

# IMS1000

# Installation and User Manual

Version 1.6

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IMS.OM.002949.DRM

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# **Software License Agreement**

The software license agreement can be found at the following location: <a href="http://www.doremilabs.com/support/cinema-support/cinema-warranties/">http://www.doremilabs.com/support/cinema-support/cinema-warranties/</a>

## Hardware Warranty

The hardware warranty can be found at the following location: http://www.doremilabs.com/support/cinema-support/cinema-warranties/

#### HDMI

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.



WARNING



#### THIS DEVICE MUST BE GROUNDED.

## IMPORTANT

Power requirements for electrical equipment vary from area to area. Please ensure that the IMS1000 meets the power requirements in the surrounding area. If in doubt, consult a qualified electrician or a Doremi Labs dealer.

## **IMS1000** Power Ratings

 The IMS1000 Maximum Power Consumption is up to 53W in playback 400Mbps with three external USB devices attached that can draw 5V/0.5A from the IMS1000 USB ports.

WARNING: Multiple sources of supply; disconnect all sources before servicing.

## IMS1000 Rack Mount and Thermal Information

- Maximum operating ambient temperature is 40°C.
- Never restrict the air flow through the devices' fan or vents.

# Protecting Yourself and the IMS1000

Never touch the AC plug with wet hands. Always disconnect the projector from the power supply by pulling on the plug, not the cord. Allow only a Doremi Labs, Inc. dealer or qualified professional engineer to repair or reassemble the IMS1000. Apart from voiding the warranty, unauthorized engineers may touch live internal parts and receive a serious electric shock. Do not put or allow anyone to put any object, especially metal objects, into the IMS1000. Use only an AC power supply. Never use a DC power supply.

If water or any other liquid is spilled into or onto the IMS1000, disconnect the power and call a Doremi dealer. The unit must be well ventilated and away from direct sunlight. To avoid damage to internal circuitry, as well as the external finish, keep the IMS1000 away from direct sources of heat (heater vents, stoves, radiators). Avoid using flammable aerosols near the IMS1000. They can damage the surface area and may ignite. Do not use denatured alcohol, paint thinner, or similar chemicals to clean the IMS1000. This can damage the unit.

Modification of this equipment is dangerous and can result in the impairment of the functions of the IMS1000. Never attempt to modify the equipment in any way. In order to ensure optimum performance of the IMS1000, select the setup location carefully and make sure the equipment is used properly. Avoid setting up the IMS1000 in the following locations:

- In a humid or dusty environment.
- In a room with poor ventilation.

- On a surface which is not level.
- Inside a moving vehicle where it will be subject to vibration.
- In an extremely hot or cold environment.

## **Removable Drives Warning**

Removal of the hot swappable hard drives allows access to pins and traces supplying power to the hard drive backplane. This is considered an energy hazard. Removal of the hard drives must be performed by a trained service specialist or by trained personnel. The equipment may only be used in a restricted access area which is not accessible to the general public.

## Caution

- The non-removable battery is located on the IMS1000 fusion board.
- Danger of explosion if battery is removed.



# **1** Introduction

# 1.1 Purpose

This manual is intended to demonstrate to the user how to install, operate, and use the software on the IMS1000 Integrated Media Server.

# **1.2 Software Version**

- This manual is intended for use with software version 2.6.4 and higher.
- This manual is intended for use with Web GUI version 1.1.7.
- The SM Version is:
  - 6.0.14 and higher for Series-2 Projectors.

# **1.3 Contact Technical Support**

If in need of help or assistance, please contact Doremi Labs Technical Services:

#### USA

24/7 Technical Services line: + 1-866-484-4004 Technical Services Email: <u>cinemasupport@doremilabs.com</u>

#### Europe

24/7 Technical Services line: + 33 (0) 492-952-847 Technical Services Link: <u>http://support.doremitechno.org/ticketing</u>

#### Japan

Technical Services line: + 044-966-4855 Technical Services Email: <u>support@doremilabs.co.jp</u>

# Australia ~ China ~ India ~ Indonesia ~ Korea ~ Malaysia ~ New Zealand ~ Philippines ~ Singapore ~ Taiwan ~ Thailand

Technical Services Email: <a href="mailto:supportasia@doremilabs.com">supportasia@doremilabs.com</a>

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# 2 ESD Rules

# **ESD Safety Rules**

ESD (Electrostatic Discharge) safety rules are to be respected while installing, repairing, or upgrading hardware on Doremi Cinema Servers.

The basic rules and elements of ESD control are the following:

- Grounded personnel:
  - All technicians must wear ESD safe smocks, wrist straps, and heel straps that are properly attached.
  - Never touch a sensitive component or assembly unless properly grounded.
- Always assume that all electronic (solid-state) components and assemblies are sensitive to ESD damage.
- Always do the work on static safe work surfaces/work stations/desks. Make sure your desk and wrist strap ground outlets are connected to the building ground.
- Be aware of the static generating materials that you work with.
- Always use grounded cards during loading/unloading of ESD devices.
- Never transport, store, or handle sensitive components or assemblies except in a staticsafe environment (ESD static bags).
- Always store ESD devices using safe tote boxes.
- Personnel Training:
  - Training courses should be required for all employees who handle or otherwise come into contact with ESD items.
  - The training program and the level of ESD protection should be tailored to the needs and sensitivity of the product or production area.
  - Recurrent training for personnel should be an integral part of the program.

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# 3 IMS1000 Overview

The IMS1000 is a state-of-the-art DCI compliant Integrated Media Server capable of playing movies and trailer packages in MXF format at up to 500 Mbits/sec when installed into a DLP Series-2 Projector.

The IMS1000 supports the highest JPEG2000 decoding formats including 4K, 12-bit 4:4:4, or 10-bit 4:2:2 for 2D and 3D HFR applications. The IMS1000 incorporates High-Definition Multimedia Interface technology. The IMS1000 accepts alternative content through HDMI® inputs and live stream. Movies and clips are stored on an on-board RAID5 storage.

The IMS1000 is controlled via Ethernet interface using a web based version of CineLister, TMS2000, or third party theater management system supporting Doremi servers. Ingest is done via USB, eSATA, or Ethernet.

# 3.1 IMS1000 Key Features and Functions

- Doremi designed and manufactured
- Single board solution (SMS and IMB on a single board)
- High quality storage
- Support for local storage
- HDMI input 4K support is forthcoming, Q3 2014
- 3D Live (Sensio® Live & RealD® Live)
- RealD ghost busting®
- Auro 3D audio®
- Web based interface
- Support for access products (Fidelio & CaptiView)
- Ingest through eSATA, USB, or Ethernet
- Live Support (Ethernet stream, Mpeg2, H264, VC1 up to 50Mbits/s)
- Scaler and Deinterlacer included
- GPIOs (4in & 6out)
- SDI inputs support the following 3D mappings:
  - Dual Stream
  - Side by Side
  - Top Bottom
  - Sensio HiFi 3D support is forthcoming, Q3 2014
  - RealD 3D support is forthcoming, Q3 2014

#### 3.1.1 JPEG2000 DCI DCP playback

- Support 2K playback up to 120fps
- Support 4K playback up to 60fps
- Bitrates up to 500Mbits/s
- DCI compliant
- 12Bits 4:4:4 XYZ' for all formats

#### 3.1.2 MPEG2/H264/VC1 MXF Interop:

- 720p 60 fps, 1080i, 1080p up to 30 fps
- Bitrates up 50MBits/s
- 4:2:0, 8bits

#### 3.1.3 Video processing features:

- Color conversion support YCbCr601, YCbCr709, RGB rec709, XYZ' and YCxCz
- De-Interlacing
- Scaler (upscale up to 4K) To be released, Q3 2014

#### 3.1.4 Security

- Doremi Forensic Watermarking for audio and video
- FIPS 140-2 Level 3 Security certified

#### 3.1.5 Audio

• 16 channels, AES-EBU, 24bits up to 96KHz

#### 3.1.6 Alternative Content

- HDMI input (See Annex D for the list of supported formats)
- HDSDI (1.5 Gbit) Support
- Dual 3GSDI— support is forthcoming, Q3 2014
- Live content (network input)
- Alternative audio routing (using HDMI audio, SDI embedded audio, and live input).

#### 3.1.7 Pre-Loaded Test Content

• Used for testing playback when hard drives are not installed. See Section 16.2 for more information.

# 3.2 Input / Output Ports

- 2x Gigabit Ethernet (RJ45) (Eth0 is full speed, Eth1 is max 500mbit/s)
- 1x eSATA 3GBit/s
- 3x USB 2.0
- 1x HDMI input
- 2x 3GSDI bidirectional (input and output) support is forthcoming, Q3 2014
- 8x AES pair (using 2x RJ45)
- 4x GPI ports (1x RJ45)
- 6x GPO ports (1x RJ45)

# 3.3 Environmental Specifications

Temperature Range (Ambient):

- Operating: 10C to 40C or 50F to 104F
- Non-operating: -20C to 60C or -4F to 140F

# 3.4 Performance / Storage / Power

- The IMS1000 uses 3 x 1TB HDDs (2.5"), providing 2TB of media storage
- Raid 5 storage is hardware based
- The IMS1000 supports up to 4K 60fps and 2K HFR up to 120 fps
- The IMS1000 supports 500 Mbits/s playback
- Battery: IMS1000 battery is a Panasonic Vanadium rechargeable lithium battery VL3032.
- Power < 70W (Power input 12V@6.25A from projector main LVDS connector)

# 3.5 IMS1000

• An IMS1000 is shown below (Figure 1):



Figure 1: IMS1000

3.6 IMS1000 Faceplate Overview



Figure 2: IMS1000 with NEC Faceplate



Figure 3: IMS1000 with Barco Faceplate



Figure 4: IMS1000 with Christie Faceplate

#### Ethernet

• The IMS1000 has two built-in Gigabit Ethernet connectors. The left one is identified as ETH1 and the right one is identified as ETH0.

#### eSATA

• Used for ingesting content at four times the maximum transfer rate of USB 2.0.

#### USB

• There are three USB 2.0 ports on the front panel that can accommodate an external USB device, such as the CaptiView transmitter or USB external drive for content ingestion.

#### HDMI

- To be used for inputting of alternative content, i.e., Blu-ray Disc player, Gaming, Digital Cameras or Laptop presentations.
- HDCP (High-bandwidth Digital Content Protection) supported

#### SDI-A/SDI-B

- 3G-SDI support is forthcoming, Q3 2014
- Used for Dual Projector setups
- Chase Mode
- Alternative Content Inputs

#### GPI

- General Purpose Input for Automation Interface
- RJ-45 Connector

Pin #	Signal
1	GPI 0+
2	GPI 0-
3	GPI 1+
4	GPI 2+
5	GPI 2-
6	GPI 1-
7	GPI 3+
8	GPI 3-

GPO

- General Purpose Output for Automation Interface
- RJ-45 Connector

Pin #	Signal
1	GPO 0
2	GPO 1
3	GPO 2
4	GPO 4
5	GPO 5
6	GPO 3
7	+5 VDC
8	Ground

#### AES-OUT 1-8

- Digital Audio Channels 1 8 Output
- RJ-45 Connector

Channels 1-8	Signal
1	Channel 1 & 2 plus
2	Channel 1 & 2 minus
3	Channel 3 & 4 plus
4	Channel 5 & 6 plus
5	Channel 5 & 6 minus
6	Channel 3 & 4 minus
7	Channel 7 & 8 plus
8	Channel 7 & 8 minus

#### **AES-OUT 9-16**

- Digital Audio Channels 9-16 Output
- RJ-45 Connector

Channels 1-8	Signal
1	Channel 9 & 10 plus
2	Channel 9 & 10 minus
3	Channel 11 & 12 plus
4	Channel 13 & 14 plus
5	Channel 13 & 14 minus
6	Channel 11 & 12 minus
7	Channel 15 & 16 plus
8	Channel 15 & 16 minus

#### LEDs

• See Figure 5 for LED placement.



Figure 5: LED Diagram

For more information, please refer to Section 20.

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# 4 Installation and Marriage with a NEC Series-2 Projector

- Before you begin to install the IMS1000 into your projector, be sure that:
  - The projector is powered down and in the off position.
  - Disconnect the AC power cord from the wall.
  - Remember to always follow ESD procedures.

# 4.1 Preparation



Figure 6: NEC Projector

• Gently pull on the filter cover to remove it (Figure 7).



Figure 7: Remove Filter Cover

• Remove the four screws holding the projector cover in place (Figure 8).



Figure 8: Screw Locations

• Using the key for the projector screen, turn the key in the lock to the right so that it is unlocked (Figure 9).



Figure 9: Projector Unlock

• Gently pull the cover off to remove it from the projector (Figure 10).



Figure 10: Projector Cover Removed

• Remove the blank cover of the media block slot by unscrewing the two handles at the side (Figure 11).



Figure 11: Unscrewing the Slot Cover

• The media block slot should now be empty (Figure 12).


Figure 12: Empty Slot

- Carefully remove IMS1000 from its carton and antistatic bag.
- Gently place the IMS1000 board into the projectors media block slot guiderails on the inside of the slot (Figure 12 and Figure 13).



Figure 13: Missing HDDs

• Screw in the handles on the side of the IMS1000 board to secure it in the projector (Figure 14).



Figure 14: Securing the Board

## 4.2 HDDs

- HDDs are to be shipped out of their chassis. Upon initial installation, insert them into the IMS1000 HDDs chassis carrier prior to powering up the projector.
- Do not insert or remove HDDs if the unit is powered on.
- HDDs are to be of the same make and model and have the same capacity.
- Doremi prohibits mixing SATA I drives with SATA II drives within the same RAID.
- Each one of the three HDDs that come with the IMS1000 will be labeled with a 1, 2, or 3.
- The HDD labeled 1 is to be inserted into the left hand HDD slot, labeled HDD-1, on the IMS1000.
- The HDD labeled 2 is to be inserted into the middle HDD slot, labeled HDD-2, on the IMS1000.
- The HDD labeled 3 is to be inserted into the right hand HDD slot, labeled HDD-3, on the IMS1000.
- Each HDD has a silver latch mechanism that allows for unlatching of the drive from the hard drive cage (Figure 15).



Figure 15: Silver Latch on HDD

- For each HDD, press on the silver release lever on the front side in order to release the spring loaded HDD carrier handle (Figure 15).
- With the carrier handle open, insert the drive all the way into the chassis cage (Figure 16).



Figure 16: HDD Insertion

- Close the silver HDD carrier handle until you hear an audible click and the release tab has locked the HDD into place.
- Repeat for the other two HDDs.

The HDDs properly installed will look like the image presented below (Figure 17).



Figure 17: HDDs Inserted

## 4.3 Reattaching the Projector Covers

• Reattach the projector cover and screw in the four screws holding it in place (Figure 18).



Figure 18: Reattaching the Projector Cover

• Turn the key to lock the projector in place (Figure 19).



Figure 19: Turning the Lock

• Reattach the filter cover by gently pushing it into place (Figure 20).



Figure 20: Reattaching the Filter Cover

## 4.4 Audio Cables Installation



Figure 21: Audio Connectors

- Plug one shielded CAT5 or CAT6 cable end into the connector labeled AES-OUT 1-8 on the IMS1000 board (Figure 21).
- Plug the other end of the shielded CAT5 or CAT6 cable into the audio processor.
- Take another shielded CAT5 or CAT6 cable and plug the end into the connector labeled AES-OUT 9-16 (Figure 21).
- Plug the other end of the shielded CAT5 or CAT6 cable into the audio processor.

**Note:** If the audio processor does not have RJ-45 connectors but has a single DB25 connector, then you will need to use the RJ-45 to DB25 converter that is provided with the IMS1000 (Figure 22).



Figure 22: RJ-45 to DB25 Converter

## 4.5 **GPI/GPO Cables Installation**



Figure 23: GPI/GPO Connectors

- Plug one shielded CAT5 or CAT6 cable end into the connector labeled GPI on the IMS1000 board (Figure 23). Install a ferrite core clamp near the connector closest to the IMS1000. Refer to Section 25 for more information on ferrite core clamp installation.
- Plug the other end of the shielded CAT5 or CAT6 cable into whichever automation controller is available or required.
- Take another shielded CAT5 or CAT6 cable and plug the end into the IMS1000 connector labeled GPO (Figure 23). Install a ferrite core clamp near the connector closest to the IMS1000. Refer to Section 25 for more information on ferrite core clamp installation.
- Plug the other end of the shielded CAT5 or CAT6 cable into whichever automation controller is available or required.

#### 4.5.1 GPI/GPO Pin-Out Information



Figure 24: RJ45 Socket Pin-Out

## 4.6 Ethernet Cables

• Connect an Ethernet cable to the Ethernet connector on the IMS1000 and the other end of the cable to either a laptop or network switch (Figure 25). Install a ferrite core clamp near the connector closest to the IMS1000. Refer to Section 25 for more information on ferrite core clamp installation.



Figure 25: Ethernet Connector

- <u>Note</u>: Ethernet port (Eth0) is set to DHCP by default. All IMS1000 boards are shipped from the factory with the following default IP address for Eth1:
  - IP: 192.168.100.50
  - SM: 255.255.255.0
  - o GW: 192.168.100.1

For more information, refer to Section 23.

## 4.7 **Power on Projector**

• Connect AC power to the projector (Figure 26).



Figure 26: AC Power

• Turn the projector on. The expected boot up time is about 2:30 minutes (Figure 27). Please refer to the projector manufacturer manual for proper power up sequence.



Figure 27: Power Switch

## 4.8 Accessing the GUI

• To access the IMS1000 GUI (Graphical User Interface), launch your browser on the computer that is connected and enter the IP address into the browsers window.

You will be presented with the Doremi IMS1000 Login screen.

- Enter Username: doremi
- Enter Password: doremi
- Click the Login button.

## 4.9 Configuring the Device

In order for the projector to communicate with the IMS1000, the projector must be configured in the Device Manager. While the projector is booting up, configure the device in the Device Manager.

To access the Device Manager, go to Administration  $\rightarrow$  Device Manager (Figure 28).



Figure 28: Device Manager

• Select Projector from the New Device drop down menu (Figure 29).



Figure 29: Add Projector Drop-Down

• Populate the projector parameters that appear (Figure 30).



Figure 30: Projector Added

• Click the Save button (Figure 30).

## 4.10 Marriage

To perform the marriage, the user must download and install the latest version of the Digital Cinema Communicator for S2 (DCC). If you do not have the latest version installed, contact your administrator.

• When first opened, the Communication Settings window will appear. Input the IP address of the projector and click Ok (Figure 31).

	Communication Settings
	Communication Device Settings
	192 . 168 . 100 . 10 C Host Name
	Port 43728 History
Ok Button	OK Cancel Apply

Figure 31: Communication Settings

• On the window that appears, click on the Mode button (Figure 32).

INEC	LAMP STATUS	NODE	Mode Buttor
DIGITAL CINEMA COMMUN	Version: 4, 1, 0, 17 LAN: 192.168.100.10	n	
Active Title Name IMB IMB XYZ 2K 239 Preset Button : No.1	PCF : DCDM_XYZ_Auto Screen : 2048/1080 No Crop		

Figure 32: Mode Button

• In the Control Mode window that appears, select Service. Input the correct password and click Ok. To obtain the password, contact your administrator (Figure 33).



Figure 33: Control Mode Window

• Using the Arrow button in the window that appears, scroll until the Setup button is available. Click on the Setup button (Figure 34).

	Digital Cinema Communicator for S2 - [LAN: 192.168.100.10]  File Setup Option	Arrow Button
Setup Button	TITLE     INFO.     SETUP     LAN     UPDATE       NEC     System: NC900C.A     MODE(5)       DIGITAL CINEMA COMMUNICATOR     Version: 4, 1, 0, 17       LAN: 192.168.100.10	
	Active Title Name MM PCF: DCDM_XYZ_Auto	
	IMB XYZ 2K 239 Screen : 2048x1080 No Crop Preset Button : No.1 3D : Disable	

Figure 34: Setup Button

• When the Setup window appears, click on the Option Slot button (Figure 35).

Digital Cinema Communicator for S2 - [LAN: 192.168.1	00.10]	- • ×	
File Setup Option TITLE INFO. SETUP LA	N UPDATE	Shield(S)	Option Slot Button
Setup Installation Color	Setting Option Slot	Reset	
Douser Auto Control       Setting       Panel Key Lock       UnLock       Lock       Silent Mode       Setting       Filter Message       0       [H]	GPIO	]	
Unlit Mode	Sleep Timer		
Cooling Lamp Off	Setting		

Figure 35: Setup Window

• In the Option Slot window, select IMB from the drop-down and click Apply (Figure 36).

	Digital Cinema Communicator for S2 - [LAN: 192.168.100.10]				
	File Setup Option				
	TITLE INFO. SETUP LAN UPDATE	Shield(S)			
Apply	Setup Installation Color Setting Option Slot	Reset			
Button	Option Slot Setting Slot B Not Available T Reset Slot B				
7	Slot A IMB   Reset Slot A				
	Apply Reset ICP				

Figure 36: Option Slot Window

• Click the Installation button and then click the Re-Marriage button (Figure 37).

	Sigital Cinema Communicator for S2 - [LAN: 192.168.100.10]	- D X
	File Setup Option	
Installation	TITLE INFO. SETUP LAN UPD/	ATE Shield(S)
Dutton	Setup Installation Color Setting	Option Slot Reset
	Orientation       Fan Speed Mode         Setting       Setting         Baudrate       4800       9600       19200       38400         Date / Time       UTC Time       2013/07/01 22:41:15       Adj.         Projector Time       2013/07/02 07:41:15       +1 Hour         PC Local       Apply	Passcode Installation Advanced User Service New Router Setup Execute Lens Center Execute
Re-Marriage Button	Language (DCC) Language Select Convergence Adjust IMB Incintenance Re-Marriage	Enigma Maintenance Re-Marriage Arm Tamper

Figure 37: Re-Marriage Button

• Enter the appropriate password and login. Contact your administrator for the necessary information. Click the Re-Marriage button (Figure 38).

	IMB Re-Marriage		
	Login ID : Password :		
Re-Marriage Button	Re-Marriage	Cancel	

Figure 38: Re-Marriage Login

• A window will appear stating that the operation was successful. Click Ok (Figure 39).



Figure 39: Operation Successful Window

- To arm the service door, push and hold the Menu button on the projector (Figure 40).
- Enter the appropriate password and click Enter on the projector. Contact your administrator for the password (Figure 40).



Figure 40: Projector Menu

To ensure that the marriage was completed correctly, on the IMS1000 GUI, go to Monitoring  $\rightarrow$  Diagnostics  $\rightarrow$  Media Block. The Security Manager section should appear as it does below (Figure 41):





Marriage has now been completed.

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## 5 Installation and Marriage with a Barco Series-2 Projector

- Before you begin to install the IMS1000 into your projector, be sure that:
  - The projector is powered down and in the off position.
  - Disconnect the AC power cord from the wall.
  - Remember to always follow ESD procedures.

## 5.1 Preparation



Figure 42: Barco Projector

• Remove the blank cover of the media block slot by unscrewing the two screws on the sides (Figure 43).



Figure 43: Unscrewing the Blank Cover

• The media block slot should now be empty (Figure 44).



Figure 44: Empty Media Block Slot

- Carefully remove the IMS1000 from its carton and antistatic bag.
- Gently place the IMS1000 board into the projectors media block slot guiderails on the inside of the slot (Figure 44).
- Tighten the two screws in place (Figure 45).



Figure 45: Tightening the Screws

## 5.2 HDDs

- HDDs are to be shipped out of their chassis. Upon initial installation, insert them into the IMS1000 HDDs chassis carrier prior to powering up the projector.
- Do not insert or remove HDDs if the unit is powered on.
- HDDs are to be of the same make and model and have the same capacity.
- Doremi prohibits mixing SATA I drives with SATA II drives within the same RAID.
- Each one of the three HDDs that come with the IMS1000 will be labeled with a 1, 2, or 3.
- The HDD labeled 1 is to be inserted into the left hand HDD slot, labeled HDD-1, on the IMS1000.
- The HDD labeled 2 is to be inserted into the middle HDD slot, labeled HDD-2, on the IMS1000.
- The HDD labeled 3 is to be inserted into the right hand HDD slot, labeled HDD-3, on the IMS1000.
- Each HDD has a silver latch mechanism that allows for unlatching of the drive from the hard drive cage (Figure 46).



Figure 46: Silver Latch on HDD

- For each HDD, press on the silver release lever on the front side in order to release the spring loaded HDD carrier handle (Figure 46).
- With the carrier handle open, insert the drive all the way into the chassis cage (Figure 47).



Spring Loaded HDD Carrier Handle

Figure 47: HDD Insertion

- Close the silver HDD carrier handle until you hear an audible click and the release tab has locked the HDD into place.
- Repeat for the other two HDDs.

The HDDs properly installed will look like the image presented below (Figure 48).



Figure 48: HDDs Inserted

## 5.3 Audio Cables Installation



Figure 49: Audio Connectors

- Plug one shielded CAT5 or CAT6 cable end into the connector labeled AES-OUT 1-8 on the IMS1000 board (Figure 49).
- Plug the other end of the shielded CAT5 or CAT6 cable into the audio processor.
- Take another shielded CAT5 or CAT6 cable and plug the end into the connector labeled AES-OUT 9-16 (Figure 49).
- Plug the other end of the shielded CAT5 or CAT6 cable into the audio processor.

**Note:** If the audio processor does not have RJ-45 connectors but has a single DB25 connector, then you will need to use the RJ-45 to DB25 converter that is provided with the IMS1000 (Figure 50).



Figure 50: RJ-45 to DB25 Converter

## 5.4 GPI/GPO Cables Installation



Figure 51: GPI/GPO Connectors

- Plug one shielded CAT5 or CAT6 cable end into the connector labeled GPI on the IMS1000 board (Figure 51). Install a ferrite core clamp near the connector closest to the IMS1000. Refer to Section 2525 for more information on ferrite core clamp installation.
- Plug the other end of the shielded CAT5 or CAT6 cable into whichever automation controller is available or required.
- Take another shielded CAT5 or CAT6 cable and plug the end into the IMS1000 connector labeled GPO (Figure 51). Install a ferrite core clamp near the connector closest to the IMS1000. Refer to Section 25 for more information on ferrite core clamp installation.
- Plug the other end of the shielded CAT5 or CAT6 cable into whichever automation controller is available or required.

#### 5.4.1 GPI/GPO Pin-Out Information



Figure 52: RJ45 Socket Pin-Out

## 5.5 Ethernet Cables

• Connect an Ethernet cable from the LAN connector on the Barco projector's cinema controller slot and the other end of the cable to either a laptop or network switch (Figure 53). Install a ferrite core clamp near the connector closest to the IMS1000. Refer to Section 25 for more information on ferrite core clamp installation.



Figure 53: Ethernet Connections

- <u>Note</u>: Ethernet port (Eth0) is set to DHCP by default. All IMS1000 boards are shipped from the factory with the following default IP address for Eth1:
  - IP: 192.168.100.50
  - SM: 255.255.255.0
  - GW: 192.168.100.1
- Connect an Ethernet cable from the Ethernet connector on the IMS and the other end of the cable to the LAN connector on the Barco projector's cinema controller slot (Figure 54).



Figure 54: Ethernet Connections

• For more information, refer to Section 23.

## 5.6 Power on Projector

• Connect AC power to the projector (Figure 55).



Figure 55: AC Power

• Turn the projector on. The expected boot up time is about a 2:30 minutes (Figure 56). Please refer to the projector manufacturer manual for proper power up sequence.



Figure 56: Power Switch

## 5.7 Accessing the GUI

• To access the IMS1000 GUI (Graphical User Interface), launch your browser on the computer that is connected and enter the IP address into the browsers window.

You will be presented with the Doremi IMS1000 Login screen.

- Enter Username: doremi
- Enter Password: doremi
- Click the Login button.

## 5.8 Marriage

Marriage on the Barco projector is done directly on the projector. After marriage is complete, the Barco projector will be automatically detected in the Device Manager.

Once the projector has finished booting up, the taillights at the back of the projector will be red, indicating that the board and the projector are not married. If there is a touch screen attached to the projector, two tamper errors will appear, indicating that the marriage has not occurred (Figure 57).

<b></b>	DP2K-10S-1190123883	BARG
	Projector error message	- where I
	The following errors occurred on the projector:	piltroi
1	Identifier     Description       5854     Imb - physical marriage tamper event       5851     Imb - service door tamper event	est Patterns ervice erver
	Show this dialog automatically on new errors	onfiguration
5 Presets 1		Installation Maintenance Touch panel
2	Default User Connected - Serial - HARBIN	📀 00: E0 🔇

Figure 57: Tamper Errors

• To begin the marriage process, push the Key button. It should be red to indicate that the marriage has not been completed (Figure 58).



Figure 58: Red Key Button

- After you push the Key button, the numbered buttons should flash orange.
- Enter in the correct password. Contact your administrator for the correct password.

- The numbered buttons should flash green if you have entered the password correctly.
- Allow about a minute for the tamper errors to clear.
- Once the marriage has been completed, the Key button will turn green (Figure 59) and the taillight will also turn green.



Figure 59: Green Key Button

To ensure that the marriage was completed correctly, on the IMS1000 GUI, go to Monitoring  $\rightarrow$  Diagnostics  $\rightarrow$  Media Block. The Security Manager section should appear as it does below (Figure 60):

	doremi	IMS1000 Serial Number: 332132	)			Screen: Software User Lei	e Version: vel:	IMS1000 2.6.4-0 admin / SuperUse	er
	Technology Leadership for Digital Cinema	MediaBlock	OVERVIEW ADMINISTRATION	CONTROL M	MONITORING	LOC	GOUT		ల
	Quick Access Links					Stora	ige 📑 Si	ystem	
	Create Quick Access Links	Status		Video Watermark:	Doremi () 3				
		Model:	Series-2	Audio Watermark:	Doremi 2.97				
		Dowser:							
		Lamp:							
Security	ſ	Security Manager							
Manager		Status							
Section	5	Service Door Status:	Closed	Physical Marriage:	Active				
Section		Service Door Armed:	Engaged	Logical Marriage:	Engaged				
		Partial Blackout:	Active	Active Marriage:	Active				
	Ruick Controls & No Playback	<ul> <li>No ingest</li> </ul>					19:48	2	1

Figure 60: Security Manager Section

Marriage is now complete.

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# 6 Installation and Marriage with a Christie Series-2 Projector

- Before you begin to install the IMS1000 into your projector, be sure that:
  - The projector is powered down and in the off position.
  - Disconnect the AC power cord from the wall.
  - Remember to always follow ESD procedures.

## 6.1 Preparation



Figure 61: Christie Projector

 Remove the blank cover of the media block slot, if it is present, by unlatching the two latches on the sides (Figure 62).



#### Figure 62: Faceplate Latches

• The media block slot should now be empty (Figure 63).



Figure 63: Empty Media Block Slot

- Carefully remove the IMS1000 from its carton and antistatic bag.
- Gently place the IMS1000 board into the projectors media block slot guiderails on the inside of the slot (Figure 63). The latches must be out and open for the IMS1000 to fit properly. To open the latches, press on the red button (Figure 64).



Figure 64: Red Button on Latch

• Close the two latches to secure the board (Figure 65).



Figure 65: IMS100 Installation

## 6.2 HDDs

- HDDs are to be shipped out of their chassis. Upon initial installation, insert them into the IMS1000 HDDs chassis carrier prior to powering up the projector.
- Do not insert or remove HDDs if the unit is powered on.
- HDDs are to be of the same make and model and have the same capacity.
- Doremi prohibits mixing SATA I drives with SATA II drives within the same RAID.
- Each one of the three HDDs that come with the IMS1000 will be labeled with a 1, 2, or 3.
- The HDD labeled 1 is to be inserted into the left hand HDD slot, labeled HDD-1, on the IMS1000.
- The HDD labeled 2 is to be inserted into the middle HDD slot, labeled HDD-2, on the IMS1000.
- The HDD labeled 3 is to be inserted into the right hand HDD slot, labeled HDD-3, on the IMS1000.
- Each HDD has a silver latch mechanism that allows for unlatching of the drive from the hard drive cage (Figure 66).



Figure 66: Silver Latch on HDD

- For each HDD, press on the silver release lever on the front side in order to release the spring loaded HDD carrier handle (Figure 66).
- With the carrier handle open, insert the drive all the way into the chassis cage (Figure 67).



Figure 67: HDD Insertion

- Close the silver HDD carrier handle until you hear an audible click and the release tab has locked the HDD into place.
- Repeat for the other two HDDs.

The HDDs properly installed will look like the image presented below (Figure 68).



Figure 68: HDDs Inserted

## 6.3 Audio Cables Installation



Figure 69: Audio Connectors

- Plug one shielded CAT5 or CAT6 cable end into the connector labeled AES-OUT 1-8 on the IMS1000 board (Figure 69).
- Plug the other end of the shielded CAT5 or CAT6 cable into the audio processor.

- Take another shielded CAT5 or CAT6 cable and plug the end into the connector labeled AES-OUT 9-16 (Figure 69).
- Plug the other end of the shielded CAT5 or CAT6 cable into the audio processor.

<u>Note</u>: If the audio processor does not have RJ-45 connectors but has a single DB25 connector, then you will need to use the RJ-45 to DB25 converter that is provided with the IMS1000 (Figure 70).



Figure 70: RJ-45 to DB25 Converter

## 6.4 GPI/GPO Cables Installation



Figure 71: GPI/GPO Connectors

- Plug one shielded CAT5 or CAT6 cable end into the connector labeled GPI on the IMS1000 board (Figure 71). Install a ferrite core clamp near the connector closest to the IMS1000. Refer to Section 25 for more information on ferrite core clamp installation.
- Plug the other end of the shielded CAT5 or CAT6 cable into whichever automation controller is available or required.

- Take another shielded CAT5 or CAT6 cable and plug the end into the IMS1000 connector labeled GPO (Figure 71). Install a ferrite core clamp near the connector closest to the IMS1000. Refer to Section 25 for more information on ferrite core clamp installation.
- Plug the other end of the shielded CAT5 or CAT6 cable into whichever automation controller is available or required.

#### 6.4.1 GPI/GPO Pin-Out Information



Figure 72: RJ45 Socket Pin-Out

## 6.5 Ethernet Cables

• Connect an Ethernet cable to the Ethernet connector on the IMS1000 and the other end of the cable to either a laptop or network switch (Figure 73). Install a ferrite core clamp near the connector closest to the IMS1000. Refer to Section 25 for more information on ferrite core clamp installation.



**Figure 73: Ethernet Connection** 

- <u>Note</u>: Ethernet port (Eth0) is set to DHCP by default. All IMS1000 boards are shipped from the factory with the following default IP address for Eth1:
  - IP: 192.168.100.50
  - SM: 255.255.255.0
  - GW: 192.168.100.1
- For more information, refer to Section 23.

## 6.6 Power on Projector

• Connect AC power to the projector (Figure 74).



Figure 74: AC Power

After about 1:45 minutes, the main screen will appear on the touch panel controller. Go to Menu → Login and login as Marriage. Contact your administrator for the correct password (Figure 75).



Figure 75: Login

• Go to Menu → Administrator Setup → Content Devices Configuration (Figure 76). From the drop-down menu, make sure that Doremi is selected (Figure 77).



Figure 76: Content Devices Configuration

System Ok		CHKISTIE 4K
Content Devices Config	guration	8
	——— Devices Inst	alled Doremi
LD Installed	IMB Installed:	Doremi
		None
		Doremi
		GDC Obvietie
		Dolby
Menu	Marriage	NA 🥹 🖓 🏐 10:51:27 AM

Figure 77: Drop-Down Menu

• Turn the projector on by pressing the green Power button on the touch panel controller (Figure 78). After about two minutes, the projector will be fully powered on.
	Preferred Channels		— All —	Power	
3996x2160 Flat XYZ	4096x1716 Scope XYZ 2	3D Flat 3996x2160 3D 13		Lamp	
3D Scope 4096x1716 3D 14	3996x2160 Flat Dual SDI 19	4096x1716 Scope Dual SDI 17		Douser	Power Button
Alternative Content HDMI 12	3D Scope 4096x1716 3D SDI 30	30 3D Flat 3996x2160 30 DSDI 31		Aux Lens	
<ul> <li>PIB Status</li> <li>ICP Status</li> <li>LD Status</li> <li>IMB Status</li> </ul>	Operational S Sta Ma Q Ru Q Ma	Status andby Power nin Power n nirriage		Test Patterns	

Figure 78: Power Button

• An error message will appear. Press the Acknowledge button (Figure 79).

Alarms			
ID	State 🔺	Occurred	
Connection to the IMB has been lost.	Critical	2013-09-03, 11:20:	
			Acknowledge
U			Button
	Ac	cknowledge	

#### Figure 79: Error Message

## 6.7 Accessing the GUI

• After about forty more seconds, the board will be fully powered on and the user will be able to access the web GUI. To access the IMS1000 GUI (Graphical User Interface), launch your browser on the computer that is connected and enter the IP address into the browsers window.

You will be presented with the Doremi IMS1000 Login screen.

- Enter Username: doremi
- Enter Password: doremi
- Click the Login button.

## 6.8 Configuring the Device

In order for the projector to communicate with the IMS1000, the projector must be configured in the Device Manager. When the projector and board have finished booting up, configure the device in the Device Manager.

To access the Device Manager, go to Administration  $\rightarrow$  Device Manager (Figure 80).



#### Figure 80: Device Manager

• Select Projector from the New Device drop-down menu (Figure 81).



Figure 81: Add Projector Drop-Down

• Populate the projector parameters that appear (Figure 82).



Figure 82: Projector Added

• Click the Save button (Figure 82).

## 6.9 Marriage

Once the projector and board have finished booting up, the lights on the side of the projector will be red and green, indicating that the board and the projector are not married. The touch panel controller attached to the projector will show a second error window, indicating that the marriage has not occurred (Figure 83). Press the Acknowledge button.

larms			
ID	State 🔺	Occurred	
IMB Connection to the ICP could not be establis	Critical	2013-09-03, 11:29:	
IMB Logical Tamper	Critical	2013-09-03, 11:29:	
IMB Physical Tamper	Critical	2013-09-03, 11:29:	
IMB Marriage Broken	Critical	2013-09-03, 11:29:	
			Acknowledg

Figure 83: Error Window

• Go to Menu  $\rightarrow$  Service Setup  $\rightarrow$  IMB Marriage (Figure 84).



Figure 84: IMB Marriage

• The marriage wizard, on the touch panel controller, will then guide you through the steps necessary to complete the marriage. Click the Next button to begin (Figure 85).



Figure 85: Marriage Wizard

• When the Marriage Checklist window appears, click Next (Figure 86).



Figure 86: Marriage Checklist

• The Arm Marriage window will appear. When the Arm Marriage button is pressed, the user has 30 seconds to press the Marriage button on the projector, which should now be green (Figure 87 and Figure 88).



Figure 87: Arm Marriage Window



Figure 88: Marriage Button on Projector

• Once the marriage is complete, the light on the projector will turn green (Figure 89).



Figure 89: Green Projector Light

To ensure that the marriage was completed correctly, on the IMS1000 GUI, go to Monitoring  $\rightarrow$  Diagnostics  $\rightarrow$  Media Block. The Security Manager section should appear as it does below (Figure 90):

	doremi	IMS100 Serial Number: 33213	<b>0</b>			Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / Superl	Jser
	Technology Leadership for Digital Cinema	MediaBlock	OVERVIEW ADMINISTRATION	N CONTROL I	MONITORING	LOGOUT		Ċ
	Quick Access Links			[		Storage 📃	System	
	Create Quick Access Links	Status:		Media Decoder Video Watermark:	Doremi 0.3			
		Model:	Series-2	Audio Watermark:	Doremi 2.97			
		Dowser:						
Security	100000000000000000000000000000000000000	Lamp:						
Manager	(	Security Manager						
		Status						
Section		Service Door Status:	Closed	Physical Marriage:	Active			
		Service Door Armed:	Engaged	Logical Marriage:	Engaged			
		Parloa Backon.	ALINE	Active maritage.	Aure			
	A Quick Controls 😵 No Playback					19:48	2	<b>n</b> 1

Figure 90: Security Manager Section

Marriage is now complete.

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# 7 Shut Down

In order to properly shutdown the IMS1000 board and the projector, the user must follow the steps below.

• To shut down the board, go to Administration  $\rightarrow$  System (Figure 91).



Figure 91: Shut Down

- Click on the Shutdown button and wait two minutes. The LED lights on the IMS1000 will stop flashing and the HDD lights will have a steady light once it has finished shutting down.
- After two minutes, refer to the projector manufacturer manual for proper power down sequence to shut down the projector.
- The IMS1000 board and the projector have now been properly shut down.

<u>Warning</u>: The IMS1000 must be shut down according to the designated method. Failure to follow the above method may result in file corruption.

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# 8 Operating System

Every time the user logs out of the operating system and then logs back in, a Login Authentication window will appear (Figure 92). The default login name is "doremi" and the password is "doremi." However, the administrator may have changed and/or added other login usernames and passwords. Please contact your administrator for the appropriate information.



Figure 92: Login Authentication Window

• The Overview Tab will appear every time the unit is turned on or rebooted. Users can access various applications from the tabs located across the top of the GUI (Figure 93).

	doremi	IMS100 Serial Number: 33213	0						Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
	Technology Leadership for Digital Cinema	Overview	OVERVIEW	ADMINISTRATION	CONTROL	MONITORING			LOGOUT	<u>ပ</u>
	Playback Status									
	Current Step							Next Scheduled Events		
					_			No s	chedule	
Overview	J:00.00						00:00:00			
Tab	System Status									
	Storage			Server				Projector		
				Playback Mode			Manual	Status		
	/data 1835 GB free of 1853 GB			Hardware			0	Lamp		•
	Quick Controls     No Playback								00:40	2 💌 😫



## 8.1 Users

The user will be prompted to enter a password for various tasks when using different applications. The administrator determines the level of security.

**Note:** Please contact your system administrator for passwords, not Doremi Labs.

The following are types of passwords/privileges the user may be asked for (Figure 94):

- Admin (Administrator) Super User
- Manager ShowManager
- Root Administrator
- Ingest Projection
- Doremi Projection

Jsemame		
manager		
manager		
admin root other		
01-	- One of the last	

Figure 94: Password Confirmation Window

In Figure 94, the user is asked to select the username and password.

**Note:** The server will need authentication to complete certain tasks. For example, the authentication required in the window above is ShowManager privileges; hence the server will automatically prompt the user to the Manager username. However, it is possible to select a different username from the drop-down list as shown in Figure 94 above, depending on the level of security that has been provided.

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## 9 Network Configuration

## 9.1 Default Network Configuration

Ethernet port (Eth0) is set to DHCP by default. All IMS1000 boards are shipped from the factory with the following default IP address for Eth1:

- IP: 192.168.100.50
- SM: 255.255.255.0
- GW: 192.168.100.1

## 9.2 Changing the IP Address

To change the IP address of the server, go to the Administration Tab  $\rightarrow$  Control Panel  $\rightarrow$  Networking Configuration and then follow the steps below (Figure 95):

	doremi	IMS1000 Seital Number: 332132		Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
	Technology Leadership for Digital Cinema	Networking Config OVERVIEW ADMINISTRAT	TION CONTROL MONITORING	LOGOUT	<u>0</u>
	Quick Access Links	Hostname: IMS1000			
		Properties of eth0:	Properties of eth1:		
	1000	Obtain an IP address automatically with DHCP.	Obtain an IP address automatically with DHCP.		
	1000	IP address:	IP address: 192.168.100.50		
	1000	Netmask:	Netmask: 255.255.255.0		
Save Button		Gateway	Galeway. 192.106.100.1		
Revert Button					
	Quick Controls			00:59	2 P

Figure 95: Networking Configuration Window

- The Networking Configuration window will appear. You will need to populate the following fields:
  - Hostname
    - <u>Note</u>: It is a good idea to input the circuit location/screen number in here. For example, "DoremiScreen-1," as it will be easier to identify in the logs.
  - Properties of both eth0 & eth1:
    - IP Address
      - <u>Note</u>: Do not put leading zeroes (0) in front of any numbers. For example, do not input 192.168.100.050.
    - Netmask
    - Gateway

**<u>Note</u>**: You can use the tick box for either of these to obtain an IP address automatically with DHCP.

- Select the Save button to keep these settings.
- You will be prompted to key in a password to keep these settings. See your system administrator for this password. SuperUser privileges are necessary to be able to confirm the changes. If the user is already logged in with SuperUser privileges, a password window will not appear.
- To verify the setup, go to Monitoring Tab → Diagnostics → System → Networking and verify the IP Address listed in the area labeled Networking (Figure 96).

doremi	IMS100 Serial Number: 332132	0			Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser	
Technology Leadership for Digital Cinema	System	OVERVIEW ADMINISTRATION	CONTROL MONIT		LOGOUT	ଦ	
Quick Access Links	Detailed Report Hardware Versions Networking	Networking Networking				tatus Overview	Monitoring Tab
	Product Informations	IP Address (eth0): IP Address (eth1): Product Information	10.11.24.105 192.168.100.50				IP
		Product Informati Product Name Serial Number: Main Software Version: Main Firmware Version: WebUI Version:	имS1000 332132 2.6.4-0 4.2.10-0 1.1.7				Address Confirmed
		Software Versions Operating Syste	The Debian 6.0.7 MD e	Software Bussor Doscoral also & N	Library 12 n Child causel Docsorel abo		

Figure 96: System Monitoring Tab Window

## 9.3 Network Reset

If for any reason the network settings need to be reset, go to Administration  $\rightarrow$  Control Panel  $\rightarrow$  Networking Configuration and click the Revert button located on the bottom of the screen (Figure 97).



Figure 97: Networking Configuration Window

## **10 Time Zone Configuration**

Units are by default set to Pacific Time Zone (PST or PDT). This section provides information on how to check and/or change the time zone.

## **10.1 Checking the Time Zone**

• To check the time and time zone, go to Administration → Control Panel → Time Settings and the Date and Time tab will appear (Figure 98).

doremi	IMS100 Serial Number: 33213	0				Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Date and Time	OVERVIEW	ADMINISTRATION	CONTROL	MONITORING	LOGOUT	<u>ပ</u>
Quick Access Links	Date and Time Current Date: Current Time: Secured Clock: Change time: Timezone	Wednesday 17:48:44 -256/360s 17	, 18 June 2014 : 48 💌 : 41	<b>v</b> Update	2		NTP Servers
	Timezone: UTC Offset: Next DST shange:	Europe/ 120 minute Sun Oct 26	Rome s 02:59:59 2014 CEST		Update		
						17:48	2

Figure 98: Current Date and Time Window

## 10.2 Changing the Time Zone

To change the time zone, follow the steps bellow:

- Go to Administration → Control Panel → Time Settings and the Date and Time tab will appear.
- Click on the drop-down menu labeled, Timezone.
- A list of time zones will appear (Figure 99).



#### Figure 99: TimeZone Drop-Down Window

- Select the time zone that best represents the geographical area in which the IMS1000 is installed.
- Once the appropriate timezone has been selected and appears within the box labeled Timezone, click the Update button to save this setting (Figure 99).
- SuperUser privileges are necessary to save the change.
- Reboot for the changes to take effect.

## **10.3 Changing the System Time**

To modify the IMS1000 system clock (RTC - Real Time Clock), follow the steps below:

**Note:** DCI specification allows the user to only modify the time +/- up to 6 minutes per calendar year.

- Go to Administration → Control Panel → Time Settings and the Date and Time tab will appear.
- Click on one of the appropriate drop-downs to modify minutes or seconds.

• For each box, a list of time settings will appear (Figure 100).



#### Figure 100: Change Time Drop-Down Window

- Once the appropriate time change has been selected and appears within the box labeled, Change Time, click the Update button to save this setting (Figure 100).
- SuperUser privileges are necessary to save the change.
- If you exceed your allotted +/- 6 minute limit, contact your first tier support representative.

## **10.4 NTP Servers**

NTP (Network Time Protocol) Servers are specific servers that sync the time and date on your unit to the UTC time. To access the NTP Servers tab, click on the green arrow button on the right side of the Date and Time tab, found by going to Administration  $\rightarrow$  Control Panel  $\rightarrow$  Time Settings (Figure 100). Click the Add button to add your NTP server (Figure 101).

	imerot	IMS1000 Serial Number: 332132				Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
	Technology Leadership for Digital Cinema	NTP Servers OVERVIE	W ADMINISTRATION	CONTROL	MONITORING	LOGOUT	<u>ပ</u>
Add au Button	ick Access Links	Add	' Feb 2013 14:10:54 (01 year, 03 m	ionths, 19 days, 0	2 hours, 52 minutes and 32 seconds ago)		Date and Time
		Last synchronisation offset: -0 second					
		Extra delay (seconds):	X lest				
		Save					
* (	Quick Controls 😵 No Playback 🔺					18:03	2

Figure 101: NTP Servers

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# 11 Overview Tab

The Overview Tab will always display first upon logging in to the IMS1000 GUI (Figure 102). This tab provides the user with a snap shot of the systems current status. The top section of the screen, labeled Playback Status, will display the current playback status along with any upcoming ShowPlaylist schedules.

The lower part of this screen displays the current system status and is separated by storage, server, and projector status. Hot links on this tab provide quick access to the user for its respective function.

From the top Tabs Bar, the user can navigate to the Administration Tab, Control Tab, or the Monitoring Tab.

	doremi	IMS1000 Serial Number: 332132				Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
	Technology Leadership for Digital Cinema	Overview OVERVIEW	ADMINISTRATION CONTROL	MONITORING		LOGOUT	<u></u>
	Playback Status						
Top Tabs Bar	Current Silep				Next Scheduled Events	iedule	
	00:00:00			00:00:00			
	System Status				[		
	Storage		Playback Mode	Manual	Projector Status		
			Security Manager		Dowser		
	/data 1835 GB free of 1853 GB		Hardware	•	Lamp		•
Notification Bar							
	🗘 Quick Controls 🛛 🍪 No Playback 🛁					00:40	2 P 4

Figure 102: Overview Tab

## 11.1 Notification Bar

The bottom Notification Bar allows the user to quickly access important features of the IMS1000. These buttons are available and can be accessed at the bottom of every tab.

### 11.1.1 Quick Controls

The Quick Controls button allows quick access to macros that have been added in the Quick Controls tab, located at Administration  $\rightarrow$  Macro Editor  $\rightarrow$  Quick Controls. It allows the user to execute a macro from any tab on the GUI. For information on how to add macros to the Quick Controls tab, refer to Section 12.7.

Once the macros have been added, click on the Quick Controls button and the macros will appear (Figure 103).

	doremi	IMS1000 Serial Number: 332132					Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
	Technology Leadership for Digital Cinema	Overview OVERV	IEW ADMINISTRATION	CONTROL	MONITORING		LOGOUT	<u></u>
	Playback Status							
	Current Stop					Next Scheduled Events	) schedule	
Macros	Construction Chatter				00.00			
	Lamp Un	Play			Ma	nual Status		0
Quick					•	Dowser		•
Controls Button						Lamp		•
	S Quick Controls & No Playback	- No Ingest					18:23	

#### Figure 103: Quick Controls

- To execute the macro, simply click on the macro (Figure 103).
- Clicking on the Quick Controls button again will cause the window to close.

#### 11.1.2 Playback

The Playback button will alert the user to any playback that is in progress (Figure 104).

If playback is in progress, clicking on the Playback button will open up the Cinelister Playback tab. If playback is not in progress, clicking on the button will open up the Cinelister Editor tab. For more information on the Cinelister tab and playback, refer to Section 13.

	doremi	IMS100 Serial Number: 332132	<b>O</b>						Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin/#	) SuperUser
	Technology Leadership for Digital Cinema	Overview	OVERVIEW	ADMINISTRATION	CONTROL	MONITORING			LOGOUT		৫
	Playback Status										
	Current Stop 00:00:00 System Status						00.00.00	Next Scheduled Events	No schedule		
	Storage			Server				Projector			
				Playback Mode			Manual	Status		•	
Playback Button	/data 1835 GB free of 1853 GB			Hardware			<u>_</u>	Lamp		•	
	Delet/Delitice     Ann Pauloget	± Mn Impert							00-40		

#### Figure 104: Playback Button

#### 11.1.3 Ingest

The Ingest button will alert the user to any ingest that is in progress.

Clicking on the button will open the Ingest Monitor tab that displays the ingest progress (Figure 105). For more information on ingesting, refer to Section 13.9.

d <mark>o</mark> remi	IMS1000 Seital Number: 332132		Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Ingest Monitor OVERVIEW ADMINISTRATION CONTROL MONITORING		LOGOUT	<u>ပ</u>
Quick Access Links	Refresh 🛞 Delete Fause Nesume 🚫 Cancel 📃 Select all		Ingest Scan 🛛 🚍 🗎	Upload
Create Quick Access Links	Status Description	Scheduled	Started	Finished
	NARNIA-3-30-OCAP_FTR_S_EN-XX_US-PG_51-EN_48_TCF_20101201_DLA_I80_GB_0V 2014-05-23123:09:11			
	DCI 2K Sync Test (Encrypted) 2.1.8 (§1ø) 2014-05-23723-08-11			
	BRIDESMAIDS_TLR-1_F_EN-XX_US-G8_51_2K_UP_20110201_UDS         2014-06-18119-41-05	2014-06-18T19:41:0	05 2014-06-181	19:42:18
	·	Success 10	00%	
Ingest	✓ PKL asset executed [68a6a67d-c1ab-412e-851d-ad7etbc5d582]	_	_	
Button	PKL asset imported [68a6a67d-c1ab-4f2e-851d-ad7efbc5d582]	Total Progress	100%	
	Assetmap ingested [756aa234-es40-41ct+5352-00c380/e98349]			
Auick Controls 🕹 No Playback			19:47	

#### Figure 105: Ingest Monitor and Button

#### 11.1.4 Session Viewer

The Session Viewer button displays all of the users that are currently logged onto the unit.

Click the button to open the Session Viewer window. Clicking on the button again will cause the window to close (Figure 106).

Joremi	IMS1000 Serial Number: 332132	D						Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Overview	OVERVIEW	ADMINISTRATION	CONTROL	MONITORING			LOGOUT	<b>O</b>
layback Status									
urrent							Next Scheduled Events		
							No	schedule	
D:00:00						00:00:00			
ystem Status <sup>Storage</sup>			Server				Projector		
			Playback Mode			Manual	Status		•
ta 1025 CP from of 1052 CP			Security Manager			0	Dowser		
							Session Viewer		
							User	Group IP	Adress Last activity
							admin	SuperUser 10	1.5.130 3 min ago
uick Controls 🕺 No Playhack	📥 No Ingest							20:38	🗶 P 🚨

Figure 106: Session Viewer Window

#### 11.1.5 Notifications

The Notifications button provides the user with notifications for things such as raid status, NTP status, updates, software integrity, disk space quota, and more. A number will appear in the corner when there is a new notification.

doremi	IMS100 Serial Number: 33213	0						Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser	
Technology Leadership for Digital Cinema	Overview	OVERVIEW A	DMINISTRATION	CONTROL	MONITORING			LOGOUT	<mark>ပ</mark>	
Playback Status										
Current Stop 00:00:00						00:00:00	Next Scheduled Events No s	chedule		More Details Button
Storage /data 1835 GB free of 1853 GB			<b>Server</b> Playback Mode Security Manager Hardware			Manual O	Projector Status Dowser Lamp		<u>/:</u>	Clear All Button
Notifications									×	Notifications Button
3         14 hours 19 min ago : NTP synchronization tail           A Quick Controls         Image: No Playback	ed: An error has occurred during	NTP synchronization. It r	night result in an incorr	ect time of the pla	yer. Set up a reachabl	e NTP server in	the: <u>NTP Server configuration</u> . (*) M	ore details 20:45	×	
	F	igure 1	07: Not	tificat	ions W	'indo	w	De	elete	

- Click on the Notifications button to view the notifications (Figure 107).
- Clicking on the Notifications button again will cause the window to close.
- Hovering over the More Details button provides more details about the notification (Figure 107).
- To delete a notification, highlight it and click on the X that appears on the right-hand side (Figure 107). To delete all notifications, click on the X in the upper right corner of the window.

Button

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# 12 Administration Tab

The IMS1000 GUI Administration tab provides access to various applications as listed below.

- To access the Administration applications, go to the Administration tab.
- A drop-down list will appear when the mouse is hovering over the tab (Figure 108). The default tab is the Control Panel tab, which has several more applications available.
- Clicking on individual tabs within applications will take you directly to that tab (Figure 108).



Figure 108: Administration Tab Window

- **Device Manager:** Allows the user to add, edit, and delete different projectors, close caption devices, subtitle devices, etc.
- **Content Feed Manager:** Allows the user to connect to other servers. Once connected, the specified servers will show in the Ingest Manager and there they will be able to pull ShowPlaylists, CPLs, KDMs, and Doremi Licenses.
- Macro Editor: Allows the user to view, edit, and add macros.
- Terminal: Allows the user to perform terminal commands.
- System: Allows the user to shut down, restart, and place the unit on standby.
- Control Panel:
  - Account Manager: Allows the user to add/remove/edit user accounts.
  - **Networking Configuration:** Allows the user to setup and modify network connections.
  - Quick Access Links: Allows the user to create links on the left side of the GUI for quick access to certain applications.
  - **Theater Properties:** Allows the user to input the information for the theater facility, contacts, and auditorium.
  - **Time Settings:** Allows the user to check and change the time and time zone. Changing the time is limited annually.

- Audio Settings: Allows the user to map/route all audio tracks to operatordesignated outputs (only SMPTE content). This where you can configure the audio delay.
- **Cinelister Configuration:** Allows the user to configure certain values for the Cinelister application.
- Live Manager: Allows the user to add a live event CPL.
- **Backup Manager:** Allows the user to back up and restore certain files on a server.
- **License Agreement:** Allows the user to agree to the software license terms and conditions.
- **Automatic Log Upload Manager:** Allows user to automate log generation and specify the frequency and location the logs will be sent to.
- Log Operator Maintenance: Allows the user to log important information (e.g., hard disk replacement, projector lamp replacement, etc.). This application helps the system administrator keep track of any change operated in a theater booth.
- **Threshold Manager:** Allows the user to view and adjust threshold levels for the server.

## 12.1 Audio Settings/Channel Mapping

The Audio Settings application allows the user to route all audio tracks in an SMPTE/Interop package to operator-designated outputs. The main purpose of the mapping is to allow users to move the HI or VI channels to a specific output. The Audio Settings application is available in the Administration tab.

 To open the Audio Settings application, go to Administration → Control Panel → Audio Settings (Figure 109).

	Ioremi	IMS1000 Serial Number: 332132			Screen: Software Ver User Level:	IMS1000 sion: 2.6.4-0 admin / SuperUser	
	Technology Leadership for Digital Cinema	Channel Mapping OVERVIEW	ADMINISTRATION CONTROL	MONITORING	LOGOU	U 🕑	
Quit	ck Access Links	Template Mapping:     Disabled       Lannet Labet       ch 01       ch 02       ch 03       ch 04       ch 05       ch 06       ch 07       ch 08       Save	Utamei Labei           ch.09			Audio Delay	Channel Mapping Tab
* 0	uick Controls 😵 No Playback 🔹				2	0:59 🔹 🏴	

Figure 109: Audio Mapping Window (Disabled) - Default Setting

• When first launched, the Audio Settings application opens in the Audio Delay tab. Click on the Channel Mapping arrow to get to the Channel Mapping tab. The Template Mapping will be set to Disabled (Figure 109).

<u>Note</u>: All the templates, except Disabled, can be modified directly instead of having to select Custom. Once the template is edited, the Template Mapping will read Custom.

Available configurations include:

- Disabled: This setting is the default and as such cannot be mapped.
- 4 channels: This is a pre-set configuration.
- 6 channels: This is a pre-set configuration.
- 7 channels: This is a pre-set configuration.
- 8 channels: This is a pre-set configuration.
- 9 channels: This is a pre-set configuration.
- ISDCF: This is a pre-set configuration.
- Passthrough: This is a pre-set configuration.
- Custom: This setting allows the user to create their own custom audio configuration.

To make any changes to the audio configuration, SuperUser privileges are necessary.

#### **12.2 Channel Mapping Tab** 12.2.1 Disabled Configuration

Disabled: This setting is the default and as such cannot be mapped. The Disabled mapping configuration will perform pass-through mapping, meaning channel number X of the CPL audio

track will be routed to audio output number X (variable) of the server, X being a number between 1 and 16. When the configuration is grayed-out, the user cannot change the configuration (Figure 110).

doremi	IMS1000 Serial Number: 332132		Screen: IM\$1000 Software Version: 2.6.4-0 User Level: admin / SuperUser
Technology Leadership for Digital Cinema	Channel Mapping OVERVIEW	ADMINISTRATION CONTROL MONITORING	LOGOUT 🔱
Quick Access Links	Template Mapping: Disabled	8	Channel Map. Audio Delay
	Channel Label	Channel Label	
	ch.01	✓ ch.09	
	ch.02	✓ ch.10	
	ch.03	✓ ch.11	
	ch.04	✓ ch.12	
	ch.05	• ch.13	
	ch.06	• ch.14	
	ch.07	• ch.15	
	ch.08	• ch.16	
	Save		
A Quick Controls 😵 No Playback			20:59 🗶 🏴



#### 12.2.2 Pre-Defined Mapping Configurations 12.2.2.1 Four Channels

This configuration is defined as follows (Figure 111):

- **Ch. 01 is Left (L)**: Output ch.01 will be playing the CPL's Left (L) audio channel.
- Ch. 02 is Right (R): Output ch.02 will be playing the CPL's Right (R) audio channel.
- Ch. 03 is Center (C): Output ch.03 will be playing the CPL's Center (C) audio channel.
- **Ch. 04 is Input**: Ch.04 is pass-through, meaning the output channel X will be playing the CPL's audio channel X.
- **Ch. 05 is Surround (S)**: Output ch.05 will be playing the CPL's Surround (S) audio channel.
- **Ch. 06 Ch. 14:** These channels are pass-through, meaning the output channel X will be playing the CPL's audio channel X. X will be a value between 6 and 14.
- **Ch. 15 is HI**: Output ch.15 will be playing the CPL's Hearing Impaired (HI) audio channel.
- Ch. 16 is VI: Output ch.16 will be playing the CPL's Narration (VI) audio channel.

doremi	IMS1000 Serial Number: 332132		Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser
Technology Leadership for Digital Cinema	Channel Mapping OVERVIEW ADMIN	IISTRATION CONTROL MONITORING	Logout 😃
Quick Access Links Create Quick Access Links	Template Mapping: 4 channels		Channel Map. 🔲 Audio Delay
	Channel Label	Channel Label	
	ch.01 L/Left	ch.09 Mute	
	ch.02 R/Right	ch.10 Mute	
	ch.03 C/Center	ch.11 Mute	
	ch.04 Mute	ch. 12 Mute	
	ch.05 S/Surround	ch. 13 Mute	
	ch.06 Mute	ch.14 Mute	
	ch.07 Mute	ch.15 HI/Hearing impaired	
	ch.08 Mute	ch.16 VI-N/Narration	
	Save		
A Quick Controls 🛛 🖗 No Playback	± No Ingest		21:14 🗷 🏴

Figure 111: Audio Mapping Set to Four Channels

### 12.2.2.2 Six Channels

This configuration is defined as follows (Figure 112):

- Ch. 01 is Left (L): Output ch.01 will be playing the CPL's Left (L) audio channel.
- Ch. 02 is Right (R): Output ch.02 will be playing the CPL's Right (R) audio channel.
- Ch. 03 is Center (C): Output ch.03 will be playing the CPL's Center (C) audio channel.
- Ch. 04 is LFE/Screen (Sub-Woofer): Output ch.04 will be playing the CPL's LFE/Screen (Sub-Woofer) audio channel.
- **Ch. 05 is Left Surround (Ls):** Output ch.05 will be playing the CPL's Left Surround (Ls) audio channel.
- **Ch. 06 is Right Surround (Rs):** Output ch.06 will be playing the CPL's Right Surround (Rs) audio channel.
- **Ch. 07 Ch. 14:** These channels are pass-through, meaning the output channel X will be playing the CPL's audio channel X. X will be a value between 7 and 14.
- **Ch. 15 is HI:** Output ch.15 will be playing the CPL's Hearing Impaired (HI) audio channel.
- Ch. 16 is VI: Output ch.16 will be playing the CPL's Narration (VI) audio channel.

doremi	IMS1000 Serial Number: 332132		Soreen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser
Technology Leadership for Digital Cinema	Channel Mapping OVERVIEW ADMINIS	TRATION CONTROL MONITORING	logout 🔱
Quick Access Links Create Quick Access Links	Template Mapping: 6 channels		Channel Map. Audio Delay
	Channel Label	Channel Label	
	ch.01 L/Left	ch.09 Mute	
	ch.02 R/Right	ch.10 Mute	
	ch.03 C/Center	ch.11 Mute	
	ch.04 LFE/Screen	ch.12 Mute	
	ch.05 Ls/Left surround	ch.13 Mute	
	ch.06 Rs/Right surround	ch.14 Mute	
	ch.07 Mute	ch.15 HI/Hearing impaired	
	ch.08 Mute	ch.16 VI-M/Narration	
	Save		
			21:18 🗶 🏴

Figure 112: Audio Mapping Set to Six Channels

### 12.2.2.3 Seven Channels

This configuration is defined as follows (Figure 113):

- Ch. 01 is Left (L): Output ch.01 will be playing the CPL's Left (L) audio channel.
- Ch. 02 is Right (R): Output ch.02 will be playing the CPL's Right (R) audio channel.
- Ch. 03 is Center (C): Output ch.03 will be playing the CPL's Center (C) audio channel.
- Ch. 04 is LFE/Screen (Sub-Woofer): Output ch.04 will be play
- ing the CPL's FE/Screen (Sub-Woofer) audio channel.
- **Ch. 05 is Left Surround (Ls):** Output ch.05 will be playing the CPL's Left Surround (Ls) audio channel.
- **Ch. 06 is Right Surround (Rs):** Output ch.06 will be playing the CPL's Right Surround (Rs) audio channel.
- **Ch. 07 is Input:** Ch.07 is pass-through, meaning the output channel X will be playing the CPL's audio channel X.
- **Ch. 08 is Input:** Ch.08 is pass-through, meaning the output channel X will be playing the CPL's audio channel X.
- **Ch. 09 is Center Surround (Cs):** Output ch.09 will be playing the CPL's Center Surround (Cs) audio channel.
- **Ch. 10 Ch. 14:** These channels are pass-through, meaning the output channel X will be playing the CPL's audio channel X. X will be a value between 10 and 14.
- **Ch. 15 is HI:** Output ch.15 will be playing the CPL's Hearing Impaired (HI) audio channel.
- Ch. 16 is VI: Output ch.16 will be playing the CPL's Narration (VI) audio channel.

doremi	IMS1000 Serial Number: 332132		Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser
Technology Leadership for Digital Cinema	Channel Mapping OVERVIEW ADMINIST	TRATION CONTROL MONITORING	LOGOUT 🔮
Quick Access Links	Template Mapping: 7 channels 🔹	Channel Label	Channel Map. Audio Delay
	ch.01 L/Left	ch.09 Cs/Center surround	
	ch.02 R/Right	ch.10 Mute	
	ch.03 C/Center	ch.11 Mute	
	ch.04 LFE/Screen	ch.12 Mute	
	ch.05 Ls/Left surround	ch.13 Mute	
	ch.06 Rs/Right surround	ch.14 Mute	
	ch.07 Mute	ch.15 HI/Hearing impaired	
	ch.08 Mute	ch.16 VI-N/Narration	
	Save		
	* No ingest		21:24 🗶 🏴

Figure 113: Audio Mapping Set to Seven Channels

### 12.2.2.4 Eight Channels

This configuration is defined as follows (Figure 114):

- Ch. 01 is Left (L): Output ch.01 will be playing the CPL's Left (L) audio channel.
- Ch. 02 is Right (R): Output ch.02 will be playing the CPL's Right (R) audio channel.
- Ch. 03 is Center (C): Output ch.03 will be playing the CPL's Center (C) audio channel.
- **Ch. 04 is LFE/Screen (Sub-Woofer):** Output ch.04 will be playing the CPL's LFE/Screen (Sub-Woofer) audio channel.
- **Ch. 05 is Left Surround (Ls):** Output ch.05 will be playing the CPL's Left Surround (Ls) audio channel.
- **Ch. 06 is Right Surround (Rs):** Output ch.06 will be playing the CPL's Right Surround (Rs) audio channel.
- Ch. 07 is Left Center (Lc): Output ch.07 will be playing the CPL's Left Center (Lc) audio channel.
- **Ch. 08 is Right Center (Rc):** Output ch.08 will be playing the CPL's Right Center (Rc) audio channel.
- **Ch. 09 Ch.14:** These channels are pass-through, meaning the output channel X will be playing the CPL's audio channel X. X will be a value between 9 and 14.
- **Ch. 15 is HI:** Output ch.15 will be playing the CPL's Hearing Impaired (HI) audio channel.
- Ch. 16 is VI: Output ch.16 will be playing the CPL's Narration (VI) audio channel.

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Channel Mapping OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<mark>ပ</mark>
Quick Access Links Create Quick Access Links	Template Mapping: 8 channels	Channel Map.	Audio Delay
	Channel Label		
	ch.02 R/Richt v ch.10 Mute v		
	ch.03 C/Center v ch.11 Mute v		
	ch.04 LFE/Screen ch.12 Mute		
	ch.05 Ls/Left surround ch.13 Mute		
	ch.06 Rs/Right surround v ch.14 Mute v		
	ch.07 Lc/Left center ch.15 HI/Hearing impaired		
	ch.08 RcRight center ch.16 VI-N/Narration		
	Save		
Quick Controls     No Playback	± No lingest	21:30	× Pr 1

Figure 114: Audio Mapping Set to Eight Channels

### 12.2.2.5 Nine Channels

This configuration is defined as follows (Figure 115):

- Ch. 01 is Left (L): Output ch.01 will be playing the CPL's Left (L) audio channel.
- Ch. 02 is Right (R): Output ch.02 will be playing the CPL's Right (R) audio channel.
- Ch. 03 is Center (C): Output ch.03 will be playing the CPL's Center (C) audio channel.
- **Ch. 04 is LFE/Screen (Sub-Woofer):** Output ch.04 will be playing the CPL's LFE/Screen (Sub-Woofer) audio channel.
- **Ch. 05 is Left Surround (Ls):** Output ch.05 will be playing the CPL's Left Surround (Ls) audio channel.
- **Ch. 06 is Right Surround (Rs):** Output ch.06 will be playing the CPL's Right Surround (Rs) audio channel.
- Ch. 07 is Left Center (Lc): Output ch.07 will be playing the CPL's Left Center (Lc) audio channel.
- **Ch. 08 is Right Center (Rc):** Output ch.08 will be playing the CPL's Right Center (Rc) audio channel.
- **Ch. 09 is Center Surround (Cs):** Output ch.09 will be playing the CPL's Center Surround (Cs) audio channel.
- **Ch. 10 Ch.14:** These channels are pass-through, meaning the output channel X will be playing the CPL's audio channel X. X will be a value between 10 and 14.
- Ch. 15 is HI: Output ch.15 will be playing the CPL's Hearing Impaired (HI) audio channel.
- Ch. 16 is VI: Output ch.16 will be playing the CPL's Narration (VI) audio channel.

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Channel Mapping OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<u>0</u>
Quick Access Links	Template Mapping: 9 channels		Audio Delay
	ch.01 L/Left ch.09 Cs/Center surround		
	ch.02 R/Right ch.10 Mute		
	ch.03 C/Center ch.11 Mute		
	ch.04 LFE/Screen ch.12 Mute		
	ch.05 Ls/Left surround • ch.13 Mute •		
	ch.06 Rs/Right surround ch.14 Mute		
	ch.07 Lc/Left center ch.15 HU/Hearing impaired		
	ch.08 Ro/Right center ch.18 VI-N/Narration		
	Save		
A Quick Controls & No Playback		21:35	

Figure 115: Audio Mapping Set to Nine Channels

## 12.2.2.6 ISDCF

This configuration is defined as follows (Figure 116):

- Ch. 01 is Left (L): Output ch.01 will be playing the CPL's Left (L) audio channel.
- Ch. 02 is Right (R): Output ch.02 will be playing the CPL's Right (R) audio channel.
- Ch. 03 is Center (C): Output ch.03 will be playing the CPL's Center (C) audio channel.
- **Ch. 04 is LFE/Screen (Sub-Woofer):** Output ch.04 will be playing the CPL's LFE/Screen (Sub-Woofer) audio channel.
- **Ch. 05 is Left Surround (Ls):** Output ch.05 will be playing the CPL's Left Surround (Ls) audio channel.
- **Ch. 06 is Right Surround (Rs):** Output ch.06 will be playing the CPL's Right Surround (Rs) audio channel.
- Ch. 07 is HI: Output ch.07 will be playing the CPL's Hearing Impaired (HI) audio channel.
- **Ch. 08 is VI:** Output ch.08 will be playing the CPL's Narration (VI) audio channel.
- Ch. 09 is Left Center (Lc): Output ch.09 will be playing the CPL's Left Center (Lc) audio channel.
- **Ch. 10 is Right Center (Rc):** Output ch.10 will be playing the CPL's Right Center (Rc) audio channel.
- **Ch. 11 is Left Rear Surround (Lrs):** Output ch.11 will be playing the CPL's Left Rear Surround (Lrs) audio channel.
- **Ch. 12 is Right Rear Surround (Rrs):** Output ch.12 will be playing the CPL's Right Rear Surround (Rrs) audio channel.
- **Ch.13**: Ch.13 is set to D-BOX Primary.
- **Ch.14:** Ch.14 is set to D-BOX Secondary.
- **Ch.15 is Input:** Ch.15 is mute, meaning there is no audio output on this channel.
- Ch.16 is Input: Ch.16 is mute, meaning there is no audio output on this channel.

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Channel Mapping OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<mark>ل</mark>
Quick Access Links	Template Mapping ISDCF		Audio Delay
	Channel Label Channel Label		
	ch.01 L/Left ch.09 Lo/Left center		
	ch.02 R/Right ch.10 Ro/Right center		
	ch.03 C/Center ch.11 Ris/Left rear surround		
	ch.04 LFE/Screen ch.12 Rrs/Right rear surround		
	ch.05 Ls/Left surround ch.13 D-BOX Primary		
	ch.06 Rs/Right surround ch.14 D-BOX Secondary		
	ch.07 Hi/Hearing impaired ch.15 Mute		
	ch.08 VI-N/Narration ch.16 Mute		
	Save		
A Quick Controls 😵 No Playback	🖾 No Ingest	01:05	2


# 12.2.2.7 Passthrough Configuration

This configuration allows the CPL's audio channel to passthrough to the processor (Figure 117).

doremi	IMS1000 Serial Number: 332132		Soreen: IM\$1000 Software Version: 2.6.4-0 User Level: admin / SuperUser
Technology Leadership for Digital Cinema	Channel Mapping OVERVIEW	ADMINISTRATION CONTROL MONITORING	LOGOUT
Quick Access Links	Template Mapping. Passthrough		Channel Map. TAddo Delay
	Channel Label	Channel Label	
	ch.01 Input01	ch.09 Input09	
	ch.02 Input02	ch.10 Input10 🗸	
	ch.03 Input03	- ch.11 Input11 -	
	ch.04 Input04	ch.12 Input12	
	ch.05 Input05	• ch.13 Input13 •	
	ch.06 Input06	▼ ch:14 Input14 ▼	
	ch.07 Input07	💌 ch.15 Input15 💌	
	ch.08 Input08	🖌 ch.16 Input16 🔽	
	Save		
			01:07 🗶 🏴 🚨



# 12.2.2.8 Custom Mapping Configuration

Click on the drop-down menu and select Custom.

• The following window will appear (Figure 118):

doremi	IMS1000 Serial Number: 332132		Screen: IMS1000 Schware Version: <b>2.6.4-0</b> User Levet: <b>admin / SuperUser</b>
Technology Leadership for Digital Cinema	Channel Mapping OVERVIEW	ADMINISTRATION CONTROL MONITORING	LOGOUT
Quick Access Links	Template Mapping: Custom		Channel Map. Audio Deley
	Channel Label	Channel Label	
	ch.01 Input01	<ul> <li>ch.09 Input09</li> </ul>	
	ch.02 Input02	ch.10 Input10	
	ch.03 Input03	ch.11 Input11	
	ch.04 Input04	ch.12 Input12	
	ch.05 Input05	- ch.13 Input13 -	
	ch.06 Input06	Ch.14 Input14	
	ch.07 Input07	▼ ch.15 Input15 ▼	
	ch.08 Input08	ch.16 Input16	
	Save		
			01:09 🗶 🏴 🖣

Figure 118: Custom Mapping

• Click on the drop-down arrow to view the available mapping parameter selection for each output channel (ch.01-ch.16) to select the CPL's audio channel, using its label that is to be routed to the processor (Figure 119).

Figure 119: Custom Mapping Parameters

# 12.2.3 SMPTE Packages

**Note**: The audio selection should reflect the audio package in number of audio channels.

Change the Template Mapping setting by clicking on the list-menu and selecting the desired setting (Figure 120).

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser	
Technology Leadership for Digital Cinema	Channel Mapping OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<u>ပ</u>	
Quick Access Links Create Quick Access Links	Template Mapping: Disabled		Audio Delay	
	Channel Label     Channel Label       ch01     7 channels       ch02     9 channels       ch02     9 channels       ch02     9 channels       ch02     9 channels       ch03     -			Audio Delay Button
	ch.04 ch.12 ch.12			L
	ch.05 ch.13			
	ch.06 ch.14			
1000	ch.07 ch.16 👻			
1.	ch.08 ch.16 v			
	Save			
A Quick Controls 🛛 🕅 No Playback		01:13	1 主 🎮 💶	

Figure 120: Template Mapping Drop-Down Window

- Make sure to click the Save button to ensure the configuration is saved. SuperUser privileges are necessary to save changes (Figure 121).
- The list of possible labels that can be routed (if present in the audio MXF file) are defined by SMPTE as follows:
  - L/Left
  - R/Right
  - C/Center
  - LFE Screen
  - Ls/Left surround
  - Rs/Right surround
  - Lc/Left center
  - Rc/Right center
  - Cs/Center surround
  - Rrs/Right rear surround
  - Lrs/Left rear surround
  - HI/Hearing Impaired
  - VI-N/Visual Impaired-Narration

# 12.2.4 Audio Delay Configuration

From the Administration  $\rightarrow$  Control Panel  $\rightarrow$  Audio Settings  $\rightarrow$  Audio Delay button, the user can modify the delay between the audio and video by dragging the cursor to the desired delay on the graphical cursor that allows values between -500 milliseconds and +500 milliseconds (Figure 121). To access the Audio Delay tab, click on the green arrow button the right side of the Channel Mapping tab (Figure 120). All audio tracks will be modified for the same delay selected. After the delay has been configured, click on the green Save button to save your audio delay settings (Figure 121). The selected audio delay will be displayed as numeric MS (milliseconds) value.



Note: The user cannot add separate delays for each track.

# Figure 121: Audio Delay Tab

- Positive Value: The audio will be heard behind the video action.
- Negative Value: Indicates that the audio is ahead of the video action.

The recommended value that matches almost all setups is 80 milliseconds.

# 12.2.5 Interop Packages

• Interop audio MXF files do not contain any channel label information. Therefore, if a configuration is selected, the routing will be executed as if the audio MXF file was created according to the ISDCF audio mapping recommendations, which currently consists of (Figure 122):

Channel in	Co	onfigurati	on	Notes	
package	5.1	7.1 SDDS	7.1 DS		
1	L	L	L	Left	
2	R	R	R	Right	
3	С	С	С	Center	
4	LFE	LFE	LFE	Screen low frequency effects	
5	Ls	Ls	Lss	Left surround (or left side surround)	
6	Rs	Rs	Rss	Right surround (or right side surround)	
7		н		Hearing impaired (with emphasis on dialog)	
8	VI-N			Visually impaired narrative (audio description)	
9		Lc		Left center	
10	221	Rc	8 <u>010</u> 88	Right center	
11		5775	Lrs	Left rear surround	
12			Rrs	Right rear surround	
13	Ν	/lotion Dat	a	Synchronous signal (currently used by D-Box)	
14	S	Sync Signa	al	Used for external sync (e.g. FSK Sync) - only used for SMPTE-DCP - NOT INTEROP-DCP	
15		1707		Unused at this time	
16				Unused at this time	

#### Figure 122: ISDCF – Interop Recommendations

# 12.3 Device Manager

The Device Manager is an application used to configure the connection between a unit and cinema projectors, 3D systems, subtitles, closed captions, etc. It also provides for the use of Ethernet commands for the control of theater automation devices.

- To run the Device Manager, go to Administration  $\rightarrow$  Device Manager.
- The following window will appear (Figure 123):



Figure 123: Device Manager

# 12.3.1 Adding a Projector

To connect a projector to the unit (server), click the New button (Figure 123).

- The New Device drop-down menu window will appear (Figure 124):
  - Any device in red indicates that the unit does not have a valid DLM ingested.



#### Figure 124: Add Device Drop-Down Window

• Select Projector. The following window will appear (Figure 125):

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Levet:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Device Manager OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<u>ပ</u>
Projector Selected	New       Seve         Revent       Device Type: Projector         Certainty       Device Type: Projector         Outprovem       Enabled         Unknown       Unknown         DUP Head IP:       Test         Vendor IP:       Username:         Machine       Paswood:         Enables subtles:       Yes         No       Primery projector:         Yes       No		
🎗 Quick Controls 🛛 😵 No Playback 🛋		18:21	

Figure 125: Device Selection Window – Projector Item Selected

The main configuration window will be updated to reflect the addition of the Projector device. The user will be able to enter the projector parameters (Figure 126):

<b>Coremi</b> Technology Leadership for Digital Cinema	IMS1000 Seifal Number: 332132 Device Manager OVERVIEW ADMINISTRATION CONTROL MONITORING	Screen: Software Version: User Level: LOGOUT	IMS1000 2.6.4-0 admin / SuperUser	
Quick Access Links Create Quick Access Links Device Button	New       Solution         Projector       Certainty         Image: Solution of the subtraction of the			Test Button
Save Button	Save Revert	19:43		Revert Button

#### Figure 126: Device Manager GUI – Projector Fields Configuration

To perform the projector configuration, follow the steps below:

- Specify a projector identifier (e.g., projector name, screen #) in the first field.
  - **Note**: For projector types, please select Primary. Also, this could apply if the user were to use dual projector for 3D (left projector would be Primary and right projector would be Secondary).
- Choose the correct Series-2 projector model to connect to the unit using the Projector model field(s).
- Select the model Series-2 for the projector from the drop-down menu on the right.
- Enter the IP address. The Test button will allow you to test the IP connection prior to saving (Figure 126).
- Choose to either enable or disable the subtitles.
- Check the Enabled check box at the top right corner of the GUI.
- Click the Save button to record the settings (Figure 126). A password confirmation page will appear. Enter the password to save and record the settings. SuperUser privileges are necessary to confirm the changes. If the user is already logged in with SuperUser privileges, the password confirmation window will not appear. Clicking the Revert button prior to saving will delete the unsaved information (Figure 126).

#### 12.3.1.1 Removing a Device or Projector

- To remove a device or projector, click on it in the left part of the Device Manager GUI.
- Click the Delete Device button (Figure 126).

#### **12.3.2** Automation Libraries Management

- Support for theater automation control is also provided. The list of currently supported devices is the following:
  - o eCNA
  - o JNior
  - A pre-built library of supported automation commands is available for each of these two devices. These automation commands can then be added to Macro Cues.

#### 12.3.3 Adding an eCNA Device

- To add the eCNA device, click the New Device button in the Device Manager window (Figure 123).
- The New Device drop-down window will appear. Select eCNA.
- The Device Manager GUI will be updated to reflect the addition of the eCNA device.
- Input the eCNA Server IP address in the appropriate field (Figure 127).
- If not already done, check the Enabled check-box in the top-right corner of the GUI.
- Click the Save button to record the settings. A window asking for the password will appear. Enter the password to save the settings and proceed. Clicking the Revert button prior to saving will delete the unsaved information (Figure 126).

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser	Enabled
Technology Leadership for Digital Clinema	Device Manager OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	Ċ	Check Box
IP Address	Projector Projector Auro Certainty ECNA Server IP: Save Revert			
		18:48		

# Figure 127: eCNA Added

# 12.3.3.1 Removing an eCNA Device

• To remove the eCNA device, select it in the Device Manager GUI and click the Delete Device button (Figure 126).

#### 12.3.4 Adding a JNior Device

- To add the JNior device, click the New button in the Device Manager window (Figure 123).
- The New Device drop-down window will appear. Select JNior.
- The Device Manager GUI will be updated to reflect the addition of the JNior device.
- Input the JNior Server IP address in the appropriate field (Figure 128).
- The port number field will already contain the appropriate value (factory default value).

**Note:** The JNior device documentation will provide the correct username and password (factory default values).

• Click the Save button to record the settings. A window will appear asking for a password. Enter the password to proceed. Clicking the Revert button prior to saving will delete the unsaved information (Figure 126).

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Device Manager OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<mark>ပ</mark>
Quick Access Links	New 🛞 Delete		
IP Addroso	Projector  Projector  Projector Auro		
Address	Certainty Bertifier JNior		
	Port: 9200		
	Usename: jnior		
	Password:		
		19:09	1 P

# Figure 128: JNior Added

# 12.3.4.1 Removing a JNior Device

- To remove the JNior device, click on it in the Device Manager GUI.
- Click the Delete button (Figure 126).

#### 12.3.5 Adding a Raw Device

A Raw device allows for communication with an external device across an Ethernet connection using Raw data formatted as text or binary strings.

- To add a Raw device, click the New button.
- The New Device drop-down menu will appear. Select Raw (Figure 129).
- The Device Manager GUI will be updated to reflect the addition of the Raw device (Figure 129).
- Input the name of the Raw device in the Identifier field.

<b>dore</b>	IMS100 Serial Number: 33213	<b>10</b> 32		Soreen Software Ver User Level:	IMS1000 sion: 2.6.4-0 admin / SuperUser
Technology Lea for Digital Cinem	adership Device Manager	OVERVIEW ADMINISTRATION	CONTROL MONITORING	LOGOUT	ి
Quick Access Links	ess Links	Delete	Footbad		
	Projector Auro Curtainty	Identifier: Raw	Chableu	1	
New	Raw eCNA JNior	Vendor: Unknown	h		
Bullon		Product Name: Unknown Device IP:			
		Protocol: tcp			
Delete		Port: 0			
Button					
	Save				
	ave				
				1	9:11 🔳 🏴

#### Figure 129: Device Manager GUI – Raw Device Configuration

- Specify a vendor name in the Vendor field.
- Specify a product name in the Product Name field.
- Enter the IP address of the Raw device in the Device IP field.
- Choose the protocol to be used (TCP or UDP) and the proper Port number.
- Click the Save button to record the settings. A window will appear asking for a password. Enter the password to proceed. SuperUser privileges are necessary to confirm the changes. If the user is already logged in with SuperUser privileges, the password confirmation window will not appear. Clicking the Revert button prior to saving will delete the unsaved information (Figure 126).

#### 12.3.5.1 *Removing a Raw Device*

• To remove the Raw device, click on it in the Device Manager GUI and press the Delete button (Figure 129).

# 12.3.6 Adding 3D Systems

<u>Note:</u> When using an IMS1000 configuration for 3D presentation, the projector needs to be set to the proper color space. Contact the projector vendor to configure the projector properly.

#### 12.3.6.1 Dolby 3D Support

• To enable the Dolby 3D support, please contact Doremi Labs Technical Support to receive the appropriate license (Section 1.3).

#### 12.3.6.2 RealD 3D Support

To enable the RealD 3D support, please contact RealD at cinema-support@reald.com to receive the appropriate license. Once the license has been received, follow the steps below:

- Open the Device Manager GUI by clicking on Administration  $\rightarrow$  Device Manager.
- Click the New Device button (Figure 129).
- Select the RealD 3D EQ.
- The device will be visible on the main Device Manager GUI.
- To complete the configuration, click the Save button (Figure 126). Enter the appropriate password and click Ok. Clicking the Revert button prior to saving will delete the unsaved information (Figure 126).

#### 12.3.6.3 Sensio 3D Support

• To enable the Sensio 3D support, please contact Doremi Labs Technical Support to receive the appropriate license (Section 1.3).

# 12.3.7 Closed Caption Support

 To enable Doremi Labs CaptiView and Rear Window devices Closed Caption support, install the appropriate license. For information about the Closed Caption Support, contact Doremi Labs Technical Support (Section 1.3) or visit <u>http://www.doremilabs.com/support/cinema-support/cinema-manuals/captiview-manuals/</u>.

# 12.3.8 Subtitle Engine Configuration

This section provides instructions on how to set up the Device Manager for Subtitle Engine support. It will allow the user to generate subtitles into the picture before being exported to the projector. Once the license has been received, follow the steps bellow:

- Open the Device Manager GUI by going to Administration  $\rightarrow$  Device Manager.
- Click the New Device button (Figure 129).
- The New Device drop-down window will appear.

**Note:** If the user already has a projector configured through Device Manager to display subtitles, meaning that the Enable subtitle file was set to Yes, adding the Subtitle Engine device will cause a warning window to appear asking the user to disable all projector subtitle display. The Subtitle Engine will generate the subtitle inside the picture before exporting the resulting pictures to the projector. If the user plans to use the Subtitle Engine, click the Yes button in the warning window to disable all projector subtitles.

- Select the Subtitle Engine device.
- The device will be visible on the main Device Manager GUI (Figure 130).

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Device Manager OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<u>ပ</u>
Subtitle Engine Create Quick Access Links	New       Solution         Projector       Orvice Type:       Subtilie Engine         Containty       Subtilie Engine       Enabled         Process closed caption data if no subtilie content is detected       Process closed caption data if no subtilie content is detected         Sare       Revert		
🎗 Quick Controls 😵 No Playback 🛃		20:29	

Figure 130: Subtitle Engine

• To complete the configuration, click the Save button (Figure 126). The user will be asked for a password. Enter the appropriate password and press Ok. Clicking the Revert button prior to saving will delete the unsaved information (Figure 126).

# 12.3.9 Missing License

If a license is missing, it will appear in red in the New Device drop-down (Figure 131).

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Device Manager OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<mark>ပ</mark>
Missing License	New       Delate         PROLECTOR         ALIOID PROCESSOR         AURIO         CALBOSI CAPINON         DRUMY 1201001         ECONA         JANOR         RAW         BAUMI 120 EQ         SUBTITLE ENGINE		
	Save Revert		
Quick Controls           Ø No Playback         ▲	No ingest	19:40	* <b>*</b> 1

#### Figure 131: Missing License

If the user tries to add the device with the missing license, a message will alert them to the missing license (Figure 132).



Figure 132: Missing License Message

# **12.4 Macro Editor** 12.4.1 Automation Cues

An Automation Cue is an action/demand that is sent from the IMS1000 to any external device connected to the IMS1000 for the purpose of being inserted into a Show Playlist. Upon installation of the IMS1000, Automation Cues can be predefined by the operator, transferred from an XML file, or added manually. Automation Cues can be added to CPLs and SPLs using CineLister.

# 12.5 Macro Automation Cues

A Macro Automation Cue consists of two parts, an Automation Cue and a Trigger Cue. Trigger Cues are explained fully in the Section 12.6, Trigger Cues. A Trigger Cue is an action that is sent *to* the IMS1000, whereas an Automation Cue is sent *from* the IMS1000. Also, Macro Cues are a sequence of actions, whereas an Automation Cue is only one action.

#### 12.5.1 Macro Creation Using Macro Editor

- Go to the Administration tab and select Macro Editor.
- The Macro Editor GUI will appear (Figure 133).



#### Figure 133: Macro Editor GUI

- Click on the New Macro button to begin the creation process (Figure 133).
- The user will be prompted to enter a name for the Macro Automation Cue (Figure 134).

Macro Settings	
Name of the Macro:	New Macro
Comments:	
Ok	Cancel

Figure 134: New Macro Settings

- Click the Ok button when done and the Macro Editor GUI will re-appear.
- The new macro will appear in the Macro Editor Window (Figure 135).



Figure 135: New Macro Added

• Click on Save when done creating the Macro Automation Cue (Figure 135). SuperUser privileges are necessary to save the changes. If the user is already logged in as a SuperUser, the confirmation window will not appear.

# 12.5.2 Editing a Macro Automation Cue

- To remove (delete) a Macro Automation Cue, select it in the Macro Editor window and click the Delete Macro button (Figure 135).
- To edit the name of an existing Macro Automation Cue, highlight the macro and click the Settings button or double-click on the Macro itself (Figure 135).
- Use the up and down arrows to re-arrange the Automation Cues (Figure 135).
- Click the Save button when finished (Figure 135).

• Selecting the Revert button will close a document without saving the changes. Use this with caution (Figure 135).

#### 12.5.3 Inserting Actions into Macro Cues

- Go to the Administration tab, and then select Macro Editor.
- Highlight the Macro to be affected.
- Click the Select an Action to Insert drop-down menu (Figure 136).



#### Figure 136: Add a New Action Window

- To add an action to the Macro Automation Cue, click on its corresponding action and click the Insert button (Figure 136).
- The actions available include the following:
- Projector:
  - Dowser: open or close the selected projector dowser.
  - Lamp: power on or off the selected projector lamp.
  - Projector Channel Switch: switch the selected projector channel.
  - Macro: execute the macro defined in the selected projector.
- Input/Output:
  - General Purpose Output: configure a GPO line.
  - Send Message: send a message to the connected device.
- Playback:
  - Audio Volume: control the audio volume output.
  - Playback Actions: change the playback state.
  - Video Output Actions: change the default video output format.
  - Sensio3D: enable or disable the Sensio3D output format.

- RealD SBS: enable or disable the RealD SBS output format.
- Chase Mode: enables synching of incoming time code
- Macro Control:
  - Delay: insert a delay between actions.
  - Purge Pending Macro: purge the current macro execution stack.
- Library:
  - Offers control using Certainty, eCNA, JNior, JNior Expansion Module, and more.
- System:
  - System Shutdown: allows the user to shut down the player.

Click Cancel to stop adding an action.

#### 12.5.4 Add a GPO Action to the Macro Automation Cue

- To add a GPO action, highlight the desired Macro Cue.
- Select the General Purpose Output option which is located in the Input/Output section in the Select an Action to Insert drop-down menu (Figure 136).
- Click the Insert button.
- The following window will appear (Figure 137):

line number:	0		
Value:	PULSE	 100 ms	-

Figure 137: GPO Setup Window

• Set the line number and value according to the usage and click the Ok button.

#### **12.5.5 Playback Action Insertion**

- To add a Playback Action, highlight the desired Macro Cue.
- Select the Playback Actions option which is located in the Playback section in the Select an Action to Insert drop-down menu (Figure 136).
- Click the Insert button.
- The following window will appear (Figure 138):

Playback Actions		
Choose the action:	Play	

Figure 138: Playback Actions Setup Window

• Select the proper playback action between Play, Pause, Toggle Play/Pause, Re-cue Show, Rewind, Skip to Next Clip, Skip to ShowPlaylist Segment, or Exit from Intermission, and click the Ok button.

#### 12.5.6 Video Output Action Insertion

- To add a Video Output Actions, highlight the desired Macro Cue.
- Select the Video Output Actions option which is located in the Playback section in the Select an Action to Insert drop-down menu (Figure 136).
- Click the Insert button.
- The following window will appear (Figure 139):

Default video output	
Cancel	
	put Cancel

Figure 139: Video Output Set Up Window

#### **12.5.7 Dowser Action Insertion**

- To add a Dowser Action, highlight the desired Macro Cue.
- Select the Dowser Action option which is located in the Projector section in the Select an Action to Insert drop-down menu (Figure 136).
- Click the Insert button.
- The following window will appear (Figure 140):

Projector Name:	Projector	
Value:	Close	
Close "Projector"	dowser	
	0	

Figure 140: Add a New Action Window - Dowser

# 12.5.8 Projector Channel Switch Insertion

- To add a Projector Channel Switch Action, highlight the desired Macro Cue.
- Select the Projector Channel Switch Action option which is located in the Projector section in the Select an Action to Insert drop-down menu (Figure 136).
- Click the Insert button.
- The following window will appear (Figure 141):

ProjectorName:	Projector	<b>•</b>
Value:	1	-
Switch to Project	t <b>or</b> channel number: 1	

#### Figure 141: Add a New Action Window - Channel Switch

- Choose the name of the projector from the drop-down menu window that appears (Figure 141).
- Use the plus/minus buttons to select the channel to send the command to.
- Click the Ok button.

#### 12.5.9 Automation Library Usage 12.5.9.1 Using Automation Library

Support for theater automation control is provided. The list of currently supported devices is:

- eCNA
- JNior Expansion Module
- JNior

When one of the supported devices (e.g., eCNA and JNior) is added, the Macro Editor will allow the user to use the corresponding commands for each device.

- To use a library command, click on Library in the Add an Action window and click Insert.
- The following pop-up window will appear (Figure 142):

Driver	Certainty	
Ulivel.	Ocitality	
Action:	SET_4K_MODE_OFF	
Message		
Message Label:	SET_4K_MODE_OFF	
Device Name:	Certainty	
Message Type:	Text	
Message:		
29,CTRL,1,S4KM	DDE 0 0,N,??,\r\n	

Figure 142: Library Window

• Select the desired driver and action. Click the Ok button, or Cancel to cancel this command.

# 12.5.9.2 Resulting Macro Setting

• The right part of the Automation Cue tab will display the added actions as illustrated below (Figure 143):



Figure 143: Action Added

- Click the Save button to save the settings.
- Enter the password to save settings and proceed.

# 12.5.10 Action List Management

# 12.5.10.1 Action Re-Ordering

The two arrows allow the user to change the order of the actions in the Macro Automation Cue (Figure 143). Using the arrows, each action can be moved to the top or to the bottom of the Macro Actions window.

- In order to move an action toward the top of the list, select it and click on the arrow pointing to the top.
- If an action needs to be moved toward the bottom of the list, select it and click on the arrow pointing to the bottom.
- Repeat the two steps above until the required actions order is obtained.

#### 12.5.10.2 Action Edition

The user can edit an action of any given Macro Automation Cue by highlighting it in the Macro Actions window. To edit the action, click on the Properties icon that appears on the right (Figure 143). The user will be able to edit the properties and set the action when added to the Macro Automation Cue.

#### 12.5.10.3 Action and Macro Removal

- To remove an action from the list of actions associated with a Macro Automation Cue, select the action in the Macro Actions window and click the X that appears on the right (Figure 143).
- To delete a macro in its entirety, highlight it in the left side of the GUI and click on the Delete button (Figure 143).

#### 12.5.11 Macro Saving

- Repeat the Macro creation operations for all the Macro Automation Cues and click the Save button (Figure 143).
- The user will be asked for a password to be able to perform the operation.
- Enter the appropriate password and click the Ok button. SuperUser privileges are necessary in order to be able to save changes. If you are already logged in as a SuperUser, the Password window will not appear. Selecting the Revert button will close a document without saving the changes. Use this with caution (Figure 135).
- The Macro Automation Cues will be available in CineLister in order to create a ShowPlaylist.

<u>Note</u>: The saving operation will not only save the Macro Automation Cues, but also the Trigger Cues that were created.

#### 12.5.12 Add a Macro to a Show Playlist

For information on how to add a macro to an SPL, please see Section 13.3.1.1.

IMS.OM.002949.DRM

# 12.6 Trigger Cue Tab

A Trigger Cue allows for the execution of a Macro Automation Cue upon the occurrence of an event from an external device using a Signal or General Purpose Input. When the user selects an event to occur from the external device, the occurrence of that event "triggers" a Macro Automation Cue. The Macro Automation Cue will then be executed. Both the event and the Marco Automation Cue are defined during the Trigger Cue creation.

The user can access the Trigger tab by either selecting it on the left had side of the GUI under the Macro Editor tab (Administration  $\rightarrow$  Macro Editor) or by clicking on the Trigger Cue arrow in the Macro Automation tab and Quick Controls tab (Figure 143).

**<u>Note</u>**: The Signal comes from an external device connected over the Ethernet. The external device options are: eCNA, JNior, and Raw.

**Example:** If a Trigger cue is based on the event, "Wait for GPI #1 ON," it is possible to link a specific Macro Automation Cue as presented above in order to be executed when GPI #1 is ON.

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Trigger Cue OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<mark>ပ</mark>
New Trigger Button	Year       Settings         Trigger       Action	Automation Cue	Quick Controls
A Quick Controls & No Playback 4	Save Revert	21:51	2 P <sup>8</sup>

# 12.6.1 Trigger Cue Tab Overview

Figure 144: Macro Editor - Trigger Cue Tab

#### 12.6.2 Trigger Cue Creation

The Trigger Cue tab is located under Administration  $\rightarrow$  Macro Editor  $\rightarrow$  Trigger Cue (Figure 144). Alternatively, the user may also click on the green arrow button on the right side of the Automation Cue tab to access the Trigger Cue tab (Figure 143).

• To create a new Trigger Cue, click the New Trigger button (Figure 144).

• The same type of window for the Automation Cue tab, allowing the user to enter the Trigger Cue name, will appear (Figure 145).

Trigger Settings		
Name of the Trigger:	New Trigger	
Comments:	(	
Ok	Cancel	

Figure 145: Trigger Cue Setting Window

- Enter the appropriate name. It will be the name used by the CineLister application to insert the Trigger Cue in a Show Playlist.
- The newly created Trigger Cue will appear in the Trigger window and it will be ready to connect to an event (Figure 146).

Delete Trigger	Pemi IMS10 Serial Number: 33	00		Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser
Button Quick Access	Links Quick Access Links Trigger Cue	OVERVIEW ADMINISTRATION CONTROL		LOGOUT
Settings Button	Save	- Connect to an even	nt <mark>v</mark> Add	
💲 Quick Controls				21:53 🔹 🏴

Figure 146: Trigger Cue Defined

- To edit the name of an existing Trigger Cue, select it in the Trigger window and click on the Settings button or double click on it (Figure 146).
- To remove a Trigger Cue in its entirety, select it in the Trigger window on the left side of the GUI and click the Delete Trigger button (Figure 146).

# 12.6.3 Connection to a General Purpose Input Event

• To connect a Trigger Cue to an event, select it in the Trigger window and click the Connect to An Event drop-down menu (Figure 147):

doremi	IMS1000 Seital Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser	
Technology Leadership for Digital Cinema	Trigger Cue OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<mark>ပ</mark>	
Quick Access Links	New     Delete     Settings       Trigger     Action	utomation Cue	Quick Controls	
	Connect to an event Add Connect to an event Cenneral Purpose Input Signal			Add Button
Quick Controls     Ø No Playback		22:41	🗶 (P <sup>1</sup>	

Figure 147: Events Window

- To connect the selected Trigger Cue to a GPI event, click the General Purpose Input option and click the Add button (Figure 147).
- The following window will appear (Figure 148):



# Figure 148: General Purpose Input Setup Window

- Define the GPI line number and value to connect to the Trigger Cue and click the Ok button.
- The connected GPI event will then appear in the right part of the GUI (Figure 149).

	IMS1000 Serial Number: 332132	Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser	
for Digital Cinema	Trigger Cue OVERVIEW ADMINISTRATION CONTROL MONITORING		
Quick Access Links	New         Settings           Trigger         Action	Automation Cue	
	Test wait for GPI #0 OFF	Event Addeo	t J
	General Purpose Input Add		

Figure 149: GPI Event Added

# 12.6.4 Connection to a Signal Event

- Click on the Trigger Cue that you want to assign the Signal event to.
- Click the Connect to an Event button from Macro Editor's Trigger Cue tab. The Connect to an Event drop-down window will appear (Figure 147).
- Click the Signal button and Click Add. The Signal Setup window will appear (Figure 150).

Source dev	ice name:	
Апу		•
Signal nam	<b>D</b> <sup>*</sup>	
orginal fiarri	5- 	
(18)		
[		
Select f	rom list.	
Select f	rom list.	
Select f	rom list.	
 Driver: Signal:	rom list. Certainty	*

Figure 150: Signal Event Setup Window

• Choose the device from the drop-down menu.

- Choose the driver from the drop-down menu.
- Choose the signal from the drop-down menu and the signal name will auto-populate.
- Click Ok when finished and the connected Signal event will appear in the right part of the Editor tab (Figure 151).

<b>doremi</b> Technology Leadership	IMS1000 Serial Number: 332132 Trigger: Cite OVERVIEW ADMINISTRATION CONTROL MONITORING	Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser	Signal
for Digital Chema Quick Access Links Create Quick Access Links	Ingger Cue     OVERVIEW     ADMINIS ITATION     CONTROL     MONITORING       Image: Trigger     Image: Trigger     Action	Automation Cue Quick Controls	Added Quick Controls Tab
Save Button Revert Button	Signal Add		Delete Event Button Properties Icon
♀ Quick Controls ♥ No Playback		23:09 🔳 🏴 🖣	



# 12.6.5 Editing and Deleting the Event

To edit the event associated with the Trigger Cue, highlight it in the Trigger Cue Actions window. Click on the Properties icon that appears to edit the event (Figure 151).

To delete the action associate with the Trigger Cue, highlight it in the Trigger Cue Actions window. Click on the X that appears to delete the event (Figure 151).

# 12.6.6 Trigger Cue Saving

- Repeat the Trigger Cue creation operation for all Trigger Cues that are created and click the Save button (Figure 151). Clicking the Revert button before saving will cause the unsaved information to be lost (Figure 151).
- The user will be asked for a password to be able to perform the operation. SuperUser privileges are necessary to confirm the changes. If the user is already logged in with SuperUser privileges, the password confirmation window will not appear.
- Enter the appropriate password and click the Ok button.
- The Trigger Cues will now be available within CineLister, so that the user can include them in a Show Playlist.

**Note:** The saving operation will not only save the Trigger Cues, but also the Macro Automation Cues.

# 12.6.7 Pre-Defined Macro Usage

If the user has a pre-defined macros.xml file containing automation and trigger cue definitions, then copy it into the **/doremi/etc/** folder and the corresponding macros will be visible in the Macro Editor GUI. The user will then be able to update the cues, if needed, from the Macro Editor GUI.

# 12.6.8 Default Cues

The default\_cues.xml file can be used to load an automation and trigger cues playlist prior to any playback. This is to avoid having to add a Fire Alarm trigger cue to each show. If the user is provided a default\_cues.xml file, copy it into the **/doremi/etc/** folder.

#### 12.6.9 Startup Scripts

• Copy the script to be executed automatically at boot in the following folder: /doremi/etc/rc.d/

# 12.6.10 Add a Trigger Cue to a Show Playlist

For information on how to add a macro to an SPL, please see Section 13.3.1.2.

# **12.7 Quick Controls**

The Quick Control feature provides you with the ability to use macros without having to browse through various menu items. You will be able to execute any command with the click of a mouse. The user can add multiple sections to make executing macros simple and efficient.

To access the Quick Controls tab, go to Administration  $\rightarrow$  Macro Editor  $\rightarrow$  Quick Controls. Alternatively, if you are in the Macro Automation tab or Trigger Cue tab, you can access the Quick Controls tab by clicking on the Quick Controls arrow on the right side of the GUI (Figure 151).

# 12.7.1 Creating Macros

To create macros, refer to Section 12.5.

#### **12.7.2 Setting up Quick Controls**

All of the macros created in the Macro Automation tab will automatically appear in the list of available macros on the left side of the GUI in the Quick Controls tab.

To assign a macro to a Quick Controls section:

• Click on New Section. This will create a tab to the right of the macro list and you will be able to define the section according to the function of the created macro (Figure 152).



#### Figure 152: Quick Controls New Section

• Drag the selected macro to the New Section tab and save by clicking on the Save button. If the selection has not been saved it will not appear on the Quick Controls

screen. Clicking the Revert button before saving will cause all of the changes to be lost (Figure 153).

- You can search for macros using the search field (Figure 153).
- Rename the section by clicking on the New Section tab (Figure 153).

New Section	IMS1000 Serial Number: 332132			Screen: IMS Software Version: 2.6.4 User Level: adm	1000 +0 in / SuperUser
Tab Technology Leadership for Digital Cinema	Quick Controls OVERVIEW ADD	MINISTRATION CONTROL MONITORING		LOGOUT	<b>O</b>
Quick Access Links	New Control     Drag the Macro from	m the list on the left and drop it to the section of your choic	e	Trigger Cue 📃 Automa	Macros
Search Create Quick Access Links		Favorites			Section
Field	Dowser Close Exit from Internission HDMI Intervallo Flat 3 minuti	Dowser Close Lam	p On Play		
Revert	Intervallo Flat 5 minuti Intervallo Manuale				
Button	Intervalo scope S minuti Intervalo scope S minuti Lamp Off Lamp On Play Prova Luci				
Save Button	Skip to Segment Feature_Presentation Save Revert				
	🚢 No Ingest			00:25	x (m 1

Figure 153: Creating a Quick Controls Section

- To edit the section, highlight it. Several options will appear on the right (Figure 154).
  - To delete the section entirely, click on the X to the right of the section.
  - To delete a macro within the section, click on the X to the right of the macro.
  - To rename the section, click on the rectangle to the right of the name.
     Alternatively, to change the name, you may also click on the section name itself.
  - To move the section, if there are multiple sections, click on the cross arrows.

	IMS1000 Serial Number: 332132					IMS1000 2.6.4-0 admin / SuperUser	Cross Arrows Button
for Digital Cinema	Quick Controls OVERVIEW ADP	MINISTRATION CONTROL	MUNITUHING	_	LOGOUT	<b>O</b>	
Quick Access Links	New Section     Drag the Macro from	n the list on the left and drop it to the sect	ion of your choice.		Trigger Cue 📃	Autom <sup>2</sup> .on Cue	Delete
Create Quick Access Links		Favorites				+ 🖷 X	Section
1000	Dowser Close Exit from Intermission	Dowser Close	Lamp On	Play		× K	Button
	номі						
	Intervallo Flat 3 minuti						
	Intervallo Flat 5 minuti						Change
	Intervallo Manuale						Name
	Intervalio scope s minuti						Button
	Lamp Off						Dutton
	Lamp On						
	Play						
	Prova Luci						
	Skip to Segment Feature_Presentation						Delete Macro Button
Quick Controls Quick Controls					00:29	2 P1	

Figure 154: Edit Section

# **12.7.3 Executing the Quick Controls**

When all of the sections have been set and saved, click on the Quick Controls button on the bottom left corner in the Notification Bar and the recently added macros will appear in the Quick Controls window.

- Click on previously created macro to execute it from any tab on the GUI (Figure 155).
- Clicking on the Quick Controls button in the Notifications Bar again will close the window.

doremi	IMS1000 Serial Number: 332132					Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Overview OVI	ERVIEW ADMINISTRATION	CONTROL	MONITORING		LOGOUT	<u>ပ</u>
Playback Status							
Current Stop					Next Scheduled Ev	ents No schedule	
Co. 00.00				00:	00.00		
Dowser Close Lamp On	Play				Projector		
Maaraa				'	Manual Status		
Available					Lamp		•
Quick Controls Button						10.00	

Figure 155: Quick Controls Window

# 12.8 Content Feed Manager

The main purpose of the Content Feed Manager application is to add an FTP ingest source. In addition, multiple units can be interconnected to share content simultaneously. The Content Feed Manager makes the ingestion process quicker and simpler.

# 12.8.1 Quick Configuration

To open the Content Feed Manager application, go to Administration  $\rightarrow$  Content Feed Manager (Figure 156).

	doremi	IMS1000 Serial Number: 332132				Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
	Technology Leadership for Digital Cinema	Content Feed Man OVERVIEW	ADMINISTRATION C	CONTROL MONITORING		LOGOUT	<u>ပ</u>
	Quick Access Links	📀 New 😢 Delele					
			Identifier:				
			Ingest Protocol: FTP	¥			
Advanced			Server IP:	Password:	Iest		
Options			Remote Path:				
			Hide advanced onlions				
			Authorize "play while ingest"				
			File type to scan:				
			Key Delivery Message	Doremi License 🛛 Compositi	on Playlist		
			Show Playlist	Installation Package			
		Save Revert					
	A Quick Controls 😵 No Playback					00:41	2 10 1

Figure 156: Content Feed Manager

# 12.8.1.1 Advanced Options

Clicking the Advanced Options button will open a drop-down menu where the user can configure the following file types to be used for ingesting (Figure 156):

- Authorize "play while ingest" from this server (not supported).
- Key Delivery Message allows the KDM to be ingested from the FTP or another server registered in the netmap.
- Composition Playlist (enabled by default) allows import or FTP of a CPL into the server.
- Installation Package software, security manager, firmware packages for upgrades.
- Doremi License (DLM) Doremi License Messages, e.g., Dolby3D, RealD, 4K Enabled, etc.
- Show Playlist click this box to be able to export and then import a SPL from one server to another.

• Click the Save button to save the configuration. The server is now added to the Content Feed Manager network (Figure 157).

# 12.8.2 Adding a Server Manually12.8.2.1Networking the Server(s)

- The Content Feed Manager GUI can be manually set up by clicking the New button. This will allow the user to add a new server for which the fields will have to be manually entered.
- Click the New button to add a new server. The following fields will appear (Figure 157):

doremi	IMS1000 Serial Number: 332132	Soreen: IMS1000 Software Version: 2.8.4-0 User Level: admin / SuperUser
Technology Leadership for Digital Cinema	Content Feed Man OVERVIEW ADMINISTRATION CONTROL MONITORING	
Quick Access Links New Button Delete Button	New       Server 1         Ingest Protocol:       FTP         Server IP:       0.0.0         Username:       manager         Password:       ••••••••         Renode Path:       ••••••••         Hide advanced options       ✓         Authorize "play while ingest" from this server       File how to scare:	Test Button
Button	Key Delivery Message Dorenii License 🗹 Composition Playtist Show Playtist 🗹 Installation Package	Advanced Options
Save Button	Save Revert	
♣ Quick Controls ♦ No Playback		18:43 💌 🏴

Figure 157: Add New Server

- Enter the Identifier name in the Identifier field. It is recommended that a unique identifier be used (e.g., screen 1, screen 2, etc).
- The Ingest Protocol is set at FTP.
- Enter the IP address for the server.
- Optional: Click the Test button to test the IP connection (Figure 157). A pop-up window will appear that will test the connection. Click the Close button to exit this window.
- Enter the Remote Path for the destination of the server. The user will have to manually enter the Remote Path.
- Click the Save button to save your changes. Clicking the Revert button before saving will cause the user to lose all of the changes (Figure 157).

# 12.8.2.2 Advanced Options

Clicking the Advanced Options button will open a drop-down menu where the user can configure the following file types to be used for ingesting (Figure 157):

- Authorize "play while ingest" from this server (not supported).
- Key Delivery Message allows the KDM to be ingested from the FTP or another server registered in the netmap.
- Composition Playlist (enabled by default) allows import or FTP of a CPL into the server.
- Installation Package software, security manager, firmware packages for upgrades.
- Doremi License (DLM) Doremi License Messages, e.g., Dolby3D, RealD, 4K Enabled, etc.
- Show Playlist click this box to be able to export and then import a SPL from one server to another.

Click the Save button to save the configuration. The server is now added to the Content Feed Manager network (Figure 157).

#### 12.8.3 Deleting a Server

• Delete a server from the Content Feed Manager list by selecting it and clicking on the Delete Repository button (Figure 157). This will also remove it from the Ingest Manager drop-down list of servers to ingest from.

# 12.8.4 Ingesting from a Server That Was Added

 In order to ingest material (restrictions are based on the Advanced Options settings) on the destination unit, the user will need to open the Ingest Manager application (Control → Ingest Manager). Select the unit that was just added in the Content Feed Manager application as a source/feed (Figure 158).

doremi	<b>MS1000</b> ial Number: 332132	Soreen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser
Technology Leadership for Digital Cinema	est Scan OVERVIEW ADMINISTRATION CONTROL MONITORING	
Quick Access Links Create Quick Access Links New Server	Refresti Lucation	Upload Digest Monitor
	sets found L(s): 0 SPL(s): 0 PKG(s): 0 KOM(s): 0 DLM(s): 0	PKL(s): 0 Other(s): 0
		40.54

# Figure 158: Ingesting

- This will populate the Ingest Manager application scan tab window with all the content available for ingest from the selected source/feed unit.
- Select the desired material to ingest.
# 12.9 Terminal

To log into the Terminal tab (Administration tab  $\rightarrow$  Terminal), enter the admin user login name and password (Figure 159).



Figure 159: Terminal Login

If possible, all changes made to settings should be done through the Terminal GUI.

# 12.10 System

The System Tab (Administration tab  $\rightarrow$  System) allows the user to restart, shutdown, and place the unit in standby.

- To restart the IMS1000, press the Restart button. You will be disconnected from the web interface in 5 seconds (Figure 160). The user has the option to cancel the action.
- To shut down the system, click the Shutdown button (Figure 160).
- To place the unit in standby, click on the Standby button (Figure 160). The user will be asked to confirm the operation.

Shutdown Button	IMS1000 Serial Number: 332132 System OVERVIEW ADMINISTRATION CONTROL MONITORING	Screen: Software Version: User Level: LOGOUT	IMS1000 2.6.4-0 admin / SuperUser	
Quick Access Links Create Quick Access Links Standby	<ul> <li>To enter Standby mode, click the Standby button. The server will not be operational.</li> <li>To restart the system, click the Restart button. You will be automatically disconnected from the web interface.</li> <li>To start down the system, click the shutdown button.</li> </ul>			Power Button
Button	Standby Restart Shutdown			Logout Button
Restart Button				
A Quick Controls & No Playback		00:30	) 🗶 🎮 💶	

#### Figure 160: System GUI

If content is currently being played, a window will appear asking the user to confirm the restart or shutdown.

The user can also quickly logout, restart, shutdown, or cancel from any tab on the GUI by using the quick access buttons.

- Clicking the Logout button will automatically logout the user (Figure 160).
- Clicking on the red Power button will give the user the option to restart, shutdown, or cancel (Figure 160 and Figure 161).



#### Figure 161: Quick Access Power Options

# **12.11 Log Operator Maintenance**

The Log Operator Maintenance is an application that lets the operator log important information (e.g., hard disk replacement, projector lamp replacement, etc.). It will help the system administrator keep track of any change operated in a theater booth. The log records created with the Log Operator Maintenance application are stored for one year.

The Log Operator Maintenance application is available in Administration  $\rightarrow$  Control Panel  $\rightarrow$  Log Operator Maintenance.

The tab will default to the Event Log tab.

#### 12.11.1 Event Log Tab



#### Figure 162: Event Log Tab

- To create an event log, click on the New button (Figure 162).
- The user will need to authenticate themselves as admin by inputting the correct password to be allowed to use this application.
- The following window will appear (Figure 163):

	Record Maintenance Event
	Select the subject that best describes the operation maintenance you have done and press Record to permanently store the event.
	Author: admin Subject: Annual maintenance activities
Cancel Button	Visual board inspection, dust removal,
Record Button	Record Cancel

#### Figure 163: Record Maintenance Window

- The Author of the log will be shown as "admin."
- Add a comment in the Comment field. No restrictions apply for the Comment field, but it
  is highly recommended that the operator/technician insert comments about the job
  performed as accurately as possible. This will be used for future references about
  maintenance. The log will be recorded based on the date and time when the log was
  entered into the Log Operator Maintenance application.
- Click the Record button or Cancel to cancel the operation (Figure 163).
- The logs that were added can be viewed in the Event Log tab (Figure 164).
- Click on the concerned log to view its properties/details (Figure 164).

doremi	IMS1000 Serial Number: 332132				Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser	Scheduled
Technology Leadership for Digital Cinema	Event Log OVERVIEW	ADMINISTRATION	CONTROL	MONITORING	LOGOUT	<u>5</u>	Tasks Tab
Quick Access Links	Rew				Event Log	Scheduled	
Create Quick Access Links	Subject	Author	Execution Date				
	Annual maintenance activities	admin	0 minute ago				
	Annual maintenance activities	admin	28 days ago				
	Annual maintenance activities	admin	8 months ago				
	<b>Comment</b> Fai la manutenzione ordinaria ( disk clean up el	2)					
Ouick Controls     Ø No Playback	± No Innest				19.18	x P1	



### 12.11.2 Scheduled Tasks Tab

The Scheduled Tasks tab lists the different maintenance operations that exist for the IMS2000 (Figure 165).

It lists, per maintenance operation, the last time the operation was performed and the next time the operation will have to be performed. For the IMS1000, the only type of maintenance operation is annual maintenance activities.

The tab is not modifiable.

To access the Scheduled Tasks tab, click on the green arrow on the right hand side of the GUI while in the Log Operator Maintenance tab (Figure 164).



Figure 165: Scheduled Tasks Tab

# 12.12 Account Manager GUI

To access the Account Manager GUI, go to Administration  $\rightarrow$  Control Panel  $\rightarrow$  Account Manager.



• The following window will appear (Figure 166):

Figure 166: Account Manager GUI

• The Account Manager GUI allows the user to edit, add, and delete user accounts.

### 12.12.1 Add a New User Account

- To add a new user account, click the New button (Figure 166).
- The following window will appear (Figure 167):

Login:		]
Full Name:		
Group:	Inactives	
Login Type:	Virtual	
Password:		
Confirm:		

Figure 167: Account Manager GUI – New User Addition

- Enter the username (to be used for login) in the upper empty field and the associated full name used to describe the user. Both names will be displayed in the window after the new user addition is completed.
- Select the proper privileges. They are listed below from the lowest level to the highest level of privileges (Figure 168):
  - **Inactive:** This user does not have any privileges.
  - Ingest: The user is allowed to ingest content.
  - **Projectionist**: Projectionist is a standard user allowed to use the Doremi applications present on the unit without changing the configuration.
  - **Show Manager**: In addition to Projectionist's privileges, a Show Manager user is allowed to ingest and delete content, and to save ShowPlaylists.
  - SuperUser: In addition to Show Manager's right, a SuperUser has the privileges to configure the unit and to create, modify, and delete user accounts. For example, the SuperUser can update the firmware and software.

	Add User	
	Login:	
	Full Name:	
	Group:	Inactives
		Inactives
	Login Type:	Ingests Projectionists
-	Password:	Superlisers
Save Button	Confirm:	
	Save	Cancel

#### Figure 168: Account Manager GUI – Privileges Definition

- Furthermore, two different login types are available for the user:
  - Application: Virtual user account only works with Doremi applications.
  - System: Regular Linux user account that can be used anywhere on the system. For example, on Linux terminal windows.
- Define the password by typing the desired password.

**Note:** The user will be provided information about the strength of the chosen password. Confirm the password in the Confirm field.

- Click the Save button to save the new user (Figure 168).
- The new user account will be visible in the main Account Manager GUI (Figure 169):

	doremi	IMS100 Serial Number: 3321	<b>))</b> 132					Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
	Technology Leadership for Digital Cinema	Account Manager	OVERVIEW	ADMINISTRATION	CONTROL	MONITORING		LOGOUT	<u>ئ</u>
Quick Access Links	Quick Access Links	and the second s							
	Create Quick Access Links	Login	Full Name			Login Type	Group		
		admin	112			System	SuperUsers		
	1000	doremi				System	Projectionists		
	10000	ingest				System	Projectionists		
		ingestkdm				System	Ingests		
Nour		manager				System	ShowManagers		
New	1000	root	root			System	Administrators		
User		Test	Test			Virtual	Inactives		
Added	1000								
	♀ Quick Controls							19:59	

Figure 169: Account Manager GUI – New User Added

## 12.12.2 Edit an Existing User Account

- To edit an existing user account, select it within the Account Manager GUI.
- The following dialog box will appear allowing the user to edit the user properties but not the username or the login type (Figure 170).

Edit User		
2	Test	
Full Name:	Test	
Group:	Inactives	-
Login Type:	Virtual	
Set password		
Save	Close	

### Figure 170: Account Manager GUI – User Properties Editing

- Click the Save button when finished editing the settings.
- Click the Close button when finished with the configuration.

## 12.12.3 Delete An Existing User Account

- To delete an existing user account, hover over it within the main Account Manager GUI and click the X that appears on the right side of the screen (Figure 166).
- The user will be asked for a confirmation. Clicking OK will delete the user account (Figure 171).

Deven	es alle sus at	
Do you	reany want	to delete fest ?

#### Figure 171: User Account Deletion Confirmation

## **12.13 Theater Properties**

The Theater Properties tab allows the user to specify theater properties, such as the facility name, address, auditorium specifics, and contact information. The user may add one facility per IMS1000. To access the Theater Properties tab, go to Administration  $\rightarrow$  Control Panel  $\rightarrow$  Theater Properties.

This information is necessary as it contains information needed for the generation of the FLM file. The information is used by studios in KDM management.

### 12.13.1 Auditorium Tab

The Theater Properties tab defaults to the Auditorium tab. Here the user can input the auditorium specifics such as screen aspect ratio and screen color. Click the Save button to save the changes. Clicking the Revert button without saving will cause all of the changes to be lost (Figure 172).

deemi	1110/000	Screen: IM\$1000
UUFEIIII	IIVISTUUU Serial Number: 332132	Software Version: 2.6.4-0 User Level: admin / SuperUser Tab
Technology Leadership for Digital Cinema	Auditorium OVERVIEW ADMINISTRATION CONTROL MONITORING	
Quick Access Links		Contasts Facility
Create Quick Access Links	Auditorium Srraen Nama: IMS1000	
Button	Screen Aspect Ratio: 2.39	
	Screen Masic None	
	Screen Color. White	
	Audio Format: Dolby 5.1	
Save	Save	
Button		
		and the second
		20:52 💌 🏴 🖣

Figure 172: Auditorium Tab

## 12.13.2 Contacts Tab

To access the Contacts Tab, use the arrow at the right side of the Theater Properties tab (Figure 172).



Here the user can input the information of the appropriate contact for the facility (Figure 173).

Figure 173: Contacts Tab

- Click on the New button (Figure 173).
- The Add Contact window will appear (Figure 174).
- Fill out the appropriate information and click Save or Cancel to cancel the operation (Figure 174).
- The contact will appear in the Contacts tab.
- To delete a contact, hover over it and click on the X that appears on the right (Figure 173).

	Add Contact
	Name:
	Phone1:
	Phone2:
<b>Sava</b>	Email:
Button	Country: UNITED STATES (US)
	Save Cancel

Figure 174: Add Contact Window

## 12.13.3 Facility Tab

The access the Facility tab, use the arrow at the right side of the Theater Properties tab (Figure 173).

Here the user can input the facility's name and address. Click the Save button to save the changes. Clicking the Revert button without saving will cause all of the changes to be lost (Figure 175).

dor	emi IMS10 Serial Number: 333	00		Screen: IMS1000 Software Version: 2.6.4-0 User Levet: admin / SuperUser
Techn for Dig	nology Leadership Facility	OVERVIEW ADMINISTRATION	CONTROL MONITORING	LOGOUT
Revert Button	Links Quick Access Links Facility Finance Entity Name: Name:	Addr Street City:	255 Address	Auditorium Contacts
Save Button	Oreut	Provin Postal Count	2e	
	Save	vert		
Cuick Controls				21:05 💌 🏴

Figure 175: Facility Tab

# 12.14Quick Access Links

The Quick Access Links application allows the user to create links on the left-side of the GUI, to be quickly accessed by the user from anywhere on the GUI. The links are available on every tab of the GUI.

To access the Quick Access Links application, go to Administration  $\rightarrow$  Control Panel  $\rightarrow$  Quick Access Links or click on the Quick Access Links tab on the left-side of the GUI (Figure 176).

A maximum of 12 links can be created.

doe	emi ims	\$1000	Screen: Software Version:	IMS1000 2.6.4-0
Quick	Serial Nu	mber: 332132	User Level:	admin / SuperUser
Access Technol for Digit	logy Leadership tal Cinema	ESS LINKS OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<mark>ပ</mark>
	• Quick /	ccess Links are displayed on the left and allow you to configure a direct link to the Web1 II specified page		
T ab Create Qu	uick Access Links			
	Add a Qu	ck Access Link		
	Select link:	Select a location		
		+		
		+		
	Save	Revert		
Outick Controls	🕫 No Playback 📩 No Incest		21.11	x [10]

#### Figure 176: Quick Access Links

To create a new Access Link, select the desired tab from the drop-down list and click the Add button (Figure 177).





The selected link will appear in the window (Figure 178).

doremi	IMS1000 Serial Number: 332132		Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Quick Access Links OVERVIEW ADMINISTRATION CONTROL MONITORING		LOGOUT	<u>ပ</u>
Quick Access Links	Quick Access Links are displayed on the left and allow you to configure a direct link to the WebUI specified page.  Add a Quick Access Link			
	Select link: System	nk		
	O Administration > System	•		
		+		
1000				
	Save Revert			
A Quick Controls 😵 No Playback	🚢 No Ingest		21:19	🗶 💌 🏝

#### Figure 178: Link Added

To edit the link, highlight the link (Figure 179).

- To delete the link, click the X.
- To rename the link, click the rectangle.
- To revert to the default name, click the curving arrow.
- For information on the action performed by the link, click the information button.

docemi	IM\$1000	Screen:	IMS1000	
	Serial Number: 332132	Software Version: User Level:	2.6.4-0 admin / SuperUser	Rename
Technology Leadership for Digital Cinema	Quick Access Links OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	Ċ	Button
	Quick Access Links are displayed on the left and allow you to configure a direct link to the WebUI specified page.			
Create Quick Access Links	Add a Quick Access tink			Delete
	Select link: System   Add a Quick Access Link			Button
	🧕 Administration > System			
	•			
Povort				
Button				
	Save Revent			Revert
Save				Button
Cuick Controls & No Playback		21:34	2 1 2	

Figure 179: Editing the Link

Once you have finished adding links, click the Save button. Clicking the Revert button will delete all unsaved changes (Figure 179).

After saving and refreshing, the newly added link will appear on the left-hand side of the GUI in all tabs (Figure 180). Clicking on the link will automatically take the user to the designated tab.

doremi	IMS1000 Serial Number: 332132				Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Control Panel OVERVIEW	ADMINISTRATION	CONTROL MONITORING		LOGOUT	<u>မ</u>
Added Link	System Settings  Account Manager  Account Manager  Account Manager  Autority Configuration  Culck Access Links  Coordinates  Coordinate		Content and Playback Audio Settings Audio Delay - Channel Mapping Cinelister Configuration Content Feed Manager Live Manager Macro Editor Automation Cue - Quick Controls - Trigger (	Ve Hardware a Backup Device I License Automa Ve Log Ope Event Log Thresho	and Maintenance Manager Agreement lic Log Upload Manag rator Maintenance - Scheduled Tasks Id Manager	per
Ruick Controls 😵 No Playback					21:37	· · ·

Figure 180: Link Added

# **12.15Cinelister Configuration**

The Cinelister Configuration application allows the user to configure certain components of the Cinelister application. Cinelister is discussed in detail in Sections 13 through 13.8.

To access the Cinelister Configuration application, go to Administration  $\rightarrow$  Control Panel  $\rightarrow$  Cinelister Configuration (Figure 181).

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser	
Technology Leadership for Digital Cinema Quick Access Links 3 System	Cinelister Configu     OVERVIEW     ADMINISTRATION     CONTROL     MONITORING       Editor configuration       Seek value (in seconds) when you click on Forward and Backward buttons in Playback:     180     sec       Seek value (in seconds) to substract to the last timecode in case of emergency recover:     180     sec       Scheduler configuration     Scheduler configuration     Scheduler configuration	LOGOUT	C	Fast- Forward and Rewind Value
	First day of the week of the scheduler: Monday			Emergency Recovery Value
A Quick Controls & No Playback a	± No Ingest	22:35	* *	

## 12.15.1 Editor Configuration

Figure 181: Cinelister Configuration, Editor

To modify the amount of time that the fast-forward and rewind buttons will jump to in playback, type the amount of seconds in the space provided (Figure 181).

To modify the amount of time that playback will rewind to in the case of an emergency recovery, type the amount of seconds in the space provided (Figure 181).

## 12.15.2 Scheduler Configuration

To modify the first day of the week in the Cinelister Schedule tab, select the day from the dropdown menu (Figure 182).



Figure 182: Cinelister Configuration, Schedule

Click Save to save the changes and Revert to undo any unsaved changes (Figure 182).

# 12.16 Live Manager

The Live Manger application allows the user to add a Virtual Device as a source of a live event. These live CPLs can be added to Show Playlists in Cinelister.

To access the Live Manager GUI, go to Administration  $\rightarrow$  Control Panel  $\rightarrow$  Live Manager (Figure 183).

dorem	IMS100 Serial Number: 3321	<b>DO</b> 132			Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadersh for Digital Cinerna	ip Live Manager	OVERVIEW ADMINISTRATION	CONTROL	MONITORING	LOGOUT	<mark>ပ</mark>
Live Manager Tab	.inks Create a new Live	Playlist Composition				
	Live source device type:	Doremi Streamit				
	Content title: Device IP: Create	Doremi Streamit	Channel:	1		
Culick Controls 49 No Pla	rback 🕹 No Ingest				22:43	× 191

Figure 183: Live Manager

# 12.16.1 Creating a Live Event

To create a live CPL, allowing a live event, follow the steps below.

• Select the live source device type from the drop-down (Figure 184).

dore	MI IMS100 Serial Number: 3321	DO 132			Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology for Digital Ci	r Leadership Live Manager	OVERVIEW ADMINISTRATION	CONTROL MONITORIN	NG	LOGOUT	ి
Quick Access Links & Create Quick	Access Links	taylist				
Live Source Type	Live source device type: Content title: Device IP: Create	Doreni Streamt Dereni Streamt Mediablock HDMI Mediablock HD-SDI	Dhannel 1			
♀ Quick Controls					22:45	

Figure 184: Live Source Device Type

- Enter the live CPL content title in the Content Title field (Figure 185).
- Enter the IP address of the external Live Event in the Device IP field (Figure 185).

doremi	IMS1000 Serial Number: 332132		Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUs
Technology Leadership for Digital Cinema	Live Manager OVERVIEW ADMINISTRATION CONTROL	MONITORING	LOGOUT
Quick Access Links	Live Composition Playlist		
Content			
Title	Create a new Live Composition		
	Live source device type: Doremi StreamIt	<b>•</b>	
	Content title: Doremi StreamIt		
Device IP	Device IP: 42.0.001 Channel: 1		
			22:52 🗶 🎮

### Figure 185: CPL Title and IP

- Click the Create button to complete the live CPL creation (Figure 186).
- The Live CPL is now visible in the Live Manager main window (Figure 186).

	doremi	IMS100 Serial Number: 33213	0					Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
	Technology Leadership for Digital Cinema	Live Manager	OVERVIEW	ADMINISTRATION	CONTROL	MONITORING		LOGOUT	<del>ن</del>
Live CPL	uick Access Links Create Quick Accors Coms	Live Composition Pla	ylist						
		Live source device type: Content title:	Doremi Stream Doremi Streaml	ıt t			•		
		Device IP: Create	42.0.0.1						
*	Quick Controls 😵 No Playback 📩							22:56	2 1

Figure 186: CPL Created

**<u>Note</u>**: The MPEG Streamer format is dynamically handled. This means that the 4:2:2 vs 4:2:0 parameter is automatically detected from the MPEG stream itself. There is no need to provide this information to the playback engine.

• Repeat the steps above as many times as necessary to generate another live CPL.

To view the properties of the CPL, highlight the CPL and click on the Properties button on the right-hand side (Figure 186).

Properties	Assets	SPL(s)	KDM(s)			
Title:	Dorerni Streamlt					
Video:	MPEG2, 1920x1	080, @24		Kind:	live	
Audio:	PCM, 24b, 6ch			Disk size:	3.91 KB	
Caption:				Standard:	Smpte	
Subtitle:	1 track			Duration:	00:00:00	
ID:		um:uuid:82bf4	9a0-5135-1b65-:	218e-61a18757c482		* =
Creation:		2014-06-03T1	9:07:02+02:00			1.0
Creator:		Live Manager 2	.6.4-0			
Company:						-

Figure 187: CPL Properties

This information is the same information provided in the Content Manager Composition Playlist tab (Figure 187). See Section 13.10.2 for more detailed information.

#### 12.16.2 Live Event in Cinelister

To use the Live CPL, allowing a live event, open CineLister (go to Control  $\rightarrow$  CineLister).

• The newly created live CPL will be visible under Live in the left part of the Editor tab allowing the user to insert it in a Show Playlist like any standard CPL (Figure 188).

For more information on Show Playlist building, see Section 13.

dorei	IMS100 Serial Number: 33213	0		Screen: IM Software Version: 2.0 User Level: ad	IS1000 6.4-0 Imin / SuperUser
Technology Lea for Digital Ciner	adership <b>Editor</b>	OVERVIEW ADMINISTRATION CONTROL	MONITORING	LOGOUT	<mark>ပ</mark>
Quick Access Links	Refresh	New 🚞 Open 💾 Save 💥 P	roperties 🔀 Delete	Schedule 📃 Playb	lack
Create Quick Acc	cess Links All available element	s	Show Playlist		
Live	all elements Skip to Segment	Feature Presentation	SPL. Snow Playlist, 20		
	66 Live				+
CPL	Doremi Streamlt				*
	🍪 Pattern				
	Black				
	30 Black 3D				
	6 Trailer				
	BRIDESMAIDS_1	TLR-1_F_EN-XX_US-GB_51_2K_UP_20110201_UDS			
	🦪 Trigger Cues				
	GPI 1 OFF				
	Test				
			start nine   Elements		
Cuick Controls 😵 1				22:59	2

#### Figure 188: Live CPL Inserted in a Show Playlist

## 12.16.3 Deleting a Live CPL

• To delete an existing live CPL, select it in the Composition Playlist tab of the Content Manager application. Click the Delete button (Figure 189).



Figure 189: Deleting a Live Event

The live CPL will be deleted from the Live Manager as well.

IMS.OM.002949.DRM

# 12.17 Backup Manager

The Backup Manager allows users to backup, delete, and restore files saved on a unit. This application allows the user to back up and restore the following files on a server:

- Doremi: These files include configuration files, devices, SNMP threshold, audio, Macros, and databases.
- Identity: These files include Doremi SecurityModule identity certificates.
- KDMs: These files include KDMs and DLMs.
- Network: Includes IP addresses, DNS configurations, etc.
- System: These files include system user accounts, group configurations, and timezone information.

<u>Note</u>: The Backup Manager will generate an automatic backup of these files daily. The most recent backup is restored. The user can manually back up files to the local drive or external drive (e.g., e-SATA or USB), or restore from an external drive at any time.

**Note:** Support is forthcoming for FTP backups.

#### 12.17.1 Automatic Backup of System

The Backup Manager application will generate an automatic backup file to the local drive (e.g., RAID) daily. It will also allow the user to back up and restore the configuration files to and from an external drive (e.g., e-SATA or USB).

**<u>Note</u>**: The user does not have control over the time at which the automatic backup is generated. The backup will generate at 6:25 GMT or at the next boot up.

#### 12.17.1.1 Viewing the Backup File Record(s)

To open the Backup Manager application, go to Administration  $\rightarrow$  Control Panel  $\rightarrow$  Backup Manager.

The Restore Backup tab will appear, showing the latest backups available (Figure 190).

doremi	IMS1000 Serial Number: 332132		Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema Quick Access Links Backup tab	Backup Manager         OVERVIEW         ADMINISTRATION         CONTROL           • Legends: <u>Automatic</u> Backup <u>Clock</u> 700 FTP Backup	MONITORING	LOGOUT	C.
Last Backup Performed	Restore backup         Generate backup           Location:         Al locations           Im: 332132_2014-05-20123.32.35         Im: 332132 2014-06-20106:25:10           Im: MS1000 332132 2014-06-19106:25:10         Im: MS1000 332132 2014-06-19106:25:10           Im: MS1000 332132 2014-06-19106:25:11         Im: MS1000 332132 2014-06-18106:25:11	Fullname:         /opt/backup/IMS1000_332           Description:         ims 332132_2014-05-2017           Date:         2014-06-20123-32-40+02           Product Name:         MS1000           Seriat:         332132           Hostname:         MS1000	132_2014-06-201721-32-40 dbk. 23.32:35 :00	<sup>zip</sup> Bac In
	INS1000 332132 2014-06-16706:25:10           INS1000 332132 2014-06-15706:25:10	Group: local IP Adress: 10.11.24.105 File Size: 121 kbytes		

### Figure 190: Home Page

• Clicking on the backup file will display details about the backup on the right-hand side (Figure 190).

### 12.17.2 Restoring the System to a Previous Backup

This section applies to units that have had any storage component changed. Every time a storage component has changed, the user will receive a message asking to restore the configuration files (Figure 191):

- **Yes:** The user can choose to restore now by clicking on Yes. This will restore the configuration files on the RAID to the new SSD flash drive.
- No: The user can choose not to restore now by clicking on No. This will generate a backup file based on the current configuration on the SSD flash and place it on the RAID.

<u>Note</u>: If you select No by mistake, you can manually restore the latest configuration from the second most recent record.

• **Ignore:** The user can choose to ignore the message for now by clicking on Ignore. This will perform no restore or backup processes.

## 12.17.3 Restoring the Configuration Files



Figure 191: Restore

- To restore the configuration files now, click on Yes.
- A confirmation window will appear, asking to proceed with the restoration process. Click on Yes.
- A log in window will appear. Enter the appropriate password and click on Ok.
- The restore process will now begin (Figure 192).
  - Note: You may cancel at any time by clicking on the Cancel button.



Figure 192: Restore Process Window

- Click on the Close button to exit out of the Restore window.
- To view the backup, go to the Restore Backup tab.
- The restore process is now complete.

#### 12.17.4 Manual Back Up and Restore

<u>Note:</u> This section assumes the user wants to manually back up or restore the configuration files at any time. The user can back up or restore the configuration files to a local drive (RAID) or to an external drive (e.g., e-SATA or USB).

Back up or restore cannot be performed while unit is in playback.

IMS.OM.002949.DRM

## 12.17.4.1 Manual Back Up to RAID

- To manually back up the material on the hard drive, click on the Generate Backup tab (Figure 193).
- Click on Generate (Figure 193).

doren	IMS1000 Serial Number: 332132	Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser	
Technology Lea for Digital Cinem	Backup Manager OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	
Quick Access Links Generate Backup	Legends: O Automatic Backup C Local Backup P FIP Backup E FIP Backup E External Media     Glick "Generate" button to generate a new backup then select a location.     Glick "Restore" button to restore the selected backup then select categories.		Generate
	Restore backup Generate backup Last Auto Backup Date: 2014-06-20 06:25:10 GMT +02:00		
	ims 332182_2014-05-20123:35:40		
A Quick Controls 😵 N		23:35 🔹 🏴 🛽	

Figure 193: Backup

• The following window will appear (Figure 194). Select the location where you want to save the backup file. You can either save to local disk (RAID) or to an external drive. Click on the Ok button.

Select the location where the backup file will be saved.	
Local Disk	Location Drop-
Ok	Down

Figure 194: Generate Button

- The backup process will now begin.
- The Backup Generation window will appear (Figure 195). This will indicate the backup process was a success.



Figure 195: Backup Generation Window

- Click on the Close button to exit out of the Backup Generation window.
- To view the backup, go to the Restore Backup tab.
- The manual backup process is now complete.

### 12.17.4.2 Manual Back Up to External Drive

To back up the configuration files manually, to an external drive (e.g., e-SATA or USB), follow the instructions in this section.

- Insert an external storage device into the unit. For this example, a USB flash drive will be used.
- Click on Generate Backup tab and click on the Generate button (Figure 193).
- Select the USB from the drop down and click on the Ok button (Figure 196).

	ж.	
elect the	location where the backup file	will be saved.
	Local Disk	
	Local Disk	
OF	USB Disk #0	

Figure 196: Select Location of Backup File - USB

- The backup process will now begin.
- The Backup Generation window will appear (Figure 197). This will indicate the backup process was a success.





- Click on the Close button to exit out of the Backup Generation window.
- To view the backup, go to the Restore Backup tab (Figure 198).

	doremi	IMS1000 Serial Number: 332132	Screen: IMS1000 Software Version: 2.6.4-0 User Level: <b>admin / SuperUser</b>
	Technology Leadership for Digital Cinema	Backup Manager OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT 🕐
USB Backup	Quick Access Links Create Quick Access Links	Lagends: 🛜 Automatic Backup 👩 Local Backup 😭 FTP Backup 🗮 Edemal Media     Lick: "Generalir button to generate a new backup them select a bocation.     Cick: "Restorn" button to restore the selected backup them select categories.	
Dackup		Restore backup Generate backup	
		Location: All locations	
		ims 332132_2014-05-20123:44:36	
		ims 332132_2014-05-20123:32:35	
		3 IMS1000 332132 2014-06-20T06:25:10	
	1000	o IMS1000 332132 2014-06-19T06:25:10	
		ims1000 332132 2014-06-18T06:25:11	
		IMS1000 332132 2014-06-17T06:25:11	
		MS1000 332132 2014-06-16T06:25:10	
	A Quick Controls & No Playback		23:44 💌 🏴 💈

#### Figure 198: USB Restore

- **Note:** The USB backup will only appear if the USB or external device is plugged in.
- The manual backup process is now complete.

### 12.17.5 Deleting Backup File(s)

 If you want to delete a backup file that was previously generated, select the file from the Restore Backup tab and click on the Delete button (Figure 199).



#### Figure 199: Delete Button

• The following confirmation window will appear. To continue the deletion process, click on the Yes button (Figure 200).



#### Figure 200: Confirmation Window

• The backup file is now deleted.

## 12.17.6 Restoring Backup File(s)

### 12.17.6.1 Restoring from RAID

• To restore any or all files, select the backup file from the left hand side and click on the Restore button (Figure 201).

	doremi	IMS1000 Serial Number: 332132	Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser
	Technology Leadership for Digital Cinema	Backup Manager OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT 🔱
All backup files previously	Quick Access Links	Legends:      Charter Ladoratic Backup      Charter Ladoratic Backup      FIF Backup      FIF Backup      External Media     Chart "Generater buttorn to generate a new backup then select a location.     Clark "Restore" buttorn to restore the selected backup then select catingories.     Restore backup     Generate backup	
generated		Location: All locations  Location: All locations  Fullname: /opt/backup/IMS1000_332132_2014-  Description: ims 332132_2014-05-20123.32.35  Mistion0 932192 2014_06-20123.32.35	06-201721-32-40.dbk.zip
		Date:         2014-06-20123-32-40+02-00           Imit:         NS1000-332-132-2014-06-19T06:25-10         Product Name:           Imit:         NS1000         Sazi-132-2014-06-19T06:25-10           Imit:         NS1000         Sazi-132-2014-06-19T06:25-11           Serial:         332132	
Restore Button		Imstance         Hostname:         Imstance         Imstance	
		MIS1000 332132 2014-06-15T06:25:10	
	Quick Controls		23:37 🔹 🏴

Figure 201: Restore Button

- A log in screen will appear. Enter the appropriate password and click on OK.
- The Restore Category Selection window will appear (Figure 202). Here, you will be able to choose which types of files to restore, or you can select all files to restore:
  - Doremi: These files include configuration files, devices, SNMP threshold, audio, and databases.
  - o Identity: These files include Doremi SecurityModule identity certificates.
  - KDMs: These files include KDMs and DLMs.

- Network: Includes IP addresses, DNS configurations, etc.
- System: These files include system user accounts, group configurations, and timezone information.



#### Figure 202: Restore Category Selection Window

- For example, if you decide to select "kdms," highlight the item on the left and click on the Restore button.
- The Processing window will appear (Figure 203).
- You will be required to reboot the system to complete the restore process. To reboot the system, go to the System tab (Figure 203).



Figure 203: Processing Window

- If you decide not to reboot, click on Close button. The unit will not reboot. This will not complete the restore process.
  - **<u>Note:</u>** The reboot process will take approximately 3 minutes to begin.
- The restore process is now complete.

## 12.17.6.2 Restoring from an External Drive

- Insert the external drive into the unit. The backup will appear in the Restore Backup tab (Figure 204).
- Select the backup file from the left hand side and click on the Restore button (Figure 204).



Figure 204: Restore

- A log in screen will appear. Enter the appropriate password and click on OK.
- The Restore Category Selection window will appear (Figure 205). Here, you will be able to choose which types of files to restore, or you can select all files to restore:
  - Doremi: These files include configuration files, devices, SNMP threshold, audio, and databases.
  - o Identity: These files include Doremi SecurityModule identity certificates.
  - KDMs: These files include KDMs and DLMs.
  - Network: Includes IP addresses, DNS configurations, etc.
  - System: These files include system user accounts, group configurations, and timezone information.

Category	Description
system	Backup system user accounts, group configuration and timezone informations
kdms	Backup of KDM and DLM files
identity	Backup of Doremi SecurityModule identity certificates
doremi	Backup of Doremi configuration files (devices, audio, snmp threashold, flmx) and databases
network	Backup of network configurations (ip address, dns)

#### Figure 205: Restore Category Selection Window

- For example, if you decide to select "doremi," highlight the item on the left and click on the Restore button.
- The Processing window will appear (Figure 206).

	Suppose	
	0000003	
Restoring from /media/L	isb0/IMS1000 332132 2014-06-12T21-18-07.dbk.zip	
Success		

Figure 206: Processing Window

- You will be required to reboot the system to complete the restore process. To reboot the system, go to the System tab (Figure 206).
- If you decide not to reboot, click on the Close button. The unit will not reboot. This will not complete the restore process.
  - **Note:** The reboot process will take approximately 3 minutes to begin.
- The restore process is now complete.

# 12.18License Agreement

The License Agreement application allows the user to agree to Doremi terms and conditions. The user only needs to do this once.

If the user has not agreed to the terms and conditions yet, a notification will appear at the top of the screen informing the user that he/she will need to give their consent (Figure 207).



Figure 207: License Message

To access the License Agreement, go to Administration  $\rightarrow$  Control Panel  $\rightarrow$  License Agreement.

Click the checkbox to indicate that you have read and accept the terms of the software license agreement (Figure 208).



Figure 208: License Agreement

# 12.19 Automatic Log Upload Manager

The Automatic Log Upload Manager allows the user to generate a log and upload it to a location that he/she selects. The user is able to automate log generation at a specified frequency.

To access the Automatic Log Upload Manager, go to Administration  $\rightarrow$  Control Panel  $\rightarrow$  Automatic Log Upload Manager (Figure 209).

Check the Active Log Uploading check box to ensure that the logs are being uploaded (Figure 209).

doremi	IMS1000 Serial Number: 332132	Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser
Technology Leadership for Digital Cinema	Log Manager OVERVIEW ADMINISTRATION CONTROL MONITORING	logout 🔱
Quick Access Links	Log Manager	
Create Quick Access Links	🕀 Add 🛞 Delete	
Add Button Check Box	Active log uploading      Frequency: Daily Time: 04 : 00 AM      File name: Default in <i>INS1000_332132_2014-06-21_2014-06-21</i> Enabled Manager Name URL Username Securit	y Laga Syndem Laga
* Quick Controls & No Playback	Save Revert	00:05 🔹 🏴

Figure 209: Automatic Log Upload Manager

- To generate a log, specify the frequency, time, and select a file name (Figure 209).
- Click the Add button. The following window will appear (Figure 210).

j		Test
)		Button
Test		
	Test	Test

Figure 210: Configuration Window

- Make sure the Enable box is checked if this particular configuration will be used.
- Give the configuration a name
- Input a desired location in the URL field.
- Enter a username and password.
- Select SMPTE and/or System logs.
- Use the Test button to test the configuration, if desired (Figure 210).

Click OK and the new configuration will appear in the main window. Click Save to save the configuration or Revert to undo any unsaved changes (Figure 211).

do	remi	IMS100 Serial Number: 33213	<b>0</b>					Si Si Ut	creen: oftware Version: ser Level:	IMS1000 2.6.4-0 admin / Supr	erUser
	Technology Leadership for Digital Cinema	Log Manager	OVERVIEW	ADMINISTRATION	CONTROL	MONITORING			LOGOUT		Ċ
Delete Button	ess Links Baile Quick Access Links	Log Manager	Delete	)4 <b>•</b> : 00 <b>•</b> /	AM 💌						
Revert Button		File name: Default	Manager Name	0_332132_2014-06-20_201	4-06-21 URL ftp://91.121.50.75	5/	Username RY	Security Logs	system	Logs	-
Save Button		Save Rever									
	trols 😽 No Plavback								00:09		<b>P1</b>

#### Figure 211: Configuration Added

To delete a configuration, click the Delete button (Figure 211).

# 12.20 Threshold Manager

The Threshold Manager allows the user to view and adjust the threshold values for temperature, voltage, fans, and certain errors.

To access the Threshold Manager, go to Administration  $\rightarrow$  Control Panel  $\rightarrow$  Threshold Manager.

When opened, the default tab is the Help tab. This tab offers an explanation of the application (Figure 212).



Figure 212: Help Tab

**Note:** Although the user is able to change the threshold values, it is recommended that the user leave the default values.

Each tab lists the high and low threshold as well as the hysteresis value, which is optional. The default hysteresis value is 0 but this can be changed.

The hysteresis value is the plus or minus tolerance value, meaning that an alert will appear when the threshold high or low is reached and will not appear again until the hysteresis value is reached. This is to prevent multiple alerts from appearing if the value continues to remain above the threshold values. Once the hysteresis value is reached, an alert will appear.

### 12.20.1 Temperatures Tab

The Temperature tab lists the high and low threshold values for different components of the server, in degrees Celsius. Hovering over the component will give a brief explanation of that component.

Click Save to save any changes and Revert to undo any unsaved changes (Figure 213).

IMS1000 Serial Number: 332132		Screen: Software V User Level:	IMS1000 fersion: 2.6.4-0 admin / SuperUser
Threshold Manager OVERVIEW ADMINISTRATION CONTROL MONITORING		LOGO	υτ 🤇
Help Temperatures Voltages Fans Counters Reset to Default	Threshold high (°C)	Hysteresis (°C)	Threshold low (°C)
MOTHERBOARD	60	6	6
CPU (Temperature for Motherboard	66	6	5
Chipset	66	6	5
S DISK1	<u>50</u>	6	6
S DISK2	50	5	5
S DISK3	50	5	5
DISK4			
DISK5			
DISK6			
MD_FPGA1			
MD_FPGA2			
MD_RTC	60	5	<u> </u>
Save Revert			
	EVENSE 10000 Setal Number: 332132 Threshold Manager OVERVIEW ADMINISTRATION CONTROL MONITORING Help Temperatures Voltages Fans Counters Reset to Default Component WOTHERBOARD COMPONENT COMPONE	Component       Threshold Manager       Veltages       Fans       Counters       Reset to Default         Oursponent       Threshold high (PC)         OUTHERDADD       00         CPU       Temperatures for Metherboard       00         OBK1       00         DISK1       60         DISK3       60         DISK4       00         DISK4       00         DISK3       00         DISK4       00         DISK3       00         DISK3       00         DISK3       00         DISK4       00         DISK3       00         DISK4       00         DISK5       00         DISK3       00         DISK4       00         DISK5       00         DISK3       00         DISK4       00         DISK5       00	Stream Schwarz V Berein Manager VERVIEW ADMINISTRATION CONTROL MONITORING LOGO Threshold Manager VERVIEW ADMINISTRATION CONTROL MONITORING LOGO Help Temperatures Voltages Fans Counters Reset to Default Threshold high (°C) Hysteresis (°C) MOTHERBOARD 666 66 Generative for Motherboard 666 Generative for Mo

Figure 213: Temperatures Tab

## 12.20.2 Voltages Tab

The Voltages tab lists the high and low threshold values for different components of the server, in millivolts. Hovering over the component will give a brief explanation of that component.

Click Save to save any changes and Revert to undo any unsaved changes (Figure 214).

doremi	IMS1000 Serial Number: 332132		Screen: Software User Leve	IMS1000 Version: 2.6.4-0 el: admin / SuperUser
Technology Leadership for Digital Cinema	Threshold Manager OVERVIEW ADMINISTRATION CONTROL MONITORING		LOG	оит 🔱
Quick Access Links	Help Temperatures Voltages Fans Counters Reset to Default			
	Component	Threshold high (mV)	Hysteresis (mV)	Threshold low (mV)
		1300	100	900
	2 (First voltage entry in SNMP)	1500	100	1000
		3600	100	3100
		3200	100	4800
		-4800	100	5200
		-4000	100	-3200
				2700
Save Button	Save Revert			
				00:19 🔺 🏴 🎴


## 12.20.3 Fans Tab

The Fans tab lists the high and low threshold values for the different fans of the server, in RPMs. Hovering over the fan will give a brief explanation of that fan.

Click	Save to save an	y changes and	Revert to undo a	iny unsaved changes	(Figure 215).
		,			1 3

doremi	IMS1000 Serial Number: 332132		Screen: Software V User Leve	IMS1000 Version: 2.6.4-0 I: admin / SuperUser
Technology Leadership for Digital Cinema	Threshold Manager OVERVIEW ADMINISTRATION CONTROL MONITORING		LOGO	тит 【
Quick Access Links	Help Temperatures Voltages Fans Counters Reset to Default	_	_	
Uteate Quick Access Links	Component	Threshold high (RPM)	Hysteresis (RPM)	Threshold low (RPM)
	MOTHERBOARD	7000	500	1000
	CPU (Motherboard main fan	3000	100	1000
	CHIPSET	7000	500	1000
	4	7000	500	1000
Save Button				
A Quick Controls & No Playback	Save Revert			00:20 🔹 🏴

Figure 215: Fans Tab

#### 12.20.4 Counters Tab

The Counters tab lists the high and low threshold values for different errors, indicating how many times that particular error is allowed to happen before an alert is issued. Hovering over the errors will give a brief explanation of that error.

Click Save to save any changes and Revert to undo any unsaved changes (Figure 216).

doremi	IMS1000 Serial Number: 332132		Screen: Software V User Level	IMS1000 Yersion: 2.6.4-0 : admin / SuperUser
Technology Leadership for Digital Cinema	Threshold Manager OVERVIEW ADMINISTRATION CONTROL MONITORING		LOGO	ut 🕐
Quick Access Links	Help Temperatures Voltages Fans Counters Reset to Default			
	Component	Threshold high	Hysteresis	Threshold low
	UNDERFLOWS	20		
	CLIP_ERR_UNDERFLOW	300		
Save Button	Save Revert			
Ruick Controls 😵 No Playback d				00:21 🔹 🏴

Figure 216: Counters Tab

## 12.20.5 Reset to Default Tab

The Reset to Default tab allows the user to reset all values to the default values (Figure 217).

d	imen	INS1000 erfal Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser	r
	Technology Leadership for Digital Cinema	hreshold Manager OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT		ש
Quick A Reset	ccess Links Create Quick Access Links	Help Temperatures Voltages Fans Counters Reset to Default			
Button		Reset all values to default			
	1	Save Revert			
A Quick			00:22		1

Figure 217: Reset Values Tab

This page has been intentionally left blank.

# **13 Control Tab**13.1 Show Management Using CineLister

CineLister is based on a Graphical User Interface (GUI) that allows the creation, management, editing, and playback of SPLs and other ingested content. CineLister also has the capability to schedule playbacks.

To configure Cinelister, see Section 12.15.

# 13.2 CineLister Editor Tab

- To access the CineLister GUI, go to Control  $\rightarrow$  CineLister.
- The user will be prompted to CineLister's Playback tab. The Playback tab is the default tab that CineLister displays every time the application is opened (Figure 218).

doremi	IMS1000 Serial Number: 332132	Scheen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser
Technology Leadership for Digital Cinema	Playback OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT
Quick Access Links	Manual DESPICABLE-ME_TLR-18-20_F_EN-XX_US-GB	Editor Schedule
	Pause 00 00 04 / 00 02 33 remaining: 00 02 27 Trailers	
	Mode: Play then Eject	

Figure 218: CineLister GUI Playback Tab

- To access the Editor tab, click on the green arrow button on the right side of the GUI (Figure 218).
- The Editor tab is composed of two different parts (Figure 219):
  - The left pane displays all of the content (e.g., features, trailers, advertisements) and Automation and Trigger Cues.
  - The right pane is used to display the content of a given Show Playlist.



Figure 219: Editor Tab

## 13.2.1 Show Playlists

A Show Playlist (SPL) is a succession of Compositions (CPLs), Automation Cues, and Trigger Cues. Show Playlists make up the chain of events that account for the playback of a show. Using CineLister, the user can create and edit SPLs.

- Types of elements that can be used when creating a SPL:
  - Audio-visual content (e.g., features, test content, trailers, live, etc.)
  - Automation cues (Macro automation events)
  - Trigger cues (events upon which a Macro Automation Cue is executed)

## 13.2.2 Audio-Visual Content

- When the audio-visual content is encrypted, an icon is displayed with the content.
  - U Lock icon with red button: The required KDM is not available. Thus the content cannot be played.
  - Use the content of the content and that content can be played.

# **13.3 Show Playlist Creation**

CineLister allows the user to create their own Show Playlist from the elements listed in the left pane of the Editor tab.



## 13.3.1 How to Create a New Show Playlist

Figure 220: Editor Tab

- Click on the New button from the CineLister Editor tab (Figure 220).
- Click on the elements to add to the SPL from the left pane of the GUI (Figure 220).
- The user can filter the elements or search for a specific element to make it easier to add them to a Show Playlist (Figure 220).
- The element(s) will appear in the right pane (Figure 221).



Figure 221: Elements Added

- To remove an element in a Show Playlist, select it in the Show Playlist window and click on the X button that appears on the right (Figure 221).
- Click on the Save button (Figure 221). The user will be prompted to a window asking them to input the correct password. SuperUser privileges are necessary to confirm the changes. If the user is already logged in with SuperUser privileges, the password confirmation window will not appear.
- After the correct password is entered, the user will be prompted to name the newly created SPL (Figure 222).



Figure 222: SPL Naming

## 13.3.1.1 Adding a Macro

- Select the element to attach the macro to in the SPL on the right side of the application.
- Select the macro on the left part of the GUI and click on it (Figure 223).



Figure 223: Macro Selected

• The Edit Time Code window will appear (Figure 224).



Figure 224: Edit Time Code Window

- Select the offset value for the macro.
- Click Ok when finished and the macro will appear on the right hand side of the GUI (Figure 225).



Figure 225: Macro Added

## 13.3.1.2 Adding a Trigger Cue

- Select the element to attach the Trigger Cue to in the SPL on the right side of the application.
- Select a Trigger Cue on the left part of the GUI and click on it (Figure 226).





• The Edit Trigger Cue window will appear (Figure 227).



Figure 227: Edit Trigger Cue Window

- Select the Automation Cue to associate to the Trigger by clicking on it in the Automation Cues window.
- Select the scope of the trigger by checking if the trigger is available for all elements or just the selected element.
- Click Ok when finished and the Trigger will appear on the right hand side of the GUI (Figure 228).



Figure 228: Trigger Added

## 13.3.2 Element Re-Ordering

Using the up and down arrows, each element can be moved to the top or to the bottom of the Show Playlist:

- To move an element to the top of the Show Playlist, select it and click on the arrow pointing up (Figure 229).
- To move an element to the bottom, select it and click on the arrow pointing down (Figure 229).



Figure 229: Element Re-Ordering

**Note:** When an element is associated with an automation or trigger cue, the cues will also be re-ordered.

## 13.3.2.1 Refresh Button

Anytime new content and a package are ingested into the server, the items will not be displayed automatically in the CineLister GUI if CineLister is already running. Click on the Refresh Contents button from the Editor tab (Figure 229) to see an updated version of all available items that have been ingested.

#### 13.3.2.2 Save Button

It is very important to click the Save button when done completing any task, especially a SPL (Figure 221). If the user does not click the Save button, the changes will not be reflected.

# 13.4 Accessing a Show Playlist

- To open an existing Show Playlist, click on the Open button from the CineLister Editor tab (Figure 229).
- A new window will appear allowing the user to select the desired SPL (Figure 230).



Figure 230: Open SPL

• Select the desired SPL and click the Ok button. The Show Playlist will be displayed on the right side of the GUI.

#### **13.4.1 Editing an Existing Show Playlist**

- Click on the Open button in the CineLister Editor tab (Figure 229).
- The user will be prompted to the SPLs Available on Server window (Figure 230).
- Select the SPL and click Ok.
- The SPL's content will be displayed on the right side of the GUI (Figure 231).



Figure 231: SPL Opened

- Re-order the elements within the SPL by using the up and down arrows (Figure 229).
- Remove elements by selecting them and then clicking the X button (Figure 231).
- To view the properties of an SPL, open the SPL and click the SPL Properties button (Figure 231).
- To view the properties of a particular CPL, highlight the CPL and click on the Properties icon that appears on the right (Figure 231).

## 13.4.2 Deleting a Show Playlist

- Open the desired SPL.
- Once the SPL is opened, delete it by clicking on the Delete SPL button (Figure 231).
- A password will be needed to complete this operation. SuperUser privileges are necessary to confirm the changes. If the user is already logged in with SuperUser privileges, the password confirmation window will not appear.
- The Delete window will appear (Figure 232).

test	^
Fire Alarm Trigger Test	
Kenen NowSDI	
NewSFL	
lame:	

Figure 232: Delete SPL Window

• Select the SPL to delete and click Delete.

#### **13.4.3 Element Properties**

- To view the properties of any element in a Show Playlist, select the element from the right side of the GUI. Highlight the selected item and click on the Element Properties button that appears on the right (Figure 231).
- The Composition Playlist Properties window will appear (Figure 233).

	000 T0-000 T0-00 000 4040	5-50	ia
JUID:	UM:UUI0:30902C67-6880-4608	-Dab2-Ce/680C00Cc	ið
Content Title:	Serenity_Full_Movie_v5		
Content Kind:	feature		
Ouration:	01:58:55		
Picture			
Encoding:	JPEG2000 (2048 x 1080)	Rate:	24 fps
Sound			
Channels:	6	Quantization:	24 bits
KDM availat	ble		
Begin	End	Status	UUID
•	ш		

Figure 233: CPL Properties

## 13.4.4 Unencrypted CPLs

If the element selected is an unencrypted CPL, the following properties window will appear (Figure 234):

juid:	um:uuid:8977a5bf-d9bd-444e	-85c3-ae670ced5fe2	
Content Title:	Validate		
Content Kind:	test		
Ouration:	00:00:10		
Picture			
Encoding:	JPEG2000 (2048 x 858)	Rate:	24 fps
Sound			
Channels:	2	Quantization:	24 bits

Figure 234: Unencrypted CPL

## 13.4.5 Encrypted CPL with Valid KDM

If the element selected is an encrypted CPL, the following Properties window will appear with the KDM information. The window will indicate that the KDM is available and its end date (Figure 235).

	100.0	uid-8c8d607d-b07d-4530	-6037-e2d01ffc5cs	is.
UUID.	um.u	ulu.0000070-0070-4350	-0007-02001110300	ω
Content Title:	GAM	E_PLAN_FTR_S_EN-EN_U	JS-	
	PG_5	1_2K_DI_20100611_CC	CAP_EN_FR_JA_E	L_ES_TR_PTXT_HIM
Content Kind:	featur	re		
Duration:	0 <mark>1</mark> :50	):06		
Picture				
Encoding:	JPEG	2000 (2048 x 858)	Rate:	24 fps
Sound				
Channels:	8		Quantization:	24 bits
KDM availab	le			
Begin		End	Status	UUID
2012-11-11 00	00:00	2013-12-11 00:00:0	0 available	um:uuid:39a59972
4	_			+

Figure 235: Encrypted KDM

**<u>Note</u>**: All KDMs will automatically be removed from the server upon expiration.

## **13.5 Play 2D Content in 3D Mode** 13.5.1 3D Mode Configuration

The user can play 2D content within a 3D ShowPlaylist. Changing the mode of the SPL to 3D does not automatically make the content 3D. The content must be in 3D/48fps format to create a 3D SPL.

## 13.5.2 How to Set the Show Playlist Mode to 3D

- Click the Show Playlist Properties button (Figure 231).
- Select the 3D mode from the Display Mode drop-down window (Figure 236).

Name:	Show Playlist	
Display Mode:	2D	-
	2D	
Duration:	3D	
	4K	
FR:	4K	

Figure 236: Display Mode Drop-Down

- Click the Close button.
- The Show Playlist Properties button will reflect the name of the SPL and what mode it is set to (Figure 237).

doremi	IMS1000 Serial Number: 332132		Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser	
Open	Editor OVERVIEW ADMINISTRATION CONTROL	MONITORING rties 🔀 Delete	LOGOUT 🕑	Playback Tab
Sutton	All available elements all elements	Show Playlist SPL: Trailers, 3D		
	Black         6         Black 3D         6           65         Black 3D 48         6         7           65         Policy         6         ToyStory-2-3D_Intermission-5_F_EN-3X_US_51_2K_DI_I8D           66         Steveplayfiel         2         2	000000 Block 000004 DESPECABLE-ME_TLR-18-20_F_EN-XX_US-68_51_ 000235 SHERLOCK-HOLMES-2_TLR-1_5_EN-XX_US-68_51 000436 TRON-LEGACY_TLR-2-30_S_EN-XX_US-68_51_2X 000726 HAPPY-FEET-2_TLR-4-20_F_EN-XX_US_68_51-2X 000726 HAPPY-FEET-2_TLR-4-20_F_EN-XX_US_68_51-2X_SPE_	2K UP 2	Name and Mode
	Trailer 127-Hours_TLR-A_F_EN-XX_US-68_51_2X_TCF_20100823_TDC AMA2-SPIDERMAN-2D_TLR-1_S_EN-XX_US-68_51_2X_SPE_201 BRIDESMAIDS_TLR-1_F_EN-XX_US-68_51_2X_UP_20110201_U0S DEFIANCE_TLR-1_F_EN-XX_US-68_51_2X_PC_20080115_DELLXE	00:12:21 LIKE_CRA2Y_TLP-1_F_EH-X0_US-G8_51_2K_PC_2 00:14:45 Block Start Time   Elements	8110728	
A Quick Controls			19:15 🔳 🏴 4	

Figure 237: SPL Set to 3D

**Note:** In 3D or 48fps mode, the IMS1000 video output is in the YCxCz color space. The projector itself needs to be properly configured to the YCxCz color space in 3D or 48fps mode for proper display. Contact the projector vendor to configure the projector properly or see Section 12.3.

# 13.6 Segment, Marker, and Intermission

Clicking on the Plus button in the Cinelister Editor tab opens a drop-down menu that allows the user to add a segment, marker, and intermission to the SPL (Figure 238).



Figure 238: Plus Button

## 13.6.1 Segment

A segment allows the user to organize and arrange the visual presentation of a ShowPlaylist (SPL) into sections or segments.

Segments are only used as an aesthetic tool to organize the SPL and to notify the user of different sections within the SPL.

To create a segment, click on the Plus (+) icon in Cinelister (in an existing or new SPL) and select Segment from the drop-down menu (Figure 238).

• The new segment will appear (Figure 240).



Figure 239: New Segment

- To rename the segment, highlight it and click on the Properties icon on the right (Figure 239). Click the Save Pack Name button to save the name.
  - Substitute any spaces with an underscore.
  - **Note:** Within the same SPL, each segment **must** have a different name.

ack Name		
Pack Name:	PreShow	Save Pack Name

#### Figure 240: New Segment Naming

- Use the up and down arrows to rearrange the segment (Figure 241).
- Several segments can be added into a SPL (Figure 241).
- To delete the segment, highlight it and click on the delete button to the right (Figure 241).



Figure 241: Segments Added

## 13.6.1.1 External Show Playlist

The user also has the option to add a Show Playlist into another Show Playlist. These are called External Show Playlists. The External Show Playlist allows the content of that SPL to be inserted into the current SPL. CineLister now lists the available SPLs on the left area of the editor among the other CPLs.

To include an external SPL into the current SPL, select the SPL in the left side of the GUI. It will appear as a segment labeled as the title of the added SPL (Figure 242):

doremi	IMS1000 Setial Number: 332132		Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / Supr	rrUser
Technology Leadership for Digital Cinema	Editor OVERVIEW ADMINISTRATION CONTROL M	IONITORING	LOGOUT	<b>0</b>
Quick Access Links	Refresh 📄 New 🚞 Open 💾 Save 💥 Proper	ties 🔀 Delete	Schedule 🗌 Playback	×
S Create Quick Access Links	All available elements	Show Playlist		
	all elements	SPL: Trailers, 2D		
	Black	Reshow	*	
Available	To Black 3D	00:00:00 Black	ж нр 2	
SPI s	C Policy	00.02:35 SHERLOCK-HOLMES-2_TLR-1_S_EN-XX_US-GB_51_	2K_WR_2	
	ToyStory-2-3D_Intermission-5_F_EN-XX_US_51_2K_DI_i3D	00:04:56 TRON-LEGACY_TLR-2-3D_S_EN-XX_US-GB_51_2K_I	DI_2010	
	😚 Showplayfist	eature_Presentation		External
	SPL1	00:07:26 HAPPY-FEET-2_TLR-4-2D_F_EN-XX_US_GB_51-EN_2	2K_WB	SPL added
	Trailers	🎯 00:09:49 SPL1		
		00:17:05 KARATE-KID_TLR-2_F_EN-XX_US-GB_51_2K_SPE_2	2010021	
	127-Hours_ILH-A_F_EN-XX_US-GB_51_2K_ICF_20100823_IDC	00:19:37 LIKE_CRAZY_TLR-1_F_EN-XX_US-GB_51_2K_PC_20	0110729	
	AMAZ-SPIDERMAN-2D_ILR-1_S_EN-AX_US-0B_01_A_SPE_201	00:22:00 Black		
		Start Time   Elements		
Ruick Controls 🕺 Playback in progres			19:43	<b>1 a</b>

Figure 242: External SPL

• Click the Save button to save any changes.

## 13.6.1.2 Skip to ShowPlaylist Segment Macro

The user can also create a macro that will cause playback to jump to a specific segment. To create the macro, go to Administration  $\rightarrow$  Macro Editor.

In the Macro Editor window	, click on the New button	(Figure 243).
----------------------------	---------------------------	---------------

	doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
	Technology Leadership for Digital Cinema	Automation Cue OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<mark>ပ</mark>
New Button	Quick Access Links	Nev       See Detet       Settings         Max       Settings         Dever Close       Settings         Dever Close       Settings         Dever Close       Settings         Provaluation       Impact Andrea         Intervation Scope 5 minution       Impact Andrea         Lamp Off       Settings         Prova Luci       Settect an action to insert         Save       Reset	Guick Controls	Trigger Oze
	A Quick Controls		20:47	

Figure 243: New Macro

• In the window that appears, name the macro "Skip to Segment X," where X is the name of the segment that will begin playing upon execution of the macro and click OK (Figure 244).

Name of the Macro:	Skip to Segment Feature_Presentation	
Comments:	ſ	ñ.
		J.

Figure 244: Macro Settings

• The macro will appear in the window. Highlight the macro and click on Select an Action to Insert (Figure 245).



Figure 245: Macro Added

- In the window that appears, go to Playback, then Playback Actions, and click Insert (Figure 245).
- In the drop-down that appears, select Skip to Show Playlist Segment (Figure 246).

Playback Actions	
Choose the action:	Play 🔽
	Play
	Pause
Ok	Toggle Play/Pause
	Recue Snow
	Skin to Next Clin
	Skip to ShowPlaylist Segment
	Evit from Intermission

Figure 246: Playback Actions

• Enter the **exact** name of the segment in the field that appears and click OK (Figure 247).

Playback Actions	
Choose the action:	Skip to ShowPlaylist Segme
Segment name:	Feature_Presentation
Ok	Cancel

## Figure 247: Segment Named

- The newly added macro will appear in the Macro Editor. Click the Save button to save the macro.
- The macro will also appear in Cinelister after the Refresh button has been clicked (Figure 248).

d	i imeno	MS100	0					Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
	Technology Leadership for Digital Cinema	ditor	OVERVIEW	ADMINISTRATION	CONTROL	MONITORIN	G	LOGOUT	<b>U</b>
Refresh Button	k Access Links	Refresh	New	Open 💾 S	ave 🔀 P	roperties	Delete	Schedule 🔄	Playback
	Create Quick Access Links 🛛 🔥 🗚	l available elements				Show I	Playlist		
		all elements	- 🔍			SPL: T	Trailers, 2D		
		Intervallo Scope 5	i minuti			<u>^</u>	PreShow		
		Lamp Off				00:00:1	00 Black		
		Lamp On				00:00:1	04 DESPICABLE-ME_TLR-1B-2D_F_EN-XX_US-GB_51	_2K_UP_2	*
		Play				≣ 00:02::	35 SHERLOCK-HOLMES-2_TLR-1_S_EN-XX_US-GB_5	51_2K_WR_2	
		Prova Luci				00:04:	56 TRON-LEGACY_TLR-2-3D_S_EN-XX_US-GB_51_2	K_DI_2010	
		Skip to Segment I	Feature_Presentatic	<u>m</u>			Feature_Presentation		
		19 Live				00:07:	26 HAPPY-FEET-2_TLR-4-2D_F_EN-XX_US_GB_51-EI	N_2K_WB	
		Doremi Streamlt					00:09:49 SPL1		
		🖻 Pattern				00:17:	05 KARATE-KID_TLR-2_F_EN-XX_US-GB_51_2K_SPE	_2010021	
Macro		Black				00:19:	37 LIKE_CRAZY_TLR-1_F_EN-XX_US-GB_51_2K_PC_	20110729	
		30 Black 3D				00:22:	00 Black		
Added	L					Start Tim	e   Elements		
♀ Quid	ick Controls 🛛 🕸 Playback in progress							20:59	2

## Figure 248: Macro Added

• When executed, this macro will cause playback to jump to the specified segment within the SPL.

#### 13.6.2 Marker

A marker is a label that is attached to a specific timecode of a CompositionPlaylist (CPL) inside the ShowPlaylist (SPL). It can be used by the user to add a note about when an event is expected to happen in the SPL. The use of these markers is generally for user information purposes only.

The exception is the Exit\_Intermission marker. For information on how to use this marker, go to Section 13.6.3.3.1.

#### 13.6.3 Intermission

The Intermission feature offers a quick and easy solution to create an Intermission (recess) during any CPL being played on servers running software version 2.6.0 or higher.

An Exit from Intermission macro can be created and added to allow the operator to trigger the exit from the Intermission SPL and resume the Main SPL.

#### 13.6.3.1 Intermission SPL

To create the Intermission SPL, go to the Cinelister Editor tab (Control  $\rightarrow$  Cinelister  $\rightarrow$  Editor).

• Add the desired CPLs to create an Intermission SPL that you wish to add to the Main SPL. Figure 249 shows an example of an Intermission SPL.



#### Figure 249: Intermission SPL

• Click the Save button and name the SPL (Figure 249).

#### 13.6.3.2 Main SPL

Create or open the Main SPL that you wish to attach the Intermission SPL to. Figure 250 shows an example of a Main SPL.



Figure 250: Main SPL

• Select the CPL to attach the Intermission SPL to and click the Plus (+) button. In the drop-down that appears, select Intermission (Figure 251).



Figure 251: Intermission Drop-Down

• In the window that appears, select the preferred offset position time code, the Intermission Playlist from the drop-down of SPLs, and the amount of time to rewind the SPL before the cut position (Figure 252). Click Ok.



Figure 252: Edit Intermission Window

- **Note**: The minutes to rewind time amount should be smaller than the offset position time amount.
- The Intermission SPL has now been added (Figure 253).
- Click the Save button and name the SPL, if necessary (Figure 253).



Figure 253: Intermission SPL Added

- •
- In the Cinelister Playback tab, the Main SPL will appear as shown in Figure 254. The CPL that has the Intermission SPL attached to it will appear as two clips with the intermission CPLs in-between (Figure 254).

doremi	IMS100 Serial Number: 3321	<b>)0</b> 32					Screen: Software Version: User Level:	IMS 1000 2.6.4-0 admin / SuperUser	
Technology Leadership for Digital Cinema	Playback	OVERVIEW	ADMINISTRATION	CONTROL	MONITORING		LOGOUT	<b>O</b>	
Quick Access Links	Manual						Editor 💮	Schedule	
Uluto Quick Access Links		ToyStory-2-	3D_Intermission-5_F	_EN-XX		Black		^	
	Play, 00:00:17/	20:05:07	Main_SPL		remaining: 00:04:50	127-Hours_TLR-A_F_EN+XX_L     AMAZ-SPIDERMAN-2D_TLR-1     LIKE_CRAZY_TLR-1_F_EN+XX,	IS-68_51_2K_TCF_2 _S_EN+XX_US-68_51 _US-68_51_2K_PC_2		
	00:00:22 / 00:20:49				remaining: 00:20:27	NightBedOMas_TLR-9_S_EN-X     SHERLOCK-HOLMES-2_TLR-1	X_US-GB_51_2K_DI _S_EN-XX_US-GB_51		CPL Split
1000			> II ▲			AMAZ-SPIDERMAN-2D_TLR-1     BRIDESMAIDS_TLR-1_F_EN-X	_S_EN+XX_US+GB_51 X_US+6B_51_2K_UP		in Two
	Mode: Play then Eject	•				O DEPANCE_TLR-1_F_BH-XX_U	6-68_51_2K_PC_200		
A Quick Controls							21:24	x P 💁	

#### Figure 254: Intermission Playback

## 13.6.3.3 Exit from Intermission Macro Creation

An Exit from Intermission macro can be created in the Macro Editor and then inserted to allow the user to quickly end intermission at any point during intermission playback and either return to the Main SPL or, with a marker, jump to a specific part of the Intermission SPL.

To create the macro, go to the Macro Editor (Administration  $\rightarrow$  Macro Editor).

• In Macro Editor, click on the New button (Figure 255).



Figure 255: Macro Editor

• Name the Macro, "Exit from Intermission" and click Ok (Figure 256).



Figure 256: Exit from Intermission Macro

• Click on the Select an Action to Insert button. In the drop-down that appears, select Playback and then Playback Actions, and then click Insert (Figure 257).

<b>Doren</b> Technology Lead for Digital Cinema	IINS1000 Serial Number: 332132 Automation Cue OVERVIEW ADMINI	ISTRATION CONTROL MONITORING	Screen: IMS 1000 Software Version: 2.6.4-0 User Levet: admin / SuperUser LOGOUT	
Macro Added	ess Links  New  New  New  New  New  New  New  Ne	Start Time   Action	Quick Controls Trigger Cue	Insert Button
유 Quick Controls 중 Pi		Channel Switch Macro Input/Output General Purpose Output Send Message Playtack Audio Volume Playtack Actions Video Output Action ser iso 20 (Resp Made Delay Purp Purpose Pending Macro Library V	21:39 🔹 🏴	Playback Actions

Figure 257: Macro Added

• Select Exit from Intermission from the drop-down menu and click OK (Figure 258).

Playback Actions	
Choose the action:	Play 🗾
	Play
	Pause
Ok	Recue Show
	Rewind
	Skip to Next Clip
	Skip to ShowPlaylist Segment
	Exit from Intermission

Figure 258: Exit from Intermission

• Click the Save button and enter the necessary password to save (Figure 259). SuperUser privileges are necessary to save the macro.

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Automation Cue OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	ి
Quick Access Links Create Quick Access Links	New         Objected         Settings           Macro         Start Time   Action	Quick Controls	Trigger Cue
Save Button	Dows or Close       Fail from Mithemassion         Full       Play         Horizontal Fail 5 minutis       Interval 10 Scope 5 minutis         Interval 0 Scope 5 minutis       Lamp On         Lamp Of       Play         Prova Luci       Skip to Segment Feature_Presentation         Skip to Segment Feature_Presentation       Select an action to insett         Sare       Revert		
Culick Controls     B <sup>™</sup> Playback in progress		21:41	

Figure 259: Exit From Intermission Macro Added

#### 13.6.3.3.1 Exit Intermission Marker

Executing the macro during Intermission will automatically begin playback of part two of the Main SPL. To cause playback to jump to a specific part of the Intermission SPL, instead of returning to the Main SPL, the user can create a marker that works with the macro.

• To add a marker, in the Intermission SPL, select the CPL that you want to play when the Exit from Intermission macro is executed. Select the Plus (+) button and select Marker (Figure 260).



#### Figure 260: Marker Creation

• In the Edit Time Code window that appears, label the marker "Exit\_Intermission". Indicate at what time code you would like the CPL to play and click Ok (Figure 261).

NightBefXMas	_TLR-9_S_EN-XX_US-
00	: 00 : 55
Marker label:	Exit_Intermission
Offset	
<ul> <li>from the beginning of the clip</li> <li>from the end of the clip</li> </ul>	00 🔻 : 00 🔽 : 55 🔽

Figure 261: Exit Intermission Marker

 The marker has now been added. During intermission, when the Exit from Intermission macro is triggered, playback will jump to the time code indicated by the marker (Figure 262).



Figure 262: Marker Added

• The user can manually execute the macro or they can add the macro to the Intermission SPL so that it is automatically executed at a specific time (Figure 262).

# 13.7 CineLister Playback Tab

To access the Playback tab, click on the green arrow on the right hand side of the GUI in the Editor and Schedule tabs (Figure 237).

## 13.7.1 Playback an Existing SPL

- Click on the Open button from the CineLister Editor tab (Figure 237).
- The following window will appear (Figure 263).

test Fire Alarm Trigger Test	*
Reneh	
NewSPL	
	~
lame:	

#### Figure 263: Open SPL Window

- Select the SPL to play and click OK.
- Next, go to the Playback tab from the CineLister GUI (Figure 264).

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser	
Technology Leadership for Digital Cinema	Playback OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<u></u>	
Quick Access Links	Manual	Edilor	Schedule	
Pause	DEFIANCE_TLR-1_F_EN-XX_US-GB_51_2K_PC	0X_US-GB_51_2K_PC_200		
Button	Pause © DESPCABL-ME_TLA-IE 00:00:17/000204 remaining: 00:01:47 © HAPPY-FEET-2_TLR-4:20 f.ocf 0.0017/000204 0.0147	-2D_F_EN-XX_US_GB_51 I_F_EN-XX_US_GB_51-EN LR-2_S_EN-XX_US-GB_51		Eject
Play Button	Cont     Cont	HXX_US-GB_51_2K_PC_2		Button
Mode Drop Down	Mode: Play then Eject 👻			
🐥 Quick Controls 🛛 😚 Playback in progress		22:37	7 🗶 🏴 🖣	

Figure 264: Playback Tab

- Click the Play button to load the Playlist (Figure 264).
- If no Playlist is selected, a message will appear stating, "The show playlist is empty" (Figure 265).

The ShowPlayli	st is empty.
Click on Editor t	o build a new ShowPlaylist.
	-
	OK

## Figure 265: Empty Playlist

**<u>Note</u>**: If a SPL contains an element with an expired KDM, the SPL will not load.

## 13.7.2 Playback Progress

The SPL progress list-box displays the order of the playback (Figure 266).

<b>doremi</b> Technology Leadership tor Digital Clinema.	IMS1000 Serial Number: 332132 Playback OVERVIEW ADMINISTRATION CONTROL MONITORING	Screen: INS1000 Software Version: 2.6.4-0 User Level: admin/Struveer Longut
Next and Previous Button	JUMPING-THE-BROOM_TLR-2_S_EN-XX_US-GB	Editor Catendal ANCE_TLR-1_F_0H-XX_US-08_51_2X_P0_200 ROARLE-ME_TLR-16-20_F_EN-XX_US-08_51 ROARLE-ME_TLR-16-20_F_EN-XX_US-08_51
	1000036/100239 1001 1001 1001 1001 1001 1001 1001 10	инстания (1994) (1992) (1994) (1994) мистания (1994) (1994) (1994) (1994) Скалу (1994) (1994) (1994) (1994) (1994) Вномы (1994) (1994) (1994) (1994) (1994) Вномы (1994) (1994) (1994) (1994) (1994) Вномы (1994) (1
Fast Forward and Rewind	inore Playthen Eject	Playback Button
Button @ Playback in progress	Two Ingest	22:46 🗷 🎮 🖥

## Figure 266: Playback Icons

The top playback bar displays how much time has elapsed/how much time is remaining in the individual element. The bottom playback bar displays how much time has elapsed/how much time is remaining in the whole SPL (Figure 266).

- Elements already played are flagged using a yellow mark.
- Elements currently being played are flagged using a green mark.
- Elements that were not played due to an error are flagged using a red mark.
- Elements that were skipped by the user have an orange mark.
- Elements that have not yet been played do not have any marks next to them.

The Playback button on the bottom Notifications Bar will display if playback is in progress (Figure 266). If playback is in progress, clicking on the Playback button will open up the Cinelister Playback tab. If playback is not in progress, clicking on the button will open up the Cinelister Editor tab.

#### 13.7.3 Pause Mode

• Use the Pause button to pause the playback (Figure 264).

Note: Clicking the Eject button will eject the SPL (Figure 264).

- Use the Next and Previous buttons to go to the next or previous CPL in the Show Playlist (Figure 266).
- Use the Fast Forward and Rewind buttons to forward or rewind within a CPL. The default value is set at 3 minutes (Figure 266). See 12.15 for instructions on how to adjust the value.
- Use the Play button to resume from where the CPL was last paused.
- Select the playback mode from the Mode drop-down list: Play, Loop, Play then Rewind, or Play then Eject (Figure 264). The user will be prompted to a password window to

confirm the mode; the default mode is Play. SuperUser privileges are necessary to confirm the changes. If the user is already logged in with SuperUser privileges, the password confirmation window will not appear.

## 13.7.4 Playback of a Live Event

The user can create a Show Playlist for the live event using theater effects such as closing and opening of curtains, previews, trailers, and advertisements before the live event is scheduled to start. The live event is not pre-recorded and therefore cannot be re-wound or fast forwarded. See Section 12.16 for more information on creating and playing a live event.

## 13.7.5 Playback Lock Mode

The Mode button can be used to determine manual or schedule mode (Figure 267).



Figure 267: Playback Lock Mode

In Schedule mode, the user is unable to change playback (Figure 268).

Schedule	doremi	IMS1000 Serial Number: 332132					Screen: Software Versior User Level:	IMS1000 2.6.4-0 admin / SuperUser
Mode	Technology Leadership	Playback	OVERVIEW	ADMINISTRATION	CONTROL	MONITORING	LOGOUT	<u>ତ</u>
	Quick Access Links	Schedule					Edilor	Schedule
			JUMPING-TH	E-BROOM_TLR-2_S_E	N-XX_US-GB		OEFIANCE_TLR-1_F_EN-XX_US-GB_51_2K_PC_200	
							DESPICABLE-ME_TLR-1B-2D_F_EN-XX_US-GB_51	
		00:00:36,				remaining: 00:01:54	HAPPY-FEET-2_TLR-4-2D_F_EN-XX_US_GB_51-EN	
							JUMPING-THE-BROOM_TLR-2_S_EN-XX_US-GB_51	
	100000000000000000000000000000000000000						NobeRetView TI P.9 S FN-YY US-GR 51 2K DI	
		<b>00:07:34 /</b> 00:12:54				remaining: 00.05:20		
	추 Quick Controls - 영 Playback in progres						22:	56 <b>x</b> P <sup>4</sup>

## Figure 268: Schedule Mode

## 13.7.6 Playback Alert Messages

Currently, there are two alerts available for playback errors. These errors are displayed at the top of every window.

- 1. Projector communication failure (Figure 269).
  - This message is displayed when there is no projector configured or if the server is not connected to the primary configured projector.
|                  | doremi   | IMS1000<br>Serial Number: 332132 | Projector co  | ommunication failure. |                                | Screen:<br>Software Version:<br>User Level: | IMS1000<br>2.6.4-0<br>admin / SuperUser |
|------------------|--|----------------------------------|---|-----------------------|--------------------------------|---|---|
| Alert<br>Message | Technology Leadership<br>for Digital Cinema<br>Frayback Status<br>Current<br>Pause<br>00.07.34 | UNERVIEW OVERVIEW A              | DMINISTRATION         CONTROL           1_2K_SPE_20110203 | MONITORING<br>0012.54 | Next Scheduled Events<br>No sc | LOGOUT                                      |   |
|                  | System Status Storage  |                                  | Server<br>Playback Mode                                   | Manual                | Projector<br>Status            |   | •                                       |
|                  | /data 1798 GB free of 1853 GB  |                                  | Security Manager<br>Hardware                              |                       | Dowser<br>Lamp                 |   | •                                       |
|                  | Cuick Controls Playback in progress  |                                  |   |                       |                                | 23:08                                       | 2                                       |

#### Figure 269: Projector Communication Failure

- 2. Storage needs assistance (Figure 270).
  - This message is displayed if at least one of the available RAID storages is degraded or faulty. For example, RAID-md0 or RAID-md1.



Figure 270: Storage Needs Assistance

## 13.8 CineLister Schedule Tab

The Schedule tab allows the user to schedule the playback of Show Playlist's on a certain day and time. The server will automatically begin the playback of the SPLs once they have been scheduled (Figure 271).

To access the Schedule tab, click on the green arrow on the right hand side of the GUI in the Editor and Playback tabs (Figure 267).



Figure 271: CineLister - Schedule Tab

#### **13.8.1 How to Schedule Playback**

- Go to the Schedule tab from the CineLister GUI (Figure 271).
- The Schedule tab automatically displays the current week.
  - To display another week, use the green arrow (Figure 271).
- Click the New button (Figure 271).
- Enter the appropriate password for the authentication window that might appear depending on your user level.
- The Edit Schedule window will appear (Figure 272).

	Edit Schedule	
	Show Playlist:	Trailers
	Week	
		Mon 23 - Sun 29 June 2014 🛛 🙀
Cancel Button	Schedule Mon 🗹 Tue Start Time:	e Wed G Thu Fri G Sat Sun
Save Button	Estimated ends time:	01:04

Figure 272: Edit Schedule Window

- Select the SPL to schedule for playback from the drop-down menu.
- Use the left and right arrows to adjust the week to schedule the playback.
- Select the day(s) to schedule the playback by checking the corresponding boxes (Figure 272).
- Select the start time for the scheduled playback by using the up and down arrows.
- Click Save when finished or Cancel to cancel the operation (Figure 272).
- The Schedule tab will be updated to reflect the recently added schedule.
   To display outdated schedules, check the Out-Dated Schedule box (Figure 271).

#### 13.8.2 Schedule Conflict

If the user is trying to schedule playback and one already exists for the same time and date, they will receive a Schedule Conflict message. The Schedule Conflict message displays the time and date for which there is a conflict. They will also receive the conflict message if they are trying to schedule playback that interrupts the scheduled time of another playback.

#### 13.8.3 Scheduled Show Did Not Start Error

If there is an error message stating, "The scheduled Show below did not start as expected." This can be due to several reasons. Contact Doremi Labs for assistance (Section 1.3).

#### 13.8.4 Show Playlist Removal

- To delete a Show Playlist from the schedule, go to the CineLister Schedule tab.
- Click on the SPL to remove it in the Schedule window.
- It will become highlighted, then click on the Delete button (Figure 271).
- The appropriate password will be needed for the password authentication window that will pop up. SuperUser privileges are necessary to confirm the changes. If the user is already logged in with SuperUser privileges, the password confirmation window will not appear.
- The user will be asked to confirm the removal of the scheduled Playback. Click Delete to delete the playlist.

#### 13.8.5 Playback Recovery Due to Power Failure

• If a power failure occurs during a scheduled playback, then playback recovery will be possible after having powered the unit back on.

#### 13.8.5.1 How to Recover Playback

- When powering the unit back on after an unexpected power failure, the user will need to login again.
- After logging in, CineLister will resume playback three minutes before the power failure occurred.

<u>Note</u>: Cinelister will resume playback at the default amount of 180 seconds prior to power failure. This amount will be different if the settings have been changed by the user. See Section 12.15.1 for more information.

#### 13.8.5.2 Shutting Down During Playback

When there is a playback in progress and the user tries to shut down the server, they will be prompted to a confirmation window. If they select yes, the server will shut down in five seconds and playback will stop.

Note: Playback will resume when the unit is turned back on.

## 13.9 Ingest Manager

The Ingest Manager GUI (Figure 273) can be accessed by going to Control  $\rightarrow$  Ingest Manager. It will only show items that can be supported by the IMS1000. Text, documents, pictures, power-point presentations, etc. will not appear.

#### 13.9.1 Ingest Scan

The Ingest Manager Tab automatically opens the Ingest Scan tab.



Figure 273: Ingest Scan

**Note:** Compositions (CPLs), Key Delivery Messages (KDMs), Doremi License Messages (DLMs), and Show Playlists (SPLs) can all be ingested through the Ingest Manager GUI.

#### 13.9.1.1 Content Types

Different types of content can be displayed in the Ingest Manger GUI window.

- Reel icons represent a Composition Package which contains audio-video content (e.g., features, trailers, etc.).
- Speaker and Film icons represent individual compositions within a Composition package.
- Film icons represent Show PlayLists (SPLs), which contain the main feature and trailers.

- <u>Note</u>: When the SPL is ingested, the Ingest Manager GUI will show all of the components that make up the SPL.
- Lock icons represent Key Delivery Messages (KDMs), which contain the required decryption keys allowing playback of the corresponding CPLs.

#### 13.9.1.2 Ingesting Content From A USB Drive

If the content to ingest is on a USB drive, plug the drive into the IMS1000's USB Port and go to the Ingest Manager.

From the drop-down window, select Local Storage and hit the Refresh button (Figure 273).

- Select an item.
  - To select, or unselect, all items, use the Select All button (Figure 274).
- To search for an item, use the search field (Figure 274).
- Click on the Ingest button (Figure 273). The ingest process will begin.
- If an item was already ingested, it will appear in gray (Figure 274).
  - <u>Note</u>: To hide all ingested content, select the Hide Ingested Content button (Figure 274).

do		IMS1000 Serial Number: 332132 Ingest Scan OVERVIEW ADMINISTRATION CONTROL MONITORING	Soreen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser LOGOUT 40	Hide
Search Field	on Dyna Carterna 255 Links 281e Quick Access Links	Refresh Local Storage all elements Select all Elements	aproad Ingest Monitor	Content
Ingested		Incollect, scanned about 0 minuter ago           Image: UBER_DOP_TEST_20_emc_red_0206           Image: UBER_DOP_TEST_20_emc_red_0206           Image: End of the state of the sta		Select All Button
		Construction         Construction<		
A Guick Con		Assets found         CPL(s): 0         PKO(s): 0         KDM(s): 0         DLM(s): 0           Vol rgest         No rgest         CPL(s): 0         CPL(s): 0         CPL(s): 0	PKL(s): 162 Other(s): 0 21:26 * "	

Figure 274: USB Ingest

• The user will be prompted to the Ingest Monitor tab to view the progress of the ingest.

#### 13.9.1.3 Ingesting Content from a FTP Site

Use a File Transfer Protocol (FTP) connection to ingest an item from a central server or a cinema server over a network.

#### 13.9.1.4 Ingesting Content From a Doremi Remote Server/LMS

- Click on the drop-down menu from the Location menu (Figure 273).
- Select the device from which to ingest from. Its content will be displayed inside the GUI (Figure 275).

<b>doremi</b>	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser	
for Digital Cinema	Ingest Scan OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<mark>ل</mark>	
Quick Access Links	Refresh 🛃 Ingest	Upload 🔤	Ingest Monitor	
Create Quick Access Links	1 all elements Select all Hide ingested content			
	1, scanned about 1 minute ago			Ingest
1000	UBER_DOP_TEST_20_enc_reel_0789			Tab
1000	SS Keekass TLR-4A S ENXX US-GB 61 2K LION 20100016 TDB:			Tab
10000	🚸 Ker Ass T.RAA, S. ENFOX, US-GE, S1, 2K, LION, 20100316, TDC			
1000	GANE_PLAN_FTR_S_ENEN_US-PG_51_2K_DL_20100611_CC_CAP_EN_PTXT			
	SAME_PLAN_FTR_S_EN-EN_US-PG_51_2X_DL_20100611_CC_CAP_EN_PTXT			
	C UBER_DCP_TEST_20_res_0125			
	UBER_DCP_TEST_20_red_0125			
			·	
	Assets found			
	Crt(s), 307 3rt(s), 0 PAU(s), 0 Kum(s); 0 ULm(s); 0 PAL(s), 307 Unit(	sj. u		
2 Quick Controls		18:03	2 19 5	

Figure 275: Remote Server Ingest

- Select the item to ingest and click the Ingest button (Figure 273).
- The user will be prompted to the Ingest Monitor tab to view the progress of the ingest.

Note: The server must be added through the Content Feed Manager (Section 12.8).

#### 13.9.2 Ingest Monitor

The IMS1000 allows the user to ingest content while the server is ingesting previously selected content. Click on the Ingest Monitor tab to see the progress of all the ingested items (Figure 276).

To access the Ingest Monitor tab, click on the green arrow on the right hand side of the GUI in the Ingest Scan and Upload tabs (Figure 275).

- USB ingests are Real Time.
- eSata ingests are two-thirds of Real Time.
- To see an updated view of the Ingest Monitor will all recently ingested items, click on the Refresh button (Figure 276).

Pause Button	IMS1000 Serial Number: 332132		Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser	Select All
Technology Leadership for Digital Cinema	Notice OVERVIEW ADMINISTRATION CONTROL MONITORING		LOGOUT	Button
	Refresh 🛞 Delete 📔 Pause 🕨 Resume 🚫 Cancel	Select all	Ingest Scan 🔲 Upload	
Button Create Quick Access Links	wates Description	Scheduled Started	Finished	Upload Tab
Delete	PUBLIC-ENEMIES_TLR-1_F_EN-XX_CAN_51_2K_UP_20090225_ASC	2014-06-2**18:14:38 2014-06-23T18:24:3	59 2014-06-23T18:26:19	
Button	PHALEOUTINEA_ILK-12_TEN-X_US-68_51_2X_UT_20101120_100     SORCERES-APPR_TLR-1_F_EN-XX_US-68_51_2X_D1_20091123_T00	2014-06-23110.14:38 2014-06-23116**	19 2014-06-23118:27:32	Properties
Flamont	V NightBet0Mas_TLR-9_S_EN-XX_US-68_51_2K_DI_20090816_TDC	2014-06-23T18:14:38 2014-06-23T18:27:3	32 2u. 196-23T18:28:00	icon
Information	KANATIE-KU_TUR-2_E-BI-XX_US-46_31_2X_SH2_2010278_DUA_0V     PKL asset executed [784a4741-67d1-4c72-9430-1555396dtd8]	2014-0-23115:14:38 2014-0-24115:281	00 2014-06-23118/290.	Cancel Button
Ingest Button	PRL asset imported [7/3447741-6701-4672-9430-1555395dtH8]           Assetmap imported [cd398764-ba11-4b46-958e-ddccd8077/d6]	Total Progre	ss 100%	Resume Button
Culick Controls			18:08 🗶 🎮 💈	

Figure 276: Ingest Progress

In the Ingest Monitor tab, the user has the option to delete, pause, resume, or cancel an ingest using the available buttons (Figure 276).

To select or unselect all items, use the Select All button (Figure 276).

To see more details for each element, highlight the item and click on the Properties icon on the right-hand side (Figure 276). The element information will be displayed at the bottom of the window (Figure 276).

The Ingest button in the bottom Notifications bar will alert the user to any ingest that is in progress (Figure 276).

Clicking on the button will open the Ingest Monitor tab that displays the ingest progress (Figure 276).

#### 13.9.3 Ingest Upload

The Ingest Upload tab can be used to upload packages from your local network. To upload a package, go to Control  $\rightarrow$  Ingest Manager  $\rightarrow$  Upload (Figure 277). Alternatively, clicking on the green arrow on the right hand side of the GUI in the Ingest Scan and Ingest Monitor tab will also open up the Upload tab (Figure 276).

doremi	IMS1000 Serial Number: 332132			Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Upload OVERVIEW ADM	IINISTRATION CONTROL	MONITORING	LOGOUT	<mark>ပ</mark>
Browse Button	You can upload packages to upgrade the j select the packages you want to install.     A system reboot might be necessary to co spload packages: Browse. No files selected.	product or to install additional feat omplete packages installation.	ures. Click on the input box below to	Ingest Monitor	Ingest Soan
Upload Button					
	📥 No Ingest			18:22	2 P 1

#### Figure 277: Ingest Upload

- Click the Browse button to locate the package to ingest (Figure 277).
- Click the Upload button when you have selected the file (Figure 277).
- When the file has been uploaded, you may be prompted to reboot the unit. Click the Reboot button (Figure 278).

	doremi	IMS1000 Serial Number: 332132	Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser
	Technology Leadership for Digital Cinema	Upload OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT 🔱
	Quick Access Links	You can upload packages to upgrade the product or to install additional features. Click on the input box below to select the packages you want to install.     A system reboot might be necessary to complete packages installation.  Files uploaded success; <sup>ally</sup> <u>Click here to reboot</u>	Ingest Monitor
Reboot Button		upload packages: Browse. No files selected.	
	Quick Controls     B Playback in progress	📥 Ingest in progress	18:25 🔹 🏴

#### Figure 278: Upload Reboot

• The user will be prompted to the System tab to restart the unit (Figure 279).

	doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
	Technology Leadership for Digital Cinema	System OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<mark>ပ</mark>
	Quick Access Links	To enter Standby mode, click the Standby button. The server will not be operational.     To restart the system, click the Restart button. You will be automatically disconnected from the web interface.     To shutdown the system, click the shutdown button.      Stantby     Restart     Shutdown		
Restart Button				
	A Quick Controls 😵 No Playback		00:30	

Figure 279: Restart the Unit

• When the unit has finished rebooting, login and go to Control  $\rightarrow$  Ingest Manager  $\rightarrow$  Ingest Monitor. The package will be available for ingest (Figure 280).

	doremi	IMS1000 Serial Number: 332132		Scre Softv User	en: IMS vare Version: 2.6. Level: adm	51000 .4-0 nin / SuperUser
	Technology Leadership for Digital Cinema	Ingest Monitor OVERVIEW ADMINISTRATION CONTROL MONITORING	1		LOGOUT	<mark>ل</mark>
	Quick Access Links	Refresh 🐼 Delete Pause 🕨 Resume 🔕 Cancel	Select all	Inges	t Scan 🗌 Upload	1
	Create Quick Access Links	Status Description	Scheduled	Started	Finished	<b></b> ^
	100000000000000000000000000000000000000	V PIRATESOFTHEC4_TLR-1-20_F_EN-XX_US-GB_51_2K_DI_20101120_TDC	2014-06-23T18:14:38	2014-06-23T18:26:19	2014-06-23T18:26:53	
Package		SORCERERS APPR_TLR-1_F_EN-XC_US-G8_51_2K_D1_20091123_TDC	2014-06-23T18:14:38	2014-06-23T18:26:53	2014-06-23T18:27:32	
Available		V NightBet0Mas_TLR-9_S_EN-XX_US-GB_51_2K_DI_20090816_TDC	2014-06-23T18:14:38	2014-06-23T18:27:32	2014-06-23T18:28:00	
		KARATE-KID_TLR-2_F_EN-XX_US-68_51_2K_SPE_20100218_DLA_0V	2014-06-23T18:14:38	2014-06-23T18:28:00	2014-06-23T18:29:03	
	100000000000000000000000000000000000000	ims_webui-1.0.4.pkg	2014-06-24T18:25:28	2014-06-24T18:25:28	2014-06-24T18:25:30	+
		Copied [ins_webui-1.0.4.pkg]		Success 100%	_	
		PKG ingested [ms_webu+1.0.4 pkg]     Reboot the system to complete installation	-	Total Progress 100%	3	
	Quick Controls     Playback in progress				18:27	x (# 1



## 13.10 Content Manager

The Content Manager application is a graphical user interface (GUI) that allows the user to browse, manage, and export all the content available on the player including: ShowPlaylist, CPL, KDM, and Doremi License. The Content Manager application is available in the Control tab.

- To open the Content Manager application, go to Control  $\rightarrow$  Content Manager.
- The Overview tab will appear. To see an updated view of the Overview tab with all available content, click on the Refresh button (Figure 281).

#### 13.10.1 Overview

The Overview tab lists all available CPLs, Licenses, SPLs, and KDMs on the unit. It also displays the used and free space available (Figure 281).

Refresh Button	IMS1000 Serial Number: 332132 Content Overview OVERVIEW ADMINISTRATION CONTROL MONITORING	Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser LOGOUT ()	
Used and Free Space	Free disk space:   Free disk space:   1788 GB   Used space:   25     CPLs   Complete:   0     KDMs   Usid:   0   Expired:   0     Not yet valid:   0     Assets count:   25     CPLs 18     KDMs 0   SPLs 5   DLMs 2	Licenses Comp. Playfist	Composition Playlist Tab
Quick Controls     Playback in progress		18:32 🗶 🍽	

Figure 281: Content Manager Main Tab

- A complete CPL is a CPL that is playable.
- An incomplete CPL misses elements and is therefore not playable.
- Valid KDMs are KDMs that have not expired yet and are for trusted devices.
- Expired KDMs are KDMs with a validity date that has expired.
- Not yet valid KDMs reference KDMs made in advance, not valid in present, to be used in the future.
- A valid license is a license that has not expired.
- An expired license is a license with validity date that has expired.
- Not yet valid licenses are available on the unit, not valid in present, but valid only for future use.

#### 13.10.2 Composition Playlists Page

The Compositions Playlists tab displays all of the CPLs available on the unit as well as their properties (Figure 282). To access the Composition Playlists tab, click on the green arrow on the right hand side of the GUI in the Overview and Decryption Keys tabs (Figure 281).

To see an updated view of the tab will all available CPLs, click on the Refresh button. To search for a specific CPL, click on the Search button. To filter the CPLs by the type of elements that have been ingested, click on the Filters button. To select or unselect all of the elements, click the Select All button (Figure 282).



Figure 282: Content Manager Composition Playlists Tab

#### 13.10.2.1 Delete a CPL

To delete a CPL from the server, click on the CPL and click on the Delete button (Figure 282).

• A window will appear asking to confirm (Figure 283).



Figure 283: Delete CPL Window

- Click Ok to continue and Cancel to cancel the operation.
- Once the CPL is deleted, it will be permanently deleted from the server and removed from any associated SPLs.

#### 13.10.2.2 Information

Clicking anywhere on the line of a highlighted CPL, or on the Properties icon that appears on the right, will display information about that CPL on the bottom portion of the tab (Figure 282).

Clicking on the name of a CPL will provide the following information. Any time the user wants to exit the CPL Information window, click on the Close button (Figure 284).

#### 13.10.2.2.1 Properties Tab

The Properties tab displays the following information about the CPL (Figure 284):

- Title
- Sound: Channel count, Quantization bits, Encoding
- Picture: Encoding and Dimension
- Package size
- Duration
- Edit rate (frame rate)
- Kind (e.g., trailer, feature, etc.)
- Caption and Subtitle Info
- UUID (Universally Unique Identifier)
- Creation date
- Creator
- Company

	Properties	Assets	SPL(s)	KDM(s)	Audio Mapping	Settings	
	Title:	Beowulf_TST-R2.4	r.4v.4a.4s-t_S_	en-Fr_TMP_5	1_2K_PC_20100305_TD	ic	
	Video:	- JPEG2000, 204	 48x858, @24		Kind:	test	
	Audio:	🥝 PCM, 24b, 8ch	: English		Disk size:	14.77 GB	
	Caption:				Standard:	Smpte	
	Subtitle:	🧳 1 track: English	i		Duration:	00:18:33	
	ID:	urr	n:uuid:c9e9b99	2-a983-486e-9	f8d-c1fe596ed6d9		Å
	Creation:	20	10-03-05T15:2	2:42-08:00			
ose	Creator:	wi	-cpl + Wailua v	0.6.44			
	Company:	./1	echnicolor digit	al cinema la			-



#### 13.10.2.2.2 Assets Tab

• The Assets tab (Figure 285) displays information on all the Reels that compose the CPL and the Assets in each Reel (Reel number, subtitle, and sound).



Figure 285: CPL Information Window - Assets Tab

#### 13.10.2.2.3 SPL(s) Tab

- The SPL(s) tab displays information related to all of the Show Playlists that contain the selected CPL (Figure 286).
- For more information on a specific SPL, select the desired SPL from the Name column and click on it. This will open the SPL information window Properties tab that will show all the names of the CPLs inside that SPL (Figure 287).
- The second tab of the SPL information window displays the related schedules (Figure 288).
- Click Ok to return to the CPL Properties window (Figure 287).

Properties	Assets	SPL(s)	KDM(s)	Audio Mapping	Settings	
Name	UUI	D				
NewSPL	um	uuid:bf846348	-fddf-42d2-acc2	-4b61e45c647f		

Figure 286: SPL(s) Tab

Name: NewSPL	
Duration: 02:17:41	
CPL Name	UUID
	um:uuid:3d9d2c67-6880-46d8-ba52-ce78adc5dc8
	um:uuid:c9e9b992-a983-486e-9f8d-c1fe596ed6d9
	urn:uuid:8977a5bf-d9bd-444e-85c3-ae670ced5fe2

Figure 287: SPL Information Window

Properties Related schedule:	•		
Start time	Mode	Annotation text	
2013-06-26T12:39:00-07:00	Pending	Schedule	
2013-06-27T12:39:00-07:00	Pending	Schedule	
2013-06-29T12:39:00-07:00	Pending	Schedule	

#### Figure 288: Related Schedules Window

#### 13.10.2.2.4 KDM(s) Tab

• This tab will display the UUID and validity of each KDM for the concerned CPL (Figure 289).

roperties	Assets	SPL(s)	KDM(s)	Audio Mapping	Settings		
JUID					Validity		
rn:uuid:cbc2c	ldbb-0121-48	c1-84dd-e2a9	8a19e5c3		Valid for 3	year(s), 10 month(s)	

Figure 289: KDM(s) Tab

- For more information on a specific KDM, select the KDM and click on it. This will take the user to the KDM Information window Properties tab.
- The Properties tab displays the following information about the selected KDM (Figure 290):
  - Message ID: KDM UUID
  - Message Type: MessageType field of the KDM
  - Annotation Text: AnnotationText field of the KDM
  - Ingestion Date: Date on which the KDM was ingested into the server

Properties	Content	Validation	TDL		
Message ID:	0710889c-c	ac7-45b9-a277	-0da0638cf090		
Message type:	http://www	.smpte-ra.org/4	30-1/2006/KDM#kdm	-key-type	
Annotation tex	t: KDM gener	ated for DCP20	00-199000		
Ingestion date	: Unknown				

#### Figure 290: Properties Tab

- The Content tab contains the following information about the related CPL (Figure 291):
  - CPL Title
  - CPL ID (CPL UUID)



Figure 291: Content Tab

• The Validation tab (Figure 292) contains precise information about the date and time of the validity of the KDM, an approximation of the period for which the KDM is valid.



Figure 292: Validation Tab

• The TDL tab contains the list of the trusted devices (projectors) and their certificate thumbprints (Figure 293).

	KDM Informatio	n			
	Properties	Content	Validation	TDL	
	ID: urn:u	uid:30ca2e13-	2f31-c74e-97d3-	44182bc89	92c2
	Trust all				
Ok Button					
	Ok				

Figure 293: TDL Tab

• Click Ok to return to the CPL Properties window (Figure 292).

#### 13.10.2.2.5 Audio Mapping Tab

The Audio Mapping tab allows the user to save audio settings specific to the CPL (Figure 294). The audio setting created for the entire unit in Administration  $\rightarrow$  Control Panel  $\rightarrow$  Audio Settings do not carry over into this tab, allowing the user to edit these settings for each CPL, if so desired.

The user also has the option to enable the Data check-box for the individual CPL, indicating that they want the channel to get a data signal, not an audio signal (Figure 294).

Click Save to save any modifications (Figure 294).

	Propertie	es Assets	SPL(s) KI	)M(s)	Audio Mapping	Settings			Data
50	(	Channel Label		Data		Channel Label		Data	Chec
	ch.01	L/Left			ch09				B0
	ch.02	R/Right	Ŀ		ch10		•		
	ch.03	C/Center			ch11				
	ch.04	LFE/Screen			ch12				
	ch.05	Ls/Left surround			ch13				
	ch.06	Rs/Right surround			ch14		-		
	ch.07	HI/Hearing impaired			ch15				
ive	ch.08	VI-N/Narration		] =	ch16				

Figure 294: Audio Mapping Tab

#### 13.10.2.2.6 Settings Tab

The Settings tab allows the user to alter the subtitle placement for the CPL as well as enable delete protection, which prevents that CPL from being deleted. If a user attempts to delete the CPL, they will get an error message. Click Save to save any modifications (Figure 295).

	Properties Assets SPL(s) KDM	(s) Audio Mapping Settin	98
	Misc	Subtitle Placeme	int
1	Delete protection	Top Offset:	0
		Bottom Offset:	0
		Right Offset:	0
		Left Offset:	0
ave			

#### Figure 295: Settings Tab

#### 13.10.2.3 Filter Tool

The Content Manager allows the user to filter CPLs, in the Composition Playlist tab, using the Filter button located on the top portion of the window (Figure 296). The Filter button allows the user to sort the CPLs based on the type of elements that have been ingested. In this case, the user can filter by:

• All Elements, Incomplete Elements, Live, Policy, Teaser, Test, and Trailer.

**Note**: The black-highlighted area (Figure 296) indicates whether the content is 3D or has subtitles (ST).



Figure 296: Filter Tool

#### 13.10.3 Decryption Keys Tab

- The Decryption Keys page displays the list of all encrypted CPLs on the unit and the corresponding KDMs with a description of the following information (Figure 297):
  - Expiration date
  - UUID of the KDM
  - Associated CPLs

To access the Decryption Keys tab, click on the green arrow on the right hand side of the GUI in the Composition Playlist and Show Playlist tabs (Figure 296).

To see an updated view of the tab will all available KDMs, click on the Refresh button. To search for a specific KDM, click on the Search button. To upload a KDM, click on the Upload button. The Upload tab of the Ingest Manager tab will appear.

For more information on the Upload tab, refer to Section 13.9.3.

IMS.OM.002949.DRM

To select or unselect all of the KDMs, click the Select All button (Figure 297).

Delete	dnremi	IMS1000		Screen: II Software Monstore, 2	WS1000 .6.4-0	Search Button
Button	Technology courtembin for Digital Cinema	Serial Number: 332132 Decryption Keys OVERVIEW ADMINISTRATION COM	ITROL MONITORIN <sup>®</sup>	User Level: a	dmin / SuperUser	Select All
Refresh	Quick Access Links	Refresh Upload 🛞 Delete 🔍 Search	Select all	Comp. Playlist Sho	w Playlist	
Button		um uuid 9a2b46f6-36c2-4aee-a1c0-50ae31ebcee7	64 Reel Composition. 1 Second Reets (Encrypted) 2.1.8 (519)	2015-11-19723:00:00+00:00		
Upload		umuuid:cf28ceb1-7cac-4504-97ac-80635d9267fc	64 Reel Composition, 1 Second Reels (Encrypted) 2.1.8 (§1ø)	2015-01-21700:00:00+00:00		Show
Button		4 um:uuid:73cc4e95-036c-4d7e-9cd8-9703d8cc9108	<&? Fox® Sublitle Test v12 Part1 ?&>	2013-12-11700:00:00+00:00		Tab
		😪 um:uuid:014ed952-e7da-4a48-a47b-274a199be48f	<&? Fox® Subtitle Test v12 Part2 ?&>	2013-12-11700:00:00+00:00		Tub
		🔏 um:uuid:d212347f-a314-49fb-a5ad-18459c551eae	<&? Fox® Subtitle Test v12 Part3 ?&>	2013-12-11700:00:00+00:00		
	1000	🧟 um:uuid:46fb2551-3c8f-4b75-9091-9ded47f812a2	Audio_Test_Doremi_Ref_16ch_Encrypted	2016-04-12723:00:00+00:00	- 19 B	Properties
KDM		Properties				Icon
Properties		ID: um:uuid:9a2b46f6-36c2-4aee-a1c0-50ae31ebcee7			And Description	
Порениез		Not valid before: 2011-10-18723:00:00 + 00:00			and the second second	
		Not valid after: 2015-11-19T23:00:00+00:00			A second second	
		Ingestion date: 2013-08-02T16:03:41-07:00				
	Quick Controls	± No Ingest		23:21		

Figure 297: Decryption Keys Tab

#### 13.10.3.1 KDM Properties

Clicking anywhere on the line of a highlighted KDM, or on the Properties icon that appears on the right, will display information about that KDM on the bottom portion of the tab (Figure 297).

Clicking on the name of a KDM will open the KDM Information tab. See Section 13.10.2.2.4 for more information on the KDM Information tab. Any time the user wants to exit the KDM Information window, click on the Ok button (Figure 293).

#### 13.10.3.2 Delete a KDM

To delete a KDM from the server, click on the KDM and click on the Delete button (Figure 297).

• A window will appear asking to confirm (Figure 298).

Do you really	want to delete	the selected h	(DM(s)?
			. Ì
	01/		

Figure 298: Delete KDM Window

- Click Ok to continue and Cancel to cancel the operation.
- Once the KDM is deleted, it will be permanently deleted from the server.

#### 13.10.4 Show Playlists Tab

- This page displays all the SPLs available on the unit together with the following information (Figure 299):
  - SPL Duration
  - SPL Name
  - UUID

To access the Show Playlist tab, click on the green arrow on the right hand side of the GUI in the Decryption Keys and Licenses tabs (Figure 297).

To see an updated view of the tab will all available SPLs, click on the Refresh button. To search for a specific KDM, click on the Search button. To select or unselect all of the SPLs, click the Select All button (Figure 299).



Figure 299: Show Playlist Tab

#### 13.10.4.1 Delete a SPL

- Select a SPL from the list and click the Delete button (Figure 299).
- A manager password and confirmation will be needed to perform the operation.
- Confirm or deny the deletion with the pop-up confirmation window by pressing Yes or No.

#### 13.10.4.2 Download

Highlighting a SPL will reveal the Download icon on the right hand side (Figure 299). This allows the user to download the SPL onto a computer and to view the CPLs in the SPL.

After selecting a SPL and clicking the Download button, the user will be asked to save or open the file.

#### 13.10.4.3 Information

Select a SPL and click on it to get details regarding the SPL.

The SPL Information window pops up and displays the SPL Properties tab (all CPLs in it) and the Related Schedules tab (Figure 300 and Figure 301).

lame: NewSPL	
luration: 02:17:41	
CPL Name	UUID
	um:uuid:3d9d2c67-6880-46d8-ba52-ce78adc5dc88
Beowull_TST-R2.4r.4	20100305_TDC um:uuid:c9e9b992-a983-486e-9f8d-c1fe596ed6d9
	um:uuid:8977a5bf-d9bd-444e-85c3-ae670ced5fe2

Figure 300: Properties Tab

Properties Related schedu	ules		
Start time	Mode	Annotation text	
2013-06-26T12:39:00-07:00	Pending	Schedule	
2013-06-27T12:39:00-07:00	Pending	Schedule	
2013-06-29T12:39:00-07:00	Pending	Schedule	

Figure 301: Related Schedules Tab

#### 13.10.5 Licenses Tab

• The Licenses page contains the list of all the licenses available on the unit including the expiration date and short description of the usage of the license (Figure 302). On this page, the user is allowed to delete licenses.

To access the Licenses tab, click on the green arrow on the right hand side of the GUI in the Show Playlist and Overview tabs (Figure 299).

• To see an updated view of the tab will all available licenses, click on the Refresh button. To search for a specific license, click on the Search button. To select or unselect all of the licenses, click the Select All button (Figure 302).

#### 13.10.5.1 License Properties

Clicking anywhere on the line of a highlighted License, or on the Properties icon that appears on the right, will display information about that license on the bottom portion of the tab (Figure 302).

Refresh         Button	Entresh Refresh Refresh Refresh Rescription	Screen: IMS1000 Software Version: 22-ev user Level: admin / SuperUser LOGOUT CONT Show Pleytet Overview	Search Button
Delete Button	2014-08-28700:00:00+00:00         PartiaBlackaut (MS)           2029-12-13700:00:00+00:00         firmware "MS-FW 4.2.10-0" license (MS)		Properties Icon Select All
License Properties	Properties           ID:         um uuld 2d3e13e2-e808-4fd5-a076-48a677bb8a3a9           Not valid before:         2014-06-28100:00:00-00:00           Product:         IMS           Not valid after:         2014-08-28100:00:00+00:00           Valid for 2 month(s), 0 week(s)	19-27	

Figure 302: Licenses Tab

### 13.10.5.2 Delete a License

- Select the license from the list and then click on the Delete button (Figure 302).
- A Manager password will be needed to perform the deletion. If the user is already logged in with SuperManager privileges, the password confirmation window will not appear.
- Click Yes to confirm the deletion.

#### 13.10.6 Adding a License

- To add a license, have the license file on a USB flash drive and plug it into a USB port on the unit.
- Go to the Control → Ingest Manager and select Local Storage from the drop-down menu.
- Select the license file(s) to install and click the Ingest button (Figure 303).

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Ingest Scan OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<del>ن</del>
Quick Access Links & Create Quick Access Links	Cocal Storage all elements Select all Come Hide ingested content	Upload 🖉	Ingest Monitor
License	localhost, scanned about 0 minutes ago		
	PeriatBluckout_M6:dm_332132.dm.zjp		
	Assens Iouna CPL(s): 0 SPL(s): 0 PKG(s): 0 KOM(s): 0 DLM(s): 0 PKL(s): 0 Other(s):		
A Quick Controls 😚 Playback in progress		23:09	2

#### Figure 303: License Ingest

- The user will be asked for a password. Enter the appropriate password and press Ok.
- It is not necessary to reboot the unit.
- Go back to the License Manager GUI. The ingested license(s) will be visible.
- After ingesting a license, the associated device (e.g., "Subtitle Engine," "Dolby DFC 100") will be visible in the Device Manager GUI.

## 13.10.7 Licenses Available - Managed Through Doremi License Control (DLM)

Sensio	Sensio HiFi 3D Demux (support is forthcoming, Q3 2014)
RealD	RealD Deghosting
RealD	RealD 3D (support is forthcoming, Q3 2014)
RealD	RealD Side-by-Side License
Dolby	Dolby 3D
Doremi	Doremi 4K License
Doremi	Doremi StreamIt License
Doremi	Captiview
Barco	Auro 3D (support is forthcoming, Q3 2014)

# **13.11 Device Controller**13.11.1How to Configure the Device Controller GUI

- To open the Device Controller application, go to Control  $\rightarrow$  Device Controller.
- The following Device Controller window will appear (Figure 304).

doremi	IMS1000 Serial Number: 332132				Screen: Software Version User Level	IMS1000 n: 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Device Controller OVERVI	EW ADMINISTRATION	CONTROL	MONITORING	LOGOUT	<mark>ل</mark>
Browse Projectors Button	Browse Projectors     This application can be used     To control a device, select a	to monitor or control external device from the Registered tab	levices. , or connect to	a device from the Manual tab.	]	
	Registered Manual					
	Name	Туре	IP		Port	
	IMS	IMS	192.168.10.10	0	43751	
			_			
Drukk Controls     99 Playback in progress	* No Innest				19:	38 🗴 🎮 🔳

Figure 304: Device Controller

• To view existing projectors, click on the Browse Projector button (Figure 304). The following window will appear (Figure 305).

Projector List		
IMS		
Close		



#### 13.11.2 Registered Tab

- If the device was previously created/registered in the Device Manager GUI, then it will automatically appear in the "Registered" tab of the Device Controller GUI.
- An IMB or Sony SRX Projector will be automatically detected by the Device Controller application when added to the network.
- The following parameters are shown in the Registered tab for the device:
  - o Name
  - o Type
  - o IP
  - o **Port**
- The "Port" number is automatically populated. Please do not alter this field.
- Select the device to control and then click on it. The Device Controller window will display four tabs that will allow the user to configure, control, and manage the device (Figure 306).

doremi	IMS1000 Serial Number: 332132				Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Device Controller OVER	VIEW ADMINISTRATION	CONTROL MONITORING		LOGOUT	ి
Quick Access Links	Browse Projectors     This application can be us     To control a device, select	ed to monifor or control external a device from the Registered tab	devices. , or connect to a device from the Manual tab.			
	Registered Manual					
	Name	Туре	IP	Pa	rt	
10000	IMS	IMS	192.168.10.10	43	751	
		_				
Quick Controls     Solution Playback in progress	± No Ingest				19:38	

Figure 306: Registered Tab

#### 13.11.2.1 General Tab

The first tab displays and controls the input source and scaling (Figure 307).

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Device Controller OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<u>ပ</u>
Quick Access Links	Untitled-1		
Input Drop- Down	General System Colors Info	_	
Scaling Drop- Down	scaling Side Masking		
Aulick Controls 😵 No Playback	± No ingest	01:02	

#### Figure 307: General Tab

- Input: The following sources are supported:
  - Internal: signal source is the IMS1000 hard drives.
  - HDMI: signal source is an external device (e.g., BD player) that connects via HDMI cable to the IMS1000.
  - SDI: signal source is an external device that connects via SDI cables to the IMS1000.
- Scaling: The following masking/scaling is selectable from the drop-down menu.
  - Side Masking
  - Top/Bottom Masking
  - o One-to-One

#### 13.11.2.2 System Tab

The second tab displays the networking configuration (Figure 308).

doremi	IMS1000 Serial Number: 332132	Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser
Technology Leadership for Digital Cinema	Device Controller OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT
Quick Access Links	Untitled-1	
	General System Colors Info Network Configuration	
Save as Default	P: 192.168.254.246 Netmask: 255.255.0 Gateway: 192.168.254.241 Save	Save Button
Restore Button	Save current configuration as detaus Save Restore default factore renderand Restore	
		01:08

#### Figure 308: System Tab

- The following networking configuration information is displayed:
  - ∘ IP
  - Mask (sub-network mask)
  - Gateway
- The user can modify the network configuration by inputting the desired configuration in the designated fields.
- Root privileges are required to change the networking parameters.
- Click Save to confirm the changes. These changes take immediate effect and they expire when you reboot the unit, being replaced by the default networking configuration (Figure 308).
- You can save these settings as default by pressing the Save as Default button. These configurations will be effective even after a reboot (Figure 308).
- To restore the networking configuration to factory default, click on the Restore button (Figure 308). The factory default settings are:
  - IP: 192.168.254.246
  - o Mask: 255.255.255.0
  - Gateway: 192.168.254.1
- Make sure to click the Save button when finished setting the network configuration.

#### 13.11.2.3 Colors Tab

• The third tab, called Colors, allows the user to modify the color space for HDMI and HDSDI inputs (Figure 309).

doremi	IMS1000 Serial Number: 332132	D				Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Device Controller	OVERVIEW ADMINISTRATION	CONTROL	MONITORING		LOGOUT	<u></u>
Quick Access Links	Untitled-1	Eat					
	General System HDMI HDMI Input Color Space: HDMI Input Color Space:	Colors Info Auto Rec709		_	_	_	
	HDSDI HDSDI Input Color Space: [ HDSDI Input Color Space: ] HDSDI Input Degamma: [ HDSDI Input Mode: ]	YCbCr709 Rec709 (20) 4:4:4 dual link	<b>v</b> <b>v</b>				
A Quick Controls & No Playback	± No Ingest					18:13	

#### Figure 309: Colors Tab

13.11.2.3.1 HDMI Color Space Settings

- HDMI Input Color Space: Click on the arrow on the drop-down menu and select the desired color space standards from the list.
  - o Auto
  - YCbCr709
  - o RGB709
  - YCxCz
  - o XYZ
- HDMI Input Degamma: Click on the arrow on the drop-down menu and select the desired degamma factor from the list.
  - Rec709
  - o DCI
  - Custom: Choose the desired degamma factor value in the numeric field using the arrows.

13.11.2.3.2 HDSDI Color Space Settings

- HDSDI Input Color Space: Click on the arrow on the drop-down menu and select the desired color space standards from the list.
  - YCbCr709
  - **RGB709**
  - YCxCz
  - o XYZ
- HDSDI Input Degamma: Click on the arrow on the drop-down menu and select the desired degamma factor from the list.
  - **Rec709**
  - o DCI

- Custom: Choose the desired degamma factor value in the numeric field using the arrows.
- HDSDI Input Mode: Click on the arrow on the drop-down menu and select the desired Input Mode from the list.
  - o (2D) 4:4:4 Dual Link
  - o (3D) 4:2:2

#### 13.11.2.4 Info Tab

The fourth tab will display the following useful identification information for the controlled device (Figure 310):

- Firmware version
- Main Board revision
- Running Mode
- Serial Number
- Software Version

d	oremi	IMS100 Serial Number: 33275	0				Screen: Software Version: User Level:	IMS 1000 2.6.4-0 admin / SuperUser
	Technology Leadership for Digital Cinema	Device Controller	OVERVIEW	ADMINISTRATION	CONTROL	MONITORING	LOGOUT	<u>ပ</u>
Quick	Access Links Create Quick Access Links	IMS1000	Exit	1				
Exit Button		General System Identification Firmware Version: MainBoard: Running Mode: Setal Number: Software Version:	Colors IMS-FW 4.6.1 IMS rev E product 332750 6.0.117-0	0				
a Qui	ck Controls 😵 No Playback 📩						15:49	9 🗶 🎮

Figure 310: Info Tab

• Click Exit to exit the application.

#### 13.11.3 Manual Tab

If the device is created manually in the Manual tab (Figure 311), then it will be temporary and will be lost once the unit is rebooted or the user logs out.

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Device Controller OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<del>ن</del>
Quick Access Links	Browse Projectors      This application can be used to monitor or control external devices.     To control a device, select a device from the Registered tab, or connect to a device from the Manual tab.		
	Registered     Manual       Device Name:     IMS       Device Type:     Integrated Media Block       IP Address:     192:168:100.50       Port:     43761		
Quick Controls     Section 2018     Playback in progres		20:38	2 19

Figure 311: Manual Tab

- The following information is required to configure the device manually:
  - Device Name: It is recommended that the user use a relevant name.
  - Device Type: Click on the arrow for the list of supported devices.
  - IP Address: IP address of the device to control.
- Port: This information is automatically populated after choosing the Device Type.
  - $\circ$  IMB Port Number  $\rightarrow$  43751

**Note:** Ethernet port (Eth0) is set to DHCP by default. All IMS1000 boards are shipped from the factory with the following default IP address for Eth1:

- IP: 192.168.100.50
- SM: 255.255.255.0
- GW: 192.168.100.1

## **13.12 Macro Execution**

This allows the operator to execute a set of macros in one single click (Figure 312). This feature is particularly useful in emergency cases. For instance, in case of a crash recovery, the player will resume the show but the operator will have to quickly execute some macros such as, "projector lamp on."

Click the Refresh button to ensure all recently added macros are visible (Figure 312).

doremi	IMS1000 Serial Number: 332132	Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Macro Execution OVERVIEW ADMINISTRATION CONTROL MONITORING	LOGOUT	<u></u>
Quick Access Links	Refresh		
Button	Execute a saved automation cue macro in one single click.		
	Macro List		<u>^</u>
	НОМ		
	Intervalio Manuele		
	Intervalio scope 3 minuti		
	Intervalio Scope 5 minuti		
	Intervalio Rat 3 minuti		
	Intervalio Rat 5 minuti		
	Prova Luci		
	Dower Close		
♀ Quick Controls		20:43	



This page has been intentionally left blank.

## 14 Monitoring Tab

This application provides information for each drive, detailed reports, and product information.

## 14.1 Diagnostics

To access the Diagnostic application, go to Monitoring Tab and click on Diagnostics.

• The System tab will automatically appear on the screen (Figure 313):



Figure 313: System Tab

- The application is composed of four different tabs:
  - System: Provides overall information concerning the system itself.
  - Status Overview: Provides information related to the hardware.
  - Storage: Provides information concerning the storage and allows the user to repair, reinitialize, and replace a drive.
  - Media Block: Provides information on issues relating to the media block.
# 14.2 System Tab

The System tab provides general information related to the server, such as: Serial Number, Software/Firmware Version numbers, IP addresses, Product Name, Security Manager Version, WebUI Version, operating system information, and hardware information. The System tab automatically jumps to the Product Informations section.

The System tab is illustrated below (Figure 314):

Detailed Report	doremi	IMS1000 Serial Number: 332132	0				Screen Softwa User Li	n: IMS are Version: <b>2.6</b> evel: <b>adr</b>	S1000 .4-0 nin / SuperUser	
Button	Technology Leadership	System	OVERVIEW ADMINISTRATION	CONTROL	MONITORING		LC	DGOUT	ப	
	Quick Access Links	Detailed Report					MediaB	ilock 🗌 Status	: Overvice	
	Greate Quick Access Links	Hardware Versions	IP Address (eth1):	192.168.100.50						Status
		Networking								Overview
	100000000000000000000000000000000000000	Product Informations	Product Informatio	ns						
		Software Versions	Product Informat	ons						Tab
			Product Name:	IMS1000						
			Serial Number:	332132						
			Main Software Version:	2.6.4-0						
			Main Firmware Version:	4.2.10-0						
	1000		Software Versions							
			Operating Syste			Software		Library		
			Host operating system:	Debian 6.0.7	MD software:	DoremiLabs 6.0.12-0	SNMP agent:	DoremiLabs DOI	REMI	
					BIOS:	Intel 8.002-3	SOAP agent:	DoremiLabs 1	.1.51-6	
					Kernel rescue:	Linux 2.6.35-rescu			~	
								20:49	2	

Figure 314: System Tab

#### 14.2.1 Detailed Report Overview

To generate a report log, please follow the steps below:

**Note**: If possible, generate the report log when there is no playback.

- Go to Monitoring Tab  $\rightarrow$  Diagnostics  $\rightarrow$  System.
- Click on the Detailed Report button (Figure 314).
- Click the OK button for the pop up that appears asking if you would like to proceed (Figure 315).

Generating the	report file may take s	several minutes.
Are you sure yo	u want to proceed?	
17		
		Cancal

Figure 315: Generate Report

• The report will take several minutes to generate.

• When the generation is complete, a window will appear asking the user if they would like to open or save the report (Figure 316). Make your selection and click Ok. The report is saved on the computer's default downloads folder.

•

Figure 316: Detailed Report

# 14.3 Status Overview Tab

The Status Overview tab provides the following information concerning the server itself: Fans, Temperature, Voltage, Memory, Network, Projector, Storage, Security Manager, Time, Administration, Playback, Security, and Features (Figure 317).

To access the Status Overview Tab, click on the green arrow on the right hand side of the GUI in the Storage and System tabs (Figure 332).

Clicking on a section on the left side of the GUI will take you from the top of the page to that section for more detailed information.

The colored icons next to the sections reveal the status of that section. Green is healthy, orange is a warning, and red is a failure (Figure 317).

	Serial Number: 332132					Software Version: User Level:	2.6.4-0 admin / SuperUser	
Technology Leadership for Digital Cinema	Status Overview 0	VERVIEW ADMINISTRATION	CONTROL M	onitoring		LOGOUT	<u>0</u>	Storage
Status Quick Access Links						System 🖂	Storage	Tab
Cons		Fans						
	Temperatures			No relevant informat	ion		E	
	Voltages							
	Memory	Temperatures						
	Network	System		MediaBlock		Storage		
	Projector	Motherboard:	36 °C	MD FPGA #1:	33 °C	DATA DISC (rd00):	29 °C	
	Storage	CPU:	59 °C	MD RTC:	32 °C	DATA DISC (rd01):     DATA DISC (rd02):	28 °C	
	Security Manager							
	<ul> <li>Time</li> </ul>	Voltagos						
	Administration	Vullayes	1					
	Playback	MediaBlock	2 25 V					
	Security	MD Tamper Voat:	3.39 V					
	Features	MD Tamper Vref:	0.9 V					
		MD Tamper AD1:	2.99 V					
		MD Tamper AD2:	1.27 V				-	

Figure 317: Status Overview Tab

# 14.4 Storage Tab

The Storage tab consists of two sub-views: Storage Details and Unit Informations (Figure 318). To access the Storage Tab, click on the green arrow on the right hand side of the GUI in the MediaBlock and Status Overview tabs (Figure 314).

- Storage Details, which is the top half of the screen, lists all the RAID builds configured on the server. On the right side of the GUI, there is a visual representation of the information for each RAID build in the first tab. The second tab has the Reset All Drives button (see Section 15.3 for more information).
- Unit Information, which is the bottom half of the screen, lists all the disks configured in the selected RAID.

RAID Selected	IMS1000 Serial Number: 332132 Storage OVERVIEW ADMINIS	TRATION CONTROL MONITORING	Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser LOGOUT	
Quick Access Links	,data	/opt /doremi Storage Details	Status Overview MediaBlock	Reset Drives Tab
DISK	md0 hw0	Healthy Healthy	Mount: ∕data. Type: ⊃+ta	
Genetica	🕐 rd00		Capacity: 1953.1 Ge	
	🗢 rd01		Used Space: 55.59 GB	General
	<b>°</b> rd02		Free Space: 1797.51 GB	RAID
	7	Unit Information		Information
	Mount: rouz	RawReadErrorRate [norm]: 100 🔵		monnadon
Disk	Canacity: 931.5 GB	ReallocatedSectorCount [raw]: 0 ReallocatedEvent [norm]: 100 ReallocatedEvent [norm]: 100 ReallocatedEvent [norm]: 00 ReallocatedEvent[norm]: 00 ReallocatedEvent[n	97%	
Information	Version: JA00A560	SpinUpTime (raw): 12884901888 O SeekErrorRate (raw): 0 O		
	Model: HGST HCC54101	SeekTimePerformance [norm]: 100 O 0A9E680 SpinRetryCount [norm]: 100 O		
	Serial: JA100010K25Y4	CurrentPendingSector [raw]: 0 O M OfflineUncorrectable [raw]: 0 O	Free Space Used Space	
	Bus: SATA	UDMACrCError [raw]: 0 O Temperature [raw]: 163209478170 O		
Quick Controls     Physical American Ameri American American	± No Ingest		21:04 🔹 🏴	



	IMS1000 Serial Number: 332132				Soreen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser	MediaBlock Tab
Quick Access Links	Storage OVER	VIEW ADMINISTRATION	CONTFIOL MONITORIA	IG Healthy	Status Overview M	ediaBlock	Reset Drives Button
	<ul> <li>hw0</li> <li>rd00</li> <li>rd01</li> <li>rd02</li> </ul>	Unit Inform	ration	Healthy		ı	
	Mount: Status: Capacily: Version: Model: Serial: Bus:	rd02 Normal (*) 931.5.58 JAD0A560 HGST HCC541010A96680 JA100010K25Y4M SATA	SMAIL: RawReadEmoRate [norm]: ReallocatedEvent [norm]: SeekErrorRate [raw]: SeekErrorRate [raw]: SeekErrorRate [raw]: DumerRendromscher [raw]: OffineUncorrectable [raw]: Temperature [raw]:	100 0 100 1 12884901888 0 100 1 100 0 100 0 163209478170 0		I	
A Quick Controls  No Playback  A	≥ No Ingest				21:03	X Pa I	

Figure 319: Reset Drives Button

### 14.4.1 RAID Information

Storage Details lists all the RAIDs configured on the server. Clicking on an individual RAID will reveal the disks that make up the selected RAID. Clicking on the individual disks will reveal the following information in the Unit Information portion as well as display a general visual representation of the RAID (Figure 318).

- An icon to show RAID status (green = healthy; amber = degraded/rebuild; red = missing)
- Array device name
- Mount point
- Array size
- Array used disk space and free space
- RAID status (healthy, degraded, rebuilding %, failed)
- SMART information
- Model and serial number
- A pie chart depicting the percentage of used and free space

# 14.5 MediaBlock Tab

To access the MediaBlock Tab, click on the green arrow on the right hand side of the GUI in the Storage and System tabs (Figure 319).

The MediaBlock tab is divided into three sections (Figure 320):

- Projector:
  - Connection Status: Displays the status of the connection with the media block
  - Model: Displays the projector model
  - Dowser: Displays whether or not the dowser is open
  - o Lamp: Displays whether or not the lamp is on
- Media Decoder:
  - Video Watermark: Displays the type of watermark present
  - Audio Watermark: Displays the type of watermark present
- Security Manager:
  - o Blackout Mode
  - Service Door Status
  - Service Door Armed Status
  - Physical Marriage: Displays whether or not the physical marriage is operational
  - Logical Marriage: Displays whether or not the logical marriage is engaged
  - Active Marriage: Displays whether or not the active marriage is engaged

The colored icons next to the sections reveal the status of that section. Green is healthy, orange is a warning, and red is a failure.

	doremi	IMS1000 Serial Number: 332132	)			Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser	
MediaBlock Tab	Technology Leadership for Digital Chema Quick Access Links Create Quick Access Links	MediaBlock Projector	OVERVIEW ADMINISTRATION	N CONTROL	MONITORING	LOGOUT Storage	System	Media
Projector Section		Status: Model: Dowser: Lamp:	Series-2	Video Watermark: Audio Watermark:	Doremi 0.3 Doremi 2.97			Decoder Section
Security Manager		Security Manager Status Service Door Status: Service Door Armed: Partial Blackout:	Closed Engaged Active	Physical Marriage: Logical Marriage: Active Marriage:	Active Engaged Active			
Section								
	2 Quick Controls 🕹 No Playback 🗳	- No Ingest				19:48	M	

Figure 320: MediaBlock Tab

# 14.6 Log Viewer

The Log Viewer tab allows the user to the user to manage and view various logs and records for the server.

To access the Log Viewer tab, go to Monitoring  $\rightarrow$  Log Viewer.

### 14.6.1 Log Records

The Log Viewer tab defaults to the Log Records tab. Here, the user can search for previously created logs. Logs are generated automatically as necessary. For example, they are generated when CPLs start and end, when the system is rebooted, when a schedule is added, and much more.

Advanced Filtering	IMS1000 Serial Number: 332132			Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin/SuperUser
Technology Leadership for Digital Cinema	Log Record: OVERVIEW	ADMINISTRATION COM	ITROL MONITORING	
Class Filtering	Class Date	Advanced Filtering		Last Pkgs Logs 📃 Log Downlos.
Create Quick Access Links	Severity Date	Class Ty	pe Subtype	
	A 2014-06-24T20:41:32+02:00	Performance Pla	ayout CPLEnd	s
	A 2014-06-24T20:41:32+02:00	Performance Pl	ayout SPLEnd	
	2014-06-24T19:03:20+02:00	Management Co	intent Assettingested	Properties
Date	0 2014-06-24T19:03:10+02:00	Management Co	intent Assetingested	Icon
Filtering	0 2014-06-24T19:02:53+02:00	Management Co	intent Assetingested	
	2014-06-24T19:01:12+02:00	Management Co	intent AssetIngested	
	2014-06-23T23:08:12+02:00	Performance Pla	ayout ScheduleMode	A REPORT OF THE REPORT OF T
	2014-06-23T22:56:55+02:00	Performance Pla	ayout ScheduleMode	and the second
	2014-06-23T22-46-28+02:00	Performance Pl	wout CPLSequencePlayed	· · · · · · · · · · · · · · · · · · ·
	⊥ No Ingest			21:24 🗶 🏴

Figure 321: Log Records

The user can search by date (Figure 322), class (Figure 323), or use the advanced filter option (Figure 324) using their respective buttons (Figure 321).

Date Filterir	g	
Date Range:	Custom range	
Starting date:	07/23/2013	
Ending date:	07/30/2013	
Ok	Cancel	

#### Figure 322: Date Filtering

Class:	All	
Туре:		
Subtype:		

Figure 323: Class Filtering

)atabase:	System	
Severity:	All	
ld Range:	Low record Id - High	record Id
Creator:		
Keyword:		
Device Id:		

Figure 324: Advanced Filtering

### 14.6.1.1 Properties

To view the properties of an individual record, highlight the record and click anywhere on the line or on the Properties icon that appears on the right (Figure 321).

The Properties window will appear and the two tabs will provide information on the specific record. Click the Close button to return to the tab (Figure 325 and Figure 326).

Main Proper	ties Properties			
ld:	13119	Severity:	Information	
Date:	2013-07-30T06:25:16-07:00	Class:	Maintenance	
Гуре:	Security	Subtype:	TimeAdjust	
Creator:		Error Code:		
Device:	Byex8G2G+xmF18vlAwUdEHzVZxM			
Keywords:				



	#13119: Maintenance/Security/Time/ Today Main Properties Properties	ldjust
	Property Name	Property Value
	TimeAdjust	0
Close Button	Close	

Figure 326: Properties Tab

### 14.6.2 Log Download

The Log Download tab allows the user to generate and download Security Manager (SMPTE) and System logs.

To access the Log Download Tab, click on the green arrow on the right hand side of the GUI in the Log Records or Last Packages Logs tabs (Figure 321).

	doremi	IMS1000 Serial Number: 332132			Screen: IMS1000 Software Version: 2.6.4-0 User Levet: admin / SuperUser	Last Packages Log Tab
New	Technology Leadership for Digital Cinema	Log Download OVERVIEW	ADMINISTRATION CONTROL	MONITORING		
Button	Quick Access Links	New			Log Records Last Pkgs Logs	Download Button
		Status Title	Database Creation Date	File Size		
Applied Filters		Applied Filters           From:         2014-06-17         CPL:           To:         2014-06-24         KDM:				Delete Button
					21:29 🔹 🏴	

Figure 327: Log Download

To generate a log:

• Click on the New button (Figure 327). Input the correct password, if necessary. The New Log window will appear (Figure 328).

Log Title:	log_07-30-2013_11-58-39	
Database:	Security Manager	
Starting date:	07/23/2013	
Ending date:	07/30/2013	
CPL Id:	All	
CDM Id:	All	

Figure 328: New Log Window

- Select either the System or Security Manager database to create the log.
- Select the starting and ending date.
- Specify a CPL or KDM id, if desired.
- Click the Create button or Cancel to cancel the operation (Figure 328).
- The log will appear in the Log Download tab.

- To download the log, highlight the log with the mouse and click on the Download icon that appears (Figure 327).
- A window will appear asking if the user would like to save or open the log (Figure 329). Make your selection and click Ok to access your log.

which is a: Wi	PAP archive	
from: http://1	0.11.26.62	
What should Firefo	x do with this file?	
Open with XML Editor (default)		
Save File		
📃 Do this <u>a</u> uto	matically for files like this from now on.	

Figure 329: Opening a Log

To delete a log, highlight the log and click on the X that appears on the right (Figure 327).

Highlighting a log will also reveal the applied filters for the log in the bottom of the screen (Figure 327).

### 14.6.3 Last Packages Logs

The Last Packages Logs tab allows the user to view the statue of the last package installed. It provides info such as if the install was successful and if/why it failed (Figure 330).

To access the Last Packages Logs tab, click on the green arrow on the right hand side of the GUI in the Log Records or Log Download tabs (Figure 327).

doremi	IMS1000 Setial Number: 332132		Screen: IMS1000 Software Version: 2.6.4-0 User Level: admin / SuperUser
Technology Leadership for Digital Cinema	Last Packages Logs OVERVIEW ADMINISTRATION	CONTROL MONITORING	LOGOUT 🕑
Last Packagos	Last installation date: 2014-05-14 01:16:44		Log Download Dog Records
Logs Tab	Checking system     Checking system     Checking user configuration     Stopping services     Remount rootfs to read-write     Configuring www-chata groups     Backup themes     Deteting old files and directories     Creating required directories     Restore themes     Processing install list     Installing WebGUI     Updating release md5     Processing post-install list     Creating regimed bisions     Remount rootfs to read-only     Starting services	[SUCCESS] [SUCCESS] [SUCCESS] [SUCCESS] [SUCCESS] [SUCCESS] [SUCCESS] [SUCCESS] [SUCCESS] [SUCCESS] [SUCCESS] [SUCCESS] [SUCCESS] [SUCCESS] [SUCCESS]	E
	Installation successful		
Aulick Controls 😵 No Playback			19:40 🗶 🎮 🖪

Figure 330: Last Packages Log Tab

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# **15 Drive Replacement**

This section presents the procedure to apply when a drive needs to be replaced.

# 15.1 Degraded Drive

• The Storage tab will display the failed drive in Storage Details telling the user that the drive needs to be replaced and will present you with the RAID status.

To replace the drive, follow the steps below:

### 15.1.1 Removing the Old Drive

- Press on the handle to release it and open the handle all the way.
- Slide the drive out gently from the HDD enclosure (Figure 331).



Figure 331: HDD Removal

### 15.1.2 Reboot

Reboot the unit with just the two functioning drives in place.

#### 15.1.3 Inserting a New Drive

- Before inserting the drive, press on the handle to release it and open it all the way until it clicks.
- Insert the new drive all the way in the HDD enclosure at the same position as the previous drive.

**<u>CAUTION</u>**: The drive must be inserted all the way inside the HDD enclosure **BEFORE** trying to close the handle. Otherwise the drive might not be plugged properly.

- Close the handle by pushing it toward the HDD until it clicks.
- When the new drive insertion process has been completed, the drive will automatically start rebuilding.

# 15.2 Rebuild Progress

The Storage tab will allow you to view the rebuild progress in Storage Details after you have replaced and inserted a new disk (Figure 332).

<u>Note</u>: When the server is rebuilding a RAID, an orange icon will appear to indicate that the RAID is being rebuilt.



Figure 332: Rebuild Status

#### 15.2.1 Managing a Drive

Support for this feature is forthcoming. Presently, the only way to disable a drive is to physically remove it from the RAID.

# 15.3 Rebuilding a RAID

When 2 or more drives have been installed, you must build the RAID. Go to Monitoring  $\rightarrow$  Diagnostics  $\rightarrow$  Storage tab to see the status of the RAID. If you need to build, the RAID status will be degraded.

To build the RAID, go to the Reset All Drives tab in the Storage tab (Figure 332).

- Click the Reset All Drives button (Figure 332).
- The user will receive a warning and will be asked to confirm the procedure (Figure 333).
- Click Continue to continue or Cancel to cancel the operation.



Figure 333: Confirmation Window

• The Reinitialize window will appear, again asking the user to confirm the operation (Figure 334).

Step 1 of 2				
You are going to perform an op	peration that changes the configuration of the disks (RAID)			
Press Continue button to go to	) next step of the process.			
If you are unsure, press Cance	l button.			

Figure 334: Confirmation Window

• The process will begin (Figure 335).



Figure 335: In Progress

• When the procedure is complete, the Storage tab will display a healthy RAID.

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# 16 Troubleshooting

# 16.1 RAID Not Detected

If you are installing (swapping) HDDs from another IMS1000, each HDD must be installed in the same order as they were in the previous set up. Otherwise the RAID will not be detected.

# 16.2 Pre-Loaded Test Content

- The user has the ability to test the playback of the IMS1000 without having the HDDs installed. To do this, go to Control → Cinelister → Editor.
- The content will already be available in Cinelister, under the section called Test (Figure 336).

	Edito	r	OVERVIEW	ADMINISTRATION	CONTROL	MONITORING		LOGOUT	<b>O</b>	
	2	Refresh	New	Open 💾 S	ive 🔀 Pro	operties 🔀	Delete	Schedule 🔤 Playl	back	
	All av	ailable elements	1			Show Pl	aylist			Test
	all e	lements				SPL: Sh	ow Playlist, 2D			l est
	⇔	Policy				<b>00:00:00</b>	Doremi-V7_3D_TST_2K_C_60_81-EN_EN_EN	_DRM_OV	*	Content
	DOLEY-DC_PO Showplaylist Trailers Trailers Trailers Alice-in-Won30 Test Doremi-V7_30 Trailer AMAZ-SPIDERI BRIDESMAIDS	DOLBY-DC_POL_	F_EN-XX_US_51_	2K_20081010_DLB						
Test		Showplaylist								
Content		Trailers								
		Teaser								
		Alice-In-Won3D_1	rsr-1-2D_s_en-x	X_US-GB_51_2K_DI_200	)	E				
		Test								
		Doremi-V7_3D_T	ST_2K_C_60_81-I	EN_EN_EN_DRM_OV						
		Trailer								
		AMAZ-SPIDERMA	N-2D_TLR-1_S_E	N-XX_US-GB_51_2K_SPE	_201					
		BRIDESMAIDS_TL	_R-1_F_EN-XX_US	GGB_51_2K_UP_2011020	1_UDS	-				
						Start Time	Elements			

Figure 336: Pre-Loaded Content

- To test playback, click on the content so that it appears in the right side of the GUI (Figure 336).
- Go to the Playback tab in Cinelister and click on the Play button.

# **16.3 Temporarily Setting the Network Configuration via USB**

This method should be used to "rescue" the device in case the IP address is lost or forgotten. The network configuration is set temporarily until the next reboot. The current IP will be back after the next reboot.

To update the network configuration with a USB flash drive:

- 1. Create a directory called "doremi" at the root of the USB key.
- 2. Create a directory called "tmp" inside the /doremi/ directory.
- 3. Create a directory called "network" inside the /doremi/tmp/ directory.
- 4. Create a file inside the "network" directory and name it "ifconfig.0". This will be used to configure Ethernet port 0.

For static IP, enter the following information in the "ifconfig.0" file, replacing the items in bold with your desired settings:

- interface: eth0
- ip: **42.0.0.1**
- mask: 255.255.255.248
- gateway: **42.0.0.6**

For DHCP, use the following format:

- interface: eth0
- ip: dhcp
- 5. Create a second file inside the "network" directory and name it "ifconfig.1". This will be used to configure Ethernet port 1.

For static IP, enter the following information in the "ifconfig.1" file, replacing the items in bold with your desired settings:

- interface: eth1
- ip: **42.0.0.1**
- mask: 255.255.255.248
- gateway: **42.0.0.6**

For DHCP use the following format:

- interface: eth1
- ip: dhcp
- 6. Create a file and name it "ntp" (optional) with the following format. Replace items in bold with your desired settings.

#### NTPSERVERS="server1.ntp.org server2.ntp.org"

- 7. Create a file and name it "dns" (required for NTP) with the following format. Replace items in bold with your desired settings.
- Nameserver **172.17.16.1**
- nameserver 8.8.8.8
- search rnd.doremilabs.fr
- domain rnd.doremilabs.fr

**Warning**: When creating these configuration files, make sure that the files do not have any extensions (e.g., .txt, .doc), which are the default for some operating systems.

- 8. Place all files that were created into /doremi/tmp/network/.
- 9. On the IMS1000, plug your USB flash drive and wait for two minutes. Unplug the flash drive and reboot.

Note: The files on USB flash drives are never moved or changed by the IMS1000.

### 16.3.1 Permanently Setting the Network Configuration

It is possible to permanently set the IP only via the USB. The files to put on the USB are the same as above but in the directory /doremi/update/network instead of /doremi/tmp/network.

# **16.4 Generating a Detailed Report**

### 16.4.1 Generating a Report via USB

To generate a report using a USB key:

- Create a directory "doremi" at the root of the USB key. This may have been previously created.
- Create a directory "report" inside /doremi directory.
- Safely remove the USB drive and plug it into the IMS1000.
- Wait 2 minutes without any USB activity (watch your USB key LED).
- Reboot the IMS1000.
- The report will be in the USB key folder: /doremi/report

#### 16.4.2 Generating a Report via Command Line

To generate a report via command line:

- Log in via SSH and type the following command:
  - o sh /doremi/sbin/report.sh
- This will generate a report and place it in the /doremi/tmp directory.
- Then log in using an FTP client with the following criteria:
  - o Host: IP
  - Username: root
  - Password: veeone
  - **Port: 22**

#### 16.4.3 Generating a Report via the GUI

To generate a report via the GUI:

- Go to Monitoring Tab  $\rightarrow$  System.
- Click on the Detailed Report button.
- Click the OK button for the pop up that appears asking if you would like to proceed
- The report will take several minutes to generate.
- When the generation is complete, a window will appear asking the user if they would like to open or save the report. Make your selection and click Ok. The report is saved on the computer's default downloads folder.

# 16.5 RTC Battery Life Expectancy and Shelf Life

The RTC battery in the IMS is rechargeable, not field replaceable, and has a life expectancy of 10 years, but a shelf life of only 1 year. The unit shows a warning when there is one year remaining.

It is the owners responsibility to keep the RTC battery charged when IMS units are in storage by powering it up once every 12 months (6 months is highly recommended). It takes 60 hours for a full charge.

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# **17 Troubleshooting Guide**

This section lists troubleshooting issues, their descriptions and identifications, and the solution to the issue.

#### Note: The highlighted sections indicate the error line.

To identify errors, the following files are useful:

- **kern.log**: The kernel log provides a detailed log of messages from the Linux kernel. These messages may prove useful for trouble-shooting as it shows information regarding software and its interaction with hardware.
- **kreport.log.x**: This is a text file that is a snap shot of commands executed for diagnostics. This particular log is generated just before every shutdown. The x is replaced with a numerical value to show the difference between shutdowns. Example: kreport.log.1 is from the previous shutdown and kreport.log.2 is from the shutdown previous to last shutdown. Information here is very similar to the information in drmreport.txt.
- **odetics.log**: A log that shows playbacks noted as ASRUN's. Can show frame specific issues in regards to underflows, decoder crashes, and can help with checking KDM validity.

# 17.1 RAID Not Seen At Boot

#### 17.1.1 Description

Content is missing in Cinelister after reboot or power cycle. In Monitoring  $\rightarrow$  Diagnostics $\rightarrow$  Storage, the /data and /opt status indicators will be red and the storage details will be unknown.

#### 17.1.2 Identification

If the report was taken during the issue, look at "Ispci" in drmreport.txt. If the report was taken after a reboot, look at "Ispci" in \doremi\log\kreport.log.x (kreport.log being the previous boot, kreport.log.0 being the boot before, and so on).The highlighted line referencing the Marvell controller will <u>NOT</u> appear when this issue occurs.

Exec. command: 'Ispci'

00:00.0 Host bridge: Intel Corporation Device 0709 (rev 08)

•••

01:13.0 Multimedia controller: Intel Corporation Device 0706 (rev 01)

01:14.0 Multimedia controller: Intel Corporation Device 0705 (rev 01)

01:15.0 Unassigned class [ff00]: Intel Corporation CE Media Processor SPI Slave (rev 01)

01:16.0 Display controller: Intel Corporation Device 070a

01:1b.0 SD Host controller: Intel Corporation Device 070b

02:00.0 SATA controller: Marvell Technology Group Ltd. Device 9230 (rev 10)

03:00.0 Unassigned class [ff00]: Device 1fd5:0007 (rev 21)

When looking at \doremi\log\kern.log (or \doremi\log\kern.log.x if the issue occurred a while before the report was taken), the following message will <u>NOT</u> appear on the specific boot that the RAID card was not detected:

Nov 12 10:07:10 ims1000 kernel: ata10.00: ATAPI: MARVELL VIRTUALL, 1.09, max UDMA/66

Nov 12 10:07:10 ims1000 kernel: scsi 9:0:0:0: Processor Marvell Console 1.01 PQ: 0 ANSI: 5

Note: This section is only applicable to IMS1000 units with the Marvell RAID card.

#### 17.1.3 Solution

Contact Doremi Labs (Section 1.3) to replace the RAID card (Doremi PN: IMS-RAID-A2-AKI, Manufacturer PN: DOR-IMSC-1RBP-1001). For a temporary workaround, reboot the unit. It may take several reboots before the unit if fully operational.

# **17.2 RAID Shutting Down**

#### **17.2.1 Description**

RAID suddenly shuts down during correct operation or before any process occurs on the system. Content is not seen, playback suddenly stops, and the /data and /opt status indicators will be red and the storage details will be unknown in Monitoring  $\rightarrow$  Diagnostics  $\rightarrow$  Storage.

#### 17.2.2 Identification

When looking at \doremi\log\kern.log (or \doremi\log\kern.log.x if the issue occurred a while before the report was taken), you should see these kinds of messages when this issue occurs:

••••

Jul 30 14:33:51 ims1000 kernel: Dolphin DEBUG: WARNING: Requested buffer not ready (frame in bank: 64)

Jul 30 14:33:51 ims1000 kernel: Dolphin DEBUG: WARNING: Requested buffer not ready (frame in bank: 64)

Jul 30 14:33:51 ims1000 kernel: ata3.00: exception Emask 0x52 SAct 0x0 SErr 0xffffffff action 0xe frozen

Jul 30 14:33:51 ims1000 kernel: ata3: SError: { RecovData RecovComm UnrecovData Persist Proto HostInt PHYRdyChg PHYInt CommWake 10B8B Dispar BadCRC Handshk LinkSeq TrStaTrns UnrecFIS DevExch }

Jul 30 14:33:51 ims1000 kernel: ata3.00: failed command: READ DMA EXT

Jul 30 14:33:51 ims1000 kernel: ata3.00: cmd 25/00:00:e8:ab:d7/00:04:b9:00:00/e0 tag 0 dma 524288 in

Jul 30 14:33:51 ims1000 kernel: res 40/00:02:0a:00:00/00:00:00:00:00/e0 Emask 0x56 (ATA bus error)

Jul 30 14:33:51 ims1000 kernel: ata3.00: status: { DRDY }

Jul 30 14:33:51 ims1000 kernel: ata3: hard resetting link

Jul 30 14:33:52 ims1000 kernel: Dolphin DEBUG: WARNING: Requested buffer not ready (frame in bank: 64)

•••

Jul 30 14:34:06 ims1000 kernel: ata3: failed to resume link (SControl FFFFFFF) Jul 30 14:34:06 ims1000 kernel: ata3: SATA link down (SStatus FFFFFFF SControl FFFFFFF) Jul 30 14:34:06 ims1000 kernel: ata3.00: disabled Jul 30 14:34:07 ims1000 kernel: Dolphin DEBUG: WARNING: Requested buffer not ready (frame in bank: 64) Jul 30 14:34:07 ims1000 kernel: sd 2:0:0:0: [sdh] Result: hostbyte=0x00 driverbyte=0x08 Jul 30 14:34:07 ims1000 kernel: sd 2:0:0:0: [sdh] Sense Key : 0xb [current] [descriptor] Jul 30 14:34:07 ims1000 kernel: Descriptor sense data with sense descriptors (in hex): 72 0b 00 00 00 00 00 0c 00 0a 80 00 00 00 00 00 Jul 30 14:34:07 ims1000 kernel: Jul 30 14:34:07 ims1000 kernel: 00 00 00 09 Jul 30 14:34:07 ims1000 kernel: sd 2:0:0:0: [sdh] ASC=0x0 ASCQ=0x0 Jul 30 14:34:07 ims1000 kernel: sd 2:0:0:0: [sdh] CDB: cdb[0]=0x28: 28 00 b9 d7 ab e8 00 04 00 00 Jul 30 14:34:07 ims1000 kernel: end request: I/O error, dev sdh, sector 3117919208 Jul 30 14:34:07 ims1000 kernel: sd 2:0:0:0: rejecting I/O to offline device ... Jul 30 14:34:07 ims1000 kernel: EXT3-fs error (device md1): ext3\_find\_entry: Jul 30 14:34:07 ims1000 kernel: sd 2:0:0:0: [sdh] Unhandled error code Jul 30 14:34:07 ims1000 kernel: sd 2:0:0:0: [sdh] Result: hostbyte=0x01 driverbyte=0x00 Jul 30 14:34:07 ims1000 kernel: I/O error in filesystem ("md0") meta-data dev md0 block ("xlog iodone") error 5 buf count 1024 0x73d241f3 Jul 30 14:34:07 ims1000 kernel: xfs\_force\_shutdown(md0,0x2) called from line 944 of file fs/xfs/xfs\_log.c. Return address = 0xc11c897b Jul 30 14:34:07 ims1000 kernel: Filesystem "md0": Log I/O Error Detected. Shutting down filesvstem: md0 Jul 30 14:34:07 ims1000 kernel: Please umount the filesystem, and rectify the problem(s) Jul 30 14:34:07 ims1000 kernel: ata3: EH complete Jul 30 14:34:07 ims1000 kernel: ata3.00: detaching (SCSI 2:0:0:0) Jul 30 14:34:07 ims1000 kernel: sd 2:0:0:0: [sdh] Stopping disk Jul 30 14:34:07 ims1000 kernel: sd 2:0:0:0: [sdh] START STOP FAILED Jul 30 14:34:07 ims1000 kernel: reading directory #2 offset 0

### 17.2.3 Solution

Contact Doremi Labs (Section 1.3) to replace the RAID card (Doremi PN: IMS-RAID-A2-AKI, Manufacturer PN: DOR-IMSC-1RBP-1001). For a temporary workaround, reboot the unit. It may take several reboots before the unit if fully operational.

# 17.3 eSATA Drives Not Seen

### 17.3.1 Description

The eSATA drives are not showing in the Ingest Manager.

#### 17.3.2 Identification

When looking at \doremi\log\kern.log (or \doremi\log\kern.log.x if the issue occurred a while before the report was taken), you should see these kinds of messages when this issue occurs:

IMS.OM.002949.DRM

Aug 6 12:39:27 ims1000 kernel: ata2: exception Emask 0x10 SAct 0x0 SErr 0x4050000 action Oxe frozen Aug 6 12:39:27 ims1000 kernel: ata2: irq\_stat 0x00400040, connection status changed Aug 6 12:39:27 ims1000 kernel: ata2: SError: { PHYRdyChg CommWake DevExch } Aug 6 12:39:27 ims1000 kernel: ata2: hard resetting link Aug 6 12:39:33 ims1000 kernel: ata2: link is slow to respond, please be patient (ready=0) Aug 6 12:39:37 ims1000 kernel: ata2: softreset failed (device not ready) Aug 6 12:39:37 ims1000 kernel: ata2: hard resetting link Aug 6 12:39:47 ims1000 kernel: ata2: softreset failed (device not ready) ... Aug 6 12:40:22 ims1000 kernel: ata2: limiting SATA link speed to 1.5 Gbps Aug 6 12:40:22 ims1000 kernel: ata2: hard resetting link Aug 6 12:40:28 ims1000 kernel: ata2: softreset failed (device not ready) ... Aug 6 12:40:28 ims1000 kernel: ata2: softreset failed (device not ready) ...

#### 17.3.3 Solution

Install ims\_sw\_hotfix\_esata-1.0.0.pkg or software version 2.5.3 or higher.

# 17.4 Audio Delay Issue

#### 17.4.1 Description

There is an important audio delay in the setup. There is an intermittent loss of audio synchronization with the video. Typically content starts out with in sync audio but gradually an audio delay is noticeable.

#### 17.4.2 Identification

No error in the logs.

#### 17.4.3 Solution

Install ims\_sw\_hotfix\_audio\_delay-2.4.4.pkg or software version 2.5.4 or higher.

# 17.5 Communication Issue with Dolby CP650

#### **17.5.1 Description**

The unit is not communicating properly with a Dolby CP650 audio processor using Eth1, but is working fine on Eth0.

#### 17.5.2 Identification

Dolby CP650 can be controlled, using macros, when connected with Eth0 interface but cannot be controlled when connected with Eth1 ethernet interface.

#### 17.5.3 Solution

Install ims\_sw\_hotfix\_smsc75xx-1.0.2.pkg.

# 17.6 Rec709 Colorspace Issue on Alternate Inputs

#### **17.6.1 Description**

When using HDMI or SDI inputs in Rec709 colorspace, the output colors are not correct. For example, the reference points are shifted, colors are not saturated, or the white is tinged with a little magenta.

#### 17.6.2 Identification

No error in the logs.

#### 17.6.3 Solution

Install firmware version 4.1.7 and SM version 6.0.15 or higher.

# **17.7 Filesystem Corruption**

#### 17.7.1 Description

The filesystem is corrupted. Symptoms include:

- Arborescence is wrong and showing ??? instead of some files/directories.
- The KDM or DLM folders in /data lose their symbolic link to /doremi/dlms and /doremi/kdms and KDMs/DLMs are lost as a result.

#### 17.7.2 Identification

When looking at \doremi\log\kern.log (or \doremi\log\kern.log.x if the issue occurred a while before the report was taken), you *may* see these kinds of messages when this issue occurs:

IMS1000 kernel: EXT3-fs error (device md1): ext3\_check\_descriptors: Block bitmap for group 16 not in group (block 589824)! IMS1000 kernel: EXT3-fs (md1): error: group descriptors corrupted

Look at drmreport.txt file and search for "Is -laRi /data," or simply run "Is -la /data" on the unit if you can access it. When this issue occurs, dlms and kdms folders do not show their symbolic link to /doremi/dlms and /doremi/kdms, or some folders are missing and showing ??? instead.

```
root@IMS1000:~# Is -la /data/
total 8
drwxr-xr-x 8 root root 110 Nov 15 06:25 .
drwxr-xr-x 23 root root 4096 Jan 15 2013 ..
drwxr-xr-x 4 root root 92 Nov 14 14:19 assets
drwxr-xr-x 2 root root 6 Nov 12 20:02 dlms
drwxrwxr-x 3 ingest users 32 Nov 14 14:09 incoming
drwxr-xr-x 1 root root 12 Nov 14 14:09 kdms
drwxr-xr-x 2 root root 4096 Nov 14 14:09 kdms
drwxr-xr-x 2 root root 6 Nov 14 14:08 playlists
drwxr-xr-x 4 root root 36 Nov 14 14:08 repository
drwxrwxrwxr 2 root root 44 Nov 14 14:27 tmp
```

root@ims1000-1:~# ls -la /data/ ls: cannot access /data/tmp: No such file or directory ls: cannot access /data/tmp: No such file or directory total 56 drwxr-xr-x 11 root root 4096 Apr 23 07:13 assets Irwxrwxrwx 1 root root 12 Oct 19 2012 dlms -> /doremi/dlms drwxrwxr-x 3 ingest users 32 Oct 19 2012 incoming Irwxrwxrwx 1 root root 12 Oct 19 2012 kdms -> /doremi/kdms drwxr-xr-x 3 root root 32768 Apr 23 07:14 maps 6 Oct 19 2012 playlists drwxr-xr-x 2 root root 36 Oct 19 2012 repository drwxr-xr-x 4 root root ? ? tmp ? ? ? tmp

The following is a correct example of "Is -la /data" output for reference:

root@IMS1000:~# Is -la /data/ total 8 drwxr-xr-x 8 root root 110 Nov 15 06:25 . drwxr-xr-x 23 root root 4096 Jan 15 2013 .. drwxr-xr-x 4 root root 92 Nov 14 14:19 assets Irwxrwxrwx 1 root root 12 Nov 14 14:09 dlms -> /doremi/dlms drwxrwxr-x 3 ingest users 32 Nov 14 14:09 incoming Irwxrwxrwx 1 root root 12 Nov 14 14:09 kdms -> /doremi/kdms drwxr-xr-x 2 root root 4096 Nov 14 14:09 kdms -> /doremi/kdms drwxr-xr-x 2 root root 6 Nov 14 14:08 playlists drwxr-xr-x 4 root root 36 Nov 14 14:08 repository drwxrwxrwt 2 root root 44 Nov 14 14:27 tmp

#### 17.7.3 Solution

Check that standby is properly configured and running on the system. For a temporary workaround, the symbolic links can be re-created or the RAID can be re-initialized:

Log onto the Terminal (Administration tab  $\rightarrow$  Terminal) and enter the admin user login name and password.

For a KDM link missing:

- mount -o rw,remount /
- rmdir /data/kdms
- In -s /doremi/kdms /data/kdms
- mount -o ro,remount /

For a DLM link missing:

- mount -o rw,remount /
- rmdir /data/dlms
- In -s /doremi/dlms /data/dlms
- mount -o ro,remount /

For other cases (re-init RAID):

- SSH into IMS1000
- Run "mount -o rw,remount /"
- Run "sh /doremi/sbin/reinit\_raid.sh"
- Wait for HW RAID to complete building.

Reboot unit

# **17.8 ShowPlaylist Errors**

If there is a problem with playback, it can be attributed to one of five issues. This section lists and describes the five solutions for playback issues.

#### 17.8.1 Playlist Will Not Load After Reboot or Power Cycle

### 17.8.1.1 Description

The following error message will show in Cinelister: "Show Playlist Error; Could not load the Show Playlist; Reason Unknown error 0."

#### 17.8.1.2 Identification

When looking at \doremi\log\odetics.log (or \doremi\log\odetics.log.x depending on the date of occurrence), there should be the following timeout messages when the issue occurs:

[Mon Sep 30 19:13:14 2013][INFO ]: Loading CPL 'e5ded2d0-d646-41a4-b8c4-32fe88fd527f' in slot '1'...

[Mon Sep 30 19:13:14 2013][INFO ]: Accept KDM '06dbadf0-ed11-4fad-b9d1-196e974801a0' for CPL 'e5ded2d0-d646-41a4-b8c4-32fe88fd527f'.

[Mon Sep 30 19:13:14 2013][INFO ]: CPL 'e5ded2d0-d646-41a4-b8c4-32fe88fd527f' successfully loaded

dolphin\_video\_context\_set\_state\_sync()::pthread\_cond\_timedwait(): timeout expired! dolphin\_video\_context\_set\_state\_sync(): Too many errors. Exiting...

[Mon Sep 30 19:13:26 2013][ERROR]: Can't set context to 'DolphinContextPaused'!

If the report was taken while the error was present, look at 'cat /proc/interrupts' in drmreport.txt. If the report was taken after a reboot, look at 'cat /proc/interrupts' in \doremi\log\kreport.log.x (kreport.log being the previous boot, kreport.log.0 being the boot before, and so on). Interrupt count should stay at 0 for dolphin module when this issue occurs.

#### Exec. command: 'cat /proc/interrupts'

	CPU0	CPU1
0:	62	0 IO-APIC-edge timer
9:	0	0 IO-APIC-fasteoi acpi
24:	1	0 IO-APIC-fasteoi pvrsrvkm
25:	6	0 IO-APIC-fasteoi parse_encode_isr
26:	11	0 IO-APIC-fasteoi decode_mux_isr
47:	0	0 IO-APIC-fasteoi ahci
64:	8944	0 PCI-MSI-edge ahci
65:	0	0 PCI-MSI-edge dolphin
NMI:	0	0 Non-maskable interrupts
LOC:	168013	167851 Local timer interrupts

#### SPU: 0 0 Spurious interrupts

•••

If the report was taken while the error was showing, look at 'cat /proc/dolphin0' in drmreport.txt. If the report was taken after a reboot, look at 'cat /proc/dolphin0' in \doremi\log\kreport.log.x (kreport.log being the previous boot, kreport.log.0 being the boot before, and so on). VID\_IFR register should be at value 00000001 when this issue occurs:

--- Dolphin registers ---GPI: 0000000 GPO: 0000000 AUD\_CFG: 0060106A AUD\_MAP0: 76543210 ...

VID\_CFG: 007074C0 VID\_IER: 00000701 VID\_IFR: 00000001 VID\_CTRL: 00000000 AES\_CONTROL: 00000004 AES\_SIZE: 00000000 ...

### 17.8.1.3 Solution

Install firmware version 4.2.7 or higher.

#### 17.8.2 Sudden Interruption Mid-Playback

#### 17.8.2.1 Description

Playback will be running fine and is suddenly stuck, the image and time code are frozen, or there is no decoder crash or underflow.

#### 17.8.2.2 Identification

The issue looks similar to the previous one but the interrupt count in 'cat /proc/interrupts' is not 0.

When looking at \doremi\log\odetics.log (or \doremi\loremi\log\odetics.log.x depending on the date of occurrence), there should be the following timeout messages when the issue occurs:

[Tue Nov 19 18:32:00 2013][INFO ]: Loading CPL 'cd02617a-6361-4ed7-96d4-e9e6d7acfc1c' in slot '1'...

[Tue Nov 19 18:32:00 2013][INFO ]: CPL 'cd02617a-6361-4ed7-96d4-e9e6d7acfc1c' successfully loaded

dolphin video context set state sync()::pthread cond timedwait(): timeout expired! dolphin video context set state sync()::pthread cond timedwait(): timeout expired! dolphin video context set state sync()::pthread cond timedwait(): timeout expired! dolphin\_video\_context\_set\_state\_sync()::pthread\_cond\_timedwait(): timeout expired! dolphin\_video\_context\_set\_state\_sync()::pthread\_cond\_timedwait(): timeout expired! dolphin video context set state sync(): Too many errors. Exiting... [Wed Nov 20 08:20:46 2013][ERROR]: Can't set context to 'DolphinContextPaused'!

If the report was taken while the error was showing, look at 'cat /proc/interrupts' in drmreport.txt. If the report was taken after a reboot, look at 'cat /proc/interrupts' in \doremi\log\kreport.log.x (kreport log being the previous boot, kreport log.) being the boot before, and so on). Interrupt count should be different than 0 for dolphin module when this issue occurs.

Exec. command: 'cat /proc/interrupts'

	CPU0	CPU	1				
0:	62	0 10	D-APIC-6	edge	timer		
9:	0	0 IC	)-APIC-fa	asteoi	acpi		
24:	1	0 10	D-APIC-f	asteoi	pvrsrv	/km	
25:	6	0 10	D-APIC-f	asteoi	parse	_encod	e_isr
47:	0	0 10	D-APIC-f	asteoi	ahci		
64:	1038032	(	) PCI-M	1SI-edg	e al	nci	
65:	<mark>1122635</mark>	(	) PCI-M	1SI-edg	e <mark>d</mark>	olphin	
NMI:	0	0	Non-ma	skable	interru	ots	
LOC:	1403630	5 14	036210	Local	timer i	nterrupt	S

If the report was taken while the error was showing, look at 'cat /proc/dolphin0' in drmreport.txt. If the report was taken after a reboot, look at 'cat /proc/dolphin0' in \doremi\log\kreport.log.x (kreport.log being the previous boot, kreport.log.0 being the boot before, and so on). VID\_IFR register should be at value 00000001 when this issue occurs:

Exec. command: 'cat /proc/dolphin0' 

Doremi Labs, Inc.

- PCI Driver for the Dolphin card

--- Dolphin registers ---GPI: 00000000 GPO: 00000000 AUD CFG: 0060116F AUD MAP0: 76543210 AUD MAP1: FEDCBA98 AUD COEF0 01000100 AUD COEF1 01000100 CSR\_DDR: 000001A0

PAR0_DDR:	49662EE0
BCR0_DDR:	0000000
WMK_CFG0:	0000000
WMK_CFG1:	0000000
ISR_DDR:	00000C5
ADV_CFG0:	0000000
ADV_CFG1:	0000000
ADV_CFG2:	0A0001EF
VID_CFG:	002814E0
VID_IER:	00000701
VID_IFR:	0000001
VID_CTRL:	0000000
AES_CONTRO	L: 00000004
AES_SIZE:	0000000
AES_PRESIZE	: 00000000
CINELINK2_CO	ONTROL: 00000000
WDG_CTRL:	0000000
MOB_TEMP:	0000000
VCLK_FREQ:	038A5FCD
FPGA_CAP:	ADFFDF53
FPGA_2CAP:	8000000
MCORE_CAP:	5FFF0280

### 17.8.2.3 Solution

Install software version 2.5.5 or higher.

### 17.8.3 Playback Stops In-Between Clips

### 17.8.3.1 Description

The unit does not start playing, or stops playing on a clip-to-clip boundary.

#### 17.8.3.2 Identification

When looking at \doremi\log\odetics.log (or \doremi\log\odetics.log.x if the issue occurred a while before the report was taken), you should see the following message when this issue occurs:

[Wed Nov 20 08:14:19 2013][INFO ]: Loading CPL '98781194-c4bc-3042-9b08-e81bd1ee3557' in slot '1'...

[Wed Nov 20 08:14:19 2013][INFO ]: CPL '98781194-c4bc-3042-9b08-e81bd1ee3557' successfully loaded

dolphin\_video\_context\_internal(): Can't detect init ADVs done bit. Retrying... dolphin\_video\_context\_internal(): Can't detect init ADVs done bit. Too many failure! [Wed Nov 20 08:14:34 2013][ERROR]: Can't set context to 'DolphinContextPaused'!

#### 17.8.3.3 Solution

Update the firmware to version 4.2.7 or higher.

# 17.8.4 Empty ShowPlaylist

#### 17.8.4.1 Description

ShowPlaylist is empty, SM and firmware versions are missing.

#### 17.8.4.2 Identification

If the report was taken while the error was showing, look at 'lspci' in drmreport.txt. If the report was taken after a reboot, look at 'lspci' in \doremi\log\kreport.log.x (kreport.log being the previous boot, kreport.log.0 being the boot before, and so on).

Exec. command: 'lspci'

00:00.0 Host bridge: Intel Corporation Device 0709 (rev 08)

01:13.0 Multimedia controller: Intel Corporation Device 0706 (rev 01) 01:14.0 Multimedia controller: Intel Corporation Device 0705 (rev 01) 01:15.0 Unassigned class [ff00]: Intel Corporation CE Media Processor SPI Slave (rev 01) 01:16.0 Display controller: Intel Corporation Device 070a 01:1b.0 SD Host controller: Intel Corporation Device 070b 02:00.0 SATA controller: Marvell Technology Group Ltd. Device 9230 (rev 10) 03:00.0 Unassigned class [ff00]: Device 1fd5:0007 (rev 21)

The highlighted line 03:00.0 referencing the device 1fd5:0007 (FPGA) will be missing when this issue occurs.

When looking at \doremi\log\kern.log (or \doremi\log\kern.log.x if the issue occurred a while before the report was taken), you should <u>NOT</u> see this message when this issue occurs:

Jun 24 15:55:43 IMS01-SC3 kernel: pci 0000:03:00.0: reg 10: [mem 0xbfd00000-0xbfdffff]

Jun 24 15:56:31 IMS01-SC3 kernel: dolphin 0000:03:00.0: enabling device (0000 -> 0002) Jun 24 15:56:31 IMS01-SC3 kernel: dolphin 0000:03:00.0: PCI INT A -> GSI 17 (level, low) -> IRQ 17

Jun 24 15:56:31 IMS01-SC3 kernel: dolphin 0000:03:00.0: setting latency timer to 64 Jun 24 15:56:31 IMS01-SC3 kernel: dolphin 0000:03:00.0: irq 65 for MSI/MSI-X Jun 24 15:55:55 IMS01-SC3 kernel: Dolphin DEBUG: dolphin\_malloc\_ex: f0e00000 (4194304 bytes) [23c00000 - 24000000]

#### 17.8.4.3 Solution

The solution for a customer would be to RMA the unit.

### 17.8.5 Playback Stops

#### 17.8.5.1 Description

Unit stops playing.

#### 17.8.5.2 Identification

When looking at \doremi\log\odetics.log (or \doremi\log\odetics.log.x if the issue occurred a while before the report has been taken), you should see the following message when this issue occurs:

[Sat Nov 23 04:24:37 2013][INFO ]: AsRun: "c110ad93-2041-4138-9300-3e34177ef0f9"," ","00:00:00.00","00:00:59.24","0","0","C" [Sat Nov 23 04:24:37 2013][INFO ]: Loading CPL 'ad49f2d6-c435-4714-af47-bd9372c8130c' in slot '2'...

[Sat Nov 23 04:24:37 2013][INFO ]: CPL 'ad49f2d6-c435-4714-af47-bd9372c8130c' successfully loaded

[Sat Nov 23 04:24:37 2013][ERROR]: DMA transfer failed for frame x during playback. [Sat Nov 23 04:24:37 2013][ERROR]: Try to recover from error...

When looking at \doremi\log\kern.log (or \doremi\log\kern.log.x if the issue occurred a while before the report has been taken), you should see the following message when this issue occurs:

Nov 23 04:24:37 IMS332399 kernel: Dolphin DEBUG: Video: JP2K - 2048 x 1080 @ 30p Nov 23 04:24:37 IMS332399 kernel: Dolphin DEBUG: Audio: WAV - 16Ch 48000Hz Map:fedcba9876543210 Mute:0000 Data:0000

Nov 23 04:24:37 IMS332399 kernel: Dolphin DEBUG: Software seamless play. Nov 23 04:24:37 IMS332399 kernel: Dolphin DEBUG: WARNING: Possible DMA transfer dropped (dma\_xfer\_state:= 1, xfer\_pending:= 575272) Nov 23 04:24:37 IMS332399 kernel: Dolphin DEBUG: Set playback state: 'DolphinContextStopped'

### 17.8.5.3 Solution

Ensure that the latest versions of the software, firmware, and security manager are installed.

- Software: 2.4.5
- Firmware: 4.2.7
- Security Manager: 6.0.1.5

# **17.9 USB Disconnect**

#### 17.9.1 Description

There was an unexpected disconnect of one of the USB devices such as external ports, eth1, Asix (eth communication with SM), and the SSD boot flash.

#### 17.9.2 Identification

• For usb1 disconnect (SSD boot flash):

There is no indication of this issue in the detailed report. The only visible symptom is that the system has crashed and is unresponsive. If you have access to the Groveland CPU serial port logs, the following message shows: usb 1-1: USB disconnect

• For usb2 disconnect (right-most external USB port):

If there is an unexpected disconnect, as opposed to a normal disconnect (e.g., a USB key is unplugged), there will be a reconnect right away.

When looking at \doremi\log\kern.log (or \doremi\log\kern.log.x if the issue occurred a while before the report was taken), there should be two messages at the same timestamp, or a maximum 1 second difference, when this issue occurs:

Jan 7 02:11:57 ims1000-1 kernel: usb 2-1: USB disconnect, address n

Jan 7 02:11:58 ims1000-1 kernel: usb 2-1: New USB device found

•••

Or

Sep 30 10:15:31 ims1000-1 kernel: usb 2-1: USB disconnect, address n

Sep 30 10:15:31 ims1000-1 kernel: usb 2-1: New USB device found

• For usb3 disconnect (USB hub):

When the USB hub disconnects, any device behind it will automatically disconnect (Asix and the 2 left-most external USB ports).

When looking at \doremi\log\kern.log (or \doremi\log\kern.log.x if the issue occurred a while before the report was taken), you should see the following message when this issue occurs: usb 3-1: USB disconnect

• For usb4 disconnect (eth1):

When usb4 is disconnected, any communication that is in progress through eth1 will be disrupted.

When looking at \doremi\log\kern.log (or \doremi\log\kern.log.x if the issue occurred a while before the report was taken), you should see the following message when this issue occurs: usb 4-1: USB disconnect

#### 17.9.3 Solution

This issue was fixed in BOM revision E5. The solution for a customer would be to RMA the unit.

# 17.10 FIPS lock

#### 17.10.1 Description

If the unit is in FIPS lock, the SM1 LED is red, it cannot communicate with SM, and the SM and firmware version numbers are missing from the WebUI or terminal.

#### 17.10.2 Identification

In the detailed report, look at \doremi\log\kern.log. The following message is typical of a FIPS lock:

Jun 19 00:56:07 ims1000 kernel: Dolphin DEBUG: Authentication failure

If you have access to the PPC serial logs, you will see the following message:

[Dec 31 17:00:05 2007][ERROR]: FIPS lock

Two tamper events can trigger a master key erasure, resulting in a FIPS lock:

- osc\_t (oscillator; may also mean battery issue in some cases)

- td1\_t (enclosure)

A hardware issue with FPGA or its associated component can also trigger a FIPS lock, and the following message will be seen on the serial log:

IMB: loading firmware: IMS-FW 4.1.3-3.
IMB: Firmware CRC is GOOD.
IMB: prog\_fpga(6589/3609899), FPGA\_CONFIG\_STATUS
IMB: load\_firmware(), Can't load FPGA firmware, reason: 1
IMB: clarity\_dev\_ioctl(), Can't load firmware.

[Jan 1 00:00:01 2009][INFO ]: firmware integrity seltest succeeded. [Jan 1 00:00:01 2009][ERROR]: FPGA AES selftest failed. [Jan 1 00:00:01 2009][ERROR]: FIPS lock ...

### 17.10.3 Solution

This issue was fixed in BOM revision E4. The solution for a customer would be to RMA the unit.

# 17.11 No power

## 17.11.1 Description

There is no power on the IMS. All LEDs are off.

### 17.11.2 Identification

No errors in the logs.

### 17.11.3 Solution

This issue was fixed in BOM revisions E9 and E10. The solution for a customer would be to RMA the unit.

# **17.12 Unit Not Booting When Drives Are Installed**

### 17.12.1 Description

The IMS unit will not boot up completely when the HDDs are installed. Unit only boots up completely when HDDs are not plugged in.

### 17.12.2 Identification

If you have access to the CPU serial logs, you can see that the unit does not boot completely and is stuck after the filesystem is mounted on md0/md1.

### 17.12.3 Solution

To recover the unit, boot the unit with one drive only, then hot plug the two other drives and re-init the RAID:

- 1. Boot with only one drive inserted.
- 2. Wait 5 min for unit to boot completely.
- 3. Insert the other 2 drives.
- 4. SSH into IMS1000.
- 5. Run 'mount -o rw,remount /'.

IMS.OM.002949.DRM
- 6. Run 'sh /doremi/sbin/reinit\_raid.sh'.
- 7. Wait for HW RAID to complete building.
- 8. Reboot unit.

As a second step, check that standby is properly configured and running on the system. You might also want to check in the logs if the customer shut down the unit while the RAID was rebuilding, or any other action that could have broken the RAID.

## 17.13 Green Screen Image

#### 17.13.1 Description

Green screen of output image when using HDMI input.

#### 17.13.2 Identification

No identification of this issue in the logs.

<u>Note:</u> Intermittent issue reported on IMS1000 units running firmware versions 4.2.5-0 and 4.2.7-D.

#### 17.13.3 Solution

Switch the IMS1000 Input to internal and then back to HDMI.

## 17.14 Cannot initiate marriage

#### 17.14.1 Description

Trying to initiate a marriage fails with software 2.4.4.

#### 17.14.2 Identification

Certificates under /doremi/etc/certs/mine do not match with the unit serial number.

#### 17.14.3 Solution

Install ims\_sw\_hotfix\_certs\_2.4.4-1.0.0.pkg.

A workaround is to execute the command "/doremi/sbin/sbcsetup.out -f --verify --repair" and reboot the unit.

## **18** Appendix A: General Purpose Output Connection Diagram



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#### 19 **Appendix B: General Purpose Input Connection Diagram**





Each general purpose input will turn on if you feed a current between 4mA and 40mA, which corresponds to voltages between 5V and 24V.

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# 20 Appendix C: LED Behavior

Front Panel LED specification:



#### Figure 337: Front Panel LEDs

The behavior of the CPU LEDS is the following:

CPU1	CPU2	State of the IMS1000 CPU			
Green	Off	Booting			
Green	Green	CPU operational without warning/error			
Orange	Green	Standby			
Orange	Off	<ul> <li>Degraded RAID or Smart Issue Detected</li> <li>Marriage Broken but Blackout DLM grants playback</li> </ul>			
Red	Off	<ul> <li>CPU cannot play due to ERROR</li> <li>Marriage is Broken or Disks/RAID not detected</li> </ul>			

The HDMI LED behavior is the following:

Off	No HDMI signal detected				
Green	HDMI detected with supported format				
Orange	HDMI detected with un-supported format				

The behavior of the SM1 and SM2 LEDs is the following:

SM1	SM2	SM status
Orange	Green	Booting
Green	Green	SM operational
Orange	Orange	SM in rescue mode
Red	Any	SM in FIPS lock (different color of SM2 can indicate the reason for Fips lock, To Be Defined)

The behavior of the SM3 and SM4 LED is the following:

SM3	SM4	Playback Status
Green	Green	OK to play, no problem reported since last CPL validate
Orange	Green	Service Door closed, but need to be rearmed
Orange	Orange	Service Door is open, marriage is activated otherwise
Orange	Red	Service Door is open, Marriage is not activated
Red	Orange	Marriage is initialized/armed but marriage not verified
Red	Green	Marriage is not initialized/armed, service door and physical marriage are ok (ready to marry)
Red	Red	Marriage is not activated, physical marriage is currently broken

# 21 Appendix D: HDMI Inputs – Supported Formats

Video:

- 480p 60
- 576p 50
- 2kp
  - o **23.98**
  - o **24**
- 720p

•

- o **50**
- o **59.94**
- o **60**
- 1080p
  - 23.9824
  - o 24
  - o 29.97
  - o **30**
  - o **47.95**
  - o **48**
  - o **50**
  - o **59.94**
  - o **60**
- 1080i
  - o **23.98**
  - o **24**
  - o **25**
  - o **29.97**
  - o **30**
- 3D Frame-Packed
  - o **720p**
  - o 1080p
  - o **1080i**

Audio:

- 32 kHz
- 44.1 kHz
- 48 kHz
- 88.2 kHz
- 96 kHz

<u>Note:</u> HDMI Audio data rate is not converted when processed through the IMS1000. Make sure your audio processor supports the audio format encoded on the disc you are playing back.

## 22 Appendix E: SDI – Supported Formats 22.1 Video

Single Link

•

2D		
0	720p	
	•	50
		59.94
		60
0	1080i	
	•	23.98
	•	24
	•	25
	•	29.97
	•	30
0	1080p	
	•	23.98
	•	24
	•	25
	•	29.97
	•	30
0	1080sf	
	•	23.98
	•	24
0	2kp	
	•	23.98
	•	24
0	2ksf	
	•	23.98

■ 24

#### **Dual Link**

- 2D
  - o **720p** 
    - **5**0
    - 59.94
    - 60
  - o **1080i** 
    - 23.98
    - 24
    - 2529.97
    - 29.9730
    - 30
  - 1080p■ 23.98
    - 23.9
    - 2425

- 29.97 30 1080sf 0 23.98 24 2kp 0 23.98 24 0 2ksf 23.98
  - 23.9 ■ 24

#### **Dual Stream**

• 3D

0

- 1080i
  - 23.98
  - 24
  - 25
    29.9
  - 29.9730
- o 1080p
  - 23.98
  - 24
  - 25
  - 29.97
  - **3**0
  - 1080sf

0

- 23.98
- 24
- o 2kp
  - 23.98
  - 24
- o 2ksf
  - 23.98
  - 24

## 22.2 Audio

• SDI Embedded Audio @ 48 KHz

# 23 Appendix F: Connection Diagram



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# 24 Appendix G: Updating Web Based User Interface Version

- Obtain the latest update package from the FTP Site. Contact Doremi Labs Technical Support to confirm the latest version.
- Log into the unit using a FTP client.
- Go to the "data/incoming/GUI" folder.
- Place the file in the GUI folder.
- Log onto the IMS1000 and go to Control  $\rightarrow$  Ingest  $\rightarrow$  Ingest Scan (Figure 338).



#### Figure 338: Ingest Scan Window

- Select Local Storage (Figure 338).
- Select the package (Figure 338).
- Click Ingest (Figure 338).
- Click OK in the pop up window to acknowledge that the system must be rebooted (Figure 339).

You are about to ingest a package, system r	must be rebooted after the ingest.
	ОК

Figure 339: Reboot Notification

• Go to Administration  $\rightarrow$  System  $\rightarrow$  Restart (Figure 340).

	doremi	IMS1000 Serial Number: 332132			Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Restart Button	Technology Leadership for Digital Cinema <b>Ouick Access Links</b> Crown Onlick Access Links	System OVERVIEW  To enter Standby mode, click the To restart the system, click the Riv To shutdown the system, click the	ADMINISTRATION CONTROL Standby button. The server will not be o estart button. You will be automatically o e shutdown button.	MONITORING operational disconnected from the web interface.	LOGOUT	U
		Standby Restart Shu	ldown			
	A Quick Controls 😵 No Playback				00:30	x #4

Figure 340: Restart

• After about ten minutes, the update will be finished.

# **25** Appendix H: Installing the Ferrite Cores

Six ferrite cores are included for installation on to the Ethernet and GPI/GPO cables that connect to the IMS1000. A ferrite core can help reduce unwanted high-frequency interference received by these cables.

- Install one ferrite core 2 inch/5.1mm from each end of the Ethernet cables, near the RJ45 plugs that will be connected to the IMS1000 Eth0 & Eth1 connectors.
- Install one ferrite core 2 inch/5.1mm on each Ethernet cable near the RJ45 plug that will be connected to the IMS1000 GPI/GPO connectors.

## 25.1 Mounting the Ferrite Core Clamp

- Open the ferrite core clamp and attach it 2 inch/5.1mm to the end of the cable that is closest to the connector that is to be attached to the IMS1000.
  - o If nessecary, push the catch to open the ferrite core clamp (Figure 341).



Figure 341: Clamp Catch

• Close the ferrite core clamp tightly around the cable (Figure 342).



Figure 342: Attaching the Clamp

• Push the tabs until they close securely with a snapping sound (Figure 343).



Figure 343: Clamp Tabs

• The procedure is now complete.

# 26 Appendix I: Maintenance Guide

The section below provides instructions for preventive maintenance operations applicable to the IMS1000.

## 26.1 Software Maintenance

Update the software, firmware, security manager, and hotfixes as indicated on the Doremi ftp website. Complete the updates if/when notified by Doremi Technical Services, or at least once a year.

#### 26.1.1 Updating an IMS1000 via USB (DLM Required)

To perform an update that requires a license, follow the steps below:

- Place the DLM file (may be zipped) and the package file on a USB drive and plug it into a USB port on the server.
- Go to Control → Ingest Manager and select Local Storage from the drop-down menu (Figure 344).
- Select the license file(s) to install only and click the Ingest button first. Then, select the package file and click the Ingest button again (Figure 344).

Ingest Button	IMS1000 Serial Number: 300106	Screen: Software Version: User Level:	Screen3 2.6.4-0 admin / SuperUser
Local Storage DLM File	Ingest Scan     OVERVIEW     ADMINISTRATION     CONTROL     MONITORING       Refrest     Ingest     Ingest     Ingest       Local Storage     all elements     Select all     Ingested content       Iscalhost, scanned about 0 minutes ago     img. fw. 4.2.10-0_300106 dmm.zip     Ingested content	LOGOUT	Ingest Monitor
Package File	🥪 MS-fw_42.10D.pkg		
	Assets found CPL(s): 0 SPL(s): 0 PKG(s): 1 KOM(s): 0 DLM(s): 0 PKL(s): 0 Other(	(s): 1	
♀ Quick Controls ♦ No Playback	± No Ingest	12:40	

#### Figure 344: Ingest Manger

- The user will be asked for a password when clicking the Ingest button the first time. Enter the appropriate password and press Ok.
- Reboot the server.

• After the server has booted back up you can confirm the update by clicking on the Monitoring tab.

#### 26.1.2 Updating the IMS1000 via Remote Package Ingest (No DLM Required)

To perform an update that does not require a license, follow the steps below:

- The Upload option can only upload .pkg files. It can access these files on your local network, eliminating the need to use a USB drive.
- Go to Control  $\rightarrow$  Ingest Manager  $\rightarrow$  Upload (Figure 345).

doremi	IMS1000 Serial Number: 332132			Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Upload OVERVIEW	ADMINISTRATION CONTROL	MONITORING	LOGOUT	<mark>ပ</mark>
Browse Button Quick Access Links	You can upload packages to upg select the packages you want to A system reboot might be necess Upload package. Browse. No files a	rade the product or to install additional fe install. sary to complete packages installation. selected.	atures. Click on the input box below to	Ingest Monitor	Ingest Scan
Upload Button					
Cuick Controls				18:22	2 P 1

#### Figure 345: Ingest Upload

- Click the Browse button to locate the package to ingest (Figure 345).
- Click the Upload button when you have selected the file (Figure 345).
- When the file has been uploaded, you will be prompted to reboot the unit. Click the Reboot button (Figure 346).

dor	emi I	<b>MS1000</b> erial Number: 332132			Sc So Us	rreen: iftware Version: ier Level:	IMS1000 2.6.4-0 admin / SuperUser
Techr for Di	nology Leadership gital Cinema	pload OVERVIEW	ADMINISTRATION CONTRO	L MONITORING		LOGOUT	<mark>ပ</mark>
Quick Access I & Create (	L <b>inks</b> Quick Access Links	You can upload packages to upgrad select the packages you want to ins     A system reboot might be necessar	le the product or to install addition tall. y to complete packages installatic	al features. Click on the input box below to n.		t Monitor 👘 Ir	rgest Soan
	File Up#	es uploaded successfully <u>Click her</u> r to load packages <b>Constants</b> No files set	r <u>reboot</u> ected. Upload.				
Reboot Button							
	Playback in progress	📩 Ingest in progress				18:25	

#### Figure 346: Upload Reboot

- The user will be prompted to restart the unit.
- When the unit has finished rebooting, login and go to Control  $\rightarrow$  Ingest Manager  $\rightarrow$  Ingest Monitor. The package will be available for ingest (Figure 347).

	doremi	IMS1000 Serial Number: 332132		: : !	Screen: IM Software Version: 2.6 Jser Level: ad	S1000 i.4-0 min / SuperUser
	Technology Leadership for Digital Cinema	Ingest Monitor OVERVIEW ADMINISTRATION CONTROL MONITORING			LOGOUT	<mark>ل</mark>
	Quick Access Links	Refresh 🛞 Delete Pause 🕨 Resume 🚫 Cancel	Select all		ngest Scan 📃 Uploa	
	Create Quick Access Links	Status Description	Scheduled	Started	Finished	<u> </u>
	100000000000000000000000000000000000000	PIRATESOFTHEC4_TLR-1-20_F_EN-XX_US-G8_51_2K_DI_20101120_TDC	2014-06-23T18:14:38	2014-06-23T18:26:19	2014-06-23T18:26:53	
Package	100000000000000000000000000000000000000	SORCERERS-APPR_TLR-1_F_EN-XX_US-GB_51_2K_DL_20091123_TDC	2014-06-23T18:26:53	:53 2014-06-23T18:27:32		
Available		V NightBet0Mas_T.R-9_S_EN-XX_US-GB_51_2X_DI_20090616_TDC	2014-06-23T18:14:38	2014-06-23T18:27:32	2014-06-23T18:28:00	
		KARATE-KID_TLR-2_F_EN-XX_US-G8_51_2K_SPE_20100218_DLA_0V	2014-06-23T18:14:38	2014-06-23T18:28:00	2014-06-23T18:29:03	=
		ims_webui-1.0.4.pkg	2014-06-24T18:25:28	2014-06-24T18:25:28	2014-06-24T18:25:30	+
		Copied [ims_webui-1.0.4.pkg]		Success 100	%	
		PKG ingested [ims_webui-1.0.4 pkg]     Reboot the system to complete installation		Total Progress 1	00%	
	Quick Controls     Orlayback in progress				18:27	* P

#### Figure 347: Package Ready for Ingest

## 26.2 The Hardware Maintenance

It is recommended that the user perform the hardware maintenance procedure at the same time as the projector maintenance, and at least once a year. This procedure is necessary to help prevent over-hearting of the board.

<u>Note:</u> The hardware maintenance must be performed in compliance with the ESD rules listed in Section 2 when handling the IMS1000 board. It should be performed by a qualified technician. If any problem occurs, contact Doremi Labs Technical Services for assistance.

#### 26.2.1 Required Tools

- ESD Safe Compressed Air or Vacuum
- Philips Head Screwdriver



Figure 348: Phillips Head Screwdriver

#### 26.2.2 Procedure

- Turn off the projector.
- Remove the IMS1000 unit from the projector. See Sections 4, 5, 6 for more information on installing and removing the IMS1000.
- Remove all HDDs from the chassis. See Sections 4, 5, 6 for more information on installing and removing the HDDs.
- Blow the dust from the security enclosure heatsink and the CPU heatsink (Figure 349), as well as the HDD trays (Figure 350). Use a vacuum cleaner or a source of compressed air that is ESD safe.
  - <u>Note:</u> Do not use a brush as this can potentially result in damage to the board. The dust removal should be limited to blowing the dust from the heatsinks and the HDD trays.



Figure 349: Heatsinks



Figure 350: HDD Tray

- Reinstall all HDDs on the chassis.
- Reinstall the IMS1000 unit on the projector.
- Record the maintenance in the Log Operator Maintenance (Administration → Control Panel → Log Operator Maintenance) application (Figure 351). See Section 12.11 for more information.

doremi	IMS1000 Serial Number: 332132	D				Screen: Software Version: User Level:	IMS1000 2.6.4-0 admin / SuperUser
Technology Leadership for Digital Cinema	Event Log	OVERVIEW	ADMINISTRATION	CONTROL	MONITORING	LOGOUT	<del>ن</del>
Quick Access Links	😯 New						Scheduled
Create Quick Access Links	Subject		Author	Execution Date			
	Annual maintenance activities		admin	28 days ago			
	Annual maintenance activities		admin	8 months ago			
	Comment						
A Quick Controls & No Playback						19:12	x #1

Figure 351: Log Operator Maintenance

# 27 Acronyms

Term	Definition		
CPL	Composition Play List		
DCI	Digital Cinema Initiatives		
DLM	Doremi License Message		
FPS	Frames Per Second		
GPI	General Purpose Input		
GPO	General Purpose Output		
HDD	Hard Disk Drive		
IMB	Integrated Media Block		
KDM	Key Delivery Message		
LCD	Liquid Crystal Display		
LED	Light Emitting Diode		
RAID	Redundant Array of Independent Disks		
SDI	Serial Digital Interface		
SPL	Show Play List		
SSH	Secured Shell		
VGA	Video Graphics Array		
XML	Extensible Markup Language		
SMS	Screen Management System		

# 28 Document Revision History

Date	Version	Description
04/26/2013	1.0	First version.
04/26/2013	1.1	Minor editorial change made.
05/06/2013	1.2	Revision made to Section 9.2.
08/08/2013	1.3	Revisions made throughout; updated to reflect version 1.0.4.
07/01/2014	1.4	Updated to reflect Web GUI version 1.1.7 and SW version 2.6.4; changes made throughout the manual.
10/01/2014	1.5	Section 16.5 added.
10/09/2014	1.6	Section 26 added. Sections 21 and 22 modified.