

BITMICRO Tops SSD Market Survey



BITMICRO is the most recognized brand in the solid state disk (SSD) market, according to the Solid State Disk Buyer Preferences Market Report published by STORAGEsearch.com.

Conducted in the fourth quarter of 2004, the survey revealed that BITMICRO leads other SSD manufacturers in overall brand awareness. When asked the question, "When thinking about SSD vendors, which company would you think about first to seek more information?", 22 percent of the respondents answered BITMICRO Networks. M-Systems and Texas Memory were tied for second place with 10 percent each. Responses were culled from over 20,000 readers who visited STORAGEsearch.com's SSD content pages in Q4 2004.

"At first I was surprised to see that BITMICRO was the #1 best known SSD brand cited by responders to our market research survey," said Zsolt Kerekes, editor of STORAGEsearch.com. "But when you look closely at the survey results and compare what SSD users say they want—with the availability of actual products—it all starts to make sense. BITMICRO offers more interface and package options than any other solid state disk manufacturer. So it is always worthwhile for SSD specifiers to take a look and see what they have on offer," Kerekes explained.

Hot Swappable E-Disk Ultra320 SCSI SSD Now Available

In response to overwhelming market demand for fast and reliable Ultra320 SCSI data storage, BITMICRO introduced an 80-pin version of the E-Disk® 3S320—the world's first Ultra320 SCSI solid state flash disk drive. This latest Ultra320 variant features the Single Connector Attachment (SCA-2) interface. Under this standard, the regular 68-pin data connector, 4-pin power connector, and various configuration jumpers are all replaced by a single

80-pin connector. The SCA-2 system facilitates hot swapping, which means that failed hard drives can be easily removed from the disk array and replaced with new ones without powering down the system. As a result, DAS maintenance in critical enterprise apps such as servers, high-end workstations and network storage are simplified to a large extent when hot swap capability is combined with the 3S320's impressive MTBF of 2 million hours.



E-DiskSAN Solutions Achieve Solaris Ready™ Certification



BITMICRO has achieved Solaris Ready™ certification from Sun Microsystems for its line of E-Disk®SAN Fibre Channel rack-mount systems. Additionally, BITMICRO has announced support for the Solaris™ 10 Operating System on both SPARC® and x86 platforms.

BITMICRO's E-Disk®SAN Fibre Channel and SCSI rack mount systems provide fast access times to stored data for military, industrial and enterprise networks and also

data integrity in case of power degradation or failure. The certification builds on the E-Disk® IDE/ATA, Fibre Channel and SCSI Wide product line strength by achieving the Solaris Ready certification. As demand for solid state storage grows, users can easily add the needed capacity by scaling up at the E-Disk® level or by easily interconnecting BITMICRO's network solid state subsystems to create extremely large SSD storage pools.

Are Flash Solid-State Disk Drives Ready for the Enterprise?

Abstract - This article examines the role of flash solid state disks (SSDs) in the enterprise market, the various enterprise applications that stand to benefit most from flash disk technology, and price/performance trends in flash SSDs. SSDs were originally designed in the 1980s for use as cache in real-time performance hungry applications, as well as mass storage in industrial and military systems, where immunity against shock, vibration, and extreme temperatures was required. Throughout the 1980s and 1990s, SSDs remained a relatively expensive niche product used in the avionics and defense industries, with few and far-in-between deployments in the IT arena.

That was then. Today we are witnessing tremendous improvements in processing technology due to increasingly complex and demanding applications. Considering the steady declines in the cost of memory, demand for SSDs in all applications has

significantly increased, with most of the upward movement and new demand emerging in the commercial enterprise market.

With high-end solid state flash disk technology improving several fold, current flash SSDs now offer performance comparable to that of DRAM-SSDs, while their inherent non-volatility allows them to be more compact, have higher capacities, consume considerably less power, and generate less heat than DRAM-SSDs. Moving towards 2009, the price gap between rotational drives and solid state flash drives will narrow significantly (a difference of about \$0.05 per MByte in 2007), and the latter will dramatically increase in performance over the former (at 100x-150x over in terms of sustained transfers and IOPS).

View the full article at http://www.bitmicro.com/press_resources_flash_ssd_enterprise.php

Using Flash SSDs as Cure-All for Medical Storage Systems

Abstract - The medical equipment industry has always remained at the cutting edge of technology to enhance or complement the skills of medical personnel in saving lives. Hospitals, medical units and clinics are spending billions to acquire quality equipment that will not fail under any circumstance despite being deployed in pretty harsh conditions such as ambulances and mobile transportation units. In addition, advances in imaging and data processing have automated almost all diagnostic evaluation process. These issues have created a need for a storage device that can ensure the high-performance and reliability of electronic medical equipment.

This article discusses the technical and economic viability of deploying solid state flash disks as storage solutions for

medical systems. Critical issues such as size and weight, shock and vibration resistance, operating temperature range, environmental factors, quality and reliability, and product life span are considered. Flash solid state disks are also proposed as the best storage alternative for electronic records management solutions such as laboratory information management systems (LIMS) and picture archiving and communication systems (PACS). LIMS and PACS both require a high level of performance, availability and reliability, as immediate access to patient information is critical in emergency scenarios.

View full article at http://www.bitmicro.com/press_resources_flash_ssd_medical.php

Online Resources

The content featured in this edition of the E-Disk Newsletter may be accessed online at the following URLs:

News Releases

BiTMICRO Tops SSD Market Survey

http://www.bitmicro.com/press_news_releases_20050202.php

Hot Swappable E-Disk® Ultra320 SCSI SSD Now Available

http://www.bitmicro.com/press_news_releases_20050104.php

E-DiskSAN Solutions Achieve Solaris Ready™ Certification

http://www.bitmicro.com/press_news_releases_20050118.php

KnowledgeBase FAQs

<http://www.bitmicro.com/kb.php>

Full Tradeshow List

http://www.bitmicro.com/press_events.php



BiTMICRO to Launch E-Disk SSD Portal

BiTMICRO Networks is set to launch www.e-disk.com, an online technology portal that will focus exclusively on the company's industry-leading E-Disk solid state flash disk technology.

The web site will feature E-Disk SSD-related news releases, white papers, feature articles and product datasheets. The Quick Find section located in the homepage will facilitate the product search process by allowing users to focus their search by product family and by interface.

In addition, [e-disk.com](http://www.e-disk.com)'s product pages will feature comparative matrices that match the features of all models under each product family according to capacity, connectors, performance and environmental specifications.

This online portal is expected to complement BiTMICRO's main website at <http://www.bitmicro.com>, as some of the portal links will eventually lead users back to the BiTMICRO website.



Knowledge Base FAQs

Q: How long does it take to reformat the E-Disk® 3S40D? What does the LED status indicator show while the drive is formatting?

A: It depends on how you are formatting the E-Disk® flash drive. If it is done in Windows, it takes about 20-30 seconds, and if it is done using a utility such as fdisk, it can take up to 10 minutes. The reformatting time also depends on the capacity of your flash drive. Formatting a 2GB E-Disk 3S40D flash drive shouldn't take longer than 2 minutes. If you do low-level formatting using the SCSI host adapter, it can take up to 30 minutes.

The green LED when lit means that the drive is idle. When the yellow LED is lit, it means that format process is already running. After formatting is completed, the E-Disk® flash drive resets and the orange, yellow and green LEDs light up at the same time. When the green LED is the only one remaining lit, it means that the E-Disk is now ready for use. When doing low level format, the orange and yellow LEDs flash alternately.

Q: I have a 512 MB E-Disk® flash drive and about 300 MB is occupied by static data (operating system and some application programs/data). I'm running a program that continuously performs write/erase cycles at a rate of approximately 100 MB per day. Do the wear-leveling and other algorithms work only with the 'free' memory (the 212 MB of unused disk space), or do they work on the whole 512 MB of the E-Disk® flash drive?

A: BiTMICRO's wear-leveling algorithms work on the entire capacity of the E-Disk® device. The algorithm does not distinguish between static and dynamic data; it ensures that erase/write cycles are evenly distributed over all the blocks of the flash drive.



FlashCIRCLE Partner Program

BiTMICRO Partners and Resellers can protect their accounts by registering prospects to BiTMICRO's sales database.

Download the Partner Account Registration Form by logging on to the Partner Source section of the BiTMICRO website. Under 2.0 Forms, click Resellers, then open or save the file in either Word or PDF format. Email the form to the Channel Sales Manager or fax it to (510) 743-3155.



BiTMICRO Lease Program

Avoid technology obsolescence! Rev up to solid state storage with BiTMICRO's innovative financing program and avail of the following features:

- Flexible Payment Options
- 100% Financing/Minimum Down Payment
- Conserve Capital and Bank Credit Lines
- Potential Tax Benefits

Visit http://www.bitmicro.com/services_lease.php for details.

Consumer Electronics Show 2005

Las Vegas Convention Center
Las Vegas, Nevada
January 6 to 9, 2005

Considered as the biggest Consumer Electronics Show to date, the 2005 International CES reportedly set several major show records, including number of attendees (142,585 - subject to independent audit), exhibitors (2,550) and exhibit space (1.531 million net square feet). More than 140,000 attendees from 115 countries witnessed the introduction of thousands of new products and trends in audio, accessories, home networking, mobile electronics, video and wireless. BiTMICRO showcased its line E-Disk solid state flash disks in Booth 562 of the Innovations Plus exhibit area. •



WEST 2005

San Diego Convention Center
San Diego, California
February 1-3, 2005

Co-sponsored by the Armed Forces Communications and Electronics Association (AFCEA) and the U.S. Naval Institute, WEST 2005 is billed as the largest event in western U.S. for communications, electronics, intelligence, information systems, imaging, military weapon systems, aviation, and shipbuilding.

BiTMICRO showcased its E-Disk solid state flash disk solutions in Booth 247 of the said event. Thanks to their ruggedized capabilities and securErase® features, E-Disk SSDs have successfully met the demanding storage requirements of the defense and aerospace industries. •



Catch BiTMICRO at these events:

Embedded Systems Conference
 San Francisco, CA, March 6-10, 2005

CeBIT 2005
 Hannover, Germany, Mar 10-16, 2005

Defense & Security Symposium
 Orlando, FL, Mar 28 - Apr 1, 2005

FOSE 2005
 Washington, DC, April 5-7, 2005

NetWorld + Interop
 Las Vegas, NV, May 1-6, 2005

Military Technologies Conference
 Tel Aviv, Israel, May 9, 2005

The E-Disk Newsletter is a quarterly publication of BiTMICRO Networks. BiTMICRO reserves the right to change or improve specifications described in the new product announcements at any time without notice. The company assumes no responsibility for any error that may appear in this document. For newsletter-related concerns or suggestions, send email to jun.alejo@bitmicro.com

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