



Introducing Mirage Data Recorder (MDR)

The **Mirage_{DR}** is designed to meet the requirements of Mission Critical Data Recording Applications such as Seismic Data Acquisition. Tape drives and tape cartridge(s) are replaced by two disk drives enclosed in shock resistant removable cartridges, delivering increased performance and superior reliability. The **Mirage_{DR}** provides fault tolerant recording to two removable disk drives in a RAID-1 configuration. Recording continues in the event of a single disk drive failure. The **Mirage_{DR}** copies data from the virtual volumes on the disk cartridge to conventional tape cartridges for processing or archive as required.

Transparent Operation – The **Mirage_{DR}** appears as an IBM 3590/3592, or LTO tape drive to the system providing plug and play compatibility. The ability to process directly from the disk cartridges greatly increases throughput and reliability of existing acquisition operations. **Mirage_{DR}** implements a Virtual Tape Autoloader with Multiple Virtual Tape Volumes. **Mirage_{DR}** automatically loads the next virtual tape volume upon executing the unload command from the server. Each virtual volume can be loaded manually using the operator front panel.

RDM (Removable Disk Modules) Features – RDM's are managed as a pair with automatically generated unique matching identification numbers. Each disk drive is mounted in a shock tolerant drive carrier. The data on the disk is recorded in actual tape format. All tape formats are supported including SEG-D and SEG-Y. RDM's can be written to, retrieved from, write protected, stored, archived to conventional tape, erased and returned to the field like conventional tape cartridges. RDMs are available with a variety of disk technologies and solid state devices.

Tape Drive Archive –The **Mirage_{DR}** features a built in stand alone, operator initiated, high-speed archive to conventional tape drives. This feature copies data from the virtual volumes on the RDM to conventional tape cartridges. The tape cartridges created are identical to tape cartridges generated directly by the recording system. **Mirage_{DR}** supports up to two tape drives, creating up to two tape cartridges at once. Operations include Archive, Archive and Verify and Verify Only.

Higher Data Protection – Mirrored disk drives provide an instant backup copy. The **Mirage_{DR}** also offers additional data protection by automatically write-protecting virtual tape volumes until they are successfully archived.

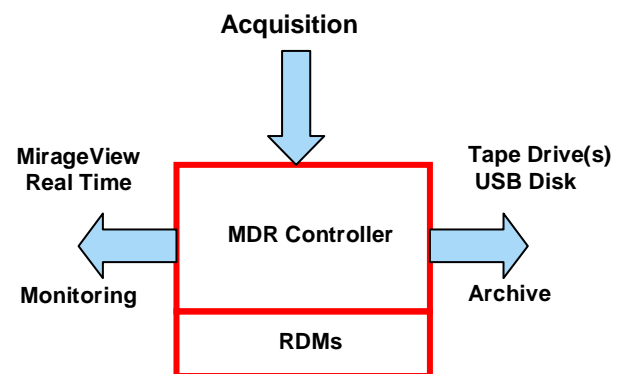
Real Time Monitoring – Read After Write (RAW)

Mirage_{DR} offers Real Time display of seismic data files via a secondary independent host port. Seismic data is retrieved and displayed via the monitor port while the MDR primary host port is used to simultaneously record seismic acquisition data providing 100% assurance in data acquisition.

System Compatibility – MDR is 100% compatible with Data Acquisition systems from **Sercel, ION, ARAM,** and **Fairfield Industries.**



MDR Tower



MDR Block Diagram



Mirage_{DR} Specifications

Mirage Data Recorder

The MDR is packaged in a tower or rackmount configuration. Each system includes an MDR controller, a pair of RDMs (all media types in RAID1 configuration), a host port, and a monitor/archive port.

Product Highlights:

- Perfect for High Density 3D & 4D recording
- Enhancement of existing workflow
- RAID-1 fault tolerance against data loss
- 100% emulation of IBM 3590/3592, LTO or DLT tape drive with built-in autoloader emulation
- Easy to Use Operator Front Panel

PERFORMANCE

Burst transfer rate	300 MB/sec
Sustained read/write speed	Up to 155 MB/sec

INTERFACES

Host	LVD SCSI U160/320	HVD	FC
Archive Tape	LVD SCSI U160/320	HVD	FC
Monitor Port	LVD SCSI U160/320	FC	ExpressCard

ARCHIVAL DEVICES

All major Tape Drives including: IBM 3590/3592/3490E, Fujitsu M8100/2488,LTO, DLT, and USB disk

MDR ENVIRONMENT

TEMPERATURE






Operating	5 degrees C to 40 degrees C
Non-operating	-40 degrees C to 60 degrees C

HUMIDITY

Operating	10% to 80% non-condensing
Non-operating	10% to 90% non-condensing

DIMENSIONS W x L x H

3 Bay Tower	7 x 15.5 x 7 inches	25lbs
2U Rackmount	19 x 21 x 3.5 inches	27lbs

DISK DRIVE TECHNOLOGY	CAPACITY / PERFORMANCE	REMOVABLE MEDIA	ENDURANCE
3.5" SCSI	146GB 80MB/sec		Removable canister rated at 25,000 insertions
3.5" SCSI	300GB 120MB/sec		Removable canister rated at 25,000 insertions
2.5" SATA Disk Cartridge (RDX)	500GB 46MB/sec		Ruggedized cartridge capable of 5000 insertions and 1 meter drops
3.5" SATA	Up to 2 TB 90MB/sec		Removable canister rated at 25,000 insertions
2.5" SSD	Up to 512GB 155MB/sec		Removable canister rated at 25,000 insertions