons" can be connected together to build a TWIN System, which provides higher throughput, more connectivity and fault tolerance. Remote Diagnostics is a standard feature.

A Channel Director (CD) emulates one Control Unit Image (either IBM 3490, 3480 or 3422) and provides connectivity to the host system. Up to four Channel Directors in a Single System and up to eight Channel Directors in a TWIN System support multiple control unit emulations and maintain connectivity to one or more hosts. Supported interfaces include ESCON and Block Multiplex Channel. Both channel types can coexist in the same control unit. A maximum of 4 Storage Directors (SD) and 32 drives are accommodated in a TWIN.

The Administration and Control Unit controls I/O operation, executes error recovery and provides Remote Service Facility (RSF). Remote Service Facility can be accessed via public network and via the internet.

The Storage Director (SD) includes the device driver and provides connectivity to the tape drives. A Single Control Unit can be equipped with up to two Storage Directors (SD). Up to eight tape drives can be connected to one SD, supporting up to 16 tape drives per Single Control Unit and 32 tape drives per TWIN.

Library Control

Magnetic Tape Libraries and Optical Disk Jukeboxes are supported by Intercom's I-6594 Control Unit. The I-5590 can be upgraded to an I-6594.

IBM S/390 Connectivity

The "Chameleon" provides connectivity to S/390, Amdahl, HDS, Siemens BS2000, Bull, Unisys and Tandem with up to four or eight ESCON and/or Block Multiplex Channel interfaces. Up to four cached Storage Directors (SD) maintain connectivity to a total of 16 tape drives. Tape drives for different tape formats can coexist on the same control unit.

Connectivity to AS/400, RS/6000, UNIX and Windows

The tape system connects to AS/400 (Attachment Features 6501, 2621, 2420 and 2644), to RS/6000 (Attachment Feature 2416, 2420), UNIX systems and Windows via wide or narrow SCSI.

Flexibility

An I-5590 "Chameleon" tape subsystem can include two Open Reel drives, two 18 track cartridge drives and two 36 track cartridge drives, all managed by the same control unit with ESCON or Block Multiplex Channel interface. This configuration handles all the outside - of -library needs of a data center.



Specifications

Control Unit	Single	Twin
Total Number of Channels	4	8
Total Number of Storage Directors	2	4
Number of supported Devices	16	2
Control Unit Emulation	IBM 3422, IBM 3480, IBM 3490, IBM 3995	
Channel Type	ESCON, Block Multiplex, FIPS 60, SCSI	
Supported Tape Formats	36 and 18 Track 9 Track Open Reel	
Form Factor	19", 5 EIA Units	19", 10 EIA Units
Power	90 - 230 V, 200 W	90 - 230 V, 400 W
Weight	35 lb. (16 kg)	70 lb. (32 kg)

Cartridge Tape Drives	36 Track Unit	18 Track Unit
Write Format	36 Track	18 Track
Cartridges Read Format	36/18 Track	18 Track
Cartridge Capacity	800 MB to 2400 MB*	200 MB to 800 MB*
Sustained Data Rate	3 MB/s to 4.5 MB/s*	3 MB/s to 4.5 MB/s*
Interface Burst Rate	20 MB/s	20 MB/s
With Fast Data Rate Option	6 MB/s to 9 MB/s*	n/a
Tape Speed (read and write)	2 m/s	2 m/s
With Fast Data Rate Option	4 m/s	n/a
Tape Speed (rewind and locate)	4 m/s	4 m/s
With Fast Data Rate Option	6 m/s	n/a
Data Compression	IDRC	
Data Buffer	2 MB, 4 MB optional	
Cartridge Loader	10 Cartridges with removable Magazine	
Form Factor w/o Cartridge Loader	19 inch rack mountable unit, 6 EIA High Units	
Form Factor with Cartridge Loader	19 inch rack mountable unit, 12 EIA High Units	
Weight w/o Cartridge Loader	23 lb. (11 kg)	
Weight with Cartridge Loader	56 lb. (25 kg)	
Power	90 to 260V, 80W (110W with Fast Data Rate Option)	

* 3:1 compressed

9 Track Open Reel Tape Drive

Tape Loading	Self Threading / Auto Loading	
Tape Speed	100 inches per second streaming	
Media	Computer grade half-inch magnetic tape ANSI-X3.40,1976	
Reel Size	6 inch to 10,5 inch diameter	
Data Format and Data Rate	GCR 6250 bpi	625 KB/s
	PE 1600 bpi	160 KB/s
	NRZI 800 bpi (read only)	80 KB/s
Load Time	25 seconds maximum	
Rewind Time	180 seconds for 2400 foot tape	
Form Factor	19 inch rack mountable unit, 6 EIA High Units	
Weight	83.6 lbs (38 kg)	
Power	110/220V, 50 - 60 Hz, 500 Watt maximum.	
Option	Desk Top Version	

Other Tape Formats and Optical Disk are available on request

Cabinet

Form Factor	19 Inch, 84 EIA High Units
Weight	145 lb. (70 kg)

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