Maxtronic ExaSAN - the next trend of digital storage
Fulfill the heavy loading demands of video industry

Nowadays, the HD (high Definition) program such as 2K digitalized TV programs and 4K resolution films are more and more common in video industry. Therefore, now we are facing a ever growing demands on heavy loading and greater efficiency requirement not only in the video server itself but also in storage. The capacity and performance will be the critical criterion of choosing equipment on these applications. Meanwhile, the SAN environment that supports multiple users on a single file system are more popular to customers than many of smaller storage systems.

However, there is an increasing request of utilizing internal hard drives and large disk arrays for those high video resolution programs. That would need high performance on editing recording and playback it. By integrating such a solution, accessing content is much faster and the contents can be repurposed/ shared easier for other clients/ editors. Therefore, MaxTronic introduce a brand new idea from internal bus out to a stand alone disk array system. MaxTronic is proud to unveil the leading of PCI-e SAN solution.

MaxTronic ExaSAN solution is built upon an innovative and advanced architecture to provide maximum flexibility with unrivaled speed. The potential and advantage not only it’s higher performance through PCI-e x4/ x8 bus but also lower the cost over the traditional fiber SAN. Altogether the ideas make the PCI-e ExaSAN the most affordable and cost-effective choice in the video market. MaxTronic ExaSAN solution provides all you need to build from a small, middle to enterprise range SAN environment. The product family is including RAID storages, ExaSAN host/device SAN switches, PCI-e HBAs, cabling and accessories. Without having components from third-party providers, MaxTronic exclusively design, verify and produce every component in the ExaSAN to ensure the best consistency and excellent quality of MaxTronic products. Furthermore, all in one supplier which make the technical supports for these products can all be done easily and immediately with MaxTronic support team.

Product Highlights:
Sustained Performance- Seamless task execution on applications
Unlike traditional external storage like Fiber Channel, SAS, eSATA or SCSI, MaxTronic ExaSAN solutions use native PCI Express protocol. The goal is to avoid protocol codec/ decode translations. Benefits are reducing any unnecessary overhead and resulting the fastest speed that a modern host computer can deliver. In addition, the data and command exchanged in a more efficiency way by directing memory access or DMA between the system memory and buffer memory on the controller. Because that the ability to reduce overhead and to provide higher bandwidth, the ExaSAN solution can be a much more suitable solution than the traditional expensive Fiber Channel solution, for performance demanding applications.

Storage Sharing - Multiple clients editing on heavy loading environment
MaxTronic's unique and world leading ExaSAN technology supports multiple host connection, multiple storage connection and high scalability of the SAN characteristic. It’s fully compatible with MacPro, Mac OS X Server, Windows and PC servers. MaxTronic ExaSAN is not only working seamlessly with Apple Xsan 2 but also improving the performance and reliability of the application. The high-performance ExaSAN can support multiple uncompressed high definition video streams with no frame drops, and provide large and scalable capacity demands for high definition video in media broadcasting or movie industries with multi user support.

EQUIPMENTS USED IN TOPOLOGY:
ExaRAID HD Systems
• SA-6608D / SA-8808D
The ExaRAID HD dual-Independent RAID storage system, the first external PCI-Express to SATA hardware RAID storage system with innovative dual independent PCI-Express RAID controller technology built to enhance the overall performance and reliability. ExaRAID HD will be offered in 3U 16 bays (SA-6608D) and 4U 24 bays (SA-8808D) configurations. Of the three configurations, the 3U and 4U rack mount systems support single controller and dual independent controller infrastructures.

The MaxTronic RAID systems ordering models:

<table>
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<tr>
<th>Model No.</th>
<th>Descriptions</th>
<th>MP Status</th>
</tr>
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<tbody>
<tr>
<td>SA-6608D</td>
<td>3U 16 bay ExaRAID HD dual independent RAID system</td>
<td>Jun. 2009</td>
</tr>
<tr>
<td>SA-8808D</td>
<td>4U 24 bay ExaRAID HD dual independent RAID system</td>
<td>Jun. 2009</td>
</tr>
<tr>
<td>ExaSAN switch kit</td>
<td>ExaSAN Switch Gen1 &amp; Gen2 - NT-redriver card &amp; cabling</td>
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PCI-e SAN Switch

- **ExaSAN G1Device Switch SW-2308S**
  SW-2308S is an industrial leading 9-port 1U PCI Express switch solution by expanding the PCI-e bus of a host server. The PCI-e switch features one (x8) upstream link, one (x8) cascade link and 7 (x4) downstream links with front and back link/power LED status indicators and all within the slim size of 1U rack-mount enclosure.

- **ExaSAN G2 Host Switch SW-2208S**
  SW-2208S allows multiple upstream connections up to 6 hosts at higher speeds and lower costs than FC/SAS solutions. Accusys innovative proprietary technology empowers direct data transfers between hosts and connected storage pools. The technology initializes memory address translation registers in the non-transparent bridge components that allow data to be transferred from one host memory to storage controllers. Software support is available for Mac OS, Linux and Windows.

**Features:**
- Optimized for 2K and HD Format Video processing
- Support storage virtualization, replication, and other SAN applications
- Cost effective if compare with FC SAN solution
- Java-based GUI for remote management,
- Support switch chassis environment management
- Zoning, LUN mapping, and other SAN or RAID configurations NVRAM
- Enabling storage virtualization, replication, and other SAN applications
- Compatible with SAN management tool like Xsan 2, MetaSAN

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**ExaSAN PCI-e Solution**

- Simultaneous Final Cut Pro Streams
- NLE Format | Required bandwidth | Number of Stream
  - ProRes 422 | 36 MB/s | 40
  - 1080i: 4:2:2 | 150 MB/s | 8

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**ExaRAID HD 3U 16bays Dual control RAID System / SA-6608D**