QUBE

Digital Cinema

The only one that does it all.

Qube Cinema provides the ultimate combination of quality, reliability, ease-of-use, security and flexibility. Designed from the ground up to operate in mission-critical applications, the architecture of the Qube system has been conceived with the future in mind. Being almost entirely software based allows the Qube system to leverage developments in the computer industry to bring cinemas a format independent, powerful and flexible product that projectionists everywhere will be instantly familiar with.

Qube Cinema is an entire suite of products that are required for a practical, commercially viable end-to-end implementation of Digital Cinema from 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.

The **Qube XP-S Digital Cinema Server** is a key component of the Qube system that plays picture and sound and provides theatre-automation support. A detachable Qube Remote Panel provides familiar operational controls such as Play, Pause and Stop along with an LCD Display and Menu Keys. Unlike more complex interfaces such as touch-screens or the mouse and keyboard, the Qube Remote Panel is a simple, familiar hardware interface that makes projectionists feel instantly comfortable with the system.

The second generation Qube software is database driven and has a flexible core media architecture that can work with multiple copies of picture, sound, subtitling and metadata files stored on local and shared central storage systems. Qube Cinema is based on the modular Microsoft Windows XP™ Embedded Operating System to maximize reliability and security while deriving benefit from Microsoft's powerful DirectShow™ architecture.

Qube XP-S is aimed at the E-cinema and Pre-show market and has HDMI picture output with HDCP and analog audio outputs in a compact 2U rack-mount package.

The Qube XP server is standards-based and designed for interoperability. The system utilizes DCI specified MXF containers with 128-bit AES encryption for media and xml for compositions and shows. RSA encryption is utilized for keys.

The base system handles high bit-rate MPEG 2 pictures and also supports Windows Media 9 and is expandable with additional software codecs. Audio is uncompressed 16 bit or 24 bit at 48 KHz and 96 KHz. Whether for pre-show or feature playback, Qube Cinema has the flexibility to support it all.

Qube Cinema supports subtitling in the TI CineCanvas™ file format and subtitles are internally rendered for display along with the picture using high quality fonts.

Media transport is possible using portable USB-2 or eSATA hard drives, high-speed data lines and satellite multicast transmissions.

Qube XP Servers can manage media completely automatically by deleting older, unused media when additional space is required to ingest new media. This again makes the system entirely automatic in operation for the projectionist and theatre manager and considerably simplifies their lives while reducing the possibility of human-error.

Qube XP systems can be managed and operated locally and remotely via a powerful web-based UI which shows status and, with the proper login credentials, allows transport control, scheduling, content ingest, key management as well as setup and maintenance. System logs can also be viewed over the web interface and are signed for verification of authenticity.

QubeCentral is a web-based digital cinema back-end operations management and reporting system that provides movie-on-demand download scheduling and transparently and securely transmits access control keys. The system can also be used to schedule commercials and provides password-protected online access to as-run logs and the health status of units in the field.

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.

Qube XP-S Technical Specifications

Digital Image Output:	HDMI with HDCP Encryption
UI Monitor Output:	DVI+VGA connector (monitor optional)
Audio Output:	25-pin D-sub Connector for 8-chan Analog Audio Output
Image Compression:	MPEG-2 4:2:0 & 4:2:2 Windows Media 9 4:2:0
Image Resolution:	Variable from SD PAL/NTSC to HD 1080P
Frame Rates:	23.97, 24, 25, 29.97, 30, 50, 59.94 & 60 fps
Audio Compression:	Linear PCM Audio Windows Media Audio
Audio Sampling:	44.1 KHz, 48 KHz and 96 KHz, 16 and 24-bit
File Formats:	MXF packaging for track files xml packaging for compositions and shows
Subtitling:	Multi-lingual subtitling in the TI CineCanvas™ format
I/O Ports:	Gigabit Ethernet Port, RJ-45 x 1 USB 2.0 Ports x 4 eSATA Port x 1 Mouse/Keyboard ports
GPI:	optional, 4 opto-isolated inputs and 4 relay outputs
Storage:	500 GB storage, no RAID
Security:	128-bit AES Encrypted Content Start/End Date control by 2048-bit RSA Encrypted Keys
Picture Watermarking:	optional Thomson NexGuard™ on MPEG-2 content
Projectionist Interface:	USB Controller with Play, Pause, Stop and Menu Buttons with 40 char x 2 line LCD Status Display
Management Interface:	Multi-function web-based Interface with System Status, Transport Control, Show Builder, Scheduling, Content Ingest, Key Management, Log Viewer and System Setup/Maintenance
Power Supply:	100-240V AC 50/60Hz, 400W
Operating Temperature:	10 to 40 degrees C
Operating Humidity:	20% to 90% non-condensing
Size:	Main Unit – 48.5 cm (W) x 8.8 cm (H) x 58.5 cm (D) 2U Rack Mountable Unit Remote Panel – 9.3 cm (W) x 4.3 cm (H) x 14.5 cm (D)
Weight:	Main Unit – 12.270 Kg Remote Panel – 0.55 Kg Packed – 21.320 Kg

Specifications mentioned herein are subject to change without notice due to continuous product development

REAL IMAGE

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