



visionary

AUDAVI USES HITACHI TRAVELSTAR™ DRIVES TO INVENT “NO COMPROMISE” REMOVABLE STORAGE SOLUTION

For more than 20 years, the world of removable storage has been dominated by floppy disks, tape, CDs and DVDs and a handful of exotic devices. Now a Milpitas, Calif. company is taking a fresh look at an old friend: hard disk drives.



Using Travelstar hard disk drives from Hitachi Global Storage Technologies as a storage backbone, AUDAVI Corp. has overcome the compromises and limitations of other removable storage approaches with its HardTAPE® drive, a remarkable device that performs like an industry-standard hard drive but handles like a rugged tape cartridge.

“It’s a little like teaching an old dog a new trick,” said Mike Bergkamp, AUDAVI’s founder and chief executive officer. “Hard drive technology deployed as removable storage wins hands down on all fronts -- cost, reliability, capacity, performance and standards.”

From Specialty to Consumer Applications



The removable storage market has been shaped by the special and demanding needs of customers who create data files measured in hundreds of megabytes – from photographic images and detailed drawings in the graphics art industry, to high-resolution video surveillance used by law enforcement and the military, to IT professionals backing up critical business information.

In the past, however, removable storage has required customers to accept compromises. “Each of the previous methods has at least one major limitation,” said Bergkamp. “Floppies don’t have the capacity; CD, DVD and tape are slow; and exotics like those from Syquest and Iomega are non-standard technologies.”

The AUDAVI HardTAPE drive has three primary components: the 2.5-inch Hitachi Travelstar drive; a protective sleeve that provides the shock and vibration protection required for mobile use and a bay that fits into the space typically occupied by a 3.5-inch floppy disk drive providing the connection to the computer. The result: a removable storage solution that offers up to 100 gigabytes of storage and fast data-access speeds in a rugged industry-standard package.

Bergkamp believes this combination of industry-standards, capacity, speed and ruggedness has important implications for the consumer electronics market. “With a 100-gigabyte Hitachi Travelstar drive, for example, our HardTAPE system could be used for transporting music from device to device,” he said. “You could download an entire library of music onto the cartridge using your PC, then remove the cartridge for use in a home stereo, a portable player or car audio system.”

Standard Package Is Critical to Design

Four important factors figured into AUDAVI's decision to select Hitachi Global Storage Technologies as a primary provider of hard disk drives.

Support for industry standards topped the list of criteria. "The whole point to HardTAPE's appeal is its ability to slip in and out of a computer without any changes to the internal workings of the host system," he said. "That requires support for established standards such as IDE, USB and ATA-6 support, as well as the de facto standard 3.5-inch floppy drive footprint."

Hitachi's depth and breadth of product line is a second important consideration, becoming even more crucial as new consumer applications emerge. For example, Hitachi Travelstar drives range in capacity from 20 to 100 gigabytes and speeds up to 7,200rpm – giving consumer device manufacturers the flexibility required to offer products at different performance and price points. In addition to capacity and speed, Hitachi's product line offers diversity in footprint – from the 3.5-inch Deskstar drives with 400 gigabytes of capacity, to one-inch Microdrive digital media with one to four gigabytes. "With Hitachi's line, we can satisfy a wide range of customer requirements," Bergkamp said.

Industry leadership in capacity, reliability, ruggedness, power consumption and other product features is a third factor that influenced AUDAVI's decision to work with Hitachi Global Storage Technologies. "A good example is the Travelstar drive's inherent ruggedness," Bergkamp explained. "It provides a launch pad for us to further insulate our product against vibration and shock." The AUDAVI HardTAPE with a Hitachi Travelstar drive, for example, is rated at 5,000 G's non-operational shock. This is equivalent to a two foot drop on to a concrete surface -- an exceptional feature, considering that the average disk drive used in a desktop computer can be damaged if dropped from only a few inches.

Finally, Bergkamp cited Hitachi's tradition of innovation. "Hitachi is one of the few companies in the world that has the financial strength to invest in research and development necessary to support new applications as they emerge," he said.

Seeding the Market for Innovation

AUDAVI's strategy is to help open up markets that aren't currently using hard drives. "We see ourselves as seeding the market of new ideas -- of helping innovators think about new ways to deploy industry-standard hard drives as removable storage," Berkamp said.

HardTAPE is being used by OEM customers to improve productivity in professional digital photography, reduce costs in feature film distribution, and increase reliability of critical data collection in the military.

Today, the company is working with leading PC manufacturers – particularly those focused on consumer markets -- to replace floppy drive bays with HardTAPE removable storage bays. Given the mushrooming growth in photographic images, music, video and other data-intensive media files, it takes only a small leap of logic to envision new opportunities in home theater equipment, automobiles and other devices.

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