

FAST LTA

We secure Terabytes.



Silent Cubes²

Certified long-term data archiving with super-redundant hard disk storage

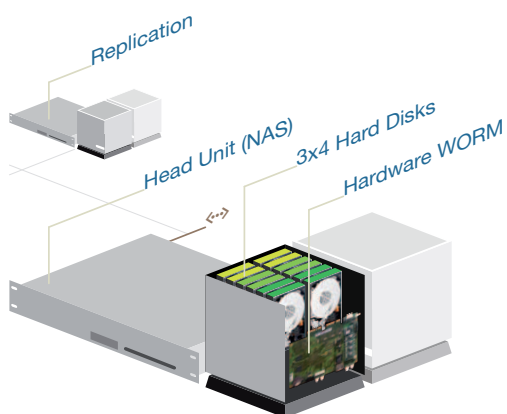


Infinite data infinitely: Silent Cubes long-term storage

Free up your valuable main memory. Put Silent Cubes to work for you, the innovative and economizing solution for permanent data storage.

Hard disks are fast replacing tapes and optical media in all phases of data archiving. Yet most conventional hard disk systems are generally not suitable for long-term storage. Enter Silent Cubes: the first storage system to be expressly and categorically developed for the secure, long-term storage of permanent data.

- Exceptionally secure against data loss, hardware malfunction and misconfiguration
- Particularly low energy and operating costs, ultra-scalable into the petabyte realm
- Full FAST LTA on-site service including hardware replacement with no data loss



The System

The Silent Cubes storage system consists of a Head Unit (NAS), serving as the interface to your network, and up to 128 Silent Cube storage units. The FAST LTA WORM Controller protects all data in the storage units against lost and manipulation at the lowest hardware level. Of the 12 hard disks, any eight will always suffice to completely restore all your data. The software to enable replication to a second location is included.



Security

Guard against data loss by banking on the safest solution of all.

Each Silent Cube storage unit comprises 12 hard disks from three different manufacturers. Even if four hard disks were to fail at the same time, no data will ever be lost. Data sealing against changes, deletions or overwriting is incorporated into the hardware and can therefore never be circumvented. Silent Cubes regularly checks the recorded data automatically (internal Digital Audit).

Modularity

Digital data volumes have exploded in recent years as new technologies and devices continue to generate more and more data.

Silent Cube storage systems grow right along with your needs and are scalable into the petabyte realm. For even more security, software is included for replication to a second location.

Cost/Benefit

Overall costs merit closer attention when weighing the various solutions. Apart from the actual equipment investment, increasing operating and energy costs also factor into the long-term archiving options.

Silent Cubes now sets the standard. The initial outlay is significantly lower than other storage systems while the operating costs amount to just a fraction of conventional solutions. One storage unit with a net 8 terabyte capacity draws a mere 2 watts of energy in standby mode.

Service

Long-term storage also means long-term assurance. FAST LTA supports each and every Silent Cubes installation within the scope of a maintenance contract. Should problems ever arise, we are right there to remedy them on the spot. And you'll never lose any of your valuable data - without needing to make a time-consuming restore from tape.



Formidable



Super-Redundancy

With four redundancy resources, the redundancy coding for Silent Cubes is more secure than a mirrored RAID6 configuration.

3 Manufacturers

To prevent any systematic failures, each storage unit is configured with hard disks from three different manufacturers.

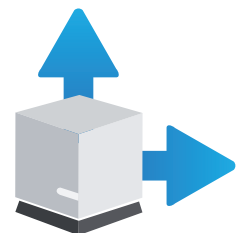
Digital Audit

The Digital Audit regularly and automatically checks data within each storage unit to bit-level accuracy, allowing any problems to be promptly identified and rectified.

Hardware-WORM

Because conventional hard drive systems are vulnerable to user errors, the FAST LTA WORM Controller protects all data against deletion or overwriting at the lowest hardware level.

Adaptable



Modular & scalable

Silent Cube storage systems are scalable into the petabyte realm. You can add storage units at any time and thus adapt capacity to your growing needs.

19-Inch Rackmount

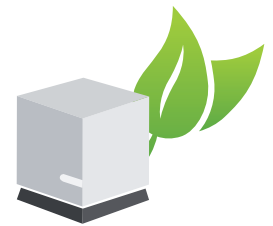
Silent Cubes feature a compact, award-winning design tailored to 19" rackmounts. Four storage units can be accommodated in a 6U chassis.

Replication

In order to protect against the loss of an entire system, for instance due to fire or water damage, Silent Cube installations can be replicated at a second location. The needed software is already incorporated into the system.



Practical



Certified CAS

Silent Cubes CAS (Content Addressed Storage) hold certification for revision-safe storage and are thus in compliance with the applicable legal guidelines (in Europe: GDPdU, GoBS, RöV, etc.) – at a compelling price.

Low Costs

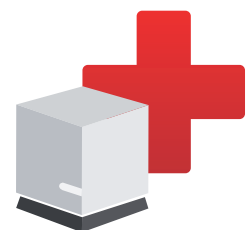
Installation, maintenance and expansion of Silent Cubes requires very little manpower and thus keeps your IT budget firmly on track.

Minimum Expense

Perhaps best of all are the low operating and energy costs. Silent Cubes in standby use less than 2 watts per 8 terabyte storage unit and overall consume less energy for electricity and cooling than any other long-term storage solution.

< 2 Watts in Standby

Thoroughness



Service Contract

FAST LTA provides full comprehensive service within the scope of the Silent Cubes maintenance contract.

24/7 Availability

You can reach us 24/7 if so desired. Should there ever be a failure, our on-site service will replace the respective components while preserving all your data. Even software updates and hardware costs are fully covered.

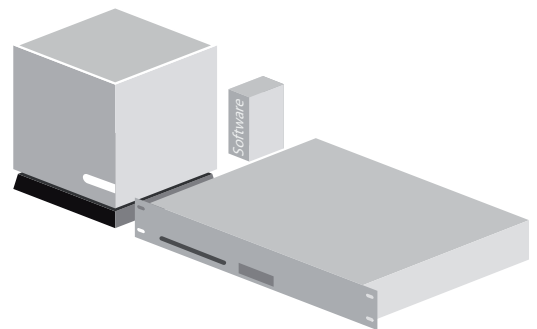
On-Site Service

The integrated monitoring feature allows you to check system status any time via web browser and provides FAST LTA with regular email updates. This allows us to act fast and proactively ensure your system is always running smoothly and securely.

Monitoring



The System



Silent Cube Storage Unit

Art.No. 7002 (8 TB)

Art.No. 7003 (4 TB)

- Permanent hard disk memory
- Capacity: 12 or 6 terabyte gross (8 or 4 terabyte net)
- 12 hard disks (4 each from three different manufacturers), quadruple redundancy via Erasure Resilient Coding
- WORM sealing against deletions and changes at the lowest hardware level
- Second power unit for redundant power supply
- Less than 2 watts in standby mode
- Gigabit Ethernet connection to the Head Unit
- Half 19-inch width, 6 U

Head Unit

Art.No. 7001

- Network storage (NAS) with 2 terabyte internal cache (1 terabyte net, RAID Level 1)
- Manages up to 128 storage units with configurable virtual volumes and access rights
- Connects via SMB/CIFS (with Active Directory Support), NFS access and SCP
- Comprises functions for asynchronous replication and secure data transfer to new hardware
- High availability mode (cluster) for local replication
- Guaranteed full recovery of data from connected storage units

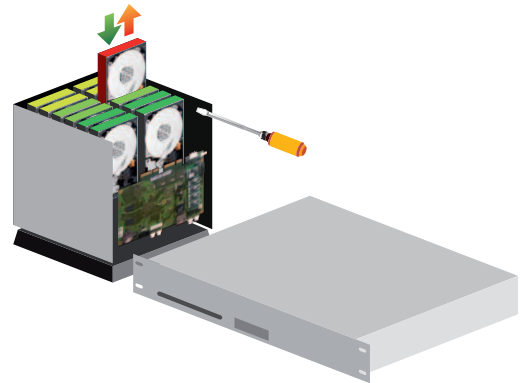
Compliance Option

Art.No. 7004

- Supports revision-safe storage (e.g. compliant with such guidelines as GDPdU, GoBS, RöV, etc.) in Germany, Austria and Switzerland
- Identity verification by 512-bit SHA-2 hash coding
- Variable retention periods can be permanently established



The Service

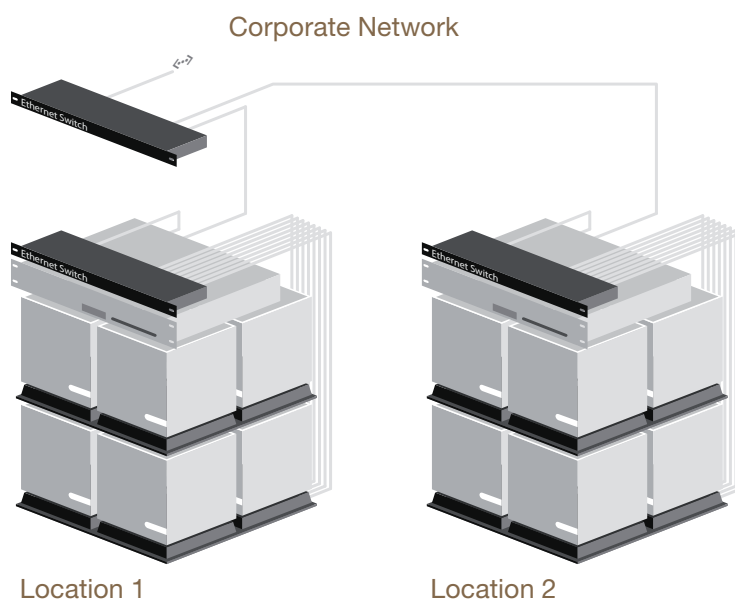


Service Contract

Art.No. 7005

- Local monitoring of all components
- Email reports to FAST LTA
- On-site service for hardware replacement with 0% data loss
- All software updates included
- All replacement parts (hard disks, etc.) included
- 5-year+ terms
- Optional: 24/7 availability

Configuration Example: 192 TB (2x 64 TB net)



Both locations in this example feature a Head Unit, eight storage units and a Gigabit Ethernet switch. The entire configuration is likewise connected to the local corporate network via Gigabit Ethernet switch.

Comes complete with the software for replication to a second location as well as for automatic switch-over should the primary system ever fail (high availability mode).

One 19-inch rackmount can accommodate four storage units (6 U).

Technical Data

Silent Cubes storage unit

Product

Hard disk-based storage unit with WORM hardware

Capacity

Number of hard disks: 12 (8 are sufficient to completely restore all data)
Storage capacity gross/net: 6/4 terabytes* (500GB hard disks) or 12/8 terabytes* (1TB hard disks)

Network

Interface: 1000/100/10Base-T
10Base-T link in standby mode

Firmware

WORM: WORM technology (patent pending)
Redundancy: Quadruple redundancy by Erasure Resilient Coding
Data integrity: Automatic, regular self-auditing (Digital Audit) using SHA-512 hash codes, detects hard disk errors and initiates automatic repair

Power consumption

Standby mode: < 2 W, redundant power supply
Continuous operation: ~ 125 W

Physical data

Dimensions (WxHxD): ~ 22 cm x 22 cm x 23 cm
Weight: ~ 13 kg

19" rackmount: 2 side-by-side storage units (stackable),
6 U in height (installation kit required)

Silent Cubes in a 19-inch rack

Four storage units fit on one shelf (6 U) – in a side-by-side and back-to-back arrangement.

Even a half-stack height will easily accommodate 8 Silent Cube storage units.



Head Unit (NAS) with file system and cache

Product

Network Attached Storage (NAS) with RAID-1 hard disk

Capacity

Gross/net cache: 2/1 terabyte* (RAID-1, 1 TB hard disk)

Network

Interface: 1000/100/10Base-T
Protocol: SMB/CIFS with Active Directory Support, NFS
Direct connection: FAST LTA API

Configuration

File system: FAST LTFS linear file system, optimized for WORM storage

Software: LTFS management
(preinstalled) Web-based administration and configuration, DHCP client / static IP address configuration

Remote monitoring

Daily encrypted email status reports to local admin and FAST LTA (opt.), Web-based intranet/VPN monitoring

Power consumption

Continuous operation: ~ 90 W, redundant power supply (opt.)

Physical data

Dimensions (WxHxD): ~ 43cm x 8,8cm x 41cm (19" wide, 2 U)