

Shared Video Storage

White Paper



Outline

- ShareMAX Configurations
- Custom Configurations
- Storage Expansion
- NAS volumes vs SAN Volumes
- SAN Management Software
- Multi-pathing
- RAID Support
- Admin
- UPS Support
- Email Notification
- Redundant Power Supplies
- Application Support

ShareMAX Configurations

ShareMAX comes in 3 base configurations; 8TB (8 x 1TB drives) 16TB (16 x 1TB drives) and 32TB (16 x 2TB drives). Each of the base models includes 6 ports of GigE connectivity, 1 slot for connectivity expansion and the ability to host 1 x 16 drive JBOD expansion unit.

The slot for connectivity expansion can be use for any of the following options:

- Quad port GigE expansion (for a total of 10 ports of GigE)
- Single port 10 GigE expansion
- Quad port Fibre Channel expansion
- Dual port Fibre Channel expansion
- Single port Fibre Channel expansion

The JBOD expansion unit comes in two configurations

- 16TB; 16 x 1TB drives
- 32TB; 16 x 2TB drives

Custom Configurations

Though the base units have 1 slot for connectivity expansion, at the users option, they may remove the Quad port GigE card that comes in all standard configurations and replace it with any of the available Connectivity Expansion options.

These custom configurations would allow for a user to have 8 ports of Fibre Channel or 2 ports of 10GigE or any combination of 2 of the Connectivity Expansion slots.

Storage Expansion

Each ShareMAX comes standard with a 16 bay 3U chassis that can support a single 16 bay 3U expansion. For users that want to expand beyond 64TB of storage, multiple ShareMAX base units can be used in the same Ethernet or Fibre Channel fabric.

The multiple units will show up to the users simply as more volumes on the network, connecting exactly the same as the initial ShareMAX unit.

A single fabric can host up to 3 x ShareMAX base/expansion combos for a total of up to 192TB on a single network.

NAS volumes vs SAN volumes

All ShareMAX volumes can be set up for NAS connectivity (1GigE & 10GigE) or SAN connectivity (Fibre Channel or iSCSI via Ethernet).

A single ShareMAX may have a both NAS and SAN volumes within the same unit, however a single volume cannot be both NAS and SAN. If a users is mixing NAS and SAN volumes they can connect to both volumes on the same workstation. The NAS volumes will connect via standard networking protocols (AFP or SMB) and the SAN volumes will connect via the chosen SAN management software.

SAN management software

ShareMAX supports the following SAN management softwares.

- MetaSAN – File Locking – Mac, Win, Linux – Fibre Channel & iSCSI
- SANmp – Volume Locking – Mac, Win – Fibre Channel & iSCSI
- Xsan – File Locking – Mac – Fibre Channel
- Stornext – File Locking – Win, Linux – Fibre Channel

All standard protocols and set ups apply to SAN per the manufactures spec of whatever management software is used.

Multipathing

Port aggregation is supported with Ethernet connections. This allows users to bond multiple 1GigE connections for support of more streams of video or higher resolutions of video such as Uncompressed HD.

RAID Support

ShareMAX supports RAID 0, 5 and 10. Most standard configurations will use RAID 5 with custom caching options for video users, this gives most users the best combination of speed, safety and available space. Within RAID 5 and 10 options a users can set up a hot spare drive for immediate RAID rebuild in the case of a failed drive.

Admin

ShareMAX features a web based Admin GUI. Password protected it is accessible by any user with access to the proper subnet and the user name/password. This allows easy monitoring from anywhere on the network.

UPS Support

ShareMAX supports APC UPS power supplies with Smart-UPS features. This allows the ShareMAX to have a proper shut down in the case of a power loss without users interaction. This is critical in the safety of a file system. ProMAX officially recommends the APC Smart-UPS 2200VA, however the APC Smart-UPS 1500VA can also be used.

Email Notification

User defined email notification will automatically generate and send users an email in based on the sensitivity set by the admin. SMART monitoring of all drives in the ShareMAX allows the admin to email users when a drive is not acting properly and is at risk of failure. Allowing an admin to replace a drive before failure even occurs.

If this setting is too sensitive for a user they can elect to receive email notifications only in the event of drive or hardware failure, such as a power supply failure.

Redundant Power Supplies

ShareMAX runs on a 2+1 power supply configuration. Allowing a power supply to fail without affecting the unit. The power supplies can be replaced while the unit is running with no affect to the users.

Redundant Power Supplies

ShareMAX has support for Final Cut Pro, Adobe Premiere, Avid Media Composer, Avid Pro Tools, Adobe After Effects and more.

On NAS volumes only a single Avid Media Composer system is supported. For multiple Avid MC systems it is required to use SAN connectivity with a SAN management software that supports multiple Avid MC systems.

Pro Tools connectivity requires a volume level SAN management software. ProMAX recommends the use of SANmp for Pro Tools systems.