

Digital Multimedia Forensic Evidence Data Storage

The TeraStack® Solution's digital multimedia forensic evidence data storage solution provides police departments and other law enforcement agencies a secure and reliable way to store the growing data for today's digital forensic evidence that is generated in a multitude of ways. Police officers and investigators are capturing evidence with the use of digital cameras, video cameras, and audio records directly from crime scenes, as well as scattered around a city as tracking of a potential suspect is completed. Being able to catalog this information in a way that is easily accessed by investigators and third parties is crucial to the successful capture of suspects in the field. Electronic criminal record data storage and archive is creating problems not easily managed with today's current data storage technology. According to an article by Jenna F. Leavitt of Association Law & Policy,



"[With] the increased reliance on computers, electronic information has become extremely important in litigation."

Digital multimedia forensic evidence data needs to be maintained for many years; as cases go "cold" or criminals sit in prison, data will age and create a need to be migrated with traditional systems. IT administrators have to deal with migrating data to new storage media technologies or new systems altogether due to the short lifespan of the data storage technologies. Hard drives have an approximate 3-5 year useful lifecycle and tape follows closely with a maximum 10-year lifecycle. Data migration of magnetic tapes and hard drives will soon be an issue of the past for long-term data retention with the introduction of high-density optical media data storage technology. Most tape systems are obsolete after a couple years because new tape technology is released. There is full backward compatibility for optical discs, so each generation of disc will be able to be read by the newest disc drives. Tape systems are only backward compatible for one-generation. Blu-ray optical discs are inherently WORM (Write Once Read Many), providing longevity and data security with no additional cost. Often the short lifetimes of tape and hard drive media have resulted in the use of redundant backup practices to compensate for their shortfall in archive effectiveness. Blu-ray optical media data integrity is rated by the manufacturer for up to 100 years on write-once media and over 50 years on rewritable media.

As data storage technology improves and data generated escalates, it is becoming more and more expensive to maintain large amounts of digital multimedia forensic evidence data, which is quickly becoming petabytes in size. Not only does the cost of traditional data storage systems become exponential as technology increases, but also management issues become a nightmare. Quick and easy management of digital forensic evidence data is becoming crucial to be able to complete and accurately investigate all of the cases that are faced by law enforcement agencies today. The data stored must remain secure and not modified from the original. WORM media is ideal, as the data written cannot be modified after data creation.

Hie Electronics' team of professional sales associates, hardware engineers, and software experts would like to hear from you if you are having problems or are considering a new data storage system. We have a customized storage solution that can serve your needs and will seamlessly integrate into existing systems. The TeraStack® Solution is powerful enough to stand-alone and is the only true Active Archive™ data storage solution. Based on the type of data each byte of information is efficiently managed, stored, and accessed. We want to design the best solution for you and will work with you step by step to provide a complete experience.

Product Information:

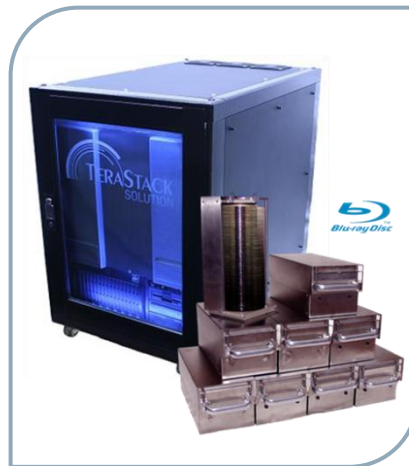
Hie Electronics, Inc. offers the TeraStack® Solution fully customizable but also in three stock TBYTe® configurations: TBYTe 8.6.6, TBYTe 8.14.28, and the TBYTe 8.14.42 (TBYTe X.Y.Z, where X is the number of TeraStack® cartridges, Y is the number of burners, and Z is the size [in TB] of the cache buffer). This solution is a multi-tiered storage and application processing platform providing a "data center in box" approach to critical data backup that can help alleviate many of the space, power, and cost limitations associated with today's storage environments. Whether a data storage technology refresh is necessary or some efficiency improvements need to be made, the TeraStack® Solution provides a turn-key system that can help solve many of the problems associated with today's storage issues dealing with forensic evidence.

Online files are managed with an energy efficient multi-core enterprise application server with significant RAID cache for application support and during peak processing periods. The scalable 6-42TB buffer acts as a landing zone for incoming digital forensic evidence data. When customer requirements require a buffer larger than 42TB, the TBYTe® can be connected directly to an existing SAN still managed by our hierarchical storage management software. Virtual nearline data files are created as soon as data begins to stream into the buffer. These files are saved onto Blu-ray data storage technology and stored in optical media volumes called TeraStack® cartridges. Bit level write verification is performed at the time of write for each Blu-ray disc. TeraStack® cartridges can be easily removed, transported, stored on a shelf, or remounted in an entirely different unit. This process is what gives IT managers peace of mind when saving data that is vital to each and every case. Data maintained within the TeraStack® is accessible immediately after it is remounted within a system. Multiple TBYTe® units may be clustered together into a single cohesive solution, providing virtually limitless expansion capabilities and offering a very scalable storage solution.

The TBYTe® provides an enterprise application server with up to 42 terabytes (TB) of online data storage and up to eight hot-swappable 6.25TB optical volumes for up to 100 terabytes (TB) of nearline data storage. The TBYTe® is a scalable data storage solution utilizing hierarchical storage management providing online, nearline, and offline data storage capabilities in one solution.

The TeraStack® Solution

TBYTE® Unit



TeraStack® Cartridge

