TABLE OF CONTENTS

THANK YOU FOR CHOSING CONVERGENT DESIGN.

Our philosophy is to ensure that all features that we have enabled in the Gemini 4:4:4 have been thoroughly tested.

Our goal is to provide a very high degree of reliability in both our hardware and firmware.

OVERVIEW

PACKAGE CONTENTS

Make sure you have the following items, supplied with your Gemini 4:4:4 upon purchase.

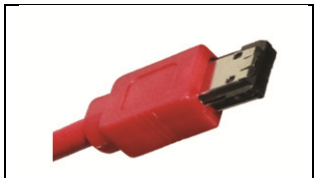
Hard Case

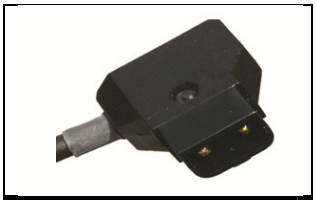

Gemini 4:4:4

Transfer Station


HDMI
Type C to Type A


HD-SDI (Qty 2)


eSATA
Data Cable


Power D-Tap
4-Pin


USB Power Cable
for Transfer Station


XLR Power Cable
4-Pin


Universal AC Power
Supply

Stylus &
Microfiber Cloth


Hot Shoe Mount

NOTE: Only Convergent Design SSD's will work in the Gemini 4:4:4.
These SSD's, available in 256 GB and 512 GB must be purchased separately.
Your Gemini 4:4:4 dealer is an ideal place to purchase these SSD's.

FEATURES

The Gemini 4:4:4 is a professional, high-definition video recorder that fits in the palm of your hand and is easily mountable on your camera. It is very light weight and small in size.

Gemini 4:4:4 functions as a high-quality monitor, with a wide viewing angle, high brightness with great contrast, and no compromise video playback device.

The footage from the Gemini 4:4:4 can be easily incorporated into virtually any workflow using your favorite codec or as native uncompressed DPX sequences.

With an extra cost option, Gemini 4:4:4 is also capable of recording, combining, and playing back 3D video.

The Gemini 4:4:4 records to specially certified and tested 1.8" solid-state hard drives that can be purchased from Convergent Design through your local dealer.

UNCOMPRESSED 4:4:4 RGB QUALITY

The Gemini 4:4:4 records in the highest quality possible; no other recorder exceeds the image quality of the Gemini 4:4:4!

The Gemini 4:4:4 records Full Uncompressed 4:4:4 RGB and also accepts 4:2:2 camera signals. This ensures that 100% of the quality of your video signal will be maintained. There are no signal losses, no artifacts, and no loss of quality whatsoever.

This is especially important when recording Log video, such as Sony S-Log or Log-C. The precise values for each bit are recorded. No bit values are changed in any way, thus preserving the full integrity of your images. Recording full 4:4:4 is the proper way to record S-Log and Log-C. Recording 4:2:2 from a 4:4:4 capable camera is a compromise.

4:2:2 to 4:4:4 UP-CONVERSION

The Gemini 4:4:4 records in DPX file format, an industry standard for high end post processing. To conform with widely used software that accepts the DPX file format, the Gemini 4:4:4 automatically up-converts (up-reses) to 4:4:4.

This is accomplished by using a sophisticated routine that uses the weighted average of nearby pixels to ensure that the 4:4:4 is of high quality, even when the source video is 4:2:2.

HD TOUCH SCREEN FOR RECORD AND PLAYBACK

The Gemini 4:4:4 is easily controlled using the touch screen. A Stylus is provded to prevent the LCD Monitor from being smudged.

NOTE: Your camera MUST be equipped to output 4:4:4 in order to use the uncompressed 4:4:4 functionality of the Gemini. A 4:2:2 signal will be up-resed to 4:4:4.

DUAL SSD

The Gemini 4:4:4 is unique in that is supports two SSD's for both recording and playback.

To extend recording time, a recording can automatically span from one SSD to another. This is fully automatic.

S-LOG and LOG-C SUPPORT

Many features are built into the Gemini 4:4:4 for supporting Log footage: A menu option easily allows one to apply a built-in LUT (Lookup Table) to native S-Log footage. The LUT is applied to the LCD and HD-SDI outputs.

LOG RECORDING

The Gemini 4:4:4 is ideally suited for recording Sony S-Log and also supports Log-C.

DUAL LINK SDI

The Gemini supports dual link 1.5Ghz HD-SDI Input for 4:4:4 recording.

HIGH PERFORMANCE SSD'S

The Gemini 4:4:4 SSD's are specially picked for their performance and reliability. These SSD's are capable of reading at greater than 400Mbps, making transfer of files very quick. You'll find these Convergent Design SSD's available through our Resellers at affordable rates.

FAST BOOT TIME

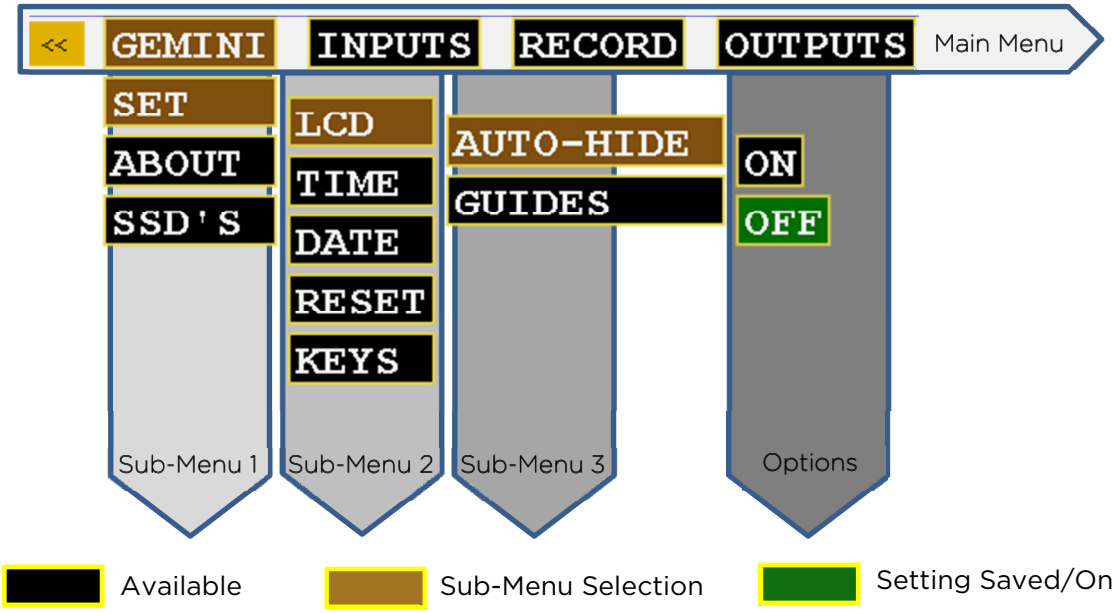
You can expect your Gemini 4:4:4 to power up and be reading for recording in approximately 12 seconds or less after applying power.

GEMINI 4:4:4 ANATOMY

WARNING: DO NOT ENCLOSE THE UNIT IN AN AIRTIGHT CONTAINER
Keep the area around the cooling fins (vertical lines on the back of the Gemini) open for air flow. Gemini 4:4:4 and SSD's will operate at full potential under these conditions.
Do not lay the unit flat, Keep the unit vertical for best cooling.

MENU STRUCTURE

The Gemini 4:4:4 menu can be accessed through the buttons along the top of the screen. By tapping on a Main Menu heading, a Sub-Menu 1 navigation will appear. Likewise, by tapping a Sub-Menu 1 heading, a Sub-Item 2, and so on, may appear and subsequently provide you with an Option related to that.



GEMINI

Sub-Menu 1	Sub-Menu 2	Sub-Menu 3	Option	Description	Additional Information
SET	LCD	Auto-Hide	On	The on screen menu will disappear after 15 seconds of idling. Touching the screen anywhere will bring the menu back.	
			Off	The on-screen menu always be displayed unless the hide button is touched	
		Guides	2.39:1		
			1.85:1		
			None	Removes any current Guides setting.	
	Time	→		Set the appropriate time.	
	Date	→	→	Set the appropriate date.	
	Reset	→	→	Restore all default settings.	
	Keys	Unit	Unit OK	Indicates your product was successfully registered.	Requires nothing further after initial registration.
ABOUT	→	→	→	Displays the firmware version, serial number of your Gemini unit, manufacturing date, and activation date.	
SSD's	Format SSD 1	→	→	Permanently erases everything on SSD 1	WARNING: DATA WILL NOT BE RECOVERABLE!
	Format SSD 2	→	→	Permanently erases everything on SSD 2	

INPUTS

Sub-Menu 1	Sub-Menu 2	Sub-Menu 3	Option	Description	Additional Information
TIMECODE	Source	→	SDI	Timecode is extracted from the SDI signal coming from your camera	For non-zero timecode, set your camera's timecode output (if it has one).

RECORD

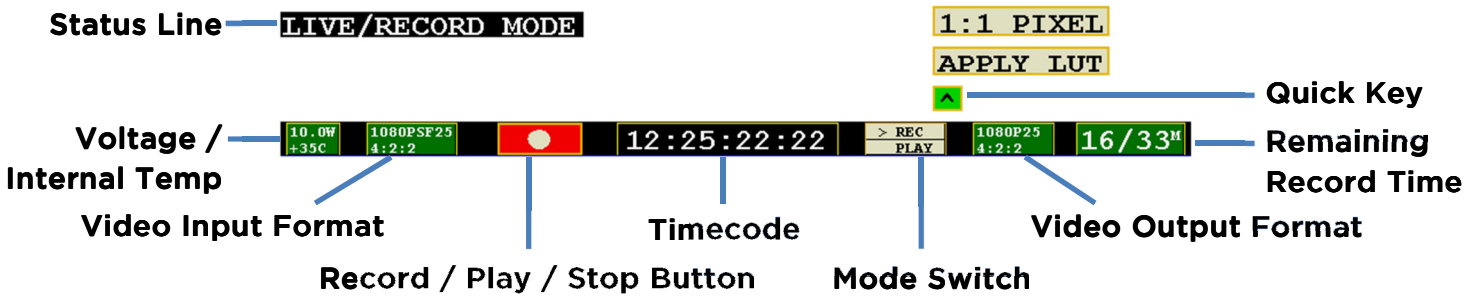
Dropdown	Sub-Item	Sub-Menu 3	Option	Description	Additional Information
TRIGGER	Rec Button	→	→	Recording is started by touching the record button on the Gemini screen	
	SDI TC	→	→	Recording will start when incrementing timecode is detected from the SDI input and will stop recording when timecode is not incrementing	This mode is particularly useful when wanting to trigger a record session from your camera's record. However, your camera will most likely output incrementing timecode while it is playing back video. This will also trigger a record in the Gemini. Therefore, this setting may need to be turned off while your camera is in playback mode
TYPE	DPX	→	→	In this mode, the Gemini will save recorded video into a .dpx file.	*See Transfer, page xxx, for more info on file types.*
CLIP	(AAAAAAAA)(000)	→	→	Allows the user to set the name of the recorded files	The last three digits will auto-increment from one recording to the next. If you are using more than one Gemini unit, it is recommended that at least the first two characters of this name be set different from one Gemini unit to the next

OUTPUT

Sub-Menu	Sub-Menu 2	Sub-Menu 3	Option	Description	Additional Information
Rec Tally	On	→	→	When the Gemini is recording, the SDI and HDMI output will display a red bar on the bottom of the screen to indicate an active record	This red bar is not recorded in the Gemini. If you are using a separate recorder to record the output of the Gemini, turn this setting off
	Off	→	→	Nothing will be overlaid on the SDI or HDMI output of the Gemini	
Mode	4:2:2	→	→	SDI output as 4:2:2; works in both Rec and Play Mode.	This setting only affects the output video. 4:2:2 Input will always be converted to 4:4:4 for recording.
	4:4:4	→	→	Incoming video will be output as 4:4:4	Use this setting if you want to output 4:4:4 RGB, usually Dual Link HD-SDI. (Not valid with 4:2:2 input.

MODE TOGGLE & STATUS

Across the bottom of your Gemini monitor you will find the Control Bar, that includes Mode Functions and related Indicators and Buttons.



		Description		Detailed Status Indicators
Status Line		The status line will indicate when you have successfully changed or applied a setting.		
Voltage/Internal Temp				
Video Input Format				
Record / Play / Stop Button		Click to initiate the appropriate action. Record Stop Play Pause		
Timecode				
Mode Switch		Tapping will move the arrow (“>”) to toggle between Rec and Play Mode.		
Video Output Format				
Remaining Record Time		Remaining record time per card, shown as SSD1 / SSD2. These numbers are approximate.....		
Quick Key		Click the carrot (“^”) to display options, then click to apply. Apply LUT — NOTE: Viewing LUTs are not applied to recorded material. 1:1 Pixel — For critical focus		

PREPARATIONS

POWER

There are multiple ways to power your Gemini 4:4:4;
1. Using the provided AC Power Supply which includes international power plugs
2. Using 4-Pin XLR Power, using the supplied 4-Pin XLR to 4-Pin Hirose Power Cable.
3. Using an Anton Bauer or IDX Battery with a D-Tap connection. A D-Tap to 4-Pin Hirose Power Cable is included.
4. Using any 4-Pin Hirose Power cable as provided by Convergent Design for Gemini 4:4:4 or nanoFlash.
5. Using any suitable DC power source, 6 to 19 Volts DC, with a 4-Pin Hirose connector.

Pin 1 & 2 Must be Positive DC Voltage
Pin 3 & 4 Must be Negative or Ground
Power Supply must supply at least 15W.

WARNING! Power input is limited to 6-19 Volt DC.

AC Power Supply

Simply connect the 4-pin Hirose to 4-Pin Male XLR cable to the Female 4-Pin XLR connector on the AC Power Supply and plug into a suitable AC power source.

Gently turn to fit and click the Hirose connector into the Power 6-19V connector on the left of the Gemini 4:4:4.

Do not force the power connector into the Remote Tally connector on the right side of the Gemini 4:4:4.

Camera

Using the supplied HD-SDI cables, or other high quality True 75 Ohm HD-SDI cables with True 75 Ohm connectors, connect your camera to SDI A, or to both SDI A and SDI B (for Dual Link).

Use of 50 Ohm and/or low quality cables will cause the video signal to be intermittent.

REGISTRATION

If you haven't already, you will need to register your Gemini 4:4:4 at www.Gemini444.com to activate your unit.

Your information is private and used internally to send you firmware updates via email. We highly encourage you to enter the optional information that we request. This extra information is designed to help us provide product improvements as well as better products for you.

When you power up the Gemini for the first time, it will automatically provide you with a serial number that you will need for your on-line registration, via the website.

(1) Tap the OK button when you are ready to proceed.

(2) Enter Unit Activation Key using the + and – buttons; Press OK.

(3) Activation is complete if you have received the 'Unit Activation Successful' in the Status Line.

SETTING DATE & TIME

The Gemini|Set|Time and Gemini|Set|Date menu items are used to set the internal clock of the Gemini 4:4:4, which keeps time even when there is no external power connected to the unit.

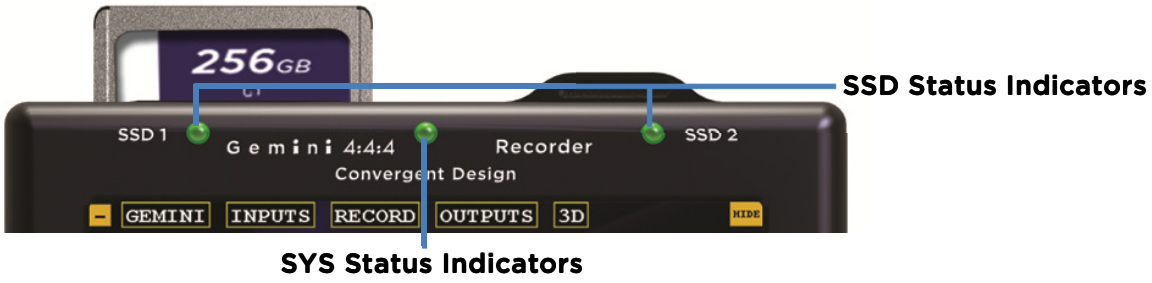
HANDLING SSD CARDS

Avoid touching the connector end of the SSD's.

Avoid shocking the connector end of the SSD's via static electricity.

When inserting into the Gemini 4:4:4, make sure the label is facing the front of the unit (see the proper placement in the image below).

Please be gentle when inserting the card. Clasping the door over the card and gently pushing in the drawer will adequately connect the drive.



Formatting SSD Cards

WARNING: BEFORE USING THE SSD'S IT IS IMPERATIVE TO FORMAT THE SSD'S IN THE GEMINI 4:4:4

ALL EXISTING DATA WILL BE LOST DURING THE FORMAT!

Formatting is a destructive process. Any data on your SSD's that has not already been transferred to another medium will be lost forever. Once this process is started, there is no way to recover the data. "Un-format Utilities" will not be able to recover the data.

Go to **GEMINI > SSD's > FORMAT SSD1** or **GEMINI > SSD's > FORMAT SSD2** from the Menu to format the SSD's.

This process will take approximately 30 seconds for a 256GB and 60 seconds for 512GB cards.

After the SSD's have been used to record any video, the video must be transferred to another device, before reformatting the SSD's, otherwise the video will be lost forever.

SSD Status Indicators

The LED lights associated with each SSD drive will display the following status color indicators:

- Drive needs to be formatted within the Gemini.
- Drive is completely full and can be played back or formatted for a new record.
- Drive is ready to record.
- SSD card is initializing.
- Drive is currently playing back.
- Drive is currently recording. **NEVER REMOVE SSD DURING RECORD OR PLAYBACK!**

System Status Indicators

The LED lights located in between each SSD drive, in the middle of the unit, will display the following status color indicators:

Ready for Record.

Recording. **IF FLASHING RED, SEE TROUBLESHOOTING BELOW.**

Play Mode.

TROUBLESHOOTING. If the System Status Indicator is FLASHING RED:

A flashing red System Status LED light indicates there was a problem during record. An additional error message should be present to indicate the error that occurred. Please power cycle the device to remove the message.

Best User Practices

- Before each shoot always make a test recording, and verify that it was recorded successfully.
- Always format your SSD's in the Gemini 4:4:4 before recording.
  Of course it is important to not reformat a SSD unless the footage has been successfully copied to another medium.

RECORDING

Recording Time / Media

Media	1080p24 4:4:4	1080p25 4:4:4
256GB SSD (x1)	21	20
256GB SSD (x2)	42	40
512GB SSD (x2)	84	80

Recording Instructions

Are you ready to capture the ultimate quality? The following will walk you through a successful recording.

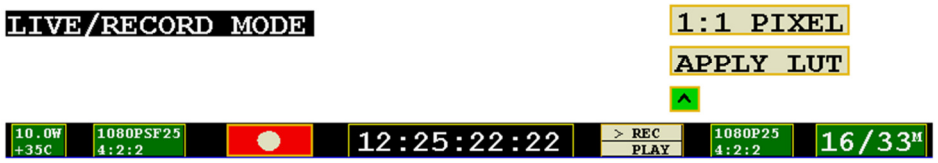
(1) Assure you have an appropriate power supply.
(2) Make sure any and all necessary settings have been programmed and saved.
(3) Insert at least one Convergent Design SSD card into either Slot 1 or Slot 2, or insert one in each slot. For more information on 'Handling SSD Cards', visit page 12. The LED SSD Drive Indicator light should be green. If so, proceed to step 4.

TROUBLESHOOTING. If the SSD Indicator(s) are NOT green, try the following:

Orange	SSD drive is initializing. If it does not change after 30 seconds, power cycle the unit.
Yellow	Go to GEMINI > SSD'S > FORMAT SSD (1 or 2).
White	Card is full; remove the card and transfer the data.

(4) If the ">" is next to 'REC' on the Mode Toggle, you are ready to record. If not, tap the Mode once to toggle to 'REC' mode.
(5) Make sure the SYS Status Indicator is green.

(6) Tap the Record Button to begin your Clip.



(7) Your clip is now recording. Please note:

a. The SYS Status Indicator is red.
b. One of the SSD Status Indicators is Red. If you have two cards in, the other light should be green.
c. The Status Bar will turn red and your time code should be incrementing.

(8) To stop recording, click the blue Stop Button. The Status Line will indicate that the "Record is Complete".

(9) Record again, or, to watch your clip(s), you are ready for Playback Mode.

DPX Recording

In DPX mode, Gemini Records video into DPX (.dpx) files. DPX is a file format that is specifically designed for uncompressed video. Each DPX file actually only stores one single frame of video. Therefore, each record will have a single folder that contains all of the DPX files. For NLE workflow options, see TRANSFER, page 18.

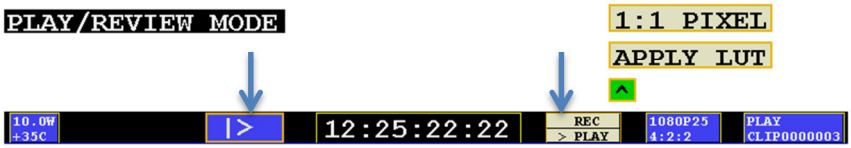
PLAYBACK

Now that you have successfully recorded to your Gemini 4:4:4, it's time to harness its playback capabilities on its high-definition 800 x 480 monitor.

(1) If the "**>**" is next to '**PLAY**' on the Mode Toggle, you are ready to play back. If not, tap the Mode once to toggle to **PLAY Mode**. The Status Line will indicate that you are now in Play/Review Mode.

WARNING: DO NOT REMOVE EITHER SSD CARD DURING PLAYBACK.
THIS MAY RESULT IN DATA THAT IS UNRECOVERABLE.

(2) Tap the blue **Play Button**.
The most recent clip taken will immediately begin playing.



(3) When **Play** has been initiated, the button will change to a **Pause Button**.
(4) When you have completed your review, tap the Mode again to toggle back to **REC Mode.**

TRANSFER

Data from your SSD is copied over eSATA; USB is used for **ONLY** powering the Transfer Station. Data cannot be copied via USB.

If your computer is not equipped with an eSATA port then you will need to purchase an Adaptor, or expansion card. Additional options include USB 3.0 to eSATA Adaptor, or PCI eSATA Adaptor.

Best User Practices

The best way to transfer is to connect the eSATA adapter, the Transfer Station and the SSD, ***then*** boot the computer.

Use 6 Gb eSATA adapters for maximum performance.

Do not force cables or the SSD into Transfer Station.

(See image for proper connectivity)

Performance

The Gemini 4:4:4 SSD's can Perform up to 400MBps. Keep in mind you will be limited by the slowest median in the transfer process. For example: eSATA 3Gbps cards have a max performance of ~270MBps, and eSATA 1.5Gbps have a max performance of ~130MBps.

Typical Hard Drives (Non-Raid) generally perform anywhere in the range of 80-130MBps. For maximum performance, make sure you are using eSATA 6 Gbps to a Raid configuration.

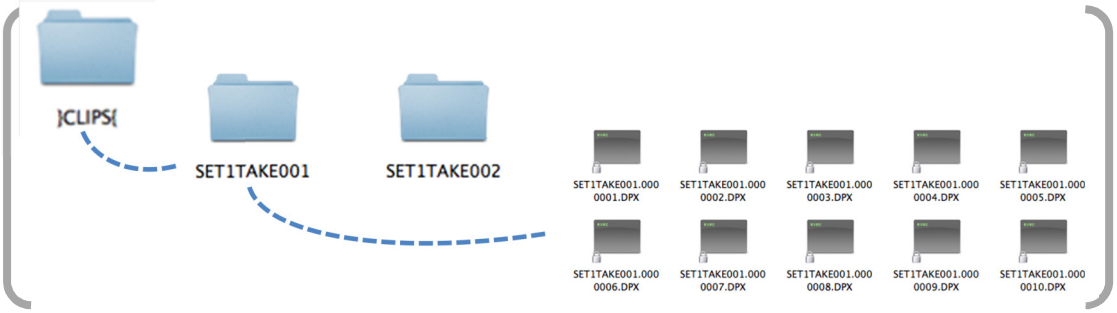
File Support

The Gemini 4:4:4 recorder accepts inputs from both HD-SDI 4:2:2 and 4:4:4 cameras. 4:4:4 Cameras currently must have HD-SDI Dual Link. HD-SDI 3G will be supported in a future firmware release.

All DPX files are recorded so that each frame of video is a single file,
with all frames from a single recording being contained within a single file folder.

All Files Recorded by the Gemini 4:4:4 are recorded as 4:4:4 10 Bit RGB DPX Files; as this is the industry standard.

Thus, each time you start and stop a recording it will create a new file folder, which takes the name of the Clip, as setup via a menu item in the Gemini 4:4:4: All clips reside in a **}CLIPS{** folder on the Solid State Drive (SSD).



}CLIPS{

CLIP001001 *(Assuming that the **RECORD|CLIP** is set to (CLIP001) (001))*

CLIP0001001.0000001.DPX

CLIP0001001.0000002.DPX

Etc.

CLIP0001002 *(Assuming that the **RECORD|CLIP** is set to (CLIP001) (002))*

CLIP0001002.0000001.DPX

CLIP0001002.0000002.DPX

Etc.

DPX Frames May contain up to 60,000 Frames per Clip (Based on 512GB Drive)

Viewing Gemini Clips

DPX Files are supported with the following Software:

DJV VIEWER (PC)

http://djv.sourceforge.net/ Click on Downloads and select one suitable for your system

http://djv.sourceforge.net/install.html

DJV VIEWER (Mac)

http://djv.sourceforge.net/ Click on Downloads and select one suitable for your system

http://djv.sourceforge.net/install.html

Many Capture Card Software programs will playback Gemini 4:4:4 DPX Files natively.

BLACKMAGIC MEDIA EXPRESS

AJA DPX Translator (AJA KONA QTToDPXTranslator and AJA KONA DPXToQTTranslator)
http://www.aja.com/products/software/

Color Grading / Finishing Support

ADOBE AFTEREFFECTS CS4, 5 and 5.5
http://www.adobe.com/products/catalog.html

AUTODESK SMOKE
http://usa.autodesk.com/adsk/servlet/pc/index?id=5561833&siteID=123112

CINEFORM REMASTER
http://www.cineform.com/products.php

FINAL CUT PRO COLOR 1.5.3

Editing Support

Adobe Premier CS4, 5, and 5.5
http://www.adobe.com/products/catalog.html

BlackMagic DaVinci Resolve
http://blackmagic-design.com/products/davinciresolve

Apple Final Cut Pro 6/7 With Glue tools
http://www.gluetools.com/

Apple Compressor 3.5 and Compressor 4

Apple Final Cut X

Not supported at this time, however the next version from Apple is expected to support DPX

Avid 5.5.3 Mac (With Glue Tools) – this info subject to change

Avid 5.5.3 PC (With MetaFuse or Cineform NEO) – this info subject to change

Avid 6 when released

APPENDIX

Firmware Updates

We strongly recommend you always keep your Gemini 4:4:4 updated with the latest firmware.
We frequently add new features and bug fixes at no cost.

Firmware Update Instructions

We recommend that you print out these instructions, if possible (p22-25).

1. Your computer must have an internet connection so you may access our website.

2. Navigate to our website: http://www.convergent-design.com/FirmwareUpdates/Gemini444.aspx

   On the Right Side of the page, you will find “Current Firmware”.
   Make a note of the firmware version that you will be downloading.

3. Format a SSD in the Gemini 4:4:4 (ensuring that no important clips are on the SSD first).

4. Insert the formatted SSD card in the transfer station.

5. Connect the transfer station to your computer, connecting both the USB and eSATA cables to your computer and the transfer station.

   If your computer does not recognize the SSD, you will need to reboot your computer.

   a. We recommend creating a folder named something like the following:
      Gemini 444 Firmware 2011-11-11-001 (1.0.105)
      (Use today’s date and firmware number as listed in our webpage.)
      But you may create a folder using a folder name of your choice.

6. Navigate to our website: http://www.convergent-design.com/FirmwareUpdates/Gemini444.aspx

   On the Right Side of the page, you will find “Current Firmware”.

7. Click on the firmware version that you wish to download.
   Note: You may reinstall an earlier version of the firmware, if desired.

For Windows 7: **(Other Windows Computers will be similar)**
See below for Mac instructions

8. Click on Save As.

9. Navigate to the folder you just created.

10. Click on Save. The file you saved will be Gemini 1.0.105.zip
    (but with the current firmware version number)

11. Navigate to this folder and file. (You may just click on "Open Folder")

12. Double Click on this file. It will be something like "Gemini 1.0.105.zip" but with the current firmware number.

13. Click on Extract All Files.

14. Click on Extract.

15. Double Click on Gemini 1.0.105 (or current firmware version number).

16. Drag and Drop the }GEM_UPDATE{ folder to your SSD Drive
    (Listed under Computer) on the left hand side of your screen.

    Note: The SSD may be "No Name", and it can be any Drive Letter", but it will have a }CLIPS{ folder on the drive.

    Do not copy the firmware update into the }CLIPS{ folder.

    Answer Yes to: "Do you want to copy this folder without Encryption?"

    And Answer Yes to: "Do you want to copy this file without Encryption?"

    Skip over "For Mac" instructions to finish the update.

For Mac

1. Start with Steps 1 through 8 above.
2. Double click on the }GEM_UPDATE{.zip
3. Copy or Drag }GEM_UPDATE{ folder to SSD.

For Both Mac and Windows (PC continued)

1. If done successfully, you will have:

   }CLIPS{ (An Empty Folder)
   }GEM_UPDATE{ (The Update Folder)
   }GEMINI{.UPD (The Actual Firmware Update File)

2. Use the "Safely Remove Hardware" option or shutdown your computer gracefully, to ensure that the firmware has been completely transferred to the SSD.
3. Otherwise, the firmware update may not be successfully copied to the SSD, and then the Gemini 4:4:4 will not find the firmware update.
4. Ensure that you have adequate power to power the Gemini 4:4:4, either battery or AC Power. The firmware update takes less than 5 minutes, but please ensure that you have at least 30 minutes of battery time remaining to ensure safety.
5. Power Up the Gemini 4:4:4.
6. Removing any video input cables.
7. Remove all SSD's.
8. Insert the SSD with the firmware update.
9. Then power on the unit.
10. You will see a Firmware Update screen if the file is on the SSD properly.
11. Follow the On-Screen Prompts to complete the firmware update.
12. When complete it will say: "DONE – PLEASE REMOVE UPDATE DRIVE" (Please remove the SSD; The unit will then power off and back on automatically).

13. If you wish to then reuse this SSD (normally the case, unless you have additional Gemini 4:4;4's to update):

a. Insert the SSD back into the Gemini 4:4:4
b. Click on Cancel (to avoid performing the Firmware Update again)
c. Reformat the SSD (Click on Menu, then Gemini, then SSD's, then Format SSD1 or Format SSD2)

This step is very important:

Then power off the Gemini 4:4:4, then Power it back on.
If you fail to perform this step to power cycle the unit, then all features of the Gemini 4:4:4 may not work properly.

TROUBLE SHOOTING: Firmware Update NOT Initializing

If you insert the SSD into the Gemini 4:4:4 and it does not start the firmware update process, the Folder Name is not correct, or the file is not in the correct location, as outlined above.

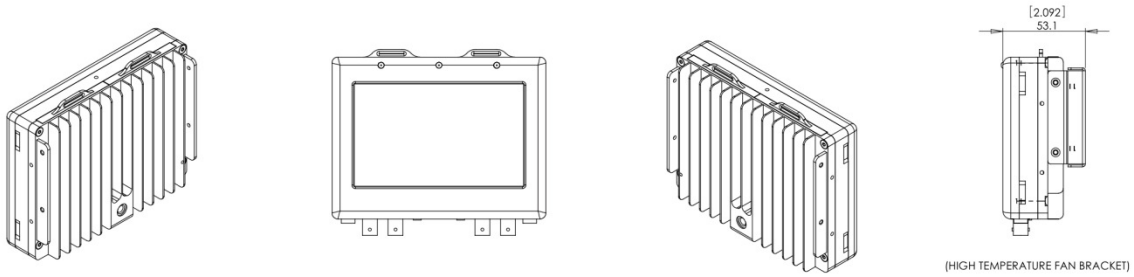
Specifications

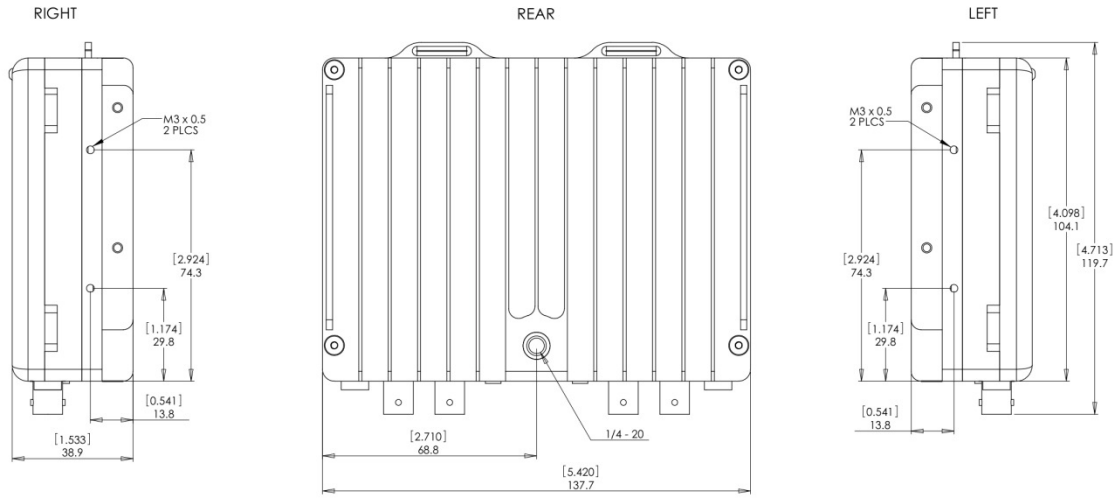
Feature	Specification
Video Standards	HD-SDI, SMPTE 292M; HD-SDI Dual-Link, SMPTE 372M; (HD-SDI 3G, SMPTE 424M - Planned)
Video Formats	1080p23.98/24//25
Video I/O	Four BNCs, (2 Input, 2 output, with individual power-down options), One HDMI (Type C) Output
Record Features	Uncompressed RGB 10-Bit 4:4:4 Recording into DPX file format
	Spans across drives (for longer record times) or (Record simultaneously to both drives – Planned)
Playback Control	Play and Pause
S-Log, Log-C Support	Support for S-Log, Log-C
Media	Two Slots for 1.8" Solid State Drives (SSD), 256GB / 512GB sizes;
	SSD Performance: 250 MBytes/Sec Write, 415 MBytes/Sec Read, 6 Gbps SATA Interface
	Note: Only SSD Media supplied by Convergent Design can be used in the Gemini
Transfer Station	1.8" SSD to 6 Gbps eSATA transfer station (included)
Built-In LCD Monitor	5" high brightness LCD, 800 cd/m^2, 800 x (RGB) x 480 Pixels, 24-Bit, 900:1 True Contrast, Wide 170^0 Viewing Angle, Color Calibrated at Factory
	(1:1 Pixel Mode, Apply LUT Mode)
Software Compatibility	Support for Avid, Final Cut Pro, Premiere, Smoke, Flame, DaVinci
Menu System	Touch Sensitive menu system with user-defined presets and customizable level of on-screen data
Timecode	HD-SDI Embedded (SMPTE RP-188) or LTC via optional cable
3D - Dual Stream (Option)	Paid option for Full Stereo (dual stream) record and playback in a single Gemini unit; Cameras must be Gen-locked to operate properly with the Gemini
	Left and Right Video Streams recorded as individual files, in full uncompressed
	Vertical Flip, Horizontal Flop, for either/both streams
	Individual output of each stream or Combine: Side by Side, Line by Line, Anaglyph, 50/50 Composite and Luma Differencing
ARRIRAW (Option)	Planned support for ARRIRAW recording and playback with Confidence Monitoring
Remote Control (Option)	Wired Remote Control with Tally Light and LTC I/O
Power Requirements	5 to 19 Volts DC, 8 to 16 watts (active) / 4.0 watt (power-save mode); 7-second boot-up time
Size, Weight	138 x 120 x 37 mm (5.4 x 4.7 x 1.45"); 680g (1.5 lb); Milled Aluminum Case
Environmental	+40 to -10 ^{0}C Ambient Temp (Operating) / +70 to -20 ^{0}C (Storage)
Gemini Production Kit	Gemini 4:4:4 Recorder, eSATA Transfer Station, HD-SDI cables, HDMI cable, Hotshoe with 1/4"x20 Ball Mount, Universal AC Power Supply, 4-Pin XLR Power Cable, D-Tap Power Cable, Stylus, Custom Fitted Hard Plastic Case
Optional Accessories	256GB / 512GB SSD Media, DC to DC Converter (Input: 20 to 32V, Output: 12V), Sun Shade, Remote Control, extra Transfer Station(s)
Notes	1080p29.97/30 and 1080p50/59.94/60 data must be striped across both drives, so simultaneous recording / 3D is not supported for these formats. (Data from two SSDs can be readily combined for editing). Also 1080p50/59.94/60 only supported in 4:2:2 sampling.
	Specifications subject to change without notice.

Record Times - See Page 15

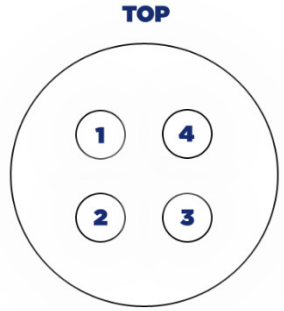
Gemini Mechanical Drawings

Useful for your mounting needs and designs, please find below mechanical drawings of the Gemini 4:4:4.



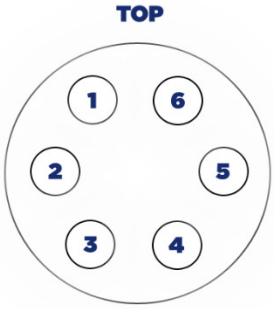


Remote Connector Pinout



POWER PINOUT

(1) Power: +6.5 ~ +19V,
(2) Power: +6.5 ~ +19V
(3) Ground
(4) Ground



REMOTE PINOUT

(1) 232 - RX
(2) Remote
(3) LTC-I/O
(4) GPI
(5) GND
(6) 232 - TX

Know Issues – Firmware Version 0.0.251

- 3G SDI not supported at this time
- ARRIRAW not supported at this time
- 720p60/50 not supported at this time
- Playback Clip Selection not supported at this time

Trouble Shooting & Support

Please read the User Manual before contacting support. We highly recommend that you follow these steps:

(1) **UPDATE YOUR GEMINI**: Visit the Gemini 4:4:4 Firmware Updates page on the website and confirm that you are running the latest version. Please refer to 'Firmware Updates' on page 22 for more about checking the system for current version and updating.
http://www.convergent-design.com/ProductUpdates/Gemini444.aspx

(2) **VISIT OUR FORUM**: We have a very active forum and you may find the answer you are looking for, as well as support from the Convergent Design community.
http://www.dvinfo.net/forum/convergent-design-nanoflash/

(3) **REFER TO DOCUMENTATION**: Please read all of this User Manual, as well as our Gemini 4:4:4 FAQs which document basic usage and help answer common questions.

(4) **CONTACT US:** If you still haven't found a solution to your support needs we are always happy to help you 24/7!

Support E-Mail: cdsupport@convergent-design.com
Sales E-Mail: cdsales@convergent-design.com
Main Telephone: ++(720) 221-3861
Sales and After Hours Support Telephone: ++ (719) 930-1376, ++803-278-0941
Web Site: http://www.convergent-design.com & www.Gemini444.com

We appreciate your questions, comments, feedback! We ARE listening! To reach out to us, look for this link on our website, or visit http://www.convergent-design.com/ProductUpdates/WereListening.aspx

Limited Warranty

Convergent Design warrants Gemini 4:4:4, and all included accessories, against defects in material and workmanship for a period of 2 years (for registered units), 1 year (for non-registered units), and 3 months (for units used as rentals) from the original date of purchase.

Convergent Design disclaims all other warranties.

Convergent Design will not be liable for damages of any kind, including, but not limited to, compensation or reimbursement on account of failure of the unit, or any of its accessories, or its recording media, external storage systems, or any other media or storage systems to record or playback content of any type. Also Convergent Design will not be liable for a failure of the unit to properly record or play back for any reason. Convergent Design's total liability, in all cases, is limited to the actual purchase price.

If you discover a defect, please refer to our Return Merchandise Policy below.

During the warranty period, Convergent Design, at its option, will repair or replace product or product components, which in its opinion prove defective, provided the unit is returned, freight charges prepaid, to Convergent Design. Parts and components used in the repair process may be recycled or repaired, at Convergent Design's sole discretion. This warranty service will be performed at no charge to the registered owner, provided the product is shipped prepaid to Convergent Design.

Convergent Design reserves the right to determine whether a needed repair is subject to the warranty as per its provisions stated herein. Transit damage caused by inadequate packing violates the warranty. The warranty will be void if, in the opinion of Convergent Design, the product has been damaged through accident, misuse, misapplication, or as a result of service or modification not authorized in writing by Convergent Design.

Opening the unit and breaking the warranty seals, voids the warranty, unless specifically authorized in advance by Convergent Design.

WARNING: THE FOLLOWING ARE NOT COVERED UNDER WARRANTY, AND ARE ITEMS FOR WHICH CONVERGENT DESIGN DOES NOT ACCEPT ANY RESPONSIBILITY:

- **Damage due to the use of an AC power supply, other than the one supplied, or use of any inappropriate power source.**
- **Damage due to overheating conditions. The unit will attempt to shut down, if powered on, in the event of overheating, before damage can occur.**

- Damage due to exposure to water, or other liquids, or excessive dust or sand.
- Damage caused by dropping or other rough handling.
- Damage caused by any overvoltage conditions or reverse voltage conditions.
- Any physical damage to the LCD and/or Touch Screen including scratches.
- Damage to any connector by using excessive force or rough handling.
- Any loss or corruption of video or audio data recorded on the unit, or any loss or corruption of data which is in any way associated with the Gemini 4:4:4.

Obtaining an RMA

It is our policy that all material and repair returns, whether in warranty or not, are only accepted if an RMA (Return Merchandise Authorization) Number has been issued for the products being returned.

E-mail Convergent Design at cdsupport@convergent-design.com to obtain an RMA number for a faulty unit, or call ++720-221-3861 (7:30 am to 5 pm Colorado, USA time).

Items must be returned within 15 days of receiving your RMA number.

Returned product must be securely packaged and must have the RMA number clearly marked on the outside of the package.

RMA numbers and return address may be obtained from Technical Support.

Convergent Design RMA # _____

4465 Northpark Drive, #400

Colorado Springs, CO 80907

EMAIL: cdsupport@convergent-design.com

WEBSITE: www.convergent-design.com or www.gemini444.com

Phone ++(720) 221-3861 (Preferred, Denver Time) or
++(866) 654-0080 or
++(803) 278-0941 (For After Hours Support 24/7)
++(719) 930-1376 (For After Hours Support 24/7)

Transit damage caused by inadequate packaging also invalidates the warranty agreement.

Please ship the unit in its original packaging, if possible.

Within the United States, the unit may be shipped directly to Convergent Design once an RMA is obtained.

Outside the United States, please coordinate with your dealer, which will then coordinate with our distributor for your part of the world. Our goal is to ensure that the units are shipped properly and that the units will clear customs without incurring extra charges. In some cases your local dealer or distributor may be able to provide you with a loaner unit.

All products must be shipped prepaid to Convergent Design, or preferably through the dealer from which the unit was purchased (if outside the US). If you purchased the unit from a dealer outside of your normal trading zone, then you may be charged for return shipping to your location.

For insurance reasons, Convergent Design cannot accept any product that is returned via U.S. Postal Service. Returns will be accepted from Federal Express, UPS, DHL, or other comparable freight carrier.

Products repaired out-of-warranty are shipped at customer's expense.