

The logo for QUBE KEYSMITH is centered at the top of the page. It consists of the word "QUBE" in a large, bold, metallic-style font with a 3D effect, followed by "KEYSMITH" in a smaller, clean, sans-serif font. The background of the entire page is a blurred screenshot of a web application interface with a blue color scheme. On the left, there is a vertical navigation menu with items like "Sites", "Compositions", "Keys", "Qube Maintenance", "Users", "Miscellaneous", and "Administrative". The main content area shows a "view compositions" page with a search bar and a table of data. The table has columns for "valid from", "valid until", and "screens".

QUBE

KEYSMITH

Qube Cinema has an entire suite of products required for a practical, commercially viable, end-to-end implementation of Digital Cinema. Qube Cinema is a company that has proven expertise in managing complex technology transformations in traditional workflows; a company with a passion for cinema and a thorough understanding of film, video, audio and computer technology as well as the production, post-production and exhibition industries.

Qube KeySmith is a powerful and comprehensive web-based digital cinema key management and reporting system that was developed to meet real-world requirements across different environments.

Some of the key components of Qube KeySmith are the Content Database, the Sites and Screens Database, the Server Database, Content Key (KDM) Generation and Reporting.

Qube KeySmith's Content database holds technical and descriptive details of each Composition and has rich search capability. The Sites and Screens Database holds the site information along with all the screens within each site. Some of the details covered include country, location, time zone, company, integrator and contact information. The Server Database holds the manufacturer information, serial numbers and both Interop and SMPTE Device Certificates. When adding Servers to the system, Qube KeySmith checks the certificate chain so only devices from authorized manufacturers can be added.

Qube KeySmith requires a Distribution KDM and respects the time window of this KDM as well as its picture and sound forensic watermarking properties. KDMs generated by Qube KeySmith can conform to both Interop and SMPTE standards.

The KDM management functionality in Qube KeySmith is comprehensive and every action is logged. Reports of KDM activity can thus be generated for audit purposes. KDMs can be generated in multiple ways and sent physically, automatically via email or uploaded to an ftp site.

Qube KeySmith has multiple Roles such as Content Manager, Site Manager, Server Manager, Key Authorizer and Key Issuer that each user on the system can be assigned and the rights and capabilities of users are governed by these Roles. While one user could be assigned all of the available Roles, in the ideal workflow, separate users would perform these roles, thus greatly increasing the security of operations.

The Qube KeySmith Reports provide detailed information on a per-Composition, per-User and per-Site basis. Logs can be used for billing and also serve as an audit-trail of operations on the system.

Qube KeySmith can also be customized to incorporate additional business logic based on the requirements of a customer. The system also has a standard API for interfacing to external systems.

And Qube KeySmith has the rare and unique combination of power, flexibility and ease-of-use that is the hallmark of products from Qube Cinema.

System Requirements: Dual Xeon Server with 8 GB RAM, 500GB RAID Storage, Windows Server 2008 x64 OS and MS SQL Server 2008 with Internet Connector License.

Qube KeySmith is part of an entire suite of products for an end-to-end implementation of digital cinema.

QubeMaster Pro is a powerful, extremely fast and flexible software-based Digital Cinema mastering solution designed to integrate fully into a modern post environment. QubeMaster Pro encodes into multiple image compression formats including JPEG2000 and MPEG-2 with DCI specified encryption and MXF Wrapping. With the most comprehensive set of pre-processing capabilities in the industry including cropping, scaling, letter- and pillar-boxing, 1D and 3D LUTs, de-interlacing, frame-rate conversion and support for the Color Transform Language (CTL), QubeMaster Pro is able to directly encode the Digital Source Master (DSM) and create a Digital Cinema Distribution Master (DCDM) at the same time, thus saving significant time and cost. The powerful mastering interface follows the DCI Object Model and allows Track Files to be added to the database; picture, sound and subtitles to be synced accurately to form Reels; and Reels to be chained together to form Compositions. The system produces standards compliant Digital Cinema Packages (DCPs) for distribution to digital screens and Key Delivery Messages (KDMs) for Key Management Systems such as QubeCentral. QubeMaster includes realtime JPEG2000 and MPEG 2 playback capabilities for sound sync and QC purposes. QubeMaster Pro also has powerful features for Compositions to be edited for the localization requirements of different territories.

The **Qube XP Digital Cinema Server** is the core component of the Qube system that plays picture and sound, and provides theatre-automation support. Redundant power supplies and RAID storage bring a high level of reliability to the system, while a detachable Qube Remote Panel provides familiar operational controls. The system is based on the modular Microsoft Windows Embedded™ Operating System to maximize reliability and security while deriving benefit from Microsoft's powerful DirectShow™ architecture. The second generation Qube software is also database driven for the highest level of flexibility. Qube XP-D has CineLink™ 2 equipped dual-link HD-SDI outputs and AES3 audio outputs apart from providing optional analog audio outputs. Designed to conform to the DCI Specification, the base system handles JPEG2000, MPEG 2 and VC-1 picture. Qube XP systems can be managed and operated locally and remotely via a powerful web-based UI. This interface shows status and, with the proper login credentials, allows transport control, scheduling, content ingest, key management, media management as well as setup and maintenance. System logs can also be viewed over the web interface and are digitally signed for verification of authenticity.



QubeCentral is a web-based digital cinema network control, management and reporting system. An option in QubeCentral is central scheduling of commercials and consolidated reports of as-run logs from networked units.

QubeCast is a unique media transmission system which uses Digital Fountain's patented wirespeed delivery technology to securely move media over satellite and broadband networks much more efficiently than conventional IP based technologies such as ftp. QubeCast can handle both multicast and point-to-point transfers and is simply the best solution on the market for digital cinema networks.



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