

INSTALLATION MANUAL FOR SR-5400C STANDALONE INTEGRATED MEDIA BLOCK™

Version 19.2

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Thank you for purchasing a GDC SR-5400C Standalone Integrated Media Block™ from GDC Technology Limited.

To ensure proper operation and to maximize value of the SR-5400C, please review this Installation Manual. It will guide you through all the features and benefits of the new SR-5400C Standalone Integrated Media Block™.

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MANUAL DISCLAIMER

This manual is made with version 19.2 and there might be slight differences depending on the software version the IMB is running. The contents, features and specifications stated in this manual are subject to change without notice due to continuous product development and improvements. In no other event shall GDC Technology Limited be liable for any loss of profit or any other commercial damages, including but not limited to special, consequential, or other damages.

FCC COMPLIANCE STATEMENT

This device installed in a Christie Series 4 projector complies with Part 15, Subpart B of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A - Unintentional Radiators digital device, pursuant to Part 15, Subpart B of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CONTACTS AND OFFICES



1 INTRODUCTION

The SR-5400C Standalone Integrated Media Block[™] from GDC is to be used with Christie CineLife+ Series Projector. The SR-5400C is capable of playing DCP content in **4K 3D** and up to **4K@96 fps**.

Each SR-5400C has in-built CineCache[™] and supports external Enterprise Storage.

1.1 Equipment List

This section provides a suggested installation configuration of GDC SR-5400C and Enterprise Storage for reference. Please contact our sales representative to specify the accessories needed for the installation.

1.1.1 SR-5400C IMB Equipment List

The SR-5400C packaging includes the components mentioned below:

Component Name	Qty	Photo
SR-5400C Unit with projector Cover Plate	1	
RJ45 AES Audio Cable (10M)	1#	
RJ45 GPIO Cables (10M)	2#	
Network Cable	1	
RJ45 to DB25 Audio Converter	1#	Audio Cable

Data Cable	1*	
Power Cable	1*	5

Subject to actual configuration. Please specify with our sales representative. Provided by Christie.

1.1.2 Enterprise Storage Equipment List

Component Name	Qty	Photo
Enterprise Storage unit	1	
3.5" SATA HDD	5*	
Power Cord	1	
eSATA Cable	1	
Quick Start Guide	1	Construction of the second sec

The Enterprise Storage packaging includes the components mentioned below :

* The number of HDD is subject to change without notice due to ongoing product development and improvement.

2 INSTALLING THE SR-5400C IN THE PROJECTOR

This section of the manual describes the physical installation of the SR-5400C into the Projector. If the Projector does not have the GDC SR-5400C installed, follow the steps mentioned below to install the SR-5400C into the Projector.



Figure 1: SR-5400C Standalone IMB[™]

2.1 Installing the Power & Data Cables

Before installing the SR-5400C into the Projector, connect the power cable to the power port (for powering the IMB) & data cable to the video port (enabling communication between IMB and Projector) of the SR-5400C IMB.



Figure 2: Data Cable (left) and Power Cable (right)

2.1.1 Installing the Power Cable

Connect the power cable to the power port on the IMB, as shown in **Figure 3**. Secure the power cable to the IMB's heat sink with cable ties, as shown in **Figure 4**.



Figure 3: Connect Power Cable to Power Port



Figure 4: Secure Power Cable

2.1.2 Installing the Data Cable

Connect data cable to the video port on IMB as shown in **Figure 5.** Secure the data cable to the IMB's heat sink with a cable tie, as shown in **Figure 6.**



Figure 5: Connect Data Cable to Video Port



Figure 6: Secure Data Cable

Note: Hot Plugging Warning



Power OFF the projector **BEFORE** connecting the power cable from the IMB to the projector.

The projector must **NEVER** be powered ON when connecting this power cable.

2.2 Inserting the SR-5400C into the Projector

Please make sure the Projector is powered OFF prior to installing the SR-5400C IMB. **Figure 7** shows the location where the SR-5400C should be installed in a Christie projector. Ensure that the Christie security gate and placeholder faceplate in the indicated position are removed prior to installing the IMB.



Figure 7: SR-5400C Placement in Christie Projector

The Projector card cage has two guide rails; one on the left and other on the right to guide the SR-5400C IMB during installation, as shown in **Figure 8** & **Figure 9**.



Figure 8: Left & Right Guide Rails



Figure 9: Card Cage of Projector

Insert the SR-5400C IMB as shown in **Figure 10**. The IMB should slide smoothly into the Projector on the rails provided on both sides of the Projector card cage.



Figure 10: Slide IMB into Projector

Connect the data and power cables to the ports inside the Projector after inserting the IMB halfway into the Projector.

Note: The video & power ports on the Projector are located on the ceiling of the card cage as indicated in **Figure 11**.



Figure 11: Connect Power & Data Cables to Projector

Check the height of the Red cable (as indicated in **Figure 12**) before sliding the IMB into the Projector. If the Red cable obstructs the installation of the IMB, please adjust its height before sliding in the IMB.



Figure 12: Height of Red Cable on IMB

After pushing the IMB completely into the projector:

- Tighten the screws at positions 1 & 2 indicated in Figure 13.
- Install the Christie security gate by inserting the brackets into the slots at positions 3 & 4 indicated in **Figure 13**.
- Push the security gate towards the IMB until it locks into position.



Figure 13: IMB installed in Projector

The SR-5400C IMB installation is now complete.

3 CONNECTING ENTERPRISE STORAGE WITH THE SR-5400C IMB

For more details on installation of the Enterprise Storage, please refer to '<u>GDC Installation</u> <u>Manual for Portable Storage and Enterprise Storage</u>'.

- 1. After the IMB is installed, connect the external Enterprise Storage to the IMB.
- 2. Connect one end of the eSATA cable provided in the package to the eSATA port of the Enterprise Storage and tighten the screws as shown in **Figure 14.**
- 3. Connect the female end of the power cord provided within the package, to the power connector port of the Enterprise Storage as shown in **Figure 14.**
- 4. The other end of the power cord needs to be connected to a recommended power outlet (100 to 240V~, 63 to 47Hz, 4.5-2A_)



Figure 14: Connect eSATA cable to the Enterprise Storage

5. Connect the other end to the eSATA cable to the eSATA port on the IMB and tighten the screws as shown in **Figure 15**.



Figure 15: Insert eSATA cable into SR-5400C eSATA port

3.1 Placement of the Enterprise Storage

It is recommended that the Enterprise Storage unit should be placed on the Christie projector pedestal as illustrated in **Figure 16**, such that the eSATA cable length (provided with the package) is sufficient enough to establish the connection between the IMB & Enterprise Storage.

Please ensure that the eSATA cable is not bent sharply or stressed.



Figure 16: Enterprise Storage Placement

The Enterprise Storage installation is now complete.

4 POWER ON/OFF SEQUENCE

4.1 Power Up Sequence

Always power up the Enterprise Storage before powering up the Projector. The Enterprise Storage must be powered up first to be correctly identified by the SR-5400C IMB.

4.2 Power Down Sequence

Always power down the SR-5400C and Projector with the following steps:

- 1. Power down the SR-5400C by using the **Shutdown** button on the Web UI Dashboard.
- 2. Power down the Enterprise Storage attached to the SR-5400C.
- 3. Power down the Projector after the SR-5400C has powered down.

5 CONFIGURING THE SR-5400C FOR PLAYBACK

5.1 SR-5400C Web UI Access

The SR-5400C uses a web-based user interface or Web UI. The following steps show how to access the SR-5400C Web UI:

- 1. In order to access the Web UI of the SR-5400C, connect the **IMB Ethernet 1** network port of the IMB to a laptop or PC using a network cable. Configure the laptop or PC to the same network as the SR-5400C.
- 2. Open a web browser (Google Chrome[™] or Mozilla Firefox[™] are recommended) & enter the IP address of the SR-5400C (<u>192.168.1.12</u> by default) to access the login page of the Web UI.
- 3. There are three levels of Users available (*User/Technician/Maintenance*). Select the required access level and enter the corresponding password to login to the Web UI.
- 4. Select the preferred Web UI language by clicking on the corresponding flag icon, as shown in **Figure 18**.



Laptop or PC

Figure 17: Accessing the SR-5400C Web UI

SR-5400C Web UI



Figure 18: SR-5400C Web UI Login Page

5.2 Clearing Marriage and Service Door Tamper Errors

After installing the SR-5400C, access the Web UI & clear the 'Marriage' & 'Service Door' Tamper errors on the IMB:

- 1. Go to **Configuration** \rightarrow **System** \rightarrow **System** section
- 2. Tamper status will show as follows:
 - IMB Marriage status (Divorced)
 - Service Door status (Opened)

General	Playback	Storage System	Maintenance		√Save ×Do
— Cle IM	ar tampers B Marriage: Morry	Desent	Service	Door: Close Cleaned	
RT	C Time offset fset Limit:360s ~ 3	360s	0 Set Curren	t Offset: Os	
Co Tir	nfigure TimeZone	iis/Hong_Kong	♥ Set		
Net	twork Time Enable NTP service	f	Set		
Networ	k Configuration				
	IMB Ethernet 1:	192 168 . 255 255 255 0	Sen	Gateway: 192 1	68 .

Figure 19: Tamper Status (before clearing)

- 3. Click on the Marry button.
- 4. Click on the Close button
- 5. Tamper status will change to:
 - IMB Marriage status (Married)
 - Service Door status (Closed)

Genera	al Playback	Storage System	Maintenance	v" Sav	w X Discon
4					
— CI	lear tampers				
17	MB Marriage: Man	Married	Service Door: Cose	Citiesd	
R	TC Time offset		R		
c	offset Limit:360s -	360s	0 Set Current Offset: 0s		
_ C(onfigure TimeZone				
т	imeZone Select:	Asia/Hong_Kong	♥ Set		
Ne	etwork Time				
6	Enable NTP servic	:e:	Set		
Netwo	rk Configuration				
	IMB Ethernet 1:	192 . 168 .	Gateway	: 192 . 168 .	
	Subnet Mask:	255 .255 .255 . 0	Server Content IP	DEFAULT	

Figure 20: Tamper Status (after clearing)

5.3 IMB Network Settings

The SR-5400C IMB Network settings can be accessed from Configuration \rightarrow System sub-tab.

- 1. Go to Configuration \rightarrow System \rightarrow Network Configuration section.
- 2. Connect the laptop/PC to the **ETH1** port of the SR-5400C IMB using a network cable. Configure the laptop/PC to the same network as the SR-5400C.
- 3. Access the SR-5400C Web UI using the default IP address of IMB Ethernet 1 interface, which is <u>192.168.1.12</u>. This is the main IP address of the SR-5400C. The IMB Ethernet 1 IP Address can be changed as per the Cinema's Management network. The Subnet Mask & Gateway values need to be set as well.
- 4. The default IP address of the IMB Ethernet 2 interface is <u>169.254.100.1</u>. The IMB Ethernet 2 IP Address can be changed as per the Cinema's Content network. The Subnet Mask value needs to be set as well.
- 5. The default IP address of the Host Module interface is <u>169.254.100.2</u>. It specifies the IP Address of the Host Module of the SR-5400C.

	o o da libouro	201-	ANT NA AREANAN	, Automati			a de la compañía de l	
General	Playback	Storage	System	Maintenance			✓ Save	× Discar
Vetwork	Configuration							
	IMB Ethernet 1:	192 . 168	. 1 . 12		Gateway:	192.168.0.	254	
	Subnet Mask:	255 . 255	.255 . 0		Server Content IP:	DEFAULT	•	
	IMB Ethernet 2:	169 . 254	.100 . 1		Host Module:	169 . 254 . 100 .	2	
	Subnet Mask:	255 . 255	. 255 . 0					
			e 2]				[ieros	
Cheol	k Network Access	Check IP Con	flict				Validat	e IPs
Check LOG Extr	k Network Access	Check IP Con	flict				Validat	e IPs
Cheol Log	x Network Access	Check IP Con uration	flict inths A	I Generate logs]		Validat	e IPs
Check Log Extr	x Network Access	Check IP Con uration	fliot inths A	I Generate logs]		Validat	le IPs
Check Log Extr	A Network Access	Check IP Con uration	flict A	J Generate logs	Generate Perf log		Validat	le IPs
Cheol Log Extr Fi Extr	A Network Access	Check IP Con uration	nict A	d Generate logs	Generate ^{pl} ef log		Validat	ie IPs

Figure 21: Network Settings on SR-5400C IMB

- 6. Once all the IP Addresses, Subnet Masks & Gateway values have been entered; click on the Validate IPs button to check their correctness.
- 7. If all IP addresses are valid, a popup window will appear as shown in Figure 22.
- 8. Click OK and then Save.

C O Dashiba	Validate IPs PASS	× Configuration
Network Configura	Current IMB Ethernet 2 IP; 192.168.1.103 Current Host module IP: 192.168.1.104	
IMB Ethern Subnet N	Current gateway: 192.168.0.254 et Current IMB Ethernet 1 IP: 192.168.0.103 Target IMB Ethernet 2 IP: 169.254.100.1	54
IMB Etherr Subnet N	Target Host module IP: 159.254.100.2 Target gateway: 192.168.1.254 Target IMB Ethernet 1 IP: 192.168.1.12	83
Check Network Acce	Target IMB 10Gb Ethernet IP: 192.168.3.12	Validate IPs
.og — Extract logs & C	configuration	
1 Week	1 Month 3 Months All Generate logs	
- Extract Perform	ance rog	
From Datetime	Consequences	
From Datetim		

Figure 22: Validate IPs

Note: The SR-5400C IMB IPs may be changed to a Cinema-specific IP scheme, keeping in mind the following rules:

- All IP Addresses must be unique.
- The IMB Ethernet 1 and [IMB Ethernet 2 + Host Module] must be on separate subnets.
- IMB Ethernet 2 and Host Module must be on the same subnet.
- Both IMB Ethernet 2 and Host Module IPs must be configured as per the content network. Therefore, two IP Addresses must be allocated for each SR-5400C IMB on the Cinema's Content network.
- Assigned IP Addresses should not conflict with other devices in the Cinema's network.

5.4 IMB Storage Settings

The IMB Storage settings for the SR-5400C can be accessed from the **Configuration** \rightarrow **Storage** sub-tab.

- 1. Go to **Configuration** \rightarrow **Storage** \rightarrow **IMB Storage** section.
- 2. Under **IMB Storage** section, select the Storage Type as 'Portable/Enterprise Storage'. The Enterprise Storage is now set as the Primary Storage.
- 3. Check Enable Secondary Storage & select 'CineCache'. The CineCache™ is now set as the Secondary Storage.
- 4. Click Save to save these settings.
- 5. Go to the **Dashboard** tab and click the **Restart** button followed by **OK** to confirm. This is to ensure all components in the IMB are able to detect the selected storage after restart.
- 6. The IMB will restart and use the selected options for Primary & Secondary Storage.

-	Dashboard	Playback	+ Automation	🔜 Content	Configuration
General	Playback St	torage System	Maintenance		✓ Save XDisca
Stora	ge Type: Portable/Ent	terprise Storage♥	Enable Secondary Storage:	CineCache	•
			4		
Content	t Setting				
Priorit	ty: Attached Storage	*			
Content	t Ingest Options				
© Rer ☑ Allo	move corrupted asset	s during ingest o CineCache	🗎 Skip cher	cking assets during	ingest
© Rer I Allo Portable	move corrupted asset ow full speed ingest to e/Enterprise Storage	s during ingest o CineCache	🗟 Skip cher	cking assets during	ingest
■ Rer I Allo Portable	move corrupted asset: ow full speed ingest to e/Enterprise Storage Create new RAID arr	s during ingest o CineCache	Hard disk information	cking assets during	RAID filesystem check
© Rer	move corrupted asset: ow full speed ingest to e/Enterprise Storage Create new RAID arr Storage performanc	s during ingest o CineCache	Skip cher Hard disk information Increase Rebuild Speed	cking assets during	RAID filesystem check High bitrate playback test
© Rer	move corrupted asset: ow full speed ingest to e/Enterprise Storage Create new RAID arr Storage performanc	s during ingest o CineCache	Hard disk information	cking assets during	RAID filesystem check High bitrate playback test

Figure 23: IMB Storage Settings

System Information : SR-	5400C	Storage						1E
Firmware Version:	9.0		Usage:	7.84 T / 8	т			
Last Update:	OS-SR60-1.0.0	RAID	status:	Unline				
SMS Version:	19.20	#	DISK1	DISK2	DISK3	DISK4	DISK5	
Package Update:	The Address of the Ad	Temperature	36°C	36°C	36°C	36°C	36°C	
Serial:	(Second	Health	9					
Server Uptime:	17 hours 39 minutes							
Warranty Expiry Date:	Unknown 50.7144C	0 127 112						1
CPU Temperature:	50 142%	Capabilities / Licen	se					is.
or o remportature.		🗲 4K Output						
letwork	R	MPEG2 Playback						
THE PARTY OF THE PARTY OF THE	LUDE DULLES							
	(100mms)	 APX Dolby 3D Dolby Atmos IP Live Streaming Live Subtites on IF RealD GB 	^o Stream	ing				
uert:	(100mms)	APX Dolby 3D Dolby 4tmos Dolby Atmos Dolby Atmos P Live Streaming Live Suttles on IB RealD GB	^o Stream	ing				
Alert:	(roomas)	A APX Doby 3D Doby Atmos I P Live Streaming Live Subtles on IA RealD GB	^{>} Stream	ing				
Nert:	en No 12	A APX Doby 3D Doby Amos I Doby Amos I Doby Amos I Doby Amos I Dive Subtities on It RealD GB	⁵ Stream	ing 2	022-10-28	8 14:26:49	ə +08:00	
liert:	en No :2	APX Dolby 3D Dolby 4tmos P IP Live Streaming Live Subtles on If RealD GB	⁹ Stream	ing 2	022-10-20 ×	8 14:26:49	9 +08:00	

Figure 24: Restart the IMB to save Storage Settings

5.5 Audio Settings

The Audio settings for the SR-5400C IMB can be accessed from the **Configuration** \rightarrow **Playback** subtab. Under the **Audio** section, the Audio Offset: value and Output Sampling Rate: can be set. Click Save to save these settings.

Offset:	0 (ms)	Output Sampling Rate: 🔍 48	3KHZ [©] 96KHZ® None	Channel Mapping
mmersive Audio Bitstre	am (IAB)			
P Streaming	4			

Figure 25: Audio Offset

6 CHRISTIE PROJECTOR SETUP

In order to configure a Christie CineLife+ Series Projector to work with the SR-5400C, the following steps must be taken:

- 1. Switch ON the Projector.
- 2. Log in to the 'Service' account on the Projector TPC by clicking on Login (as shown in **Figure 26**).



Figure 26: Login to Service Account

3. Enter Username as 'service' and the corresponding password and click the Login button (as shown in **Figure 27**).

Operator	PROJECTOR.CDS IP:	192.168.1.16	CHRISTIE®		8/12/19 05:49 am
<					
		U			
	(🔛)	Oser: service			
		Password:	•		
q	w ² e	³ r ⁴ t ⁵	y ⁶ u ⁷	i ^s o ^s p	° 🗵
	a ^e s ^z	d ⁴ f ['] g	^s h [*] j ⁼	k (I)	Login
	z ·	x c v	b n	m ′	
	123			▲	▼ ►

Figure 27: Type Username & Password

4. Once logged in, go to Service Setup \rightarrow Marriage Setup (as shown in Figure 28).

Service	PROJECTOR.CDS IP:	192.168.	1.16	CHK:ISTIE*	8/12/19 06:03 am	STATUS:	
Đ	Scheduler	<	SERVICE SETUP				
*-	Laser Settings						
0	Color Settings	(a)	User Accounts				(\mathbf{P})
2	Image Settings	ΨD	Backup and Restore				
ŏ	Channel Setup		System Upgrade				
*	Status >	í	Preferences				
(\$)	Diagnostics	율	Network Settings				
°0	Automation	8	Marriage Setup				
*/	Service Setup	Ŀ	Time Setup				•
	About						
	ADOUL						_
	Logout						1/2

Figure 28: Marriage Setup

5. Complete the steps mentioned in the **Marriage Setup** wizard. Click on the 'Service Door Secure' box. Once it turns Green, click Next (as shown in **Figure 29**).

Service	PROJECTOR.CDS IP: 1	192.168.1.16 CA	lkiSTIE*	8/12/19 06:05 am	STATUS:	Service	PROJECTOR.CDS IP: 192-168	.1.16	CHixISTIE®	8/12/19 06:07 am	STATUS:
۵	MARRIAGE	SETUP			۲		MARRIAGE SETU	IP			۲
۲	① Start	🖉 Manlage Checklins	Arning	C Field	0)	(f) Stat	Manage Checklist) Arming	(d) Fields :	\odot
Q3			1			03	March 1997				
3/6	This wizard will guide	you through the IMB Marriage proced	lure to enable Secure content p	layback. This operation	witi 🧿	**	This wizard will guide you th	rough the IMB Marriage pro	cedure to enable Secure content	playback. This operation w	at 🧿
信	require you to certify t	that this unit has not been tampered v	vich and will be togged according	igty in the seconcy syste	em.	徸	require you to certify that th	s unit has not been tampen	eo with and will be togged accord	angly in the security system	n.
*											
670	Г										
G			\sim								
			\sim		(149	0					(B)
			Service Door Sec	ine		<i>′</i>					
					5	8					猛
											_
					0.11					Ne	xt

Figure 29: Service Door Secure

6. Ensure all the items on the Marriage Checklist (as shown in **Figure 30**) have been done. If yes, then click **Next**.

Service	PROJECTOR.CD5 IP: 192.168.1.	16 0	665TH [®]	8/12/19 06:09 am	STATUS:
â	MARRIAGE SETUP				۲
٢	@1541	 Martiage Outling 	3 Arming) a mut	0
で 後	By proceeding with this wizard	you are acknowledging that	the following items have	been checked and are in order	. 0
á≡					
50 CD	A Ensure the light engine fan p	pack and fan pack clamp plate ar	e installed.		
٩	B Ensure the top cover is insta	alled and the locking pin is fully	engaged.		
	C Ensure the card cage locking	g pin is fully engaged.			۲
	L				纾
				Back	ext
				Back	ext

Figure 30: Marriage Checklist

7. Login by entering the Marriage account username & password & click on Login (as shown in **Figure 30**).



Figure 31: Login to Marriage Account

8. After logging in, a pop-up message will be displayed to press the **MARRIAGE** button on the operator panel of the Projector (as shown in **Figure 32).**



Figure 32: Press Marriage Button on Projector

9. Close the wizard once the "Marriage has been completed successfully" message is shown, by clicking on the Finish button (as shown in **Figure 33).**



Figure 33: Marriage Successful

10. Clear the marriage & service door tampers errors on the SR-5400C IMB as well. (Refer to **Section 5.2**).

11. Go back to the main menu. Select **Service Setup** \rightarrow **Preferences** (as shown in **Figure 34).**

Service	PRO/ECTOR.CDS IP: 192.168.1.16	CHRISTIE®	8/12/19 05:55 am	STATUS:	
ŵ	PREFERENCES				٢
۲	General	IMB			\odot
Ω,	Alarm Triggers	Type	GDC	~	
1	Lens/ILS		None		
征	Automation	1	600		
*	Touch Panel	-			
G	IMB]			۲
		1			(B)
					猛

Figure 34:Preferences

12. Under the **Preferences** menu, select 'IMB'. Select 'GDC' from the Type drop-down (as shown in **Figure 38).**

Service	PROJECTOR.CDS IP: 192.168.1.16	CHMISTIE®	8/12/19 05:55 am	STATUS:	
â	PREFERENCES				٢
۲	General	ІМВ			۲
UĈ.	Alarm Triggers	Туре	GDC	~	
2014	Lens/ILS		None	_	
2	Automation		GOC	_	
60	Touch Panel				
•	IMB]			۲
					1
					52
					- 41,553

Figure 35: Select IMB Type

13. A pop-up message will be displayed (as shown in **Figure 36).** To save the IMB settings, reboot the Projector by clicking on the Reboot button.

(Interaction))	PROJECTOR.CDS.1 (P 192.16)	8.1.16	CHINESTIE*		0/12/19: 05:55 am	STATUS	
	PREFERENCES						
۲			ІМВ				
et re Ees		ІМВ		×			
80			Projector reboot is required t	o apply changes			
-		?	made in IMB settings. Are yo reboot the Projector?				
0							
			Cancel	Reboot			

Figure 36: Reboot Projector

7 TIME ZONE SETUP ON SR-5400C

The SR-5400C IMB may or may not arrive with the local time zone set. The following steps show how to change the time zone on the Server.

- 1. Go to **Configuration** \rightarrow **System** \rightarrow **System** section.
- 2. Under the **Configure TimeZone** section, use the TimeZone Select: drop-down & select the applicable Region/City.
- 3. Click on the Set button & then Save to save this timezone setting.

🕑 🚯 Dashboa	rd 🔚 Playback	∳ Automation	Content	Configuration
General Playback	Storage System	Maintenance		✓ Save X Discard
Clear tampers				
IMB Marriage:	Marry Married	Service Do	OF: Close Closed	
RTC Time offset				
Offset Limit:36	60s ~ 360s	0 Set Current O	ffset: Os	
— Configure TimeZo	one			
TimeZone Select	Asia/Hong_Kong	Set		
	Asia/Bahrain Asia/Baku	*		
Network Time	Asia/Bangkok			
Enable NTP se	Asia/Beirut			
	Asia/Bishkek Asia/Brunei			
	Asia/Chita Asia/Choibalsan			
Network Configuratio	Asia/Colombo	10		
	Asia/Dhaka			
IMB Etherne	Asia/Dubai		Gateway: 192 . 16	68 . <mark>0</mark> . 254
Subnet Ma	Asia/Dushanbe sl Asia/Famagusta	Server	Content IP: DEFAUL	T v
2	Asia/Gaza Asia/Hebron			
	Asia/Ho_Chi_Minh			
	creen No :2	SM CONNECTED		2022-10-28 15:02:59 +08:00

Figure 37: TimeZone setting

8 CONTENT INGEST MANAGEMENT SETUP

An ingest source must be configured before content can be ingested into the SR-5400C. This section shows the configuration for content ingest from two different source types. The same steps can be used to set up content ingest sources using other sources.

8.1 Content Ingest from USB Drive

The following steps describe the content ingestion from an external USB drive:

- 1. Connect the USB drive to the USB port of the SR-5400CIMB.
- 2. Go to **Content** \rightarrow **Source** sub-tab and select the **Ingest** option.
- 3. Select 'USB DRIVE' from Source list.
- 4. Under the Details section; select the drive name assigned to the USB Disk, from the Pick a storage device: drop-down. Select the drive partition assigned to the USB Disk by the SR-5400C from the Select a partition: drop-down.
- 5. Click OK to mount the content ingest source and select the content to be ingested.

Dashboard	🗄 Playback	✤Automation	🔜 Content	Configuration	[-
Summary Package	KDM License	Source- Schedule	Status		
Source	Details				
USB DRIVE	Ту	pe: USB			
eSATA					
FTP191	Pick a storage devi	ce: JetFlash Transcend_8	ige ✓		
FTP147	Select a partiti	on: /dev/sdb1	~		
Local			51		
FTP103	v 01	× Cancel			
₽ Refresh					
Ø Live Source					
🔹 💄 📴 🛓 🖓 🛦 Screen	No :2	(SM CONNECTED)		2022-11-04 14:23:54 +08:00	

Figure 38: Select Ingest Source as USB Drive

- 6. Browse the content list on the left and select the directory where the package is located. The list of packages in the directory will be displayed on the right.
- Select the package or CPL you wish to ingest using the checkbox on the left of that particular entry in the PKL/CPL list. You can select multiple PKL's or CPL's.
- Click on Ingest button. You may choose to either ingest content to Primary Storage only using the Ingest-Primary option OR ingest content to Primary as well as Secondary Storage using the Ingest-Primary+Secondary option (provided that Secondary Storage has been enabled under Configuration → Storage).

	Dashboard	Playback	∳ Automation	Content	ିକ Configuratio	on [
Summary	Package	KDM License	Source- Schedule	Status		
Source: US	SB DRIVE	PKL CPL F	üter	đ		
	-	✓ Title↓≦			Issue Date 🖨	Status 🖨
		🗹 🖻 FILM 201	130516		2013-05-16	
Ser Euro	M 20130516 DC	Details				
FILM	M_20130516_DC	Details	Title			
FiLI	M_20130516_DC	Details Size 11.76 KB	Title CPL [FILM 20130516]			
FILM	W_20130516_DC	Details Size 11.78 KB 918.54 MB	Title CPL [FILM 20130516] Picture	100.00010		
2) ing Plane	M_20130516_DC	Details Size 11.76 KB 918.54 MB Ingest-Primar Schedule Ing	Title OPL [FILM 20130616] Picture Y y+Secondary est	101.484.014		
Pile Play +	M_20130516_DC	Details Size 11.76 KB 018.54 MB Ingest-Primar Schedule Ing	Y y+Secondary est			€ Cirr

Figure 39: Ingest Content

9. The content ingest progress can be viewed from the **Status** sub-tab.

<u> </u>	Dashboard	8	Playback	🗲 Auto	omation	Conte	nt	Configuration	(÷
Summary	Package	KDM	License	Source+	Schedule	Ştatus			
Title						U	Action	Status	Progress
FILM 2013051	6	in the second	di secondario i	10			ingest	Finished	100%
Type: PKL Description			Size	e: 528.41 M / 52	8.41 M	ŝ	Start At: 202	2-10-28T14:42:09+08	8:00
Type: PKL Description	i:		Size	∷ 528.41 M / 52	8.41 M		Start At: 202	2-10-28T14:42:09+06	8:00
Type: PKL Description	n Move Up Mov	ve Down	Size	:: 528.41 M / 52	8.41 M		Start At: 202	2-10-28T14.42:09+08 Resume Doted	3:00 Clear History

Figure 40: Status of Content Ingest

8.2 Content Ingest from FTP

Follow the steps mentioned below to setup content ingestion from an FTP server:

- 1. Go to **Content** \rightarrow **Source** sub-tab and select the **Ingest** option.
- 2. Click on the Create button. Select 'FTP' as the source type. Enter the FTP Name. In this case, we use "Test_FTP1".
- 3. Enter the respective parameters for IP Address, Port, Source Path, Username and Password.
- 4. Click Save to save these FTP settings.

Dashboard	🛃 Playback		Content	Configuration
Summary Package	KDM License	Source- Schedule	Status	
Source	Details			
USB DRIVE	Type:	FTP 👻		
asata	Name:	Test FTP1		
FTP191	IP Address:	192 168		
FTP147	Best	102.100		
Local	Port			
FTP103	Source Path:			
2 Refresh + Create	Username: Password:			
Ø Live Source	X Cancel V Sav	Show ingest content ann □	otation text	
🖣 💄 📑 🛓 🖓 🗛 Screer	No :2	(SM CONNECTED)		2022-10-28 14:53:31 +08:00

Figure 41: Select Ingest Source as FTP

5. Click Open button to connect to the FTP server and choose the content for ingest.

Type:	FTP ¥	Doen
Name:	Test_FTP1	
P Address:	192.168	
Port:		
Source Path:		
Username:	CONTRACT.	
Password:		
	Show ingest content annotation text	

Figure 42: Open FTP Source

The steps to ingest content remain the same, as mentioned under Section 8.1

9 AUDIO SETUP

The SR-5400C features AES digital audio signal via two RJ45 Outputs. For compatibility with most audio processors on the market, a standard RJ45 to DB25 connector is included in the packaging (please refer to **Figure 43**).

Note: For Dolby Atmos[®] installations, please use the RJ45 to DB25 connector supplied with the Dolby CP850 cinema processor.



Figure 43: RJ45 → DB25 Audio Connector

A-TOP (RJ45) (Female)	Channel	DB25 (25Pin) (Female)
Pin1	AES Out 1+	24
Pin2	AES Out 1-	12
Pin3	AES Out 2+	10
Pin4	AES Out 3+	21
Pin5	AES Out 3-	9
Pin6	AES Out 2-	23
Pin7	AES Out 4+	7
Pin8	AES Out 4-	20
A-BOT (RJ45) (Female)	Channel	DB25 (25Pin) (Female)
Pin1	AES Out 5+	18
Pin2	AES Out 5-	6
Pin3	AES Out 6+	4
Pin4	AES Out 7+	15
Pin5	AES Out 7-	3
Pin6	AES Out 6-	17
Pin7	AES Out 8+	1
Pin8	AES Out 8-	14

Figure 44: RJ45 → DB25 Pinout (For traditional audio connector)

A-TOP (RJ45) (Female)	Channel	DB25 (25Pin) (Male)
Pin1	AES Out 1+	14
Pin2	AES Out 1-	2
Pin3	AES Out 2+	3
Pin4	AES Out 3+	17
Pin5	AES Out 3-	5
Pin6	AES Out 2-	16
Pin7	AES Out 4+	6
Pin8	AES Out 4-	19

Figure 45: RJ45 → DB25 pinout (For CP750/JSD80 audio connector)

A-top	A-bot	A-top
Pin1 - AES_OUT1+	Pin1 - AES_OUT5+	8
Pin2 - AES_OUT1-	Pin2 - AES_OUT5-	
Pin3 - AES_OUT2+	Pin3 - AES_OUT6+	
Pin4 - AES_OUT3+	Pin4 - AES OUT7+	
Pin5 - AES_OUT3-	Pin5 - AES OUT7-	2 2
Pin6 - AES OUT2-	Pin6 - AES_OUT6-	1 8
Pin7 - AES_OUT4+	Pin7 - AES_OUT8+	
Pin8 - AES_OUT4-	Pin8 - AES_OUT8-	A-bot

Figure 46: AES Audio RJ45 pinout

10 DOLBY ATMOS® SETUP

10.1 IMB Network Diagram with Dolby Atmos®

Only the 'Dolby Atmos Input' network port on the Dolby CP850 is used for communication with the SR-5400C. Connect this network port to the Gigabit Management switch, so that it can communicate with the IMB Ethernet 1 port on the SR-5400C. The 'Dolby Atmos Command' network port on the CP850 is not used.



Figure 47: IMB Network Setup with Dolby Atmos®

10.2 Dolby Atmos® Configuration

Follow the steps mentioned below to setup the CP850 with the SR-5400C IMB:

- 1. From the SR-5400C Web UI, go to the **Configuration** \rightarrow **Playback** sub-tab.
- 2. The IPs for 'IMB Ethernet 1' on the SR-5400C and 'Dolby Atmos Input' on the CP850 must be configured to the same subnet.
- Under the Immersive Audio Bitstream (IAB) section, select the 'Dolby Atmos (External)' option. The Atmos Data IP and Atmos TLS IP settings must both be set to the 'Dolby Atmos Input' IP set on the CP850. In the example shown in Figure 48, the 'Dolby Atmos Input' IP on the CP850 is <u>192.168.1.245</u>. Under the Audio section, the Audio Offset value must be set to '-251' ms or '-80' ms depending on the firmware version of CP850.

	8 Pla	yback	✤Automation	Content	Configuration
General Playback	Storage	System M	aintenance		✓ Save X Disc
Audio					
Offset:	0 (ms)	Output 5	Sampling Rate: 🏾 48KH	Z [©] 96KHZ® None	Channel Mapping
Decoder: None	• •				
mmersive Audio Bitstr	eam (IAB)				
mmersive Audio Bitstr	eam (IAB) ≋). √				
Dolby Atmos (Externa Atmos Data IP: 19	eam (IAB) ⊫)✔ 2 . 168 . 1 . 2	45	Atmos TL:	SIP: 192.168.1	. 245
Dolby Atmos (Extern: Atmos Data IP: 19 P Streaming	eam (IAB) □)♥ 2 . 168 . 1 . 2	45	Atmos TL	SIP: 192.168.1	. 245
Dolby Atmos (Externing Atmos Data IP: 19 P Streaming UDP Multicast	eam (IAB) ⊫)▼ 2.168.1.2	45	Atmos TLS	S IP; 192 . 168 . 1	. 245
Dolby Atmos (Extern: Atmos Data IP: 19 P Streaming UDP Multicast Group address: 23	eam (IAB) a)) ✓ 2 . 168 . 1 . 2 9.100.5.3	45	Atmos TLS Port: 8208	8 IP: 192 - 168 - 1	. 245
Dolby Atmos (Externing Atmos Data IP: 19 P Streaming UDP Multicast Group address: 23	eam (IAB) iI) ✔ 2 . 168 . 1 . 2 9.100.5.3	45	Atmos TLS Port: 8208	SIP: 192 . 168 . 1	. 245

Figure 48: Audio & Dolby Atmos[®] Settings

The following will be shown on the web interface on the Dolby CP850 during playback of Dolby Atmos[®] content (refer to **Figure 49**). This can be used to determine if Dolby Atmos[®] playback is successful:

- Dolby Atmos content LED will turn Green.
- Screen server connected LED will turn Green.
- Atmos track information will appear under the Dolby Atmos info section (information will be 'n/a' if Dolby Atmos[®] track is not playing).
- Level monitor next to the mute button will dynamically show AES input levels.

7.0	(×)
Dolby Atmos info	U R C DR Los Ros Los Ros Los Ros
Dolby Autios Into	•
Louby Atmos content	
sample rate	48 kHz
frame rate	24 fps
suid	e4dcb72b-5dc8-477d-9135-034711b99d03
encrypted	no
Dolby Atmos version	0
input status	
sample rate	46 kHz
AES input status	0000000
	AES AES AES AES AES AES AES 1/2 3/4 5/6 7/8 9/2011/1213/1415/16
network interface st	atus
hostname	cp850-ListBLngTrm
screen server connected	0

Figure 49:Dolby CP850 Web Interface

11 SUBTITLES

To enable subtitles, please check Subtitle Overlay option under Configuration \rightarrow Playback \rightarrow Subtitle section.

DC	🚯 Dashboard	Ħ	Playback	🗲 Auto	mation	Content	Configuration	[→
General	Playback	Storage	System	Maintenance			✓ Seve	Discard
Subtitle								
Subtitle	title Overlay	5	*		Subtitle De	lay: D (frad	nesj	
Cinecany	/as							
✓ Use Project	RPL for SMPTE s	ubtitles out: <mark>-</mark>	40	(sec)	Cinecanvas M Projector Bla	Network: Auto	✓ 200 (ms)	
Caption								
Enab subtitle	ole closed caption es only)	n on screen i	For DCPs wi	thout				
SMP	TE S430-10 caption	ons			Maximum wa	iting time:	20 (sec)	
Network	Timecode							
- <u>1</u> m	🛓 🖓 🛦 Scree	n No :2		(SM.COT	NECTED)		2022-10-28 14:58:02 +08:1	00 📫

Figure 50: Subtitle settings

12 AUTOMATION SETUP

The SR-5400C is able to control external devices using its automation interface. This can be used to automate repetitive tasks for the cinema operator to prevent user error. All devices to be controlled by automation over the network must be connected to the management network of the SR-5400C.

12.1 Automation setup for Server GPIO

The SR-5400C GPIO automation device settings can be configured using the steps below:

- 1. Go to **Automation** \rightarrow **Cue** sub-tab.
- 2. Under the Device column, select 'IMBGPIO'.
- 3. Enter the device Name, Input Min Pulse width (ms) and Output Pulse Width (ms).

Do 🕑 Dashboard	Playback 🗲 Ar	utomation 🔤	Content	¢⊖ Configuration	C
Trigger Schedule Cu	Je Input Device Optio	ons Import / Export		✓ Save ×	Discen
Device	Details				
System	TVP	: IMBGPIO		Z Ena	bled
Timer	Name				are a
IMBGPIO	Input Min Pulse Width (ms	100			
Christie	Output Pulse Width (ms	n: 200			
ICS-20		1 <u>1</u>			
Network socket device					
XSP-1000					
+ Create					
🔹 🖿 🕹 😲 🛦 Screen N	lo :2	CONNECTED		2022-10-28 14:36:36 +08:0	00 🖻

The output pulse width must be at least <u>100ms</u>. If a different output pulse width is required, the value can be entered in the Output Pulse Width setting. Click the Save button to save any changes made.

12.2 Automation setup for Projectors

The SR-5400C supports automation for Barco, Christie and NEC projectors. Follow the steps below to configure a projector device in the server automation interface.

- 1. Go to **Automation** \rightarrow **Device** sub-tab.
- 4. Under the Device column, click the Create button.
- Select 'PROJECTOR' as the device Type. Enter the Name: of the device and click OK.
- 3. Enter the IP address: of the projector device
- 4. Set the correct Model: and Series: of the projector. The Port: number will automatically change to the default automation port number for the selected model.
- 5. Enter Login and Password for the projector, if required.
- 6. Click Save to save the settings.

Name:	
Christie	
Туре:	
PROJECTOR	•

Figure 52: Add Projector Device

Device	Details					
System	Туре:	PROJECTOR				Enabled
limer	Name:	Christie		Rename		
MBGPIO	Model:	CHRISTIE 🗸	Series:	Other	~	
Christie	IP Address:	10.10.100.123				
- Create	Port:	5000				
	Login:					
	Password:					
	Debte					

Figure 53: Projector Device Settings

12.3 Automation setup for eCNA devices

The SR-5400C supports the eCNA-10 automation system. Follow the steps below to configure an eCNA device in the server automation interface.

- 1. Go to **Automation** \rightarrow **Device** sub-tab.
- 2. Under the Device column, click the Create button.
- Select 'eCNA_IO' as the device Type. Enter the Name of the eCNA device and click OK.
- 4. Enter the IP address of the eCNA device.
- The eCNA device has many cues available for automation. These cues can be enabled or disabled by selecting them after clicking the buttons in Server events, eCNA controls, eCNA status, and eCNA event report. All cues are disabled by default.
- 6. Click Save to save the settings.

Name:	
ecna	
Туре:	
eCNA_IO	

Figure 54: Add eCNA Device

DC	Dashboard	Playback	\$ Aut	omation	Co	ontent	Configuration	C
Trigger	Schedule	Cue Input Device	Option	s Import /	Export		✓ Save	K Discar
Device		Details						
System			Type: (CNA IO			En En	abled
Timer			Name:	eCNA		Rename		abrea
IMBGPIO			P Address:					
eCNA		Serv	ver events:	STA STP	CUE			
T Creace		eCN	A controls:	OUT16ON OUT16OFF OUT16TO(DP10N	DP10N			
		et	CNA status:	CUE0 CUE1 CUE2 CUE3	CUE			
		eCNA ev	ent report:	FIRESTOP START IDLE AU STOP				
		Deleté						

Figure 55:eCNA Device Settings

12.4 Automation setup for JNIOR devices

The SR-5400C supports the JNIOR Ethernet I/O controller device. Follow the steps below to configure a JNIOR device in the server automation interface.

- 1. Go to **Automation** \rightarrow **Device** sub-tab.
- 2. Under the Device column, click the Create button.
- 3. Select 'JNIOR_IO' as the device Type. Enter the Name of the JNIOR device and click OK.
- 4. Enter the IP address of the JNIOR device.
- 5. The settings for Port, Login and Password are set to the default values for JNIOR device if left empty.
- 6. Click Save to save the settings.

Name:	
JNIOR	
Туре:	
JNIOR_IO	

Figure 56: Add JNIOR device

System	Type: .	INIOR IO		Enabled
Timer	Name:	JNIOR	Rename	
MBGPIO	Model:	•		
INIOR	IP Address:			
F Create	Port:	502		
	Login:			
	Password:			
	Input Min Pulse Width (ms):			
	Output Pulse Width (ms):			
	Delete			

Figure 57: JNIOR Device Settings

12.5 Automation setup for Christie ACT devices

The SR-5400C supports the Christie ACT automation device. Follow the steps below to configure a Christie ACT device in the server automation interface.

- 1. Go to **Automation** \rightarrow **Device** sub-tab.
- 2. Under the Device column, click the Create button.
- Select 'ChristieACT' as the device Type. Enter the Name of the ChristieACT device and click OK.
- 4. Enter the IP address of the ChristieACT device.
- 5. The default setting for Port is displayed on the settings for the ChristieACT device. Change this value if required.
- 6. Default control cues will be set up for a new ChristieACT automation device. Control Cues can be added or removed by clicking the + or – buttons.
- 7. Click Save to save the settings.

Name:	
ChristieACT	
Туре:	
ChristieACT	

Figure 58: Add ChristieACT device

				Management and
Trigger Schedule	Cue Input Device Optio	ins Import / Export	t	✓ Save × Disca
Device	Details			
System	Time:	ChristiaACT		P Fachlad
Timer	type.	ChristicACT	Rename	Enabled
MBGPIO	IP Address:	ChinadeAct	Rename	
ChristieACT	Local Port:	6015		
b Crosse	Control Cues:	Name		
- Citale		- START_FLAT		
		- START_SCOPE		
		- FEATURE		
		+		
	Delete			
	_			

Figure 59: ChristieACT Device Settings

12.6 Automation setup for Dolby devices

The SR-5400C supports automation for the Dolby sound processors. Follow the steps below to configure a Dolby device in the server automation interface. For this example, the device refers to the Dolby CP750 cinema processor.

- 1. Go to **Automation** \rightarrow **Device** sub-tab.
- 2. Under the Device column, click the Create button.
- 3. Select 'DolbyCP750' as the device Type. Enter the Name of the Dolby CP750 device and click OK.
- 4. Enter the IP Address of the Dolby CP750 device.
- 5. Click Save to save the settings.

Name:	
DolbyCP750	
Туре:	
DolbyCP750	0

Figure 60: Add Dolby Device

Trigger Schedule Cue Device	Input Device Optic etails Type: Name: IP Address: Delete	DolbyCP750 DolbyCP750	Rename	✓ Sine X Decard X Decard Image: Sine X D
Device D System I Timer I IMBGPIO D DolbyCP750 I + Create I	etails Type: Name: IP Address: Delete	DolbyCP750 DolbyCP750	Rename	C Enabled
System Timer IMBGPIO DolbyCP750 Create	Type: Name: IP Address: Delete	DolbyCP750 DolbyCP750	Rename	C Enabled
Timer IMBGPIO DolbyCP750 + Create	Name: IP Address: Delete	DolbyCP750	Rename	
IMBGPIO DolbyCP750 + Create	IP Address: Delete			
DolbyCP750 ✦ Create	Delete			
+ Creste	Defete			
L				
	La .			

Figure 61: Dolby Device Settings

12.7 Automation setup for USL DAX devices

The SR-5400C supports automation for USL DAX sound processor. Follow the steps below to configure a USL DAX device in the server automation interface.

- 1. Go to **Automation** \rightarrow **Device** sub-tab.
- 2. Under the Device column, click the Create button.
- 3. Select 'USL-DAX' as the device Type. Enter the Name of the USL DAX device, and click OK.
- 4. Enter the IP Address of the USL DAX device.
- 5. Click Save to save the settings.

DAX	
Туре:	
USL-DAX	

Figure 62: Add USL DAX Device

GDC	Dashboard	🗄 Playback	F Automation	n Content	© Configuration	[→
Trigger	Schedule	Cue Input Device	Options Import	/ Export	✓ Save	× Discord
Device		Details				
System			Type: USL-DAX		Z E	nabled
Timer			Name: DAX	Rename		
IMBGPIO			Address:			
DAX						
+ Create		Delete				
		1				
en 🔺 👗 🔲	🛓 🖓 🛕 Scre	en No :2	SM CONNECTED		2022-10-28 14:38:40 +	08:00 📫 1

Figure 63: USL DAX Device Settings

12.8 Automation setup for USL JSD devices

The SR-5400C supports automation for USL JSD-80 and JSD-100 sound processor. Follow the steps below to configure a USL JSD device in the server automation interface.

- 1. Go to **Automation** \rightarrow **Device** sub-tab.
- 2. Under the Device column, click the Create button.
- 3. Select 'USL-JSD' as the device Type. Enter the Name of the USL JSD device, and click OK.
- 4. Enter the IP Address of the USL JSD device.
- 5. Select the correct model ('JSD-80' or 'JSD-100') of the device the server is connected to.
- 6. Click Save to save the settings.

	Name:
	JSD
	Type:
	USL-JSD
	ype: USL-JSD

Figure 64: Add USL JSD Device

DC	Dashboard	Playback	+ Automation	Cont	ent	op Configuration	C
Trigger	Schedule	Cue Input Device	Options Impo	ert / Export		✓ Save	X Discord
Device		Details					
System			Type: USL-JSD			Z E	nabled
Timer			Name: JSD		Rename		
IMBGPIO	//		Model: JSD80	~			
JSD			P Address:				

Figure 65: USL JSD Device Settings

13 COMPONENT ENGINNERING TA-10 SETUP

The Component Engineering TA-10 can be used for theater automation with the SR-5400C. It requires that the TA-10 be wired in a particular configuration. A wiring diagram can be seen in **Figure 66**.

The TA-10 is connected to the SR-5400C using the server's GPIO input/output port. Configure event labels with the GPIO device to trigger the TA-10.



Figure 66: Component Engineering TA-10 wiring diagram

14 TESTING PROCEDURES FOR QC AFTER INSTALLATION

After the installation has been completed; it is necessary to test the following to ensure that the SR-5400C has been properly installed:

- 1. Test the video playback capabilities of the SR-5400C.
- 2. Test the audio playback capabilities of the SR-5400C and verify that all the channels are working. Also check for any static noises.
- 3. Test the server's ability to activate automation cues using test cues for lights, curtains, sound and fire alarm.
- 4. Test the remote access capabilities of the server, including: Theater Management System (TMS) access and network connectivity.

15 APPENDIX

15.1 AES Audio and GPIO Pinout

AES Audio

GPIO

A-top Pin1 - AES_OUT1+ Pin2 - AES_OUT1- Pin3 - AES_OUT2+ Pin3 - AES_OUT3+	A-bot Pin1 - AES_OUT5+ Pin2 - AES_OUT5- Pin3 - AES_OUT6+ Pin4 - AES_OUT6+	A-top B	B-top 8 1 8	B-top 1 Pin1 - GPI_INO Pin2 - GND Pin3 - GPI_IN1	B-bot Pin1 - GPI_IN4 Pin2 - GND Pin3 - GPI_IN5	C-top Pin1 - GPO_0A Pin2 - GPO_0B Pin3 - GPO_1A	C-bot Pin1 - GPO_4A Pin2 - GPO_4B Pin3 - GPO_5A
Pin5 - AES_OUT3- Pin6 - AES_OUT2- Pin7 - AES_OUT4+ Pin8 - AES_OUT4+	Pins - AES_OUT7- Pins - AES_OUT6- Pin7 - AES_OUT8+ Pin8 - AES_OUT8-	1 A-bot	B-bot C-bot	Pin4 - GPI_IN2 Pin5 - GND Pin6 - GND Pin7 - GPI_IN3 Pin8 - GND	Pin4 - GPI_IN6 Pin5 - GND Pin6 - GND Pin7 - GPI_IN7 Pin8 - GND	Pin4 - GPO_2A Pin5 - GPO_2B Pin6 - GPO_1B Pin7 - GPO_3A Pin8 - GPO_3B	Pin4 - GPO_6A Pin5 - GPO_6B Pin6 - GPO_5B Pin7 - GPO_7A Pin8 - GPO_7B



15.2 GPIO Power Details

GPIO Input Details

- Vin High min level is 3.5 Volts
- Vin Low max level is 1.5 Volts
- lin min -20 uA
- lin max +20 uA
- (Essentially no current flows; this is a voltage sensing device)
- The GPI inputs have a 5.62K Ohm resistor pull-up to an isolated 5 Volts. Shorting the pins would send an input high ("dry contact")

GPIO Output Details

- Outputs use a solid-state relay
- Max voltage across relay contacts GPO_nA and GPO_nB = 200 Volts
- Relay ON-resistance: Min = 6 / Typ = 10 / Max = 15 ohms
- Relay Current limit: Min = 300 / Typ = 360 / Max = 460 mA
- Relay output power dissipation (continuous) = 600 mW



GDC Technology manufacturing facility is ISO 9001:2015 certified.

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