

NEW

# SX-2000A Digital Cinema Server with Integrated Media Block

The stunning solution for both 2K and 4K digital cinema



Integrated Media Block



SX-2000A Digital Cinema Server

GDC Technology is proud to introduce the new **SX-2000A Digital Cinema Server with Integrated Media Block**, our fifth generation digital cinema playback server designed to fully comply with DCI specifications and FIPS-140 security requirements.

The SX-2000A can support both 2K and 4K resolutions that is future-proof based on Texas Instrument's Enhanced DLP Cinema<sup>®</sup> technology, retaining all of the attractive SA-2100A's features such as:

- 2K/4K DCI MXF JPEG2000 playback
- DCI MXF JPEG2000 3D playback
- MPEG2 MXF Interop playback
- FIPS-140 Certified Media Block
- DCI approved forensic watermarking
- HDTV live streaming capabilities
- Highly stable Linux-based operating system
- Ingest of Digital Cinema Packages (DCPs) via physical media, network and satellite

In addition, the SX-2000A offers increased storage capacity and flexibility with the following unique features standard.

## Unique Features

### Supports NEC, Christie and Barco Series 2 Projectors

The SX-2000A is ready to support Series 2 projectors and provide higher processing performance support for applicable DCI requirements and enhanced security for content protection.

### Subtitle Overlay Support on Server

The SX-2000A is capable of rendering multiple-language subtitles and overlaying them over the picture in real-time without relying on the subtitle-rendering features of projectors.

### Closed Captioning Support

The SX-2000A facilitates greater access to motion pictures by displaying closed captions from DCPs on WGBH's Rear Window Captioning devices.

### Automation Compatibility

The SX-2000A allows bi-directional communication with theatre devices such as cinema control systems, cinema sound processors and cinema projectors, hence making automation of these devices possible and achieving substantial reduction in setup time and possible human errors.

### Support of Performance Log

Ensures performance-related information is captured during the playback of shows is properly logged in a standard format for later retrieval. The log records are digitally signed to prevent tampering.

### FIPS 140-2 Certified Media Block

The SX-2000A ships with a FIPS 140-2 Level 3 Certified Media Block providing the highest level of security recommended by DCI.



### Redundant Hot Swappable Up to 4TB Storage (Optional)

Up to 4TB of content storage. The SX-2000A uses 3 redundant hot swappable drives that can be easily attached or detached. The SX-2000A is able to remain operational in the event of a single drive failure and minimizes downtime.



### Instant Playback from CRU Drive Sleds \*

The SX-2000A allows for instant playback from the CRU drive sleds without requiring content ingest. This significantly reduces time to screening in emergency situations.



### Swapping of Data Drives for Immediate Content Playback

The SX-2000A allows instant transfer of data drives (i.e. HDD) between servers, making a movie to move quickly from one screen to another.



### Instant Playback from TMS Library

The SX-2000A allows for instant playback from the TMS content library to the server. This makes available huge amount of content storage for playback, providing flexibility for show management.



### Remote Access of the Screen Management System

Cinema operators can remotely access the SX-2000A using the Theatre Management System (TMS) and Screen Management System (SMS) from a Windows<sup>®</sup> PC and other mobile devices such as Apple<sup>®</sup> iPhone<sup>™</sup>.



### Incorporation of RealD 3D EQ Technology

The availability of RealD's 3D EQ ghostbusting technology in the SX-2000A allows for superior 3D presentations and facilitates seamless integration with RealD 3D exhibition systems.



**GDC Technology Offices**

**USA (Los Angeles, CA)**

3500 W Olive Ave., Suite 940,  
Burbank, CA 91505  
Tel: +1 877 743 2872 (Toll Free)  
Fax: +1 877 643 2872

**USA (Sterling, VA)**

21155 Whitfield Place, Suite 207,  
Sterling, VA 20165  
Tel: +1 877 337 0868 (Toll Free)  
Fax: +1 571 313 0468

**Hong Kong**

Unit 1-7, 20th Floor,  
Kodak House II,  
39 Healthy Street East,  
North Point, Hong Kong  
Tel: +852 2523 6851  
Fax: +852 2579 1131

**Singapore**

6 Changi South Street 2,  
Fedex Building, Level 7,  
Singapore 486349  
Tel: +65 6222 1082  
Fax: +65 6222 1089

**China (Shenzhen)**

Block B, Yuehaimen Square,  
No. 2292-2300 Nanhai Blvd.,  
Shenzhen, P.R. China 518052  
Tel: +86 755 8611 0889  
Fax: +86 755 8611 0899

**China (Beijing)**

Rm. 518-520, Tower B,  
No.11 De Wai Street,  
Xi Cheng District,  
Beijing, P.R. China 100088  
Tel: +86 10 6205 7040  
Fax: +86 10 6205 7054

Email: info@gdc-tech.com

Website: www.gdc-tech.com

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due to ongoing product  
development and  
improvement.

GDC manufacturing  
facility is  
ISO 9001: 2000 certified.



PB-0030-1006-V2E

# SX-2000A Digital Cinema Server Technical Specifications

**Physical**

Dimensions 482 (W) x 616 (D) x 177 (H) mm 4RU  
Weight 25kg (55lbs)

**Environmental**

Operating temperature 5° to 40°C (41° to 104°F)  
Operating humidity 20% to 90%, non-condensing  
Operating altitude 10,000ft. above sea level

**Power**

Power requirement 100 to 240V AC ± 10%,  
50/60Hz (15A max.)  
300W  
Max power consumption  
Redundant power supplies Redundant internal hot swappable x 2  
Uninterrupted power supply (UPS) with surge protection (optional) 3-way, meets IEEE STD 587 Cat. A 6KV test

**Video Performance**

Formats (MPEG) 1280 x 720, 1280 x 1024, 1920 x 1080,  
1920 x 1080, 1998 x 1080, 2048 x 858,  
2048 x 1080, 4096 x 2160  
Formats (JPEG) 23.98, 24, 25, 29, 29.97, 30, 50, 59.94,  
60 fps  
Frame rates (MPEG)  
Frame rates (JPEG) 23, 24, 48 (3D), 25, 29, 30 (HD)  
Compression JPEG2000, MPEG2 MXF Interop  
Packaging DCI Digital Cinema Package (DCP), DSR™

**Audio Output**

Digital uncompressed audio 16 channels (XLR-M x 8, AES/EBU)  
48/96 KHz, 16-bit/24-bit  
D-sub 25-pin  
Audio Offset +/- 500 frames

**System Interfaces**

Ethernet 2 x RJ-45  
(1 x 10/100 BaseT,  
1 x 1000 BaseT)  
USB2.0 6 x USB A-Type male  
16-port GPI/Os D-sub 25-pin  
DVD-ROM drive \* Read speed 8x  
HDD sled \* CRU-Dataport DX 115

DVB-ASI (optional) BNC, CENELEC  
EN 50083-9 standard  
270Mbps < 2.8ppm  
RS232 D-sub 9-pin  
Modem Interface with remote sensing software

**Storage**

Redundant hot swappable 2000GB  
(Upgradeable to 4000GB)

**Security**

AES 128-bit encrypted data storage  
GDC conditional access system  
Thomson NexGuard® forensic watermarking  
FIPS 140-2 Level 3

**Subtitles**

Instant subtitle overlay on server

**Reference I/O**

Analog Genlock Bi-level, Tri-level

**User Interface**

Server Built-in Touch Panel Integrated Control of digital cinema servers  
Control (optional) and DLP Cinema® projectors  
External Panel Integrated Control of digital cinema servers  
Control (optional) and DLP Cinema® projectors  
Windows® PC Remote access to the screen management  
network control system (SMS) and server user interface

**Language Versions**

English  
Simplified Chinese  
Traditional Chinese  
Korean  
Japanese  
Spanish

**Third-Party Integration Options**

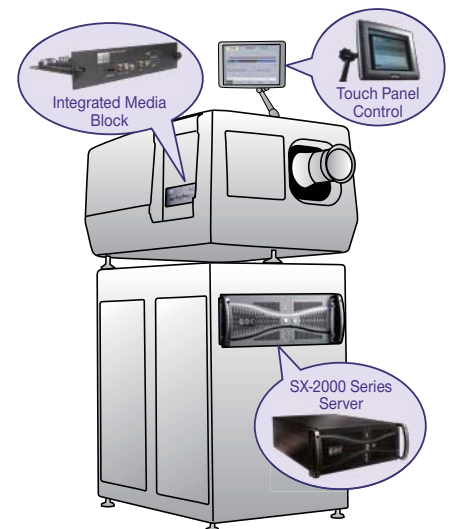
CineDigm Theatre Command Center® v3  
Library Management Server®  
RealD RealD 3D EQ  
Dolby Dolby 3D  
WGBH Rear Window Captioning Device  
D-BOX Technologies D-BOX Motion Code™

## SX-2000 Series Digital Cinema Server

The SX-2000 Digital Cinema Server is available in various configurations to suit the differing needs of cinema owners. Cinemas that already utilize a theatre management system (TMS) will find the SX-2000T a cost efficient choice. Meanwhile, cinemas not using TMS can benefit from the increased ingest options available in the SX-2000A.

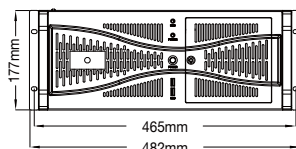
Model No.	SX-2000	SX-2000A	SX-2000T
Description	Basic Model	Advanced Model	Advanced Model for TMS Integration
DVD-ROM Drive		●	
HDD Sled		●	
Redundant Power Supply		●	●
GPI/O		●	●
Hot-Swappable HDD x 3 units		●	●

\* Only available in SX-2000A

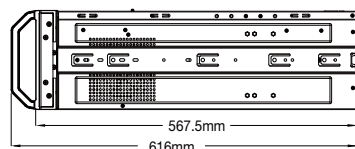


Series 2 DLP Cinema® projector with SX-2000 Series server and Integrated Media Block

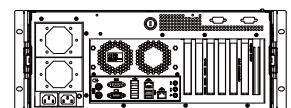
## SX-2000 Series Digital Cinema Server Technical Drawings



Front View



Side View



Back View