

DigitalinxIP 2000 / 5000 Series Deployment Guide

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Introduction

This document is to assist with deploying the DigitalinxIP 2000 and 5000 series products.

With DigitalinxIP you can stream HDMI audio and video signals over a 1Gb network infrastructure. The 2000 series system is capable of streaming video resolutions up to 1080p and uses h.264 compression to allow thousands of endpoints to be deployed over a 1Gb network. The 5000 series is capable of streaming video resolutions up to 4K@60Hz 4:2:0 and USB 2.0 full speed and uses JPEG2000 which is a visually lossless compression codec that features low end to end latency (~1.5fps). Because JPEG2000 operates at a much higher data rate compared to h.264 the amount of streaming decoders in a system is limited to 100 total devices when using a 1Gb network infrastructure, however if utilizing a 10Gb network infrastructure, many more devices can be deployed on the same multi-switch network system.

There are multiple ways to control DigitalinIP systems once installation of the switching system is complete. The Digi IP Control APP for iPad and Windows can be used for simple video switching and display ON and OFF control, a third party control system can also communicate with and control all DigitalinxIP devices on the A/V LAN.



Installation Instructions - 2000 / 5000 Series

Installation Steps

1. Configure a managed 1Gb / 10Gb PoE network switch for DigitalinxIP system usage

NOTE: A network switch configuration guide has been built to assist with configuring network switches for a variety of switch manufacturers. The network switch configuration guides are located on the DigitalinxIP product pages on the Liberty website (www.libav.com) under the *DOCUMENTATION* tab

- 2. Once network switch is configured, turn off power to the configured network switch
- 3. Connect Category 5e or greater twisted pair cable with the TIA/EIA-568B crimp pattern between the LAN1 port on the IPEXCB and the configured network switch

NOTE: If the network switch cannot provide power or enough power to the IPEXCB, connect the included power supply to the 12V DC power input of the control box. If the network switch is not providing PoE power to the IPEXCB then disable the PoE function of the connected RJ45 port on the switch

- 4. Connect the DigitalinxIP encoder(s) and decoder(s) to the network switch using Category 5E or greater twisted pair cable with the TIA/EIA-568B crimp pattern and per the instructions for those device
- 5. Connect all sources and displays to the respective DigitalinxIP encoders and decoders
- 6. Apply power to the configured network switch
 - NOTE: The IPEXCB will fully boot after five minutes
- 7. Apply power to the connected audio/video devices
- 8. Use *DigitalinxIP Configurator Sofware* to configure the DigitalinxIP components

NOTE: The *Digitalinx Configuator Software* tool can be downloaded at *www.libav.com* under the IPEXCB product paged under *SOFTWARE* tab

To control the IPEXCB and DigitalinxIP system by a third party control system, connect a Category cable between the LAN2 port on the IPEXCB to an Ethernet based third party control system network or use the RS232 connection on the IPEXCB to connect to a third party serial based control system according to the manufacturers system instructions

For a comprehensive list of IP and serial system commands for the IPEXCB and DigitalinxIP systems, please refer to the *DigitalinxIP Programming Guide* which is located under the *DOCUMENTATION t*ab on the IPEXCB product page online at *www.libav.com*

Pre-written control system drivers are also available online on the IPEXCB product page under the DRIVERS tab

Downloading DigitalinxIP Configurator Software

The Digi IP Configuration software tool can be found on the IPEXCB product page under the *SOFTWARE* tab at *www. libav.com.* Download the zip file and extract all files, then run the .exe setup file on the Windows PC that will be used to configure the IPEXCB and associated encoders and decoders.

Making a PC Connection

Connect a Windows PC to an open port on the A/V network switch with a Cat 5e patch cable.

Set a static IP address for the Windows PC that is within the IP range of the IPEXCB (169.254.1.xxx) and set the subnet mask to 255.255.0.0. See Logging into the web browser Graphical User Interface (GUI) on page 9.

Please contact an IT administrator if the PC cannot be assigned a static IP address in this range.

Running Digi IP Configurator Software

Open the DigitalinxIP Configurator software. The link to the software can be found in the Windows Start menu or on the desktop if the option was enabled during setup.



If a firewall warning pops up, tick the check boxes for private and public networks.and click ALLOW ACCESS

Pindows Secu	urity Alert		×
Windo app	ws Defend	er Firewall has blocked some features of this	
Windows Defender public and private r	Firewall has blo networks.	ocked some features of Configuration tool for DigitalinxIP on all	
	Name:	Configuration tool for DigitalinxIP	
- A	Publisher:	Liberty AV Solutions	
	Path:	C:\users\liberty\desktop\digitalinxip configurator 8.5.14\digitalinxip configurator 8.5.14.exe	
Allow Configuration	tool for Digital	nxIP to communicate on these networks:	
Private netw	orks, such as n	ny home or work network	
Public netwo because the	rks, such as th se networks of	ose in airports and coffee shops (not recommended ten have little or no security)	
What are the risks	of allowing an a	pp through a firewall?	
		Allow access Cancel	

NOTE: DigitalinxIP Configurator cannot run in Windows 10 S Mode. If the PC used is running S Mode it must be switched out of S Mode.



DigitalinxIP Configurator Software Overview

The DigitalinxIP Configurator software will typically present a 'Welcome' screen that will ask you to either open an existing file or create a new project file.

B .	Welcome ×
New file	Create a new empty project file
Open fil	Open an existing project file More Files C:/Users/LibertyAV/Documents//SystemConfig.hoi
	OK Cancel

The DigitalinxIP Configurator software will then present a pop-up reminding the user to press the *Search* button to automatically recognize attached DigitalinxIP devices on the network. Ticking the check box will prevent this from opening in the future.

💀 Tip	×
Please click "Search" on the toolbar to start.	
Do not show this dialog again	
	ОК



The DigitalinxIP Configurator software screen is split into three primary zones: Decoders (RX) will be located on the left, encoders (TX) as well as the IPEXCB (C) will be located on the right and Groups will be located in the center.

🗠 Open 🔲 Save as 🛛 🔎 Search 🔮 Save alas	Batch commands		Other Design (TV Protection)
KT Hame(Allas) Type NO. HostHame ~ [All Groups (© ungrou. Group 1	Sath Grag Charge	Al Group Desite Docup Uproceed Uproceed	Ofer Device(TX/Corolleu)

The IPEXCB should be the first device that is discovered by the software if the PC is correctly connected to the A/V network switch and within the IP range of the control box.

[Other [)evices(TX/C	ontrolBo	x)			
	NO.	Alias	Туре	HostName	IP	Version	
		C IPE	IP	IPEXCB-341B2280	169.2		



Search for DigitalinxIP Devices on the Network

Clicking the *Search* button will tell the IPEXCB to scan the network for compatible encoders and decoders.

₽ Ş.				
Project(P)	Tools(T)	Option(O)	Help(H)	
• New	C Open	📑 Save	Search 🕹 Save alias	Batch commands

After the search is complete, a pop-up window will display the number of total devices found on the network, including the IPEXCB.



Encoders and decoders will now be displayed in their respective locations in the software. A green letterbox will appear to the left off all devices indicating they are live devices on the AV LAN. The letter 'R 'represents decoders or receivers, the letter 'T' represents encoders or transmitters and C represents the IPEXCB control interface.

Name (Alia	3)	Туре	NO.	HostNa
💙 All Gro	oups			
🗸 G 1	ungrouped	Group	1	
	R IPEX2002-341B228017	RX	1	IPEX20
	R IPEX2002-341B228017	RX	2	IPEX20
	R IPEX2002-341B228013	RX	3	IPEX20
	R IPEX2002-341B228017	RX	4	IPEX20

If a discovered device loses connection to the network, the green letterbox will change to white.

Name (Alias)	Туре	NO.	HostNa
✓ All Groups			
✓ G ungrouped	Group	1	
R IPEX2002-341B228017	RX	1	IPEX20
R IPEX2002-341B228017	RX	2	IPEX20
R IPEX2002-341B228013	RX	3	IPEX20
R IPEX2002-341B228017	RX	4	IPEX20



Assigning Alias Names to DigitalinxIP Encoders and Decoders

It may be important to assign an alias name to a device so the device can be associated and / or recognized with an A/V device more easily. This will also allow for faster programming when using the API for third party control of DigitalinxIP devices.

To assign an alias to a device, except for the IPEXCB, right click the device and select General Settings.

Name (Alias)		Type	NO	. Hostname	
4 All Grou	ns				
⊿ G un	grouped	Group	1		
R	IPEX5002-341B22	RX			£
R	IPEX5002-341B22	RX	\subseteq	General Settings	D
R	IPEX5002-341B22	RX		Video Settings	þ
R	IPEX5002-341B22	RX		Serial Settings)

The default Alias is the [MANUFACTURERS MODEL NUMBER - MAC ADDRESS OF THE DEVICE]. Enter the deisred Alias for the device, then click *Apply*. Clicking the *X* will close the pop-up.

To prevent any switching issues, only alphanumeric characters and hyphen (-) are allowable characters, spaces are not allowed.

evices:	IPEX5002-341B2	IPEX5002-341822801F4A						
ostname:	IPEX5002-341B2	2801F4A						
ias:								
IP Addres	s Settings							
Auto				○ Static				
IP Addres	s:	169	. 254	. 3	. 206			
Subnet M	ask:	255	. 255	. 0	. 0			
Gateway:		169	. 254	. 0	. 254			
After pres	ssing "Apply",							
this Devic	e will automatically	reboot for the set	tings to take e	effect.				

When the encoders and decoders have an Alias applied, the Alias will show up in the device listings.

Name(Alias)	Туре	NO.	Hostname
All Groups			
G ungrouped	Group	1	
R OUT1	RX	1	IPEX5002-341B22801F
R OUT2	RX	2	IPEX5002-341B228030
R OUT3	RX	3	IPEX5002-341B228030
R OUT4	RX	4	IPEX5002-341B228030



Creating Decoder Groups

It may be useful to categorize decoders into groups so they can be identified more easily by their location. When using DigitalinxIP with a third party control system, it is not necessary to create and use groups however for servicing purposes it may be useful to do so. When using the DigitalinxIP iPad or Windows APP, groups are used to navigate to various locations with ease. See *Using iPad or Windows Control APP with IPEXCB* on page 55.

Create a New Group

With *All Groups* selected on the left panel, click *Create Group* at the top of the middle panel.

Name (Alias) Type NO. HostName V All Groups G ungrouped Group 1 R Entrance Left RX 1 IPEX2002-341B22802 Estrance Dight RV 2 IPEX2002-341B22802	Batch	Group Chang	je 💧	+ • =	All Groups
✓ All Groups ✓ G ungrouped Group 1 ℝ Entrance Left RX 1 IPEX2002-341B22802 ₽ Entrance Dight RX 2 UPEX2002-341B22802	ame(Alias)	Туре	NO.	HostName	create oroa
✓ G ungrouped Group 1 R Entrance Left RX 1 IPEX2002-341B22802 P Entrance Dight RV 2 UPEX2002-341B22802	All Groups				
R Entrance Left RX 1 IPEX2002-341B22802	✓ G ungrouped	Group	1		
P Entrança Dight DV 2 IDEV2002_241822902	R Entrance Left	RX	1	IPEX2002-341B22802	
Elicialice Right RA 2 IFER2002-341B22602	R Entrance Right	RX	2	IPEX2002-341B22802	

Provide a name for the new group, then click OK.

🖳 Create (Group	Х
Create:	Group	v
Name:	Lobby	
	OK Cancel	

With the new group created you can now assign decoders to the group. To make this change click on *Batch Group Change* button.

K.	Batch G	roup Change	1	+ - =
Name(Alias)		Туре	NO.	HostName
✓ All Groups				
✓ G ungrouped		Group	1	
R Entrance 1	Left	RX	1	IPEX2002-341B22802
R Entrance 1	Right	RX	2	IPEX2002-341B22802
G Lobby		Group	2	



Assigning an DigitalinxIP Encoder or Decoder to a Group

To assign decoders to the desired group location, click on 'Batch Group Change'



Choose the appropriate decoder group on either side of the Batch Group Change menu using the *RX Filter* drop down menus on either side. Selections will be adjusted from the left menu to the right. Use the button to then send a decoder from one group to the next.



The decoders will now appear in the new group in the RX window.

			Batch G	roup Change		+ - =
Name (Alias)			Туре	NO.	HostName
✓ A12	l Grou	ps				
	G un	grouped		Group	1	
~	G Lo	bby		Group	2	
	R	Entrance	Left	RX	1	IPEX2002-341B22802.
	R	Entrance	Right	RX	2	IPEX2002-341B22802.



Removing an DigitalinxIP Encoder or Decoder

To remove an encoder or decoder from the configuration of the AV system, right click on the name of the encoder or decoder, then click *Delete*.

Name(Alias)	Type	NO.	Hostname
All Groups G ungrouped R OUT1 R OUT2 R OUT3 R OUT4	Group General Setting Video Settings Serial Settings	1 1 15	K5002-341B22801F K5002-341B228030 K5002-341B228030 K5002-341B228030
	Idle Image Sett Turn On OSD Turn Off OSD CEC One Touch CEC Standby	ings h Play	
formation	EDID Export Delete Update Device Reboot Reset to Factor	Data y Default	
Alias: OUT1 Device Type: RX	Change Group		

A confirmation window will open to confirm the deletion of the encoder or decoder.





Create a Video Wall Group

When building video wall systems, use proportional horizontal and vertical video wall system layout to avoid video stretching and image distortion. *For example* 2x2, 3x3, 4x4 etc.

Create a New Group

With All Groups selected on the left panel, click Create Group at the top of the middle panel.

R	x			Batch Group Change + -	All Groups
	Name(Alias)	Туре	NO.	HostName	Create Group
	✓ All Groups				
	✓ G ungrouped	Group	1		
	R TopLeft-2x2	RX	1	IPEX2002-341B22801768	
	R TonDight_2v2	DV	2	TDEV2002_3/1822801763	

Provide a name for the new group, then click OK.

Create:	Group	V	
Name:	2x2_Video_Wall		
	ОК	Cancel	

With the new group selected in the left panel, click the *Create VW* button at the top of the middle panel. This will create a new video wall configuration.

R BottomRight-2x2 R Entrance	RX RX	4 5	IPEX2002-341B22801769 IPEX2002-341B22801765	
G 2x2_Video_Wall	Group	2		
2x2_Video_Wall Edit Group Delete Group	Create VW		Apply Automatically apply	
To all screens				



Select the number of rows and columns to be used in the matrix output or video wall configuration. There is a maximum of 16 rows and 16 columns per group. When naming the video wall, spaces and special characters are not allowed.

2	Create Video Wall
Video \	Nall Name: 2x2
Row:	2 🗸
Col:	2 🗸
Group:	2x2_Video_Wall 🔻
	OK Cancel

Click *OK* to create the video wall. The configuration will show up beneath the group that was just created and a visual representation will appear in the middle section of the Digi IP Configurator software.

Project(P) Tools(T) Option(O) H	Help(H)					
			_			
🕑 New 💾 Open 📃 Save	Search	2	Save alias 🛛 🔝 Ba	atch commands		
RX						
		-		2x2		
Batch Group Chan	ge 🏦	±	+ -	_		
Name (Alias)	Туре	NO.	Hostname	•	Create Layout/scene	Remove Layout/Scene
4 All Groups				Sort item in the list	Apply Automatically apply	
⊿ G ungrouped	Group	1				
R TopLeft-2x2	RX	1	IPEX5002-34			<u>^</u>
R TopRight-2x2	RX	2	IPEX5002-34			
R BottomLeft-2x2	RX	3	IPEX5002-34:	RX:	RX:	
R BottomLeft-2x2	RX	4	IPEX5002-34:			
⊿ G 2x2_Video_Wall	Group	2				
W 2x2	Video	1				
						1
				RX:	RX:	
						-
						¥
<			>	<		>



Create a Video Wall Layout

With the newly created video wall sub-group selected on the left panel, click Create Layout/Scene at the top of the middle panel.

2x2	
	Create Layout/Scene K Remove Layout/Scene
Sort item in the list	Apply Automatically apply

Enter a name for the layout under *Layout/Scene Name*, such as 2x2. Spaces and special characters are not allowed.

Make sure you are using the 'Standard Video Wall' option under 'Layout/Scene Type' then click OK.

B	Create Layout/Scene	×
Video Wall Name: Screen layout/Scene	2x2	V
Layout/Scene Name:	2x2	
Row:	2	~
Column:	2	Ŧ
Layout/Scene Type:	Standard Video Wall	•
	Ok	Cancel

Drag and drop the decoders in the ungrouped section of the left panel to the respective display locations within the matrix layout by holding down left click on your mouse. As each decoder is assigned to a location, it will disappear from the upgrouped section and will then be re-assigned to the video wall group.

RX					ava wal	
			Batch Group Change	★ + - Ξ	ZX2_Wall	Create Layout / Edit Layout & Remove Layo
Name (Alias)	Туре	NO.	HostName		- Hudin	
✓ All Groups					Sort item in the list	Apply Automatically apply
✓ G ungrouped	Group	1				
R TopLeft-2x2	RX	1	IPEX2002-341B22801768		TV.	TV.
R TopRight-2x2	RX	2	IPEX2002-341B22801763		1.4.	
R BottomLeft-2x2	RX	3	IPEX2002-341B22801393		RX:	RX:
R BottomRight-2x2	RX	4	IPEX2002-341B22801769			
R Entrance	RX	5	IPEX2002-341B22801765			
✓ G 2x2_Video_Wall	Group	2				
W 2x2_Wall	Video	1				
					TX:	TX:
					RX:	RX:





The RX portion of the visual representation will show the assigned decoders in each display slot.

Repeat the process with the encoders to assign a predefined AV route whenever the current layout is selected. This step is optional and would not be used if dynamic video switching will be used.

2x2		
📝 2x2 🔹	Create Layout/Scene 📝 Edit Layout/Sce	ene 🔀 Remove Layout/Scene
Sort item in the list	Apply Automatically apply	
● TX: IN1 ● RX: TopLeft-2x2	 → TX: IN1 → RX: TopRight-2x2 	^
● TX: IN1 ● RX: BottomLeft-2x2	● TX: IN1 ● RX: BottomLeft-2x2	
<		۲ ۲

To adjoin the video wall display so one image will displayed proportionally across the video wall, click and hold down the right mouse button over the upper far left display in the groups section and drag it to the bottom right display quadrant of the video wall.



Release the right mouse button and click *Combine*.

TX: RX: Botton	nRight-2x2	
	Change TX Change RX	* *
	Remove TX Remove RX) •
	Select All Remove All TX	
	Combine	
	Split	



Provide a simple name, such as vw, in the Logic Properties window, then click OK.

Eg Logic Screen Properites	?	\times
Basic Settings		
Name: vw		
ОК	Cance	:

A blue line will surround the visual representation of the displays and a dotted line will separate each display, which indicates the configuration is a logical video wall.





Video Wall Bezel Compensation (5000 series only)

To compensate for bezel size in a video wall, right click on the video wall group and select *Logic Screen Properties* from the menu.

TX: RX: TopLeft-2x2	TX: RX: TopR	ight-2x2
	Change TX Change RX	•
TX: RX: BottomLeft-2x2	Remove TX Remove RX	▶ ×2
	Select All Remove All TX	
4	Combine Split	
-	Logic Screen Propert	ties

The *Layout/Scene Name* tab allows the outside and viewable dimensions of the display to be configured to offset the image in order to maintain proper aspect ratios of the source content. The number values are referring to 0.1 mm increments.

Suppose a 43 inch LED TV has an 8 mm bezel with outside dimensions of 970 mm x 569 mm. The following values would be entered into the tab: OW = 9700, OH = 5690, VW = 9540, and VH = 5530.





The Advanced Settings tab allows correcting the video output on an individual display.

Horizontal Shift will shift the video image to the left or right. If the display is on the left edge of the video wall, the image cannot be shifted to the right. A single unit is 8 pixels.

Vertical Shift will shift the video image up or down. If the display is on the top edge of the video wall, the image cannot be shifted down. A single unit is 8 pixels.

Horizontal Scale Up will stretch or shrink the video image horizontally. The scale is one pixel per number of columns in the video wall.

Vertical Scale Up will stretch or shrink the video image vertically. The scale is one pixel per number of rows in the video wall.

Tearing Delay is used to compensate for screen tearing and is applied when the source content covers the entire video wall. In a 3 x 3 video wall, the tearing delay would only affect a 3x3 video wall image. A 2 x 2 video wall image on the 3 x 3 wall will ignore the tearing correction. The values are defined in microseconds with typical values ranging between 10000 and 16000.

D.	Logic Screen Properties	×
Layout/Scene Name: 2x2 Advanced Set	ings	
Devices:	•	
Horizontal Shift (N x 8 pixels)		
🖲 Left 🔵 Right 0 🌲		Apply
Vertical Shift (Host: N pixels Client: N x 8 p	xels)	
Up Down		Apply
Horizontal Scale Up (N pixels/column_count):	
0		Apply
Vertical Scale Up (N pixels/row_count):		
0		Apply
Tearing Delay (us):		
0		Apply
		OK Cancel



Create a Matrix Layout within Video Wall Group

When a video wall group is created and a decoder is assigned to each display within the video wall, you have the ability to build a matrix system layout within the video wall group.

With the video wall sub-group selected on the left panel, click *Create Layout/Scene* at the top of the middle panel. The video wall visual representation should also be seen in the middle panel.

2x2	
	Create Layout/Scene
Sort item in the list	Apply Automatically apply

Enter a name for the matrix, such as *Matrix*, make sure the *Standard Video Wall* option is selected under the *Layout/Scene Type* option, then click *OK*.

Video Wall Name:	2x2	
Screen layout/Scene		
Layout/Scene Name:	Matrix	
Row:	2	~
Column:	2	Ŧ

Verify Group Layouts

Clicking the dropdown list at the top of the middle section with the video wall group selected will show all layouts that have been created.

2x2	
📝 Matrix 🔹	📲 Create Layout/Scene 📝 Edit Layout/Scene 🔀 Remove Layout/Scene
📝 2x2	Automatically apply
Matrix	
TX:	TX:
RX: TopLeft-2x2	RX: TopRight-2x2
тх:	TX:
RX: BottomLeft-2x2	RX: BottomLeft-2x2



Creating Combination Layouts for Large Video Wall Groups

When a video wall group is created and a decoder is assigned to each display within the video wall, you have the ability to build a combination video wall / matrix system layout within larger video wall systems such as 3x3, 4x4 and beyond.

In our example we will create a 2x2 video wall quadrant to the upper right of the 3x3 video and designate the remainder of the displays in the video wall system for matrix video routing.

Create a video wall group labeled 3x3 and assign the appropriate decoders to the appropriate video wall quadrant locations. For instructions on creating a video wall configuration, see page 14 *Creating a Video Wall Group*

3X3								
- -	reate Layout/Scene 📝 Edit Layout/Sce	ene 🔀 Remove Layout/Scene						
Sort item in the list Apply Automatically apply								
RX:	RX:	RX:						
RX:	RX:	RX:						
RX:	RX:	RX:						



With the video wall sub-group selected on the left panel, click *Create Layout*/Scene at the top of the middle panel. The video wall visual representation should also be seen in the middle panel.

Create a video layout labeled 2x2x5. For instructions on creating a video wall group, see *Create a Video Wall Layout* on page 27.

Combine the top four displays in upper right hand corner of the video wall configuration in the groups section. For instruction on how to combine displays for a video wall configuration see page 18.

You now have a 2x2 system with 5 displays operating in matrix mode within the 3x3 video wall configuration.





Remove a Video Wall Layout

Remove a Layout

To remove a layout, click the *Remove Layout/Scene* button with a valid video wall selected.



A confirmation window will open to confirm the deletion of the layout.



If this is the last layout for the video wall, another confirmation window will open to confirm the final deletion.





Remove a Video Wall

To remove a video wall layout, right click on the name of the video wall in the window to the left, and click *Delete Video Wall*.

Name(Alias)			Тур	e	NO		Hostname	2				
▲ All Groups												
		G	un	grou	1	Grou	цр	1				
	⊿	G	2 x	2_V:	i	Grou	ıp	2				
		⊿	W	2x2	2	Vie		1			_	
				R		RX		Edit	Vide	o Wall		41B22801F4A
				R		RX		Dele	te Vi	deo Wall		41B2280303B
				R		RX		3		IPEX5002	2-3	41B2280303C
				R		RX		4		IPEX5002	2-3	41B2280305D

A confirmation window will open to confirm the deletion of the video wall.

₽ _{\$}	Delete Group	×	
?	Do you want to delete this group?		
	Yes	No	

After the video wall is deleted, the video wall reference will be removed from the group.

Remove a Group

To remove a video group, right click on the name of the group, and click *Delete Group*.

Name (Alias)		Туре	NO.	Hostname
⊿ All Gro	ups				
Gu	ngrouped		Group	1	
⊿ G 2	x2_Video Wa	11	Groun	2	
R	TopLe	Create \	Video Wall		IPEX5002-341.
R	TopRi	Edit Gro	oup		IPEX5002-341.
R	Botto	Delete (Group		IPEX5002-341.
R	Botto	U LAL		_	IPEX5002-341.

A confirmation window will open to confirm the deletion of the video group.

₽2,	Delete Group		
?	Do you want to delete this group?		
	Yes No		

After the group is deleted, all assigned encoders will be moved to the *ungrouped* group.

Na	me(Alia	(S)	Туре	NO.	Hostname
⊿	All Gr	oups			
	⊿G	ungrouped	Group	1	
		R TopLeft-2x2	RX	1	IPEX5002-341.
		R TopRight-2x2	RX	2	IPEX5002-341.
		R BottomLeft-2x2	RX	3	IPEX5002-341.
		R BottomLeft-2x2	RX	4	IPEX5002-341.



2000/2100 Series Advanced Device Settings

IPEX2001 / IPEX2101 - Video Settings

To configure the video settings of an IPEX2001, right click on the name of the encoder and select *Video Settings*.



In the *Basic* tab, tick the *Enable* or *Disable* radio button under *HDCP Settings* to change the video encryption mode of the source device.

🛂 Video Settings		×
Basic Advanced		
HDCP Settings		
Enable	🔿 Disable	
	Cancel	Apply



In the *Advanced* tab, tick the *Modify Advanced Parameters* box to access different methods to adjust the bandwidth and quality of the source signal.

🛂 Video Settings		Х
Basic Advanced		
Modify Advanced Parameters		
Rate Control	vbr 🔻	
Max Bitrate(Kbps)	cbr 20000 + 64~30720	
FPS	60 • 1~60	
	Cancel Apply	



IPEX2002 / IPEX2102 - Video Settings

To configure the video settings of an IPEX2002, right click on the name of the encoder and select Video Settings.



The Basic tab allows specifying a specific output resolution for a connected display.

🛂 Video Settings		×
Basic Advanced		
HDMI Video Output		
Force Resolution:	AUTO	-
	AUTO	
	1920X1200 (60fps)	
	1600X1200 (60fps)	
	1080P (60fps)	
	1080P (50fps)	
	1080P (30fps)	
	1080P (25fps)	
	1080P (24fps)	
	1680X1050 (60fps)	
	1280X1024 (60fps)	× .

In the *Advanced* tab, tick the Low delay settings box to choose between high quality video with a longer delay or low delay with lower video quality.

🖳 Video Settings			×
Basic Advanced Low delay settings Video mode	high quality video high quality video low delay	-	
		Cancel Apply	

IPEX2102MV - Audio / Video Multi-Viewer Settings

The IPEX2102MV devices settings can be configured the same as the IPEX2102 decoder so see prior section for device settings.

To test, build and store preset multi-viewer layout settings so they can be accessed by the Digi IP iOS Control APP or with a 3rd party control system using the systems API, right click the device in the software and click on *LAYOUT* SETTINGS



A pop up window will be appear, click the drop down menu under *LAYOUT* to choose a preset tile layout

Dep Layout Settings	×
Layout Mode: Tile	
Edit Video Source	
2-1 Window Jordan Jan Jan Jan Jan Jan Jan Jan Jan Jan J	
3-2	
43	
5-2 v	
1 N/A 💌 🌌 fit 💌	
Audio Source	
O Default to TX:	
Default to Window Location:	
Save	





In the example below the 2-1 multi-viewer tile layout was selected. To assign encoders to the window location in the layout, use the drop down menus to select the desired encoder from the *Video Source* section.

To choose the decoders default audio output signal (HDMI and de-embed output) when using a multi-view layout, choose from either *Default to TX* or *Default to Window Location*, in the *Audio Source* menu. Choose an encoder in the drop down menu when using the *Default to TX* option, choose a window location number in the drop down menu when using the *Default to Window Location*.



To test the current settings, click *APPLY*. To save the settings to the 2-1 layout, click *SAVE*

These static settings will be recalled when choosing this layout in the Digi IP Control iOS APP or with the appopriate API commands.

Layout	2-1	
		Mode: Tile
		Video Source
		Window Location Default to TX Display Mode
1	2	
		1 IN1 🔻 🍱 fit 🔻
Audio Source		2 IN2 🔻 🂵 fit 💌
O Default to TX:	N/A	
Default to Window Location:	1	
	Save	Apply
	<u> </u>	



5000 Series Encoder Advanced Settings

EDID Settings

To define the EDID settings of an IPEX5001, right click on the name of the encoder and select EDID Settings



Select one of the built-in EDID files to determine the audio and video settings for the source, then click Apply

c [Ş	EDID Settings ×
-	Set EDID:	HDMI_4k_2D_2.0_HDR_v1.0
	EDID File:	HDMI 4k 2D 2.0 HDR v1.0 HDMI 4k 2D 2.0_v1.0 HDMI 4k 2D 5.1 HDR v1.0
		HDMI_#K_2D_5.1_V1.0 HDMI_#K_2D_5.1_V1.0 _HDMI_4K_2D_7.1 HDR_V1.0
		0 HDMI_4k_2D_7.1_v1.0 2 Upload

Explanation of EDID files:

- HDMI_4K_2D_2.0_.HDR_v1.0 4K with HDR support / 2 Channel Stereo
- HDMI_4K_2D_2.0_.v1.0 4K no HDR support / 2 Channel Stereo
- HDMI_4K_2D_5.1_.HDR_v1.0 4K with HDR support / 5.1 Surround
- HDMI_4K_2D_5.1_v1.0 4K no HDR support / 5.1 Surround
- HDMI_4K_2D_7.1_.HDR_v1.0 4K with HDR support / 7.1 Surround
- HDMI_4K_2D_7.1_v1.0 4K no HDR support / 7.1 Surround
- Upload Option to upload custom EDID file

Video Settings

To configure the video quality settings of an IPEX5001, right click on the name of the encoder and select *Video Settings*.



Choose a video quality settings from the Video Quality drop down menu, then click Apply.

To enable the preview of the video stream of the IPEX5001, tick the Enable Preview field and click Apply.

₽ş.	Video Settings			×
Preview Settings				
Video Quality Auto Auto Quality 0(The best) Nc Quality 1 Quality 2 Quality 3 Quality 4 Quality 5(The Worst)	nfigured for the new settings to take effect.	ОК	Cancel	Apply



Audio Settings

To set the default audio stream of an IPEX5001, right click on the name of the encoder and select Audio Settings.

NO.	Alias	Туре	Hos	stname	IP	Vers
	C IPE.	IP	IPE	XCB-341B2280	169.2	v1.14
1	T IN1	TX				0.5.
2	T IN2	TX		General Settings		10.5.
				Video Settings		
				Serial Settings		
				Audio Settings		

Choose the default audio stream / input for the IPEX5001 encoder, then click Apply.

When choosing the *auto setting*, the audio stream will be automatically selected, when choosing the *hdmi* setting, the default audio stream will be the embedded HDMI audio stream and when choosing *analog*, the default audio stream will generate from the 3.5mm analog audio input on the IPEX5001.

Note: when using the analog option, the EDID setting for the encoder must be set to a stereo audio EDID setting. See page 30 for IPEX5001 EDID settings

₽¢	Audio Settings ×
Audio Input:	auto auto hdmi analog



RS232 (Serial) Settings

To configure the serial settings of an IPEX5001 RS232 port, right click on the name of the encoder and select *Serial Settings*.

NO.	Ali	ias	Т	pe	Hostname	I	Р	Versi
	С	IPE.	IF		IPEXCB-341B2280	1	69.2	v1.14
1	Т	IN1	ту		TDFV5001_3/1822	1	69.2	v0.5.
2	Т	IN2		Ge	neral Settings		69.2	v0.5.
				Vid	leo Settings			
				Ser	ial Settings			
				Au	dio Settings			

Choose the desired settings for the serial port by using the drop down menus, then click Apply.

Timeout settings for the serial port can also be applied here by choosing the token timeout under *Timeout Setting*, then click *Apply*.

ě	Serial Settings
Serial Settings	
Baud Rate:	115200 -
Data Bits:	8 🗸
Stop Bits:	1
Parity:	None
Timeout Settings	
Token Timeout: 1 🔹 seconds	
	Cancel Apply

Refreshing Device Info

To refresh the devices current configuration settings, right click the encoder of choice and click on *Update Device Data*





5000 Series Decoder Advanced Settings

Video Settings

To configure the video settings of an IPEX5002, right click on the name of the decoder and select Video Settings.

Name(Alias)	Type NO. Ho	stnam				
▲ All Groups						
⊿ G ungrouped	Group 1					
R OUT1	D37 4 T D 7	7X500:				
R OUT2	General Settings	:X500:				
R OUT3	Video Settings	X500:				
R OUT4	Serial Settings	X500:				

Some of the options in the *Video Settings* window are HDCP output type, video output resolution, no video behavior, and screen rotation. In order for the changes to take effect, the IPEX5002 must be restarted.

🖳 Video Settings	×
HDCP Hybrid Original	
HDMI Timing Hybrid Pass-Through	
Screen Settings Timeout for detecting video lost: 10 🜩 seconds ("-1" means never) Turn off screen when video lost	
Stretch Type Fit In	
Display Rotation No Rotate	
Note: Reboot the devices configured for the new settings to take effect. OK Cancel Apply	

The *HDCP Hybrid* options allow setting the output HDCP settings to match the original content, force HDCP 1.x mode, or force HDCP 2.2 mode.

The *HDMI Timing Hybrid* options define the output video resolution of the IPEX5002. Pass-Through will bypass the scaling function of the decoder.

The Screen Settings options define timeout out for lost video, video stretch type and display rotation orientation.

Once menu has been defined, click Apply then OK



RS232 (Serial) Settings

To configure the serial settings of the IPEX5002 RS232 port, right click on the name of the encoder and select *Serial Settings*.

Name(Alias)	Туре	NO.	Hostnam
All Groups			
⊿ G ungrouped	Group	1	
R OUT1	DM	1	TDTX500
R OUT2	General Settings		X500
R OUT3	Video Settings		X500
R OUT4	Serial Settings		X500

Choose the desired settings for the serial port by using the drop down menus, then click *Apply*.

🖳 Serial Settings	×
Serial Settings	
Baud Rate:	230400 👻
Data Bits:	8 🗸 🗸
Stop Bits:	1 🗸
Parity:	None 🔻
Note: Reboot the devices configured for the new settings to take effect.	OK Cancel Apply



Idle Image / Splash Screen Settings

The power on screen and idle image screen can be customized for each encoder. The idle image screen will appear when there is no active video signal streaming through the encoder, the power on screen will appear when the encoder boots up.

To configure the idle image settings of an IPEX5002, right click on the name of the encoder and select *Idle Image Settings*.

Name(Alias)		Туре	NO.	Hostnam
All Groups				
⊿ G ungrouped		Group	1	
R OUT1		с <u>іс</u> и		00
R OUT2		General Set	00	
R OUT3		Video Settir	ngs	00
R OUT4	:	Serial Settin	gs	00
	_		-	
		Idle Image S	Settings	

To update the *Idle Image* of the encoder click *Select Image* to browse for an image file on your computer to load, then click *Upload*

To update the *Power On Logo* of the encoder click *Select Image* to browse for an image file on your computer to load, then click *Upload*

	Image Resolution: 1280X720	
	Image Size: not to exceed 1.5MB	
	Upload Progress:	Upload
	Image Size: not to exceed 128KB	
	Image Size: not to exceed 128KB	
		Upload
Support Format: 8	BMP 16 bits (RGB565) or 32 bits (ARGB8888)	
te: Reboot the dev	ices to make the new settings effective.	



OSD (On Screen Display) Settings

To help identify which decoder is connected to a display in the field, an On Screen Display (OSD) option can be turned on or off. When the OSD is on, the alias of the decoder will be displayed on the screen connected to the decoder

To set the OSD either on or off on an IPEX5002, right click on the name of a decoder and select either *Turn On OSD* or *Turn Off OSD*.



CEC Settings

To test CEC display POWER ON functionality of a CEC enabled display connected to the IPEX5002 decoder, right click on the name of the decoder and select *CEC One Touch Play* to test the POWER ON functionality of the display.

To test CEC display POWER OFF functionality of a CEC enabled display connected to the IPEX5002 decoder, right click on the name of the decoder and select *CEC Standby* to test the POWER OFF functionality of the display.





Exporting EDID Settings

DigitalinxIP encoders EDID settings can be set to the displays native EDID settings by exporting the EDID from a display connected to a decoder then selecting the EDID file in the EDID settings of the IPEX5001 encoder.

To export the EDID settings of a display connected to a IPEX5002, Make sure the display connected to the decoder is turned ON, then right click on the name of the encoder and select *EDID Export*.

Name(Alias)		Туре	NO.	Hostnam
All Groups				
⊿ G ungrouped		Group	1	
R OUT1		RX	1	IPEX500
R OUT2		RX	2	IPEX500
R OUT3		RX	3	IPEX500
R OUT4		RX	4	TPFX500
		General Setting	gs	
		Video Settings		
		Serial Settings		
		Senar Settings		
		Idle Image Set	tings	
		Turn On OSD	-	
		T 0// 000		
		Turn Off OSD		
		CEC One Touc	h Play	
		CEC Standby		
	6	EDID Export	>	
			/	

Choosing the option above will prompt you do save the file in the EDID file settings in Digi IP Configuator. The EDID configuration can now be applied to an encoder. For instructions on IPEX5001 EDID settings see page 30.

4	EDID Export		
🗧 🏵 🔻 🕇 📕 « I	Digi IP Configurator → EDID 🗸 🗸	C Search EDID	م ر
Organize 👻 New fol	der	8==	• @
Image: This PC Image: Desktop Image: Documents Image: Documents <th> Name HDMI_4k_2D_2.0_HDR_v1.0.bin HDMI_4k_2D_2.0_v1.0.bin HDMI_4k_2D_5.1_HDR_v1.0.bin HDMI_4k_2D_5.1_v1.0.bin HDMI_4k_2D_7.1_y1.0.bin HDMI_4k_2D_7.1_v1.0.bin </th> <th>Date modified 3/21/2017 2:24 AM 6/21/2016 9:08 PM 3/21/2017 2:23 AM 6/21/2016 9:08 PM 3/21/2017 2:23 AM 6/21/2016 9:08 PM</th> <th>Type BIN File BIN File BIN File BIN File BIN File</th>	 Name HDMI_4k_2D_2.0_HDR_v1.0.bin HDMI_4k_2D_2.0_v1.0.bin HDMI_4k_2D_5.1_HDR_v1.0.bin HDMI_4k_2D_5.1_v1.0.bin HDMI_4k_2D_7.1_y1.0.bin HDMI_4k_2D_7.1_v1.0.bin 	Date modified 3/21/2017 2:24 AM 6/21/2016 9:08 PM 3/21/2017 2:23 AM 6/21/2016 9:08 PM 3/21/2017 2:23 AM 6/21/2016 9:08 PM	Type BIN File BIN File BIN File BIN File BIN File
👊 Network	v <		
File name: Save as type: Scen	ieinfo file (*.bin)		
Hide Folders		Save	Cancel



Refreshing Device Info

To refresh the devices current configuration settings, right click the decoder of choice and click on *Update Device Data*

Name(Alias)		Туре	NO.	Hostnam
All Groups				
⊿ G ungrouped		Group	1	
R OUT1	-			X500
R OUT2	Gene	eral Setting	IS	X500:
R OUT3	Vide	o Settings		X500
R OUT4	Seria	l Settings		X500
	ldle	lmage Sett	ings	
	Turn	On OSD		
	Turn	Off OSD		
	CEC	One Touch	h Play	
	CEC	Standby		
	EDID	Export		
	Dele	te		
	Upd	ate Device	Data	
	Rebo	oot		



Configuring Dante Audio (IPEX5001-D Only)

NOTE: It is not necessary to set the IPEX5001-D encoder to DHCP IP Mode when configuring Dante audio.

To properly configure Dante audio on a IPEX5001-D Dante enabled encoder, configure the IP video system as described in this manual using the default Auto IP mode with no router connected to the AV LAN. Once video is configured with DigitalinxIP Configurator software, connect a router with DHCP server to the AV LAN to configure the Dante audio streams. Dante Controller must be used to configure or route Dante audio streams received from the IPEX5001-D, Dante Controller can be downloaded online at *www.audinate.com*

To set the default audio stream of the IPEX5001-D that will on ramp onto a Dante audio network, right click on the name of the encoder and select *Audio Settings*.



Choose the default audio stream / input for the IPEX5001-D encoder, then click Apply.

Note: When choosing the *hdmi* setting, the default Dante audio stream will be the embedded stereo 2 channel HDMI audio stream and when choosing *analog*, the default Dante audio stream will generate from the 3.5mm analog audio input on the IPEX5001-D.

Note: The EDID setting for the Dante encoder must be set to a stereo / 2 channel audio EDID setting. See page 30 for IPEX5001 EDID settings

₽ş.	Audio Settings	×
Audio Input:	auto auto hdmi analog	Ţ



Saving and Loading Settings

Upload Settings to IPEXCB

In order for the configuration to be used in a live system, it must be uploaded to the connected IPEXCB. Right click on the IPEXCB in the right panel and click *Upload*.

NO.	Al	ias	Тур	e	Hostname	IP
	С	IPEXCB	ТР		TPFXCB-341B2280	169.2
1	Т	IN1		U	pload	169.2
2	Т	IN2		D	ownload	169.2
				IP	Config	
				D	elete	
				U	pdate Device Data	
				R	eboot	

Click Yes in the upload confirmation window.



After a few seconds, the progress window will show the upload is complete. Click OK once the button is no longer grayed out.





Download Settings from IPEXCB

To access the current system configuration, it must be downloaded from the IPEXCB. Right click on the IPEXCB in the right panel and click *Download*.

NO.	Alia	35	Тур	e	Hostname	IP
	С	IPEXCB	тр		TPFXCB-341B2280	169.2
1	Т	IN1		U	pload	169.2
2	Т	IN2		D	ownload	169.2
				IP	Config	
				D	elete	
				U	pdate Device Data	
				Re	eboot	
						1

Click Yes in the download confirmation window.



After a few seconds, the progress window will show the download is complete. Click OK once the button is no longer grayed out.





Save Settings to a File

Click the *Save as* button or navigate to *Project > Save as* to save the current system to a file in case the IPEXCB becomes damaged or must be reset to factory defaults.

🖳 IPLinx Config	🖳 IPLinx Config
Project(P) Tools(T) Option(O) Help(H)	Project(P) Tools(T) Option(O) Help(H)
🏳 Open 📃 Save as 🔎 Search 🕂 Save	Open earch 👲 Save
RX Save a configuration file.	Save as
	Export to summary.txt file
	Exit
Name(Alias) Type NO. HostNa	Name (Allas) Type NO. HostNa

Provide a name for the save file, then click *Save*.

File <u>n</u> ame:	: Sample System		~
Save as <u>t</u> ype:	: Devinfo file (*.hoi)		~
 Hide Folders 	Save	Cancel	

A status window will show the save is complete. Click OK.





Load Settings from a File

Click the *Open* button or navigate to *Project > Open* to load a saved system file in case the IPEXCB became damaged or was reset to factory defaults.

Project(P) Tools(T)	Option(O)	Help	(H)	Project(P)	Tools(T)	Option(O)	Help(H)
🖄 Open 📃 Save a	s ps	Search	🕂 Save	Open			earch	🕂 Save
RX Open a configu	ration file.	-		Save a	s			
				Export	to summa	ry.txt file		
				Exit				
Name (Alias)	Туре	NO.	HostNa	IName (AL	143)	туре	NO.	HostNa

Select the name for the previously saved file, then click Open.

File <u>n</u> ame:	Sample System.hoi	V Devlnfo file (*.ho	i) ~
		<u>O</u> pen	Cancel

A status window will show the file has been imported successfully. Click OK.





Batch Commands

The *Batch Commands* menu allows you to configure settings of multiple encoders and decoders in large batches rather than one at a time. This is a much more efficient way of configuring multiple devices on an A/V LAN.

To access, click on the Batch Commands menu



To apply changes to devices, select the desired encoders and decoders on the device list to the left, select the desired batch menu and then apply settings to the selected devices according to the selected menu.

		Batch Command	5				
Devices Filter : All	IP Video Image ▼	Audio Serial Po	wer EDID O	thers			
All Checked/Total: 0/6	Starting IP address:	0	. 0		0		0
Alias	Finishing IP address:	0	. 0		0		0
	IPE Subnet Mask:	255	. 255		0		0
	IPE Gateway:	0	. 0		0		0
	IPE						
	Warning: This software does not d Please set them carefully	check whether IP address,sul y.	onet mask and gatev	vay meet inte	rnet protocol	specification.	
	Warning: This software does not c Please set them carefully	check whether IP address,sul y.	onet mask and gatev	vay meet inte	rnet protocol	specification.	
	Warning: This software does not d Please set them carefully	check whether IP address,sul y.	onet mask and gatev	vay meet inte	rnet protocol	specification.	
	Warning: This software does not d Please set them carefully	check whether IP address,sul y.	onet mask and gatev	vay meet inte	rnet protocol	specification.	
	Warning: This software does not d Please set them carefully	check whether IP address,sul y.	onet mask and gates	vay meet inte	rnet protocol	specification.	
	Warning: This software does not d Please set them carefully	check whether IP address,su y.	onet mask and gatew	vay meet inte	rnet protocol	specification.	
	Warning: This software does not d Please set them carefully	check whether IP address,sul y.	onet mask and gatew	vay meet inte	rnet protocol	specification.	

Explanation of Menu

IP - Changes IP address scheme of multiple DigitalinxIP devices

Video - 2000 / 5000 series video settings

- For JPEG 2000 5000 Series Settings Only
- For H.264 2000 Series Settings Only

Image - Allows for upload of a custom system boot up or background picture

Audio - Audio delay settings

Serial - Configures RS232 serial ports of devices, allows for serial command testing

Power - Defines discrete power ON/OFF commands for displays connected to DigitalinxIP decoders

EDID - 5000 Series only; allows for change to and upload of EDID tables

Others - Allows for reboot / factory default reset of DigitalinxIP devices



Changing IP Address Scheme

When deploying DigitalinxIP systems, it may be desired to change the IP address scheme for the entire system to a different IP range or IP class. To do this you will need to change the IP addresses of the DigitalinxIP devices first then change the IP address of the LAN1 port of the IPEXCB.

Note: when changing IP addresses, ALL newly given addresses must be in range with one another and the IPEXCB Control Interface

Changing the IP addresses of DigitalinxIP encoders and decoders can be done individually by right clicking on the DigitalinxIP encoder or decoder and selecting *General Settings* or by using *Batch Commands*. When using multiple DigitalinxIP devices *Batch Commands* is the preferred method.

Click on Batch Commands, by default the IP menu will be the default submenu

B .	Batch Commands	×
Devices	IP Video Image Audio Serial Power EDID Others	
Filter : All Chadred/Tetals 0/6		
All Checked/lotal: 0/6	Starting IP address: 192 . 168 . 10 . 2	-
Snow the online devices only.	Finishing IP address: 192 . 168 . 10 . 💈	
IN1 IPE	Subnet Mask: 255 . 255 . 0	
□ IN2 IPE □ OUT1 IPE □ OUT2 IPE	Gateway: 0 . 0 . 0 . 0	
OUT3 IPE		
	Warning: This software does not check whether IP address, subnet mask and gateway meet internet protocol specification. Please set them carefully	
	ricase set ulein carefuny.	
	Device Reboot	
< >		

Select the desired DigitalinxIP device(s) on the device list to the left.

Choose a starting IP address for the devices in the IP Address begin field

Choose an ending IP address for the devices in the IP Address end field

Fill in the appropriate subnet for the class of IP addresses being used on the Subnet Mask field

Fill in the appropriate router IP in the Gateway field (optional if using a router)

Click Apply - Devices will now reboot with the new IP

In the example above we are changing the DigitalinxIP system address scheme from a Class B to a Class C address starting with 192.168.10.xxx with a subnet mask of 255.255.255.0. Since there are 6 total devices with will use 192.168.10.2 as our starting range and 192.168.10.8 as our ending range, reserving 192.168.10.1 for the IPEXCB



Note: Once the DigitalinxIP device addresses have been changed, they will fall of the network in Digi IP Configurator if the newly changed IP addresses are not in the same range of the IPEXCB or the computer connected to the network running Digi IP Configurator. They will reappear after the IPEXCB and computer running Digi IP Configurator has been changed to that IP range.

Right click on the IPEXCB in Digi IP Configurator and choose the menu IP Config to adjust the IP address settings of the IPEXCB



The following pop up window will appear

N IP Config	×
IP 1 (AV) [TX and RX communication]	
IP Address:	
Subnet Mask: 255 . 255 . 0 . 0	
Gateway: 169 . 254 . 1 . 254	
IP 2 (C) [Telnet client and browser communication]	
IP Address: 192 . 168 . 11 . 243	
Subnet Mask: 255 . 0 . 0	
Gateway: 0 . 0 . 0 . 0	
Active Gateway	
IP 1 (AV)	
○ IP 2 (C)	
Note: The deactivated gateway IP will change to 0.0.0.0 automatically.	
Apply	
After pressing "Apply", this Device will automatically reboot for the settings to take effect.	

Enter the desired static IP address, Subnet Mask and Gateway information in the IP1 and IP2 Address field in the IP 1 [TX and RX communication] and IP2 (C) (Telnet and browser communication) field.

Note: In order to activate a gateway (router) to communicate with either interface (IP1 or IP2) you must choose which interface in the *ACTIVE GATEWAY* option to activate then enter the routers IP address for that LAN in the *Gateway* IP field for that interface, the deactivated gateway IP will change to 0.0.0.0 automatically.

Click Apply to apply settings

Note: After you change the IP range to your IPEXCB and the DigitalinxIP devices be sure to change your computers IP range to match the newly changed IP range.



CEC Display Power Configuration

In Digi IP Configurator you can configure ON/OFF power commands for displays connected to decoders using either CEC or RS232 so they can be powered ON/OFF using the Digi IP Control APPS or a 3rd party IP or serial based control system easily.

To configure display power using CEC, click on the *Batch Commands* menu.



Click on Power submenu

Check the decoders you want to configure then check the CEC box located at the top left

	Batch Commands	
	batch commanus	
Devices	IP Video Image Audio Serial Power EDID Others	
Filter : All 🔻	Display Power Control	
All Checked/Total: 1/6	CEC	
Show the online devices only. 👔 👤	RS232	
Alias Ho	RS232 Settings	
IN1 IPE	Baud Rate: 115200	~
IN2 IPE	Data Bits: 8	~
	Stop Bits: 1	~
OUT3 IPE	Parity: None	Ŧ
0014 IPE	Command	
	Hex Mode	
	Power on:	
	Standby:	
	Α	pply
	CEC Test One touch play Standby	
< >		

To test CEC ON and OFF functionality from this screen use the *CEC Test* module in this menu. *One Touch Play* is for display ON and *Standby* if for display OFF.

Use the following API commands to turn display ON/OFF using a 3rd party control system.

config set device sinkpower on RECEIVER NAME config set device sinkpower off RECEIVER NAME

RECEIVER NAME is the name of the decoder. Use the default name of the decoder given by the DigitalinxIP system or the alias that was assigned to the decoder. If using an alias to identify encoders and decoders in a session be sure to use the *config set session alias on* command.

For a comprehensive list of API commands please refer to the *DigitalinxIP Programming Guide* located on the IPEXCB product page under the *DOCUMENTATION* tab at www.libav.com

RS232 Display Power Configuration

NOTE: To properly send power ON/OFF serial commands to displays connected to encoders, connect the RS232 port of the DigitalinxIP decoder to the display. Be sure to connect TX from DigitalinxIP decoder to RX of the display and RX from DigitalinxIP decoder to TX.

To configure display power using RS232, click on the Batch Commands menu.



Click on Power submenu

Check the decoders you want to configure then check the RS232 box located at the top left

₽ş.	Batch Commands ×
Devices Filter : All Filter : All All Checked/Total: 1/6 Show the online devices only. Alias IN1 IPE IN2 IPE V OUT1 IPE V OUT1 IPE	IP Video Image Audio Serial Power EDID Others Display Power Control
OUT2 IPE	Stop Bits: Parity: None Command Hex Mode Power on: PVR ON Standby: PWR OFF CEC Test One touch play Standby Standby Standby CEC Test
< >	

Enter the correct RS232 communication settings for your display in the *RS232 Settings* section. For correct settings for the display that is connected to the decoder, you will need to consult the displays manufacturers owners manual.

Enter the power ON/OFF command sets for the display in the *Power On* and *Standby* field in the *Command* section. By default commands entered in the *Power On* and *Standby* field are ASCII based, check the Hex Mode box to enter Hex based commands. If special termination characters are needed use the *Serial* submenu in Batch Commands to enter this information under *Append Carriage-Return / Line Feed* and choose the appropriate terminator.



Use the following API commands to turn display ON/OFF in a 3rd party control system.

config set device sinkpower on RECEIVER NAME config set device sinkpower off RECEIVER NAME

RECEIVER NAME is the name of the decoder. Use the default name of the decoder given by the DigitalinxIP system or the alias that was assigned to the decoder. If using an alias to identify encoders and decoders in a session be sure to use the *config set session alias on* command.

For a comprehensive list of API commands please refer to the *DigitalinxIP Programming Guide* located on the IPEXCB product page under the *DOCUMENTATION* tab at www.libav.com

Using iPad or Windows Control APP

An iPad and Windows based control APP is available for DigitalinxIP simple system control. The APP communicates with the Digi IP Configurator file that is saved directly onto the IPEXCB, therefore the APP cannot make changes to DigitalinxIP system settings.

The iPad APP can be downloaded on the Apple APP Store and the Windows applications is available for download on the IPEXCB product page online at www.libav.com under the *SOFTWARE* tab.

Connecting Apple iPad to DigitalinxIP System

To connect an Apple iPad to the DigitalinxIP A/V network, connect a wireless access point to the A/V network switch where the DigitalinxIP system resides. Once you've decided on an SSID for the WiFi connection, join the WI-Fi network in the iPad's Settings portal.

In our example below we created a WI-Fi connection labeled *IPLinx A/V Network*.

iPad		11:55 AM
	Settings	Wi-Fi
≁	Airplane Mode	Wi-Fi
?	Wi-Fi IPLinx AV Network	Figure 19 IPLinx AV Network
*	Bluetooth Off	CHOOSE A NETWORK $\tilde{\gamma}_{ij}^{M_{\rm E}}$
		103
C	Notifications	Arrive
	Control Center	Other
C	Do Not Disturb	
		Ask to Join Networks
\bigcirc	General 1	Known networks will be joined automatically. If no known networks are ava
AA	Display & Brightness	to manually select a network.
*	Wallpaper	
()	Sounds	
	Touch ID & Passcode	



If you do not have an Internet connection or a DHCP server connected to the A/V network you may notice a spinning wheel next to the network SSID that you are trying to connect to in the iPad settings portal. This is because a DHCP server is not connected to the system therefore an auto IP is not automatically assigned to the iPad

Settings	Wi-Fi	
C Airplane Mode	Wi-Fi	
🕤 Wi-Fi IPLinx AV Netwo	rk 🤃 IPLinx AV Network	≈ (j)

If this is the case, keep in mind that as long as the network SSID populates to the blue section to the left in the WI-Fi settings you are connected. If you would like to assign an IP in the range of the DigitalinxIP A/V network follow the steps below.

Click on the (i) button next to the SSID in the Wi-Fi settings window in the iPad.

Settings	Wi-Fi	
Airplane Mode	Wi-Fi	
😒 Wi-Fi IPLinx AV Network	E IPLinx AV Network	

Then choose the *Static* submenu to enter in a static IP Address and Subnet Mask that is in range of the DigitalinxIP A/V network

iPad		11:55 AM		76% 🔳
	Settings	< Wi-Fi	IPLinx AV Network	
✐	Airplane Mode	Forget This Network		
?	Wi-Fi IPLinx AV Network			
*	Bluetooth Off	DHCP	BootP	Static
		IP Address		169.254.1.55
	Notifications	Subnet Mask		255.255.0.0
	Control Center	Router		
C	Do Not Disturb	DNS		
		Caarah Damaina		
\bigcirc	General 1	Search Domains		
AA	Display & Brightness	HTTP PROXY		
*	Wallpaper	Off	Manual	Auto
((۱)	Sounds			
	Touch ID & Passcode			
	Battery			
	Privacy			

In our example above we entered in an IP Address and Subnet Mask in the default range of the DigitalinxIP A/V network.



After entering in a static IP Address and Subnet Mask in the range of the DigitalinxIP A/V network, a check mark will now appear next to the SSID name in the iPads settings portal.

iPad				11:55 AM	76% 🔳 🗖
	Settings			Wi-Fi	
≁	Airplane Mode	\bigcirc		Wi-Fi	
Ŷ	Wi-Fi	IPLinx AV Network		✓ IPLinx AV Network	₹ (i)
*	Bluetooth	Off		CHOOSE A NETWORK $\hat{\sigma}_{i,\hat{c}}^{i_{i,\hat{c}}}$	
				103	₹ (i)
	Notifications			Arrive	₹ (j)
	Control Center			Other	
C	Do Not Disturb				
				Ask to Join Networks	\mathbf{D}
\bigotimes	General	1		Known networks will be joined automatically. If no known networks are available, you w	vill have
AA	Display & Brightness			to manually select a network.	
	Wallpaper				
(())	Sounds				
	Touch ID & Passcode				
	Battery				
	Privacy				



Click on the Digi IP APP icon on your iPad to launch the APP. Once you are connected to the DigitalinxIP network the APP will show that it is *CONNECTED* at the top of the APP home page.



Groups (groups of displays, video wall configurations and their respective layouts) will be located in the upper half of the APP and sources will be located at the bottom half of the APP. Thumbnail previews of live sources in the A/V network will also appear in the respective source and displays lists in the APP.

To expand a group simply click on a group in the list to show the display layout within that group. To route video selections, simply drag and drop sources thumbnails into the desired display location. To turn displays ON or OFF in a group, simply press Display On or Display Off in the bottom right corner of the APP. For this function to work on a display, that display must be CEC capable and the CEC must be turned ON in the displays setting menu.



Hiding Groups

Groups that are configured in DigitalinxIP Configurator will always appear in a list on the home page of the APP. In the example below, two groups have been created; *Group 1* and *Group 2* which each group containing displays that has been assigned to the group in Digi IP Configurator.



The group labeled *ungrouped* is a default group where all devices are originally stored before custom groups are made in Digi IP Configurator, therefore *ungrouped* cannot be deleted. However you can hide the group in the APP if there is no active displays located in that group. Hiding groups will also allow for multiple iPads to control multiple zones and only have access to the displays or groups of displays in that respective zone.

To hide a group, click on the settings cog in the upper right hand corner of the APP, then click *Advanced Settings*. It will prompt you for a password, the default password is *admin*.





Click on Decoder Group and Control Settings

DIGI DIP		11:48 AM	
Settings		Advanced Settings	
Connection Settings	>	Change Password	>
Advanced Settings	>	Change IP Controller's IP Address	>
/ersion Information	>	SMART Source	\otimes
		Source Control	
		Preset	
		Decoder Group & Control Settings	
		Encoder Settings	
		Preview Frame Rate	>

Uncheck the button to the right for *ungrouped*.

Click the back arrow above the *Settings* menu to return the home page of the APP. You will then notice that *ungrouped* will no longer appear in the group list.

Settings		Advanced Settings Decoder Gr	oup & Control Settings
Connection Settings	>	ungrouped	>
dvanced Settings	>	Group 1	() >
ersion Information	>	Group 2	~ >



Connecting Windows Computer to DigitalinxIP System

The Windows application can be downloaded on the IPEXCB product page under the *SOFTWARE* tab at www.libav.com. Extract all files and install the setup file. It will direct you to installing the control APP on your computer.

In order to control the DigitalinxIP system with the Windows APP either, connect a computer directly to the A/V network switch with a Cat5e or better cable or connect to the A/V network through a wireless access point that is connected to the A/V network.

When connecting a computer directly to the DigitalinxIP A/V network be sure to change the IP address of the computer to the range of the DigitalinxIP network. *For instructions on how to change an IP address on a computer see page 9.*

Note: User interface and application settings are exactly the same as the iPad APP version. *Please refer to page 57 for iPad APP usage.*



Syncing APP to IPEXCB IP Address

The control APP must be synced to the IPEXCB IP address on the A/V network IP address in order to communicate with the DigitalinxIP A/V system. The default address for the IPEXCB as well as the APP is 169.254.1.1. If you have changed the default IP of the IPEXCB to another IP address then you will need to enter that IP address into the APP settings.

Click on the settings cog in the upper right hand corner of the home page of the APP.

Click on Advanced Settings

Click on Change IP Controller's IP Address

iPad			11:48 AM		77% 🔳
	DIGI ÞIP				
	\odot				
	Settings		Advanced Settings		
	Connection Settings	>	Change Password	>	
	Advanced Settings	>	Change IP Controller's IP Address	>	
	Version Information	>	SMART Source	\bigotimes	
			Source Control	>	
			Preset		
			Decoder Group & Control Settings		
			Encoder Settings	>	
			Preview Frame Rate	>	



Then enter the IP address of the IPEXCB and click Connect to Controller

Then click the back arrow located above Settings menu to go back to the home page of the APP.

iPad ᅙ			10:33 AM	63% 🔳)
	DIGI DIP			
	Θ			
	Settings		Advanced Settings	
	Connection Settings	>		
	Advanced Settings	>		
	Version Information	>	IP controller's IP address: 192.168.10.1	
			Connect to Controller	

When you have successfully connected to the DigitalinxIP A/V network with the APP, it will state that you are **CONNECTED** at the top of the home page of the APP





DigitalinxIP is a brand of:



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