# SX-2000

# Digital Cinema Server with Integrated Media Block

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





Integrated Media Block

SX-2000 Digital Cinema Server with Integrated Media Block, GDC Technology's fifth generation digital cinema playback server is fully complied with DCI specifications.

The SX-2000 can support both 2K and 4K resolutions based on Texas Instrument's Enhanced DLP Cinema® technology, retaining all of the attractive SA-2100A's features.



# SX-2000 Digital Cinema Server with Integrated Media Block (IMB)

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



# **GDC SX-2000** with IMB achieves DCI compliance!

# **Unique Features**

# Supports Barco, Christie and NEC Series 2 Projectors

The SX-2000 seamlessly integrates with all Series 2 projectors including Barco, Christie and NEC to ensure highly reliable and secure content delivery.

## **Live 3D Support (Optional)**

The SX-2000 comes integrated with 3D Demuxing# (side-by-side) which makes receiving high-quality 3D broadcasts possible. It also provides a built-in integrated 3D receiver-decoder to seamlessly support 3D Live broadcast without requiring additional receiver-decoder.

# **Supports All Approved 3D Systems**

The SX-2000 seamlessly integrates with numerous studio-approved 3D systems such as RealD, Masterlmage, Dolby 3D and active 3D systems.



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

The SX-2000 comes with 3 hot swappable data drives that can easily be attached or detached.

The SX-2000 is able to remain operational in the event of a single drive failure, thereby minimizing downtime.



# Instant Playback from CRU Drive Sleds\*

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

# **Finest 3D Playback**

The SX-2000 provides the highest quality 3D playback with 12-bit 4:4:4 output images (left and right), providing 500 times more color spectrum than legacy servers.

### **USB 3.0 Interface (Optional)**

The SX-2000 features an optional USB 3.0 interface that increases content ingest speed by approximately 2 times faster than a USB 2.0 interface.

# **Supports Closed Captioning Devices**

The SX-2000 supports various closed captioning devices such as USL Closed Captioning Device and WGBH Rear Window Captioning Device to enhance the hearing or visual impaired cinema patron's movie-going experience.



## Instant Playback from TMS Media Library#

The SX-2000 allows for instant playback from the Theatre Management System's (TMS) content library

to the server, providing greater flexibility for show management.



# Remote Access of the Screen Management System

Cinema operators can remotely access GDC servers using Theatre Management System (TMS) and

Screen Management System (SMS) from a Windows® PC, or mobile devices such as the Apple® iPhone $^{\text{\tiny{M}}}$ .

# **SX-2000 Digital Cinema Server Technical Specifications**

#### **Physical**

Dimensions 482(W) x 616 (D) x 177 (H) mm 4RU

Weight 25kg (55lbs)

**Environmental** 

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

Power

Power requirement 100 to 240V, 60 to 50Hz, 6 to 3A

Max power consumption

Redundant power supplies Redundant internal hot swappable x 2 3-way, meets IEEE STD 587 Cat. A 6KV test Uninterrupted power supply

(UPS) with surge protection (optional)

**Video Specifications** 

4096 x 2160 - 24 (2D) (optional) JPEG 2000 2048 x 1080 - 24 (2D), 24 (3D), 48 (2D)\*

MPEG 2/MPEG 4

SMPTE Digital Cinema Package (DCP), Packaging

Interop DCP, DSR®

**Audio Output** 

Digital uncompressed audio 16/24-bit AES/EBU,

16 channels, 48/96 KHz

D-sub 25-pin

Audio Offset +/- 500 frames

**System Interfaces** 

Ethernet 2 x RJ-45 (1x10/100 BaseT, 1 x 1000 BaseT)

USB 2.0 6 x USB A-Type Female USB 3.0 (optional) 2 x USB A-Type Female

8-port GPI/Os D-sub 25-pin (16-port GPI/Os is optional)

DVD-ROM drive\* Read speed 8x CRU sled\* CRU-Dataport

DVB-ASI (optional) BNC, CENELEC EN 50083-9 standard

270Mbps D-sub 9-pin Modem Interface with remote access software

Redundant hot swappable 2000GB Storage

(Upgradable to 4000GB)

Security AES 128-bit encrypted data storage

Civolution (Thomson NexGuard®) forensic

watermarking FIPS 140-2 Level 3

Subtitles Subtitle overlay on server

Projector Cinecanvas support

Reference Input Analog Genlock

**User Interface** 

External Panel Control (optional) Integrated control of digital cinema

servers and DLP Cinema® Projectors

Windows® PC network control Remote access to the screen

management system (SMS) and server user interface

English / Simplified Chinese / Traditional Chinese / **Language Versions** 

Korean / Japanese / Spanish / French

**Third-party Integration Options** 

GDC, Third-party\*

RealD, Dolby 3D, Masterlmage, 3D system

active systems

D-Box Motion Code™, 4D plex 4D system

Closed Captioning Device USI

WGBH (Rear Window Captioning Device)

**Integrated 3D Live Specifications** 

MPEG 2/ MPEG 4 Video

Dolby Digital (AC-3)\*/ MPEG 2 audio Audio

3D Demuxing Side by side / Third-party#

UDP Multicast of MPEG 2 Transport Stream Stream Format

\* Only available in SX-2000A

\* Supports Dolby Digital (AC-3) in pass-through mode only, which requires external AC-3 decoder or sound processor for integration

\* 2D playback at 48fps requires updated projector software

\* Please check with your TMS provider

# RealD LIVE and SENSIO® Hi-Fi 3D Live support available

# Subject to network stability and bandwidth limitation

# **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.

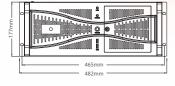
Model No.	SX-2000A	SX-2000T
Description	Advanced Model	Advanced Model for TMS Integration
DVD-ROM Drive	•	
CRU Sled	•	
Redundant Power Supply	•	•
GPI/O	•	•
Hot-swappable HDD x 3 units	•	•



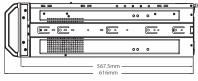
Series 2 DLP Cinema® projector with SX-2000 Series server and Integrated Media Block

# **SX-2000 Series Digital Cinema Server Technical Drawings**

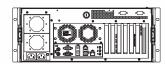
Front View



Side View



**Back View** 





# **GDC Technology Offices**

### **USA (Los Angeles, CA)**

1016 West Magnolia Boulevard Burbank, CA 91506, USA

Tel: +1 818 972 4370 /

+1 877 743 2872 (Toll Free)

Fax: +1 877 643 2872

# USA (Sterling, VA)

21155 Whitfield Place, Suite 207, Sterling, VA 20165, USA

Tel: +1 877 337 0868 (Toll Free)

Fax: +1 571 313 0468

#### Spain (Barcelona)

Av. Diagonal, 177, 9th Floor 08018 Barcelona, Spain Tel: +34 93 238 14 10 Fax: +34 93 309 31 88

#### **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

### Japan (Tokyo)

7F Nishino Kinryo Bldg, 4-9-4, Hatchobori, Chuo-ku Tokyo 104-0032, Japan Tel: +81 3 3523 2650

Tel: +81 3 3523 2650 Fax: +81 3 3523 2651

#### Singapore

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

Tel: +65 6222 1082 Fax: +65 6222 1089

# China (Shenzhen)

5th Floor GDC Building, No.9 Hi-tech Middle 3 Road, Science & Technology Park, Nanshan District,

Shenzhen, P.R. China 518057 Tel: +86 755 8608 6000 Fax: +86 755 8608 8098

# China (Beijing)

Rm. 609-618, Office Building, 20# Xinde Street, Xicheng 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



GDC Tech manufacturing facility is ISO 9001: 2008 certified.

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# **China Regional Technical Support**

# Changsha (长沙)

Tel: +86 400 886 0966 (Toll Free)
Fax: +86 10 6205 7054

# Chengdu (成都)

Tel: +86 400 886 0966 (Toll Free)

Fax: +86 10 6205 7054

# Chongqing (重庆)

Tel: +86 400 886 0966 (Toll Free)

Fax: +86 23 6311 8005

# Guangzhou (广州)

Tel: +86 400 886 0966 (Toll Free)

Fax: +86 20 8329 9144

#### Shanghai (上海)

Tel: +86 400 886 0966 (Toll Free) Fax: +86 21 6073 1256

#### Wuhan (武汉)

Tel: +86 400 886 0966 (Toll Free)

Fax: +86 10 6205 7054