Just Add BPower

CONTROL4 DRIVER GUIDE

Revised 2021-09-10

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Download

Control4 driver downloads can be found on the Just Add Power support site at <u>support.justaddpower.com</u>.

You can find the complete Control4 drivers and JADConfig in the Knowledge Base at support.justaddpower.com

- Control4 driver section: <u>support.justaddpower.com/kb/section/11/</u>
 - o Luxul drivers: <u>https://support.justaddpower.com/kb/article/58/</u>
 - o Cisco drivers: <u>https://support.justaddpower.com/kb/article/59/</u>
- JADConfig: support.justaddpower.com/kb/article/69/

After you download the drivers, extract the files and copy them into the Control4 Driver directory.

Run JADConfig

JADConfig is software that runs on a Windows computer and configures supported managed switches and all attached Just Add Power devices.

Download

You can find JADConfig and the complete Control4 drivers in the Knowledge Base at support.justaddpower.com

- JADConfig article: <u>support.justaddpower.com/kb/article/69/</u>
- Control4 driver section: support.justaddpower.com/kb/section/11/

Configuration

JADConfig must be run on the switch before the driver can control the system.

If Layer 3 control – Video Wall, CEC control, RS232 control, IR control, On-Screen Display, Image Pull – will be used in the system, please be sure to Export the text document provided at the end of JADConfig. It contains the IP addresses to all Just Add Power devices in the system, as well as the *Static Route* that must be added to the router in order to access the Just Add Power devices.

Configuration generated at 14:22 on Mon 22 April 2013 Note that the following static route must be added to your router so that the control system can access the JAP devices: Network: 192.168.100.0 Netmask: 255.255.255.0 Gateway: 192.168.1.254 Just Add Power Device Configuration: P02) Transmitter 1, 192.168.100.2 / 255.255.255.0 (gateway 192.168.100.1) P03) Transmitter 2, 192.168.100.6 / 255.255.255.0 (gateway 192.168.100.5) P04) Transmitter 3, 192.168.100.10 / 255.255.255.0 (gateway 192.168.100.9) P05) Transmitter 4, 192.168.100.14 / 255.255.255.0 (gateway 192.168.100.13) P06) Transmitter 5, 192.168.100.18 / 255.255.255.0 (gateway 192.168.100.17) P07) Transmitter 6, 192.168.100.22 / 255.255.255.0 (gateway 192.168.100.21) P08) Transmitter 7, 192.168.100.26 / 255.255.255.0 (gateway 192.168.100.25) P09) Transmitter 8, 192.168.100.30 / 255.255.255.0 (gateway 192.168.100.29) P10) Receiver 1, 192.168.100.130 / 255.255.255.0 (gateway 192.168.100.129) P11) Receiver 2, 192.168.100.131 / 255.255.255.0 (gateway 192.168.100.129) P12) Receiver 3, 192.168.100.132 / 255.255.255.0 (gateway 192.168.100.129) P13) Receiver 4, 192.168.100.133 / 255.255.255.0 (gateway 192.168.100.129) P14) Receiver 5, 192.168.100.134 / 255.255.255.0 (gateway 192.168.100.129) P15) Receiver 6, 192.168.100.135 / 255.255.255.0 (gateway 192.168.100.129)

Setup Switching Driver

Add Switching Driver

In *System Design,* to go the *Items* window on the right side and choose the Search tab. Set Device Type to A/V Switch, Manufacturer to Just Add Power, and make sure that Local is checked.

There are two switching drivers:

- avswitch_ip_JustAddPower_CiscoSG300.c4i
 - Cisco SG Series controls all models of Cisco switches
 - SG300
 - SG350
 - SG500
 - SG500X
 - SG550X
- avswitch_ip_JustAddPower_Luxul.c4i
 - o Luxul Series controls all models of Luxul switches
 - AMS-1208P
 - AMS-2600
 - AMS-2616P
 - XMS-2624P
 - AMS-4424P
 - XMS-5248P
 - XMS-7048P

Double-click on the switching driver that matches the switch model to add it to the system.

tems			
Locations	Discovered	My Drivers	Search
			~
✓ Local	✓ Online	Certified O	Inly
A/V Switch	ı v	Just Add Po	wer v
Results	s	ort by: Relev	vance v
Just A	dd Power		
Just Add	Power	Luxul AMS2	2616P Seri
AV Switc	h 7/16/201	5 4:29 P	Local
Just A	dd Power		
Just Add	Power	Cisco	SG Series
A/V Switc	h 12/2/201	4 9:04 P	Local

Just Add Control4 Driver Guide -

Configure Switching Driver

After the driver is added, it needs to be configured to work with the switch as it was configured by JADConfig.

System Design

- 1. Select the switch driver
- 2. In the *Properties* window, enter the License Key and click *Set*. Additional information about the driver can be found under the Documentation tab.

roperties	Prop	erbes	List Vi	ew.	Inf
dvanced Properties					
roperties Documentation Actions Lua					
Driver Version	-203				
Switch Model					
MAC Address					
Licence Key	Qut 9Th TA-HPO+BEh+C2MIvi49YUQB Sp6Zvw9CNtugXart.bh/Gc5foA+SApGAtmc323qiz6Lv1ec05qY23		Set	Can	bel
Operational Mode	Not connected				
Username	cisco				
Standard Password	cisco				
Debug Mode	Off	٣			
Debug Subsystems		_			

System Design
System
· ^ • Ø 9
E-C Example System
🖻 🐳 Corporate
🗄 🥽 Building
🗄 🔁 Main
🔤 😲 Rack
- 🛃 J+P Switch
- Home Controller HC250

🛃 System Design

Connections

Media

Agents

Programming

Connections - Network

- 3. Select *Connections* in the bottom left corner, and select the *Network* tab from the *Connections* window. The switching driver will be listed as a Device.
- 4. Double-click on the switching driver and add the IP of the switch that was configured by JADConfig (example shows a switch IP of 192.168.1.254)

System Design	
Connections	
👩 Media	
Agents	
Programming	

<u>File Driver Go Tools Help</u>								
Connections	IP Network Conn	ections						
Control/AV Network	Identify Disconne	ct				Disconnect Zig	Bee	Disconnect All
IP Network	Device	Room	Туре	Address Type	Address			
	J+P Switch	Rack	c4:lua_gen	IP	192.168.1.254			
	Home Controller HC250	Rack	c4:control4_hc250	UUID	c4:control4_hc250_homecontroller-DevHC2			

5. Go back to the *System Design* window. In *Properties*, the *Operational Mode* will reflect the status of the driver:

Operational Mode	Meaning
NxM Licenced	Switch configuration of N inputs and M outputs with valid
	license key
NxM Demo	Switch configuration of N inputs and M outputs with
	invalid license key. Works for 30 minutes then stops.
Not Connected/Logging In/Connected	Only seen briefly while the driver logs in. If seen for more
	than 1 minute, contact support.
Connecting	Driver is attempting to connect but failing. Check that IP
	address is correct, network is connected to port 1 of the
	switch, and the Director can connect to the network
Invalid Username or Password	Username/password do not match the login information
	for the switch. Check these values under Properties.

Connections - Control/AV

- 6. Select the *Control/AV* tab from the *Connections* window.
- 7. Select the switching driver from the *Connections* window.
- Under Audio/Video Inputs, select HDMI Input 1 and drag to the source device that it is connected to.
 HDMI Input 1 is Transmitter 1 – the first Transmitter in the system.

Connections	
Control/AV	Network
	· ^ · • • •
E-G Example System	
🗄 😻 Corporate	
🗄 🦙 Building	
🖻 🔁 Main	
🔶 😲 Ra	ack Room
-5	J+P Switch

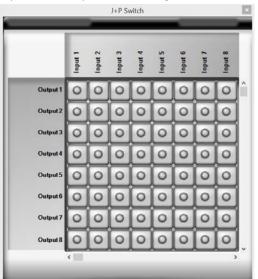
9. Repeat step 8 for each HDMI Input in the system. HDMI Input # will always match the Transmitter #.

Connections	Control & Audio V	/ideo Conn	ections			
Control/AV Network	J+P Switch					
· · · · • • •	Name	Туре	Connection	Input/Output	Connected To	
Example System	Audio/Video Inputs					
- Corporate	😴 Input 1	Video	HDMI	Input	Home Controller HC250->HD	MI (Audio/Video)
Building	💙 Input 2	Video	HDMI	Input	Apple TV->Video	
🖃 🖼 Main	🜄 Input 3	Video	HDMI	Input	Roku Channels->AV Out	
Rack Room	🖶 Input 4	Video	HDMI	Input	Amazon Fire TV->AV Out	
- 🚽 J+P Switch	🐨 Input 5	Video	HDMI	Input	Bluray->Output	
- Home Controller HC250	🖶 Input 6	Video	HDMI	Input		
- 😥 Digital Media	🖶 Input 7	Video	HDMI	Input		
- Tuneln	HDMI Output Devices					
- O My Music	HDMI Output Devices					
My Movies	Device		Name		Location	Connections
- Stations	Rome Controller HC250		HDMI (Audio/Video)		Rack Room	J+P Switch->Input 1
- Channels	🚟 Roku Channels		AV Out		Rack Room	J+P Switch->Input 3
🗈 🚟 Roku Channels	🚟 Amazon Fire TV		AV Out		Rack Room	J+P Switch->Input 4
Amazon Fire TV	🍰 Bluray		Output		Rack Room	J+P Switch->Input 5
Apple TV	Apple TV		Video		Rack Room	J+P Switch->Input 2

- 10. Scroll down to *Audio/Video Outputs*. Select HDMI Output 1 and drag to the display device that it is connected to. HDMI Output 1 is Receiver 1 the first Receiver in the system.
- 11. Repeat step 10 for each HDMI Output in the system. HDMI Output # will always match the Receiver #.

onnections	Control & Audio Vi	deo Coni	nections			
Control/AV Network	J+P Switch					
· ^ • 9 9	Name	Туре	Connection	Input/Output	Connected To	
C Example System	Audio/Video Outputs					
- Orporate	Totput 1	Video	HDMI	Output	Samsung UN32EH4003F->INPU	IT HDMI 1/DVI
E- Building	The output 2	Video	HDMI	Output	LG LG4790->INPUT HDMI/DVI	1
🖮 🔁 Main	The output 3	Video	HDMI	Output	J+P RS232-IP CEC->HDMI	
🖶 🕎 Rack Room	The second secon	Video	HDMI	Output	J+P RS232-IP TL VW->HDMI	
J+P Switch	The output 5	Video	HDMI	Output	J+P RS232-IP TR VW->HDMI	
- Home Controller HC250	The output 6	Video	HDMI	Output	J+P RS232-IP BL VW->HDMI	
- 😰 Digital Media	Totput 7	Video	HDMI	Output	J+P RS232-IP BR VW->HDMI	
	The second secon	Video	HDMI	Output		
- O My Music Mi My Movies	HDMI Input Devices					
Channels	Device		Name		Location	Connections
Roku Ohannels Roku Ohannels Roku Ohannels Diray Roku Ohannels Pole Roku Ohannels Pole Roku Ohannels Pole Pole	J.J.P R5232/P IR J.G LG4790 LG LG4790 LG LG4790 LG LG4790 J.LG LG4790 J.J.P R5232/P R5232 J.J.P R5232/P R5232 J.J.P R5232/P TL W		НОМІ INPUT HOM/OVI 1 INPUT HOM/OVI 2 INPUT HOMIA HOMI HOMI HOMI HOMI HOMI HOMI HOMI HOMI		IR Control RS232 Control RS232 Control RS232 Control RS232 Control RS232 Control IR Control IR Control IR Control IR Control IR Control Soutrol RS24 VW Bottom Left VW Bottom Right VW	J+P Switch->Output 2 J+P Switch->Output 2 J+P Switch->Output 1 J+P Switch->Output 4 J+P Switch->Output 4 J+P Switch->Output 7

12. Switching control can be tested by double-clicking on the switching driver. A popup grid will appear that allows switching of displays based on Input and Output numbering.



Advanced Programming

Advanced Programming requires knowledge of how to use the *Agents* and *Programming* tabs in Composer.

The switching drivers have additional functions for

- <u>Multiswitch</u> switch multiple displays at once, like for a video wall
- <u>PoE Control</u> turn on and off PoE for specific ports
- <u>Favorites</u> create and save input/output assignments for later recall with one button
- <u>Save</u> save the current configuration of the switch

Just Add Control4 Driver Guide -

Multiswitch

Switch multiple displays to one source in one command. It is most often used to switch all video wall displays together.

Command

SW1,2,3,4=5

- Case-sensitive SW must be capitalized
- 1,2,3,4 are Output numbers separated by commas. Any amount of Outputs can be switched at the same time.
- 5 is the Input number to switch the Outputs to

Examples

- Example 1
 - o SW4,5,6,7=1
 - o Switch Outputs 4, 5, 6, and 7 to Input 1
- Example 2
 - o SW1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16=4
 - o Switch Outputs 1-16 to Input 4

PoE Control

Turn Power over Ethernet on and off for PoE switches

- UNIT_ID stack unit number for stacked switches. If unstacked switch, set to 1.
- PORT port on the switch
- ACTION ON or OFF

ctions	
evice Actions	
~ ^ ~	9
Example System	~
E 😽 Corporate	
🗄 🌍 Building	
🗄 🔄 Main	
E Rack Room	
G Room Variables	. 1
Home Controller HC250	
E 20 Digital Media	
⊕-	
🕀 🎬 My Movies	~
P Switch Actions	
MulitSwitch Control - switch " SW4,5,6,7=5 "	
Commands Conditionals Loops	
Commands Conditionals Loops	^
Commands Conditionals Loops	^
Commands Conditionals Loops	^
Commands Conditionals Loops Start Start Stop Pulse V	^
Commands Conditionals Loops Start Start Start Start	^
Commands Conditionals Loops Start Stop Pulse O Loudness Settings Toggle Set V	^
Commands Conditionals Loops	^
Commands Conditionals Loops Start Stop Pulse O Loudness Settings Toggle Set V	^
Commands Conditionals Loops	^
Commands Conditionals Loops	^
Commands Conditionals Loops Start Start Stop Pulse Councess Settings Councess Settings Mute Settings Coggle Set Councess	^

Device Actions
· · · · ?
Example System
🖻 🔶 Corporate
🗄 😙 Building
ian ian ann ann ann ann ann ann ann ann ann
Rack Room
Be J+P Switch
Home Controller HC250
🕀 👷 Digital Media
My Music My Movies
J+P Switch Actions
POE Control - switch 1 port 1 ON
Commands Conditionals Loops
U Start
Stop Set 0 ‡
Pulse 💿
Loudness Settings
◯ Toggle ◯ Set ✓
Mute Settings
Mute Settings
☐ Toggle
☐ Toggle
Toggle Set
Toggle Set Set Device Specific Command POE CONTROL I I
Toggle Set

Favorites

Create and save input/output assignments for later recall with one button

Create Favourite

Store an input/output combination as a Favorite to be recalled later

- Select_Output = choose the outputs to be saved in the favorite, separated by commas
 - o Example: 1, 2, 4, 5
 - This example will save the inputs that are being watched by output 1, 2, 4, and 5 in memory
- Set_Favorite = choose the favorite ID to save configuration as. Valid values are 1-16. Shared with *Create Favourite with All Outputs*.
 - o Example: 3
 - Saves the input numbers being watched by the outputs listed in *Select_Output* to Favorite 3 so the configuration for those outputs can be recalled later with one button
- Create Favourite Example:
 - o Select_Output: 1,2,4,5
 - o Set_Favorite: 3
 - Identifies the inputs being watched by outputs 1, 2, 4, and 5. Saves the output/input combination to Favorite 3. When Favorite 3 is later recalled, outputs 1, 2, 4, and 5 will be switched back to their input assigned when the *Create Favourite* function was executed.

Create Favourite with All Outputs

Store all input/output combinations as a Favorite to be recalled later

- Favourite_Number = choose the Favorite ID to save configuration as. Valid values are 1-16. Shared with *Create Favourite*.
- Example
 - o Favourite_Number: 3
 - Identifies the inputs being watched by all outputs. Saves the output/input combination to Favorite 3, erasing any data that was previously stored as Favorite 3. When Favorite 3 is later recalled, all outputs will be switched back to their input assigned when the *Create Favourite with All Outputs* function was executed.

Recall Favourite

Recall a Favorite ID and switch the input/output combinations for that Favorite ID

- Favourite_Number = choose the Favorite ID to recall the configuration for. Valid values are 1-16. Recalls a Favorite stored with *Create Favourite* or *Create Favourite with All Outputs*.
- Example
 - Favourite_Number: 3
 - Recall Favorite 3 and switch all outputs to the inputs that were assigned when Favorite 3 was created.

Actions	
Device Actions	
× ^ ×	9
Example System	
Corporate	
E g Building	
🗄 🔁 Main	
E Rack Room	
Room Variables	_
Big J+P Switch Big Home Controller HC250	-
Bigital Media	
Tuneln	
My Music	
My Movies	\checkmark
J+P Switch Actions	
Creating a Favourite 3 with the current status of	
➡ ouputs 1.2.4.5	
C odpato tizitijo	
Commands Conditionals Loops	
Commands Conditionals Loops	^
Commands Conditionals Loops	^
Commands Conditionals Loops	^
Commands Conditionals Loops Start Stop Pulse ©	^
Commands Conditionals Loops Start Start Stop Pulse Stop Loudness Settings	^
Commands Conditionals Loops Start Stop Pulse ©	^
Commands Conditionals Loops Start Start Stop Pulse Stop Loudness Settings	^
Commands Conditionals Loops Start Start Stop Pulse Stop Loudness Settings	^
Commands Conditionals Loops Start Start Stop Pulse Toggle Set	^
Commands Conditionals Loops Start Stop Pulse © Loudness Settings Toggle Set Mute Settings	^
Commands Conditionals Loops Start Stop Pulse © Loudness Settings Toggle Set Mute Settings	
Commands Conditionals Loops Stat Stat Stat Stop Set Set Pulse Set Mate Settings Toggle Set Set Toggle Set Set	
Commands Conditionals Loops Stat Stat Stat Pulse Set Image: Set ings Toggle Set Image: Set ings	
Commands Conditionals Loops Start Start St	
Commands Conditionals Loops Stat Stat Stat Stop Set Set Pulse Set Mate Settings Toggle Set Set Toggle Set Set	

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				ĺ
0.0.0.0	Hone Controller HC252 Digtal Media Tunein My Music My Music			
J+P Switch Actions				
1.4.1	Favourite 3 for all outp	ıt		
Commands Start	Conditionals		Loops	
 Step Pulse 	() Set §		0	
Loodness Setts				
Toggle	⊖ Set		- 44	
Male Settings				
Topple	() Set		Ψ.	
0.1000				
Device Spec	silic Command			

Device Actions C Example System Corposite		^	~	Y
E-Corporate Def Building E-The Main			~	í
E-Corporate Def Building E-The Main				Ĩ
Rack Room	h			
Switch Actions				,
Recalling Fevourite 3	onals		Loops	
Start Stop	Set 0	1	Coope	1
Loodness Settings	🔿 Set 📗		2	
Mute Settings	() Set		*	

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Save

Save the switch configuration in its current state. If the switch reboots, it will return to that configuration.

Actions	
Device Actions	
× ^ v	7
Example System Corporate Source Corporate Source Rock Room Groom Variables Source So	*
	•
J+P Switch Actions	
SAVE	
Commands Conditionals Loops Start Image: Start Image: Start Image: Start Stop Image: Start Image: Start Image: Start Pulse Image: Start Image: Start	^
Loudness Settings Toggle Set v	
Mute Settings	
Device Specific Command SAVE	

Setup RS232 Control

Add Static Route

A static route allows the Control4 processor to communicate with the Just Add Power devices for endpoint control. This pathway must exist in order for any Layer 3 functions to work.

The information for the static route that needs to be added is in the JADConfig Report file.

Note that the following static route must be added to your router so that the control system can access the JAP devices:

Network: 192.168.200.0 Netmask: 255.255.255.0 Gateway: 192.168.1.77

There are two options for activating Layer 3 communication: 1) With Router and 2) Without Router

Static Route With Router

- 1. Access the web interface of the internet router connected to port 1 of the managed switch and look for a section labeled *Routing*. The exact location or name of this section in the menus differs depending on the router.
- 2. Once in the *Routing* section, look for an option that allows the Static Route to be added to the Local Area Network. It may be called *LAN & Wireless, Local Area Network*, etc.
- 3. If the only Static Route option is *WAN, Internet,* or *Wide Area Network,* then that internet router is most likely not capable of the Static Routing function needed. A different router is needed.

LUXUL Simply Connected									odel: ABR-
Quick Setup	Routes								
▶ Status	Active Routes								
Network OHCP Server	Destination IP	Sobnet Mask	Gatevray	Metric	Interface				
Static Leases	default	0.0.00	100 191 224.1	0	Marca -				
Dynamic DNS	10.0.00	255.0.0.0	192,108,1,254	2-1	LAN				
 Multi-WAN 	108.191.224.0	255 255 248 0	0.0.0.0	0	VM21				
VLAN	102.168.1.0	265 265 255 0	0000	0	CAN				
 Firewall/Security 	102.108.2.0	255 255 255 0	192.168.1.10	2	LWI .				
QoS	192.108.100.0	255 255 256 0	192.168.1.50	2	EAN .				
► VPN	102.168.209.0	255,255,255,0	102.168.1.242	2	LAN				
+ Administration									
► Tools	Add Static Route								
	Description	Interface	Destination		Netmask	Gateway	Metric		Modily
		LAN ~						Ad	d Cancel
	Static Routes								
	Description	Interface	Destination IP	Net	rask	Gateway	Metric	M	locilly
	Securey LAN	LAN Y	192 100 2 0	265.25	5.216.8	112 Not 1.10	2	Edit	Deinte
	LODON	LAN Y	1000	256	000	110.168 1.254	2	Edit	Delete
	Classroom	LAN -	102 168 100 0	265.26		102 168 1.50	2	Edit	Delete
	Lop 2G	LAN V	102.169.200.0	265.25		102.168.1.242	1	Edit	Delete

Static Routing on a Luxul ABR-4400

Static Route Without Router

If the router does not have Static Routing (or there is no router), then the IP settings of the Control4 processor must be changed to allow the Static Route.

- 1. In Composer, select *Tools* \rightarrow *System Manager*.
- 2. Connect to the Control4 processor, select the network tab, and choose *Configure...*
- 3. Assign the Control4 processor a static IP address and Subnet mask that matches the network
- 4. Set the Gateway of the Control4 processor to the IP address of the Just Add Power switch (192.168.1.77 in the image)
- 5. Set the DNS to the router (if it exists).

DevHC25	0-000FF	FF16323E		
Network	Status	Logging Setup		
Active Inte	erface			Configure
Interf	ace:	Ethernet	Status: Connected	
MAC:		00:0F:FF:16:32:3E		
IP Address	,			
IP add	Iress:	192.168.1.140	Using DHCP: No	
Subn	et mask:	255.255.255.0		
Gate	way:	192.168.1.77		
DNS Serv	ers			
DNS	server 1:	192.168.1.1	Using DHCP: No	
DNS	server 2:	8.8.8.8		
DNS	server 3:			
Domain				
Doma	in:			

IP settings with switch IP of 192.168.1.77

Add & Configure RS232-IP Server Driver

In *System Design,* to go the *Items* window on the right side and choose the Search tab. Set Manufacturer to Just Add Power and make sure that Local is checked.

There is one RS232-IP Server driver: proxy_ip_JustAddPower_TerminalServer.c4i

Each instance of the driver controls one Just Add Power device, so load one driver for each endpoint that needs control.

The RS232-IP Server Driver controls

- RS232
- CEC
- IR
- Video Wall
- On-Screen Display
- Tiling Transmitter
- other Layer 3 features

Add one RS232-IP Server to the system for <u>each</u> device that needs RS232 control.

System Design

- 1. Select the RS232-IP Server driver
- 2. In the *Properties* window, enter the *Licence Key*. The driver will not work without a license key.
- 3. Set the *Baud Rate, Data Bits, Stop Bits,* and *Data Parity* to match the endpoint device's serial settings.
- 4. Set Soip Mode to Bidirectional (Guest Mode) for RS232 control
- 5. Set *IP Address* to the IP address of the Just Add Power device that is controlling the endpoint device.
- 6. (Optional) Set the *SOIP KeepAlive Message* or *SOIP KeepAlive Period* if needed.

roperties		Properties	List Vi	en lei
operties				
Default least (icne)	u la			
dvarced Properties				
Properties Lua				
Driver Version	210			
MAC Address	000FFF16323E			
Licence Key	Qut9/hTA+IPO+8Eh+C2Wi+49910QItSp82vw9CNtugXirt3b6is5oA+SApGAImu3R3ojz6Lr1ec05qY73		Set	Cancel
Baud Rate	9620	w		
Data Bits	1	¥		
Step lits		÷		
Data Parity	None	u		
Operational Mode	Unicensed			
SOIP KeepAlive Message				
SOIP KeepAlive Period	No KeepAlive	v		
Soip Made	Bidirectional (Guest Mode)	×	Set	Cancel
IP Address	192.168.100.130		Set	Cancel
Debug Mode	Off	×		
Debug Subsystems				
Debug Level	0			
Loopback Test	or	v		

ocations Disc	overed	My Dr	ivers	Sea	rch
	ororod	ing of		000	
					~
🗸 Local 🖌 O	nline	Cert	ified O	nly	
All Device Type	es∨	Just	Add Po	wer	~
	-				
Results	5	ort by:	Relev	ance	×
RS232 - IF	, Serv	er			
Just Add Power	r	F	S232 -	IP Ser	ver
others	12/2/201	4 9:03	P	(Loc	al
Just Add P	ower				
Just Add Power	r	Luxu	I AMS2	616P \$	Seri
A/V Switch	7/16/201	5 4:29	P	Loc	al
Just Add P					
Just Add P			Cisco	SG Sei	ies

System Design
System
· ^ · · · · · · · · · · · · · · · · · ·
Ust Add Power
- Headquarters
Front of Building
🖨 🔁 31x47 Luxul XMS7048
🖨 🕎 Server Closet
- Home Controller HC250
SAVI Server
- 🔁 Digital Media
── ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─
Stations
Channels
J+P RS232 - IP Server
E-Cobby 4x4 Wall
E Boyer
🗄 🐨 Tech Room Rack
🗄 🔁 Class
1

	- Control4 Driver Guide Just Add
Connections – Network	System Design
 No network connections are necessary. The IP address of the Just Add Power device is in System Design – Properties. 	Connections
Connections – Control/AV	💮 Media
8. Select <i>Connections</i> in the bottom left corner, and select the <i>Control/AV</i> tab from the <i>Connections</i> window.	Agents
9. Select the RS232-IP Server driver from the <i>Connections</i> window. Connect	W Programming
the SERIAL output port of the RS232-IP Server to the serial port of the TV driv	er
Control & Audio Video Connections	

oona on a maano	nace connee				
J+P RS232-IP RS232					
Name	Туре	Connection	Input/Output	Connected To	
Audio/Video Inputs					
THDMI 💎	Video	HDMI	Input		
Control Outputs					
SERIAL	Control	RS_232	Output	LG LG4790->Serial RS-232	
Room Control					
Room Selection	RoomControl	AUDIO_SELECTION	Output		
Room Selection	RoomControl	VIDEO_SELECTION	Output		
RS_232 Input Devices					
Device	N	ame		Location	Connections
📕 LG LG4790	S	erial RS-232		RS232 Control	J+P RS232-IP RS232->SERIAL

- 10. No HDMI connection is necessary. The TV driver will have the HDMI connected.
- 11. Repeat for each RS232-IP Server performing RS232 control.

Setup CEC Control

Add Static Route

A static route allows the Control4 processor to communicate with the Just Add Power devices for endpoint control. This pathway must exist in order for any Layer 3 functions to work.

The information for the static route that needs to be added is in the JADConfig Report file.

Note that the following static route must be added to your router so that the control system can access the JAP devices:

Network: 192.168.200.0 Netmask: 255.255.255.0 Gateway: 192.168.1.77

There are two options for activating Layer 3 communication: 1) With Router and 2) Without Router

Static Route With Router

- 1. Access the web interface of the internet router connected to port 1 of the managed switch and look for a section labeled *Routing*. The exact location or name of this section in the menus differs depending on the router.
- 2. Once in the *Routing* section, look for an option that allows the Static Route to be added to the Local Area Network. It may be called *LAN & Wireless, Local Area Network*, etc.
- 3. If the only Static Route option is *WAN, Internet,* or *Wide Area Network,* then that internet router is most likely not capable of the Static Routing function needed. A different router is needed.

LUXUL Simply Connected									odel: ABR-44
Quick Setup	Routes								
► Status	Active Routes								
Hetwork OHCP Server	Destination IP	Submet Mask	Gatevray	Metric	Interface				
Static Leases	default	0.000	100 191 224 1	0	1982				
Dynamic DNS	10000	255.0.0.0	182,108,1,254	2.5	ENG .				
► Hulti-WAN	108.191.224.0	255 255 248 0	0.0.00	0	10021				
• VLAN	102.168.1.0	265 265 255 0	0000	8	(AN				
 Finewall/Security 	192.168.2.0	255 255 255 0	192.168.1.10	2	DM .				
QoS	192.168.100.0	255 255 256 0	192,168,1.50	2	1,401				
► VPN	102.168.209.0	255,255,255,0	102.108.1.242	2	LAN .				
Administration	Add Static Route								
► Tools									
	Description	Interface	Destination	iP.	Netmask	Gateway	Metric		Modify
		LAN ~						Ad	d Cancel
	Static Routes								
	Description	Interface .	Destination IP	Netz	nask	Gateway	Metric	N	locilly
	Secury LAN	LAN V	192 100 2 0	285.25	5.216.0	112 144 1.10	2	lidit	Deinte
	i.ebby	LAN Y	000.07	256	0.0.0	102 168 1 254	2	Edit	Deiete
	Classroom	LAN -	102.168.100.0	265.25	5.256.0	102.168.1.50	2	Edit	Delete
	Lop 26	LNN V	102 169 200 0		5.216.0	102.168.1.242	1	Edit	Delete

Static Routing on a Luxul ABR-4400

Static Route Without Router

If the router does not have Static Routing (or there is no router), then the IP settings of the Control4 processor must be changed to allow the Static Route.

- 1. In Composer, select *Tools* \rightarrow *System Manager*.
- 2. Connect to the Control4 processor, select the network tab, and choose *Configure...*
- 3. Assign the Control4 processor a static IP address and Subnet mask that matches the network
- 4. Set the Gateway of the Control4 processor to the IP address of the Just Add Power switch (192.168.1.77 in the image)
- 5. Set the DNS to the router (if it exists).

WHC26	50-000FI	FF16323E			
letwork	Status	Logging	Setup		
Active Inte	erface				Configure.
Interf	ace:	Etherne	et	Status: Connected	
MAC:		00:0F:F	F:16:32:3E		
IP Address	s				
IP ad	dress:	192.168	8.1.140	Using DHCP: No	
Subn	et mask:	255.255	5.255.0		
Gate	way:	192.168	8.1.77		
DNS Serv	ers				
DNS	server 1:	192.168	8.1.1	Using DHCP: No	
DNS	server 2:	8.8.8.8			
DNS	server 3:				
Domain					
Doma	ain:				

IP settings with switch IP of 192.168.1.77

Add & Configure RS232-IP Server Driver

In *System Design,* to go the *Items* window on the right side and choose the Search tab. Set Manufacturer to Just Add Power and make sure that Local is checked.

There is one RS232-IP Server driver: proxy_ip_JustAddPower_TerminalServer.c4i

Each instance of the driver controls one Just Add Power device, so load one driver for each endpoint that needs control.

The RS232-IP Server Driver controls

- RS232
- CEC
- IR
- Video Wall
- On-Screen Display
- Tiling Transmitter
- other Layer 3 features

Add one RS232-IP Server to the system for <u>each</u> device that needs CEC control.

System Design

- 1. Select the RS232-IP Server driver
- 2. In the *Properties* window, enter the *Licence Key*. The driver will not work without a license key.
- 3. (Optional) Set Soip Mode to NONE
- 4. Set *IP Address* to the IP address of the Just Add Power device that is controlling the endpoint device.

210		
000FFF16323E		
rdw8z0mbE9zjGN6ERfeGgCuEaAGyA6C0gVUjC9FqdX70mUQsXjLxdwbS++eXlqh61VGjAJn1rW0rDjt8AXeA	Set	Cancel
9600 ~]	
8]	
1]	
None]	
// Disconnected - Telnet		
]	
No KeepAlive]	
NONE	Set	Cancel
192.168.50.130	Set	Cancel
Off v]	
]	
0		
Off	1	
	210 000FFFF16323E rdw8zCmbE3gGN6ER/eGgCuEaAGyA6C0g/VU/C3FqdX70mUQaX[Lxdwb5++eXqh61VGjA.hn frW0rDj88XxeA 9600 8 1 V None // Disconnected - Telnet I No KeepAlve NONE 192.168.50.130 Off 0 0 <td>210 000FFFF16323E rdw8cCmbE3gGN6ER#cGgCuEaAGyA6C0gVUjC3FqdX70mUQaXjLxdwb5++cXqh61VGjAhn1rW0rDj88XxeA Set 9600 > 8 > 1 > None > // Disconnected - Teinet > NoNE 192.168.50.130 Set 0ff > 0 </td>	210 000FFFF16323E rdw8cCmbE3gGN6ER#cGgCuEaAGyA6C0gVUjC3FqdX70mUQaXjLxdwb5++cXqh61VGjAhn1rW0rDj88XxeA Set 9600 > 8 > 1 > None > // Disconnected - Teinet > NoNE 192.168.50.130 Set 0ff > 0

				• • • •	•••
ems					
ocations	Discovered	d My Dri	vers	Searc	ch
					~
 Local 	✓ Online	Cert	ified Or	ıly	
All Devic	e Types	✓ Just /	Add Pov	ver	٧
Results		Sort by:	Releva	ance	۷
RS232	2 - IP Sei	ver			
Just Add	Power	R	S232 -	IP Serv	er
others	12/2/20	014 9:03 F	2	Loca	D
Just A	dd Powe	er			
Just Add	Power	Luxu	AMS2	616P Se	eri
AV Switc	h 7/16/20	015 4:29 F	2	Loca	D
Just A	dd Powe	er			
Just Add	Power		Cisco S	G Serie	es
AV Switc	h 12/2/20	014 9:04 F	0	Loca	D

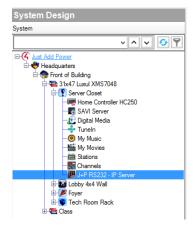
- Control4 Driver Guide

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Just Add

8 Power



Just Add Control4 Driver Guide -

Connections – Network

5. No network connections are necessary. The IP address of the Just Add Power device is in *System Design – Properties*.

Connections – Control/AV

- 6. Select *Connections* in the bottom left corner, and select the *Control/AV* tab from the *Connections* window.
- 7. Select the RS232-IP Server driver from the *Connections* window. Connect

the *HDMI Input* port of the RS232-IP Server to the correct *Output* number on the switching driver. (Use the JADConfig Report file to determine the *Output* number).

J+P RS232-IP CEC				
Name	Туре	Connection	Input/Output	Connected To
Audio/Video Inputs -				
THDMI	Video	HDMI	Input	J+P Switch->Output 3
Control Outputs				
SERIAL	Control	RS_232	Output	
Room Control				
Room Selection	RoomControl	AUDIO_SELECTION	Output	CEC Control->Video's Audio End-Point 1
Room Selection	RoomControl	VIDEO_SELECTION	Output	CEC Control->Video End-Point

- 8. There is no need to load a TV driver when using CEC control. The RS232-IP driver performs all functions.
- 9. Repeat for each RS232-IP Server performing CEC control.

Setup IR Control

Add Static Route

A static route allows the Control4 processor to communicate with the Just Add Power devices for endpoint control. This pathway must exist in order for any Layer 3 functions to work.

The information for the static route that needs to be added is in the JADConfig Report file.

Note that the following static route must be added to your router so that the control system can access the JAP devices:

Network: 192.168.200.0 Netmask: 255.255.255.0 Gateway: 192.168.1.77

There are two options for activating Layer 3 communication: 1) With Router and 2) Without Router

Static Route With Router

- 4. Access the web interface of the internet router connected to port 1 of the managed switch and look for a section labeled *Routing*. The exact location or name of this section in the menus differs depending on the router.
- 5. Once in the *Routing* section, look for an option that allows the Static Route to be added to the Local Area Network. It may be called *LAN & Wireless, Local Area Network*, etc.
- 6. If the only Static Route option is *WAN, Internet,* or *Wide Area Network,* then that internet router is most likely not capable of the Static Routing function needed. A different router is needed.

LUXUL Simply Connected									odel: ABR-
• Quick Setup • Status	Routes								
Network OHCP Server	Destination IP	Subnet Mask	Gaterray	Metric	Interface				
Static Leases	default	0000	100 191 224 1	0	55523				
Dynamic DNS	10.0.00	255.0.0.0	192,108,1,254	2-	LAN				
 Multi-WAN 	108.191.224.0	255 255 248 0	0.0.0.0	0	VM26				
• VLAN	102 168 1.0	265 255 256 0	0000	0	LAN				
· Realing	102.168.2.0	255 255 255 0	192.168.1.10	2	LWI .				
 Firewall/Security OoS 	192.168.100.0	265 255 256 0	192,168,1.50	2	174N				
• Ups • VPN	102.166.200.0	255 255 255 0	102.168.1.242	2	LAN				
► Administration	Add Static Route								
► Tools	Description	Interface	Destination	P	Netmask	Gateway	Metric		Modify
		LAN ~		bi E		- 31112		N	and the second se
	Static Routes								
	Description	Interface	Destination IP	Net	sask.	Gataway	Mestic	N	lodily
	Securey LAN	LAN V	192 188 2.0	265.25	216.0	157 144 1 50	2	Edt	Deinte
	Lebby	LAN V	1000	256	0.0.0	100 168 1 254	2	Edit	Delete
	Classroom	LAN -	102.168.100.0	265.25	5,256.0	102.168.1.50	2	Edit	Delete
	Lab 26	LAN ~	102 169 200 10	265.25		102.168.1.242	1	Edt	Delete

Static Routing on a Luxul ABR-4400

Static Route Without Router

If the router does not have Static Routing (or there is no router), then the IP settings of the Control4 processor must be changed to allow the Static Route.

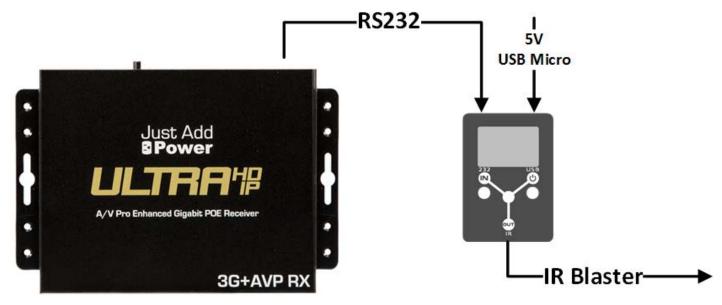
- 6. In Composer, select *Tools* \rightarrow *System Manager*.
- 7. Connect to the Control4 processor, select the network tab, and choose *Configure...*
- 8. Assign the Control4 processor a static IP address and Subnet mask that matches the network
- 9. Set the Gateway of the Control4 processor to the IP address of the Just Add Power switch (192.168.1.77 in the image)
- 10. Set the DNS to the router (if it exists).

DevHC25	0-000FF	FF16323E		
Network	Status	Logging Setup		
Active Inte	erface			Configure
Interf	ace:	Ethernet	Status: Connected	
MAC:		00:0F:FF:16:32:3E		
IP Address	,			
IP add	Iress:	192.168.1.140	Using DHCP: No	
Subn	et mask:	255.255.255.0		
Gate	way:	192.168.1.77		
DNS Serv	ers			
DNS	server 1:	192.168.1.1	Using DHCP: No	
DNS	server 2:	8.8.8.8		
DNS	server 3:			
Domain				
Doma	in:			

IP settings with switch IP of 192.168.1.77

Just Add Control4 Driver Guide -

Connect IR Dongle



Included Cabling

The following hardware is included with the Flux Capacitor.

- 1. IR Blaster
- 2. 3.5mm-to-3.5mm stereo plug cable
- 3. USB A Male to Micro USB cable
- 4. USB power tab Y cable



IR Blaster



Stereo plug



USB A Male to Micro USB



USB power tap

Add & Configure Universal GC Device Driver

In *System Design,* to go the *Items* window on the right side and choose the Search tab. Set Manufacturer to Global Cache.

Each instance of the driver controls one IR Dongle, so load one driver for each endpoint that needs IR control.

System Design

1. No settings need to be applied in *System Design*. The *Status* and *Connection Status* boxes will populate when the driver is fully configured.

Off	~	
On	~	
150		
Off	~	
On	~	
Connected to Global Cache.		
Connected to Global Cache 19:08:41 - Cmd Queue: 0 IR Queue: 0		
	On 150 Off On 1 Connected to Global Cache.	On v 150 ÷ Off v On v I connected to Global Cache. v

Connections – Network

- 2. Select the Network tab from the Connections window.
- 3. Set the IP Address to the IP of the Just Add Power device that the IR Dongle is connected to (available in the JADConfig Report file).

Identify Disconnect					Disconnect All IP
					View as: O Tree 💿 Lis
Device	Room	Туре	Address Type	Address	
Reference Controller HC250	Server Closet	c4:contr	UUID	c4:control4_hc25	
😼 Lobby Luxul 31x47	Tech Room Rack	c4:lua_gen	IP	192.168.1.254	
😼 Luxul Switch	Room	c4:lua_gen	IP	192.168.1.50	
🔬 Samsung Blu-ray	Room	Samsung	SSL	192.168.1.58	
🎆 Kaleidescap Strato	Room	c4:lua_gen	IP	192.168.1.58	
🚝 IR Vizio top left	Room	c4:lua_gen	IP	192.168.50.130	
🚝 IR Vizio top right	Room	c4:lua_gen	IP	192.168.50.131	
😫 IR Vizio bottom left	Room	c4:lua_gen	IP	192.168.50.132	
🛢 IR Vizio bottom right	Room	c4:lua_gen	IP	192.168.50.133	
🚝 IR Vizio left	Room	c4:lua_gen	IP	192.168.50.134	
🚝 IR Vizio center	Room	c4:lua_gen	IP	192.168.50.135	
😫 IR Vizio right	Room	c4:lua_gen	IP	192.168.50.136	
Receiver	Room	c4:lua_gen	IP		
🖉 Universal GC Device	Server Closet	c4:lua gen	IP	192.168.254.130	

Connections – Control/AV

- 4. Select the *Control/AV* tab from the *Connections* window.
- 5. Select the Universal GC Device driver from the *Connections* window. Connect the *IR Output/Sensor Input 1* connection to the *IR Sensor* of the device being controlled.

Control & Audio Vie	deo Con	nections			
Universal GC Device					
Name	Туре	Connection	Input/Output	Connected To	
Control Outputs					
IR Output/Sensor Input 1	Control	IR OUT	Output		
IR Output/Sensor Input 1	Control	CONTACT_SENSOR	Output		
IR_OUT Input Devices					
Device		Name		Location	Connections
VIZIO R1C1 ENTRY		IR Sensor		Fover	
VIZIO R2C1 ENTRY		IR Sensor		Fayer	
VIZIO R3C1 ENTRY		IR Sensor		Foyer	
VIZIO R4C1 ENTRY		IR Sensor		Fayer	
Vizio 2x2 top left		IR Sensor		Room	IR Visio top left->IR Output/Sensor Input 1
Vaio 2x2 top right		IR Sensor		Room	IR Vizio top right->IR Output/Sensor Input 1
Waio 2x2 bottom Left		IR Sensor		Room	IR Vizio bottom left->IR Output/Sensor Input 1
Wzio 2x2 bottom Right		IR Sensor		Room	IR Vizio bottom right >IR Output/Sensor Input
Vizio 3x1 left		IR Sensor		Room	IR Vizio left->IR Output/Sensor Input 1
Wizio 3x1 Center		IR Sensor		Room	IR Vizio center->IR Output/Sensor Input 1
Vizio 3x1 Right		IR Sensor		Room	IR Vizio right oIR Output/Sensor Input 1
DIRECTV 3		IR Sensor		Room	
DIRECTV 4		IR Sensor		Room	
DIRECTV 10		IR Sensor		Room	

6. Repeat for each Universal GC Device driver.



Add & Configure RS232-IP Server Driver

In *System Design,* to go the *Items* window on the right side and choose the Search tab. Set Manufacturer to Just Add Power and make sure that Local is checked.

There is one RS232-IP Server driver: proxy_ip_JustAddPower_TerminalServer.c4i

Each instance of the driver controls one Just Add Power device, so load one driver for each endpoint that needs control.

The RS232-IP Server Driver controls

- RS232
- CEC
- IR
- Video Wall
- On-Screen Display
- Tiling Transmitter
- other Layer 3 features

Add one RS232-IP Server to the system for <u>each</u> device that needs RS232 control.

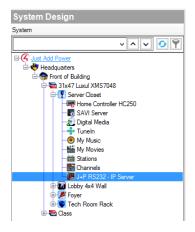
System Design

Properties

- 1. Select the RS232-IP Server driver
- 2. In the *Properties* window, enter the *Licence Key*. The driver will not work without a license key.
- 3. Set the *Baud Rate* to 9600, *Data Bits* to 8, *Stop Bits* to 1, and *Data Parity* to none.
- 4. Set *Soip Mode* to *CLI ACCESS*.
- 5. Set *IP Address* to the IP address of the Just Add Power device that is connected to the IR Dongle.

Properties			
Default Input: {None}	×		
idvanced Properties			
Properties Lua			
Driver Version	210		
MAC Address	000FFF16323E		
Licence Key	rdw8zOmbE9zjGN6ER¥eGgCuEaAGyA6C0gVUjC9FqdX7OmUQaXjLxdwbS++eXtqh61VGjAJn1rW0rDjt8AXeA	Set	Cancel
Baud Rate	9600 ~	Set	Cancel
Data Bits	8 ~ ~		
Stop Bits	1		
Data Parity	None v		
Operational Mode	// Disconnected - Telnet		
SOIP KeepAlive Message			
SOIP KeepAlive Period	No KeepAlive v		
Soip Mode	CLI ACCESS v	Set	Cancel
IP Address	192.168.50.130	Set	Cancel
Debug Mode	Off		
Debug Subsystems			
Debug Level	0]	
Loopback Test	Off		

tems	D :	Î.u. D			
Locations	Discovered	My Dr	ivers	Sear	ch
					~
✓ Local	✓ Online	Cert	ified C	nly	
- All Device	e Types - 🕚	Just	Add Po	ower	~
Results	5	Sort by:	Relev	/ance	~
RS232	- IP Ser	ver			
Just Add F	Power	F	S232	- IP Sen	ver
others	12/2/20	14 9:03 F	P	Loca	al
Just Ac	dd Powe	r			
Just Add F	Power	Luxu	I AMS	2616P S	ieri
AV Switch	h 7/16/20	15 4:29 F	P	Loca	al
Just Ac	dd Powe	r			
Just Add F	Power		Cisco	SG Ser	ies
	h 12/2/20		Þ	Loci	al



Connections – Network

6. No network connections are necessary. The IP address of the Just Add Power device is in *System Design – Properties*.

Connections – Control/AV

- 7. No Control/AV connections are needed. HDMI connection is made to the TV driver and IR connection is made to the Universal GC driver.
- 8. Repeat for each RS232-IP Server performing IR control.

_	Control4 Driver Guide	Just Add
		B Power
	System Design	
0	Connections	
\odot	Media	
226	Agents	
8	Programming	

Advanced RS232-IP Server Programming

Advanced Programming requires knowledge of <u>how to use the *Agents* and *Programming* tabs</u> in Composer.

A Static Route must be present on the router to use Advanced Programming functions.

All Advanced Programming functions require use of the RS232-IP server driver and has functions for:

- Video Wall set video wall mode and adjust tearing delay
- CEC use Consumer Electronic Control on the endpoint device (built into base driver function as of v2.10)
- Console Command pre-programmed and custom functions
- Audio Delay adjust audio delay on the stereo out port

Add Static Route

A static route is a pathway for the Control4 system on the local area network (LAN) to communicate with the Just Add Power devices on a separate subnet. This pathway must exist in order for the RS232-IP Server driver to work. The information for the static route that needs to be added is in the JADConfig Report file.

Note that the following static route must be added to your router so that the control system can access the JAP devices:

Network: 192.168.200.0 Netmask: 255.255.255.0 Gateway: 192.168.1.77

The Static Route is applied to a router. However, if the router does not have Static Route capabilities, then there is an alternative.

Static Route With Router

- 1. Access the web interface of the internet router connected to port 1 of the managed switch and look for a section labeled *Routing*. The exact location or name of this section in the menus differs depending on the router.
- 2. Once in the *Routing* section, look for an option that allows the Static Route to be added to the Local Area Network. It may be called *LAN & Wireless, Local Area Network*, etc.
- 3. If the only Static Route option is *WAN, Internet,* or *Wide Area Network,* then that internet router is most likely not capable of the Static Routing function needed. A different router is needed.

LUXUL									del: ABR-4 are Version: 4
Quick Setup	Routes								
▶ Status	Active Routes								
Hetwork DHCP Server	Destination IP	Schnet Mask	Gatevray	Metric	Interface				
OHCP Server Static Leases	default	00.00	100 191 224 1	0	NUMPER A				
Dynamic DNS	10000	255.0.0.0	192 108 1 254	2	LMI				
► Multi-WAN	108 191 224 0	255 255 248 0	0.000	0	Value				
• VLAN	102 168 1.0	265 265 265 0	0000		CAN				
· limiting	102.168.2.0	265 255 255 0	192.168.1.10	2	LAN .				
Firewall/Security	192,168,100.0	255 255 256 0	192,168,1.50	2	LAN .				
• QoS • VPN	102.166.200.0	265 288 288 0	102.108.1.242	2	LAN				
Administration	Add Static Route								
► Tools	Description	Interface	Destination	i P	Netmask	Gateway	Wetric		Modify
		LAN ~	11			1112		Add	Cancel
	Static Routes								
	Description	Interface	Destination IP	Netmas	x	Gateway	Mestic		(df)
	Secury 1.01	LAN V	192 198 2 0	285.253.25	16.0 11	07 NH 1.50	2	licit	Delete
	Lebby	LAN Y	1000	256.0.0	0 10	2.168.1.254	2	Edit	Delete
	Classroom	LAN ~	102,168,100.0	265,255,25	56.0 (12.168.1.50	2	Edit	Delete

Static Routing on a Luxul ABR-4400

Static Route Without Router

If the router does not have Static Routing (or there is no router), then the IP settings of the Control4 processor must be changed to allow the Static Route.

- 1. In Composer, select *Tools* \rightarrow *System Manager*.
- 2. Connect to the Control4 processor, select the network tab, and choose *Configure...*
- 3. Assign the Control4 processor a static IP address and Subnet mask that matches the network
- 4. Set the Gateway of the Control4 processor to the IP address of the Just Add Power switch (192.168.1.77 in the image)
- 5. Set the DNS to the router (if it exists).

Network	Status	Logging	Setup		
Active In	terface				Configure
Inter	rface:	Etherne	et	Status: Connected	
MAC	2:	00:0F:F	FF:16:32:3E		
IP Addre	SS				
IP ac	dress:	192.168	8.1.140	Using DHCP: No	
Sub	net mask:	255.255	5.255.0		
Gate	eway:	192.168	8.1.77		
DNS Ser	vers				
DNS	server 1:	192.168	8.1.1	Using DHCP: No	
DNS	server 2:	8.8.8.8			
DNS	server 3:				
Domain					
Dom	ain:				

IP settings with switch IP of 192.168.1.77

Add & Configure RS232-IP Server Driver

In *System Design,* to go the *Items* window on the right side and choose the Search tab. Set Manufacturer to Just Add Power and make sure that Local is checked.

There is one RS232-IP Server driver: proxy_ip_JustAddPower_TerminalServer.c4i

Each instance of the driver controls one Just Add Power device, so load one driver for each endpoint that needs control.

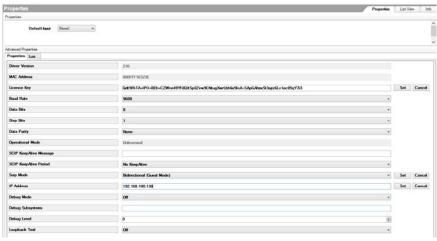
The RS232-IP Server Driver controls

- RS232
- CEC
- IR
- Video Wall
- On-Screen Display
- Tiling Transmitter
- other Layer 3 features

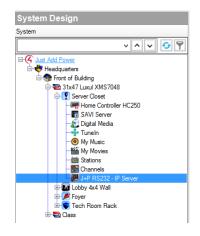
Add one RS232-IP Server to the system for <u>each</u> device that needs Advanced Programming control. RS232-IP Servers that are performing IR/CEC/RS232 control can also be used for Advanced Programming.

System Design

- 1. Select the RS232-IP Server driver
- 2. In the *Properties* window, enter the *Licence Key*. The driver will not work without a license key.
- 3. Set *IP Address* to the IP address of the Just Add Power device that is controlling the endpoint device.



tems					
Locations	Discovered	My Dr	ivers	Sear	ch
					~
✓ Local	Online	Cert	ified O	nly	
- All Devic	e Types 🚿	Just	Add Po	wer	٧
Results	s	Sort by:	Relev	ance	~
RS232	2 - IP Ser	ver			
Just Add	Power	F	S232 -	IP Sen	/er
others	12/2/20	14 9:03 F	Þ	Loca	aD
Just A	dd Powe	r			
Just Add	Power	Luxu	I AMS2	616P S	eri
A/V Switc	h 7/16/20	15 4:29 F	Þ	Loca	al
Just A	dd Powe	r			
Just Add	Power		Cisco	SG Seri	ies
A/V Switc	h 12/2/20	14 9:04 F	Þ	Loca	aD



Video Wall

Set the Just Add Power Receiver into video wall mode. Just Add Power video walls can be up to 16 rows and 16 columns. Combine video wall commands for multiple RS232-IP Server drivers together to create a full wall. See the <u>Video Wall</u> <u>Walkthrough</u> section for more information.

Actions		
Device Actions		
		v ^ v 📍
Conv Var Conv Var	2-IP TL VW / lables 2-IP TR VW w lables 2-IP BL VW VW ables	
J+P RS232-IP BR VW Actions		
Set VideoWall Mode si	ze: 2 by 2 position: 2, 2	
Commands	Conditionals	Loops
Volume Mute Loudness	On Off Toggle	
Device Specific Comm Basic VideoWall Mode Change Number of Rows Z Number of Columns	2	▼
Row Position 2		
Column Position 2	!	-

ctions	
vice Actions	
	~ ^ ~
Ert VW ⊕ G Room Variables	
↔ B J+P RS232-IP BR VW	
RS232-IP BR VW Actions	
Set VideoWall Mode size: 1 by 1 position: 1, 1	
Commands Conditionals	Loops
Balance	
Volume On On Off Coudness Toggle	
Volume On On Off Off Toggle Input	v
Volume Mute Loudness Pulse Set HDMI Volume On Off Toggle	v •
Volume On On Off Loudness Set HDMI Off Set HDMI O Set H	
Volume On Mute Off Loudness Toggle Input Set Pulse Set HDMI V O Device Specific Command Basic VideoWall Mode Change Number of Rows 1	•

Bottom Right Display of a 2x2

CEC

Consumer Electronics Control is control of endpoint devices passed through the HDMI cable. The current version of the RS232-IP Server driver has CEC commands built into the remote.

CEC Command

Pre-programmed CEC commands:

- Display ON power on the display
- Display OFF power off the display
- TV Speakers ON enable the display speakers (not functional on most displays)
- TV Speakers OFF disable the display speakers (not functional on most displays)
- Force HDMI Selection Select HDMI Input 1

CEC Bytes

Send custom CEC commands

Actions Device Actions 9 < ^ < + G Room Variables ➡ J+P RS232-IP TL VW 🝞 Top Right VW Room Variables 🗄 🌆 J+P RS232-IP TR VW 🗑 Bottom Left VW A Room Variables HIP RS232-IP BL VW Sottom Right VW Room Variables J+P RS232-IP BR VW + C Variables J+P RS232-IP BR VW Actions CEC Command: Display ON Commands Conditionals Loops Balance Volume On Mute Off Loudness Togale Input Set HDMI O Pulse Oevice Specific Command CEC Command CECCommand Display ON v

CEC Command - Display ON

Device Actions		
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J-P RS232-IP TL VW Geom Variables J-P RS232-IP TR VW Geom Variables J-P RS232-IP BL VW Geom Variables J-P RS232-IP BR VW Geom Variables J-P RS232-IP RS V Geom Variables J-P RS232-IP RS23-IP RS V Geom Variables J-P RS23-IP RS23-	v /	N V 19
J+P RS232-IP TL VW G Room Variables J+P RS232-IP TR VW G Room Variables J+P RS232-IP BL VW G Room Variables J+P RS232-IP BR VW G Variables P RS232-IP BR VW G Variables CEC Bytes: Commands Conditionals Loops Balance Volume On Off Loudness For Toggle Input Pulse Set HDMI CEC Bytes: CEC Bytes: Commands Commands Commands Commands Commands Commands Conditionals Loops Balance Volume On Off Loudness Toggle Input Pulse Set HDMI Input CEC Bytes: CEC Bytes: CEC Bytes: Commands Commands Commands Commands Commands Volume Volume On Off Commands Commands Commands Volume On Off Commands Volume On Off Commands Commands Commands Volume On Off Commands Volume On Off Commands <	Boom Variables	
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Cec Bytes Cec Bytes Pulse Device Specific Command Cec Bytes Cec Bytes Cec Bytes Conditionals		
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Bottom Right W Geom Variables J+P RS232:IP BR W CEC Bytes: Commands Conditionals Loops Balance Volume On Off Loudness On Off Toggle input Pulse Set HDMI V CEC Bytes		
Cec Bytes: Commands Conditionals Loops Balance Volume On Off Loudness Set HDMI Pulse Set HDMI CEC Bytes CEC Bytes Cec Bytes Commands Conditionals Loops Conditionals Coops Cec Bytes Commands Conditionals Coops Cec Bytes		
Volume V		
P RS232-IP BR VW Actions CEC Bytes: Commands Conditionals Loops Balance Volume On Off Loudness On Off Toggle Input Pulse Set HDMI CEC Bytes CEC Bytes CEC Bytes V CEC Bytes V		
CEC Bytes: Commands Conditionals Loops Balance Volume On Off Loudness Pulse Set HDMI CEC Bytes CEC Bytes V CEC		
Commands Conditionals Loops Balance On On Volume On Off Loudness Toggle Input Pulse Set Pulse Set HDMI Optice Specific Command V CEC Bytes V	P BR VW Actions	
Mute On Loudness Off Toggle Pulse Set Pulse Set Pulse V Operation V		oops
Mute On Loudness Off Toggle Pulse Set HDMI O Device Specific Command CEC Bytes CECBytes		
Mute Off Loudness Off Toggle Input Pulse Set HDMI Operation CEC Bytes CEC Bytes		
CEC Bytes	Ute On	
Toggle Input Pulse Set HDMI CEC Bytes CECBytes	Off	
Input Pulse Set HDMI Device Specific Command CEC Bytes CECBytes	Toggle	
Pulse Set HDMI O Device Specific Command CEC Bytes CECBytes V	< O roggie	
Pulse Set HDMI Device Specific Command CEC Bytes CECBytes V		
Device Specific Command CEC Bytes	Area Sat UDMI	
CEC Bytes v		
CEC Bytes v	0	
V CECBytes	vice Specific Command	
		*
CEC Bytes	8	~
•	LEL Bytes	

J+P RS232-IP CEC On On ۲ Channel Recal • 0 01 000 6 000 G. Info. 000 • Eq (A) [Volume Go Input

Console Command

Pre-Programmed

- Audio Delay Decrease decrease the audio delay on the Stereo Out port by 1
- Audio Delay Increase increase the audio delay on the Stereo Out port by 1
- Capture RX EDID send to RX to capture the EDID from attached display and send back to Transmitter
- Link RESTART restart the video-over-ip link
- Link STOP disable the video-over-ip link
- Link Watchdog Disable disable aggressive HDMI handshaking (default)
- Link Watchdog Enable enable aggressive HDMI handshaking
- Reboot reboot the unit
- RX HDMI OFF disable the HDMI port on the Receiver and output nothing
- RX HDMI ON enable the HDMI port to output video if present
- RX HDMI Mute/Darken RX HDMI will output black screen
- TX HDMI OFF enable the HDMI port on the Transmitter
- TX HDMI ON disable the HDMI port on the Transmitter
- TX Video Mode 0 set video encoding to Mode 0. Only use on Transmitter
- TX Video Mode 1 set video encoding to Mode 1. Only use on Transmitter
- TX Video Mode 2 set video encoding to Mode 2. Only use on Transmitter
- TX Video Mode 3 set video encoding to Mode 3. Only use on Transmitter
- TX Video Mode Dynamic set video encoding to dynamic mode (default). Only use on Transmitter
- USB/IP Enable enable USB functionality on devices
- USB/IP Take Control take control of the USB link to the device
- USB/IP Disable disable USB control
- Watch 1080i as 1080p convert 1080i to 1080p (default)
- Watch 1080i as 720p convert 1080i video to 720p. 2G Only

Console Command (Advanced)

Any console command can be sent through this option. The exact command is needed.

Device Action	ns			
			~ ^	v (*
	±G	Room Variables	() () (
	- D.	J+P RS232-IP BR	W	
		C Device Variabl	es	
+ C Variab	les	-		
E G Progra		rol		
+ 4Store				
🗄 🍊 Backu	IP .			
E Custor				
E G Syster		s		
Hacro				
E G Remot				
G Sched	luler			
Seno	I JAP Con	sole Command	:	Loops
	I JAP Con		:	Loops
Comma	I JAP Con	sole Command	:	Loops
<u> </u>	I JAP Con	sole Command	~	Loops
Comma Comma Volume	d JAP Cons	sole Command	: On	Loops
Comma Comma Volume Mute	a JAP Con:	sole Command	~	Loops
Comma Comma Volume Mute	d JAP Cons	sole Command	On Off	
Comma Comma Volume Mute	a JAP Con:	sole Command	On	
Comma Comma Volume Mute	a JAP Con:	sole Command	On Off	
Volume Mute	a JAP Cons nds e dness	sole Command	On Off	
Sence Comma Volume Mute Loue	a JAP Cons nds e dness	sole Command Conditionals	On Off	
Volume Volume Mute Input Puls	d JAP Con:	Sole Command Conditionals	On Off	
Volume Volume Mute Input Puls	a JAP Cons nds e dness	Sole Command Conditionals	On Off	
Volume Volume Mute Input Puls	d JAP Con: nds e dness e ce Specific	Sole Command Conditionals	On Off	

Audio Delay

Sets the audio delay on the stereo audio output port to a specific value. Valid values are 1-32.

Value	Delay (ms)	Va	lue	Delay (ms)	Value	Delay (ms)
1	6	10		67	19	129
2	13	11		74	20	135
3	20	12		82	21	142
4	27	13		88	22	149
5	33	14		95	23	156
6	40	15		101	24	163
7	47	16		108	25	170
8	54	17		115		
9	61	18		122		

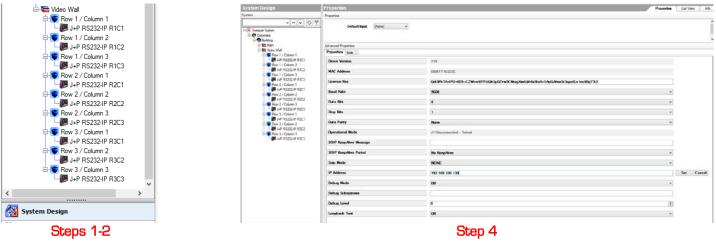
Actions							
Device Actions							
		· ^ · 9					
 	ottom Right VW	^					
⊕ (4	Room Variables						
-	J+P RS232-IP BR V	W					
E G Variables							
Programming Co	ntrol						
4Store							
E-C Custom Buttons	Backup						
E G System Diagnost	tics						
Hacros							
B G Remote Access							
E G Scheduler		~					
J+P RS232-IP BR VW	Actions						
Set Audio De	lay to: 0						
Commands	Conditionals	Loops					
		^					
Volume							
-	C	On					
Mute	1	0					
		Off					
	Ļ	Toggle					
Input							
O Pulse	Set HDM	I v					
Device Spe	cnic Command						
Set Audio Delay							
Delay	0						

Video Wall Walkthrough

These step-by-step instructions will create a 3x3 video wall and program the macros needed to control it.

Driver Addition and Room Assignment

- 1. Under *System Design* in Composer, load one *Room* into the project for each display in the video wall and name them accordingly. This example is for a 3x3 wall, so add 9 *Rooms*.
- 2. Add a Just Add Power RS232-IP Server driver for each TV in the video wall. Rename the drivers according to their wall position for simpler identification.
- 3. (Optional) Add the appropriate TV driver for your project to each *Room*. The TV driver only needs to be added if the TV is being controlled with RS232 or IR.
- 4. Assign the license key and IP address for each corresponding Receiver in the video wall to its RS232-IP Server driver.



Enabling and Creating Macros

- 1. Under *Agents* in Composer, click on *Add*, and add *Macros* to the *Agents* window if not already there.
- 2. In the *Macros* window, click on *Add* and name the macro according to the function it will perform.
- 3. Repeat step 3 until all macros have been created.

Agents	Available Agents	
Agents Add Remove	Agent Name OK	Macros Add Delete
4-store Backup Custom Buttons	Access	Name
Macros Scheduler	Advanced Lighting California	3x3 Full Wall
Variables	Communication	2x2 Top Left
	Email Notification History	2x2 Top Right 2x2 Bottom Left
Macros Add Delete	Light Properties	2x2 Bottom Fight
Name	Media Scenes Push Notification	All Single Screens
	Screen Saver	Switch Full Wall Source 1
	SNMP Configuration Timer	Switch Full Wall Source 2
	UI Configuration Wakeup	Switch 2x2 Top Left Source 1 Switch 2x2 Top Left Source 2
	wakeup	Switch 2x2 Top Right Source 1
	< >>	Switch 2x2 Top Right Source 2
Add	Macros	All Macros
	Macros Add	Delete Create New Macro
	Name	
		Name 3x3 Full Wall
		Create Cancel
	Create	Name Macro

Programming Macros

The two examples below use a 3x3 video wall and show two different layouts possible on the video wall. Using these two examples as a template, a programmer can create any video wall setup.

- Create a 3x3 Wall
- <u>Create a 2x2 Wall with Single Screens</u>

Create a 3x3 Wall

In order to change a full 3x3 wall to watch the same source, two macros are involved: one macro to switch all screens to the same source, and a second macro to change the video wall mode on the Receivers. They will be combined together later to perform the entire action in one button press.

Set Video Wall 3x3 Mode



- 1. Under *Programming* in *Composer*, scroll down and select *Macros* in the *Device Events* list. Select the *3x3 Full Wall* macro
- 2. In *Device Actions* on the right side, select the driver for the Row 1, Column 1 Receiver.
- 3. Scroll down to *Device Specific Commands* and select *Basic Video Wall Mode Change*. Set *Number of Rows* to 3. Set *Number of Columns* to 3. Set *Row Position* to 1. Set *Column Position* to 1.
- 4. Drag the green arrow into the *Script* window to add it to the macro.
- 5. In Device Actions on the right side, select the driver for the Row 1, Column 2 Receiver.
- 6. Scroll down to Device Specific Commands and select Basic Video Wall Mode Change. Set Number of Rows to 3. Set Number of Columns to 3. Set Row Position to 1. Set Column Position to 2
- 7. Drag the green arrow into the Script window to add it to the macro.
- 8. Repeat until all 9 displays have their Row and Column Positions assigned in the macro. There will be 9 commands in the macro when finished.

	Script	Actions		
evice Events	Series Bacate	Device Actions		
inte Elemin	Servet When 3x3 Full Wall is executed Image: Servet Viewer Market Servet Strag Spontane, 1, 1 Servet Viewer Market Servet Strag Spontane, 1, 1 Servet Viewer Market Servet Strag Spontane, 2, 1 Servet Viewer Market Servet Strag Spontane, 2, 1 Servet Viewer Market Servet Strag Spontane, 2, 1 Servet Viewer Market Servet Strag Spontane, 2, 1 Servet Viewer Market Servet Strag Spontane, 2, 1 Servet Viewer Market Strage Strage Spontane, 2, 1 Servet Viewer Market Strage Strage Spontane, 2, 1 Servet Viewer Market Strage Strage Spontane, 2, 1 Servet Viewer Market Strage Strage Spontane, 2, 1 Servet Viewer Market Strage Strage Spontane, 2, 1 Servet Viewer Market Strage Strage Spontane, 2, 1 Servet Viewer Market Strage Strage Spontane, 2, 1 Servet Viewer Market Strage Strage Spontane, 2, 1 Servet Viewer Market Strage Strage Spontane, 2, 1 Servet Viewer Market Strage Strage Spontane, 2, 1 Servet Viewer Market Strage Strage Spontane, 2, 1 Servet Viewer Market Market Strage Strage Spontane, 2, 3 Servet Viewer Market Market Strage Strage Spontane, 2, 1	Commits System Commits	Notable Notable Colours 2 Notable N	v A V
		Number of Columns	3	(e)
		Row Position	4	<u>(8)</u>
		Column Position	1	(e)
System Design Connections Helda Agents Frogramming				

Switch Sources

- 1. Under *Programming* in *Composer*, scroll down and select *Macros* in the *Device Events* list. Select the *Switch Full Wall Source 1* macro
- 2. In *Device Actions* on the right side, select the switching driver.
- 3. Scroll down to Device Specific Commands and select MULTISWITCH.
- 4. The command structure for MULTISWITCH is:
 - SW4,5,6,7,8,9,10,11,12=1
 - a. SW must be **CAPITALIZED**
 - b. 4, 5, 6, 7, 8, 9, 10, 11, 12 are the outputs that are to be switched according to *Connections* for the video wall screens.
 - c. = sign separates the outputs from inputs
 - d. 1 is the input number that the outputs will be switched to
- 5. Add the appropriate *MULTISWITCH* command to the macro by dragging the green arrow into the *Script* window
- 6. Add the 3x3 Full Wall macro to this macro
 - a. In *Device Actions* on the right side, select *Macros*
 - b. Select the 3x3 Full Wall macro from the dropdown list
 - c. Drag the green arrow into the Script window
- 7. The completed macro will switch 9 screens to watch source 1 and change the Receivers to video wall mode
- 8. Duplicate this macro for every source in the system that will be on the full wall.

Actions		Actions
Device Actions	~ ~ 9	Device Actions
Bulding State Main	*	
trade holds the form functions the form functions		Iter Big Starting Cetter
J+P Switch Actions		Custom Buttons
Mulit Switch Control - switch " SW4,5,6,7,8,9,10,11,12=1 "		Gostern Diagnostics
boolika adalaga	ops	
Start Stop Set 0 5		 ⊕ G Remote Access ⊕ G Scheduler ⊕ G Update Manager
Loudness Settings		Macros Actions
Mute Settings Toggle Set		Execute Macro '3x3 Full Wall'
Device Specific Command		Commands Conditionals Loops
MULTISWITCH v Command SW4.5.6.7.8.9.10.11,12+1 v		Select Macro: 3x3 Full Wall V
Step 4-5	-	Step 6

G	Composer 2.8.2 - Example System (Local)	
<u>File D</u> river <u>Go</u> <u>T</u> ools <u>H</u> elp		
Programming	Script	
Device Events	Script	Execute
Corporate Bulding Bulding Bulding Main Rack Room G Room Variables J-P Switch Digital Media Digita	When Switch Full Wall Source 1 is executed WhiltSwitch Control - switch " SW4,5,6,7,8,9,10,11,12=1 " Execute Macro "3x3 Full Wall"	
	Step 7	

Create a 2x2 Wall with Single Screens

There are many other video wall modes to be made out of a 3x3 wall. One example is a 2x2 wall with 5 single screens. All of the commands will be combined into a single macro in this example.



Set Video Wall 2x2 and Single Screen Modes

- 1. Under *Programming* in *Composer*, scroll down and select *Macros* in the *Device Events* list. Select the 2x2 Top Left macro
- 2. In *Device Actions* on the right side, select the driver for the Row 1, Column 1 Receiver.
- 3. Scroll down to *Device Specific Commands* and select *Basic Video Wall Mode Change*. Set *Number of Rows* to 2. Set *Number of Columns* to 2. Set *Row Position* to 1. Set *Column Position* to 1.
- 4. Drag the green arrow into the *Script* window to add it to the macro.
- 5. Repeat steps 2-4 for the other 3 Receivers that make up the 2x2 wall portion, changing the *Row Position* and *Column Position* for each screen.
- 6. Select the driver for the Row 1, Column 3 Receiver.
- 7. Scroll down to *Device Specific Commands* and select *Basic Video Wall Mode Change*. Set *Number of Rows* to 1. Set *Number of Columns* to 1. Set *Row Position* to 1. Set *Column Position* to 1. This will put the Receiver into single-screen mode.
- 8. Drag the green arrow into the *Script* window to add it to the macro.
- 9. Repeat steps 7-8 for the other 4 Receivers that are in single-screen.
- 10. The video wall mode is set. Move to Switch Sources section on the next page to finish the macro.

Programming	Script	
Device Events	Script	Execute
Variables Gramming Control Gramming Co	When 2x2 Top Left is executed Set VideoWall Mode size: 2 by 2 position: 1, 1 Set VideoWall Mode size: 2 by 2 position: 2, 1 Set VideoWall Mode size: 2 by 2 position: 2, 2 Set VideoWall Mode size: 1 by 1 position: 1, 1 Set VideoWall Mode size: 1 by 1 position: 1, 1 Set VideoWall Mode size: 1 by 1 position: 1, 1 Set VideoWall Mode size: 1 by 1 position: 1, 1 Set VideoWall Mode size: 1 by 1 position: 1, 1 Set VideoWall Mode size: 1 by 1 position: 1, 1 Set VideoWall Mode size: 1 by 1 position: 1, 1 Set VideoWall Mode size: 1 by 1 position: 1, 1 Set VideoWall Mode size: 1 by 1 position: 1, 1 Set VideoWall Mode size: 1 by 1 position: 1, 1 Set VideoWall Mode size: 1 by 1 position: 1, 1 Set VideoWall Mode size: 1 by 1 position: 1, 1	

Switch Sources

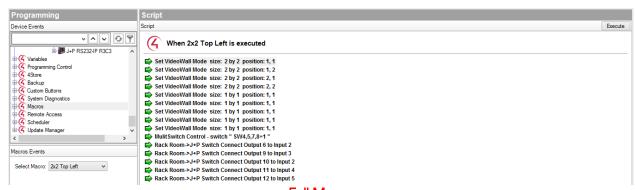
- 1. In Device Actions on the right side, select the switching driver
- 2. Scroll down to Device Specific Commands and select MULTISWITCH
- 3. The command structure for MULTISWITCH is:

SW4,5,7,8=1

a. SW must be CAPITALIZED

- b. 4, 5, 7, 8 are the output numbers for the top left 2x2 that are to be switched according to *Connections* for the video wall screens.
- c. = sign separates the outputs from inputs
- d. 1 is the input number that the outputs will be switched to
- 4. Add the appropriate *MULTISWITCH* command for the 2x2 screens to the 2x2 Top Left macro by dragging the green arrow into the *Script* window
- 5. Create commands to switch the single-screen displays:
 - a. In the switching driver, select the *Output* for the Receiver and the *Input* for the source you want to show
 - b. Add the command to the macro by dragging the green arrow into the *Script* window
 - c. Repeat steps a-b for each single screen display in the wall
- 6. The full macro is complete!

			v ^ v	
Le	Rack Room		لسبا لسبار	
	B G Room Va	riables		
	📴 😼 J+P Swite	zh		
	🗈 🐙 Home Co	ntroller HC250		
🕀 😥 Digital Media				
	🕀 💠 Tuneln			
	Image: My Music			
	ALL Maria	in		
Switch Action	ons			
_		tch Connect Output 1 to Input 3		
_		tch Connect Output 1 to Input 3		
Rack R		tch Connect Output 1 to Input 3 Conditionals	Loops	
Rack R	Room->J+P Swit		Loops	
Rack R	Room->J+P Swit		Loops	
Rack R	Room->J+P Swit	Conditionals	Loops	
Rack R Cor Output	Room->J+P Swit	Conditionals	Loops	
Rack F	Room->J+P Swit	Conditionals	Loops	





Tiling Walkthrough

The Just Add Power Tiling Transmitter consists of:

- Four Just Add Power Receivers that can watch any Transmitter in the system
- One Just Add Power Transmitter that can broadcast video to any Receiver in the system

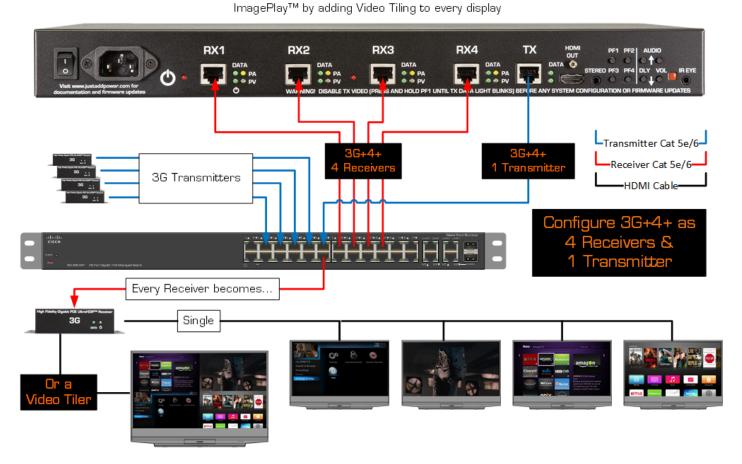
The four videos being viewed by the Receivers are compiled into one video layout and output by the Transmitter as a single, unique video signal. The compiled video signal from the Transmitter can be viewed on any Receiver in the system.

The Receivers in the Tiling Transmitter can be switched like any Receiver in the system, making them act like 4 Displays. The Transmitter is an additional source in the system; if a system has 6 Transmitters and a Tiling Transmitter, that system has 7 Sources.

The Tiling Transmitter isn't confined to one room because of the way the Transmitter distributes video. This creates an uncommon situation for Control4: Control4 expects each room to have one display and each display to be located in a different room, but the Tiling Transmitter is 4 displays that are in the rack.

There are a variety of ways for controlling a Tiling Transmitter with Control4. The method is a good example of how a Tiling Transmitter can be integrated with Control4, but each system requires different considerations.

3G+4+ Tiling Transmitter



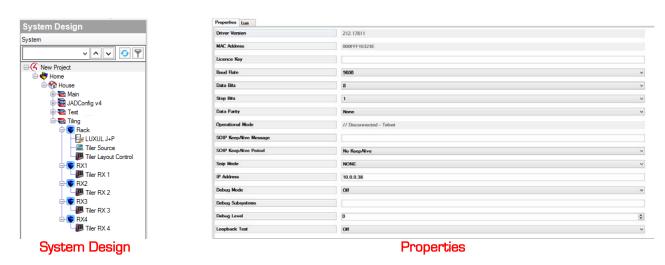
Driver Setup and Connection

Part 1 - Receivers

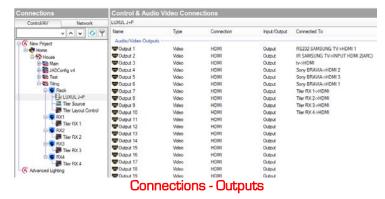
- 1. In *System Design*, load four *Rooms* into the project one for each Receiver in the Tiler and name them accordingly.
- 2. Add 4 Just Add Power RS232-IP Server drivers one in each *Room* as displays for switching the 4 Receivers. Rename the drivers for ease of understanding. These drivers will be connected later as Outputs.
- 3. In *Properties*, assign the license key and IP addresses from the JADConfig Report File for the 4 Tiling Receivers.
- 4. In *Connections* → *Control/AV*, connect the HDMI Input of the four Tiling Receivers to the HDMI Outputs numbers on the switching driver according to the JADConfig Report File.

Part 2 - Transmitter

- In System Design, add a generic source to the rack area to represent the Tiling Transmitter, for example the PC UI Button driver. Rename it to reflect that it is a Tiling Transmitter instead of a PC. This driver will be connected later as an Input.
- 2. Add a Just Add Power RS232-IP Server driver to the rack area and rename it appropriately aka *Tiler Layout Control*. This driver will be used to adjust the layout of the Tiling Transmitter.
- 3. In *Properties*, assign the license key and IP address from the JADConfig Report File for the Tiling Transmitter.
- 4. In *Connections* → *Control/AV*, connect the HDMI Output of the Tiling Transmitter to the HDMI Input number on the switching driver according to the JADConfig Report File.



	Control & Audio Video Connections				
Control/AV Network	LUXUL J+P				
v A V 0 9	Name	Type	Connection	hput/Output	Connected To
C New Project	Audio/Video Input	5			
Home	Thout 1	Video	HDMI	Input	DTV 1->Output
House	Thou 2	Video	HDMI	Input	DTV 2->Output
E Think Main	Thou 3	Video	HDMI	Input	DTV 3->Output
D D JADConfig v4	Though 4	Video	HOMI	input	DTV 4->Output
Test	Winput 5	Video	HDMI	input	Tiler Source > AV Out
🗄 🚭 Tilog	The Input 6	Video	HDMI	Input	
6- Rack	Though 7	Video	HDMI	Input	
LUXUL J-P	Thou a	Video	HDMI	Input	
-III Tiler Source	Thout 9	Video	HOMI	Input	
Tiler Layout Control	Thout 10	Video	HDMI	input	
EH S RX1	Though 11	Video	HOMI	Input	
L IB Tiler RX 1	The Input 12	Video	HDMI	Input	
E- RX2	Thout 13	Video	HDMI	Input	
Tiler RX 2	Pinput 14	Video	HOMI	Input	
E- SRX3	Thout 15	Video	HDMI	Input	
Ther Hox 3	Thout 16	Video	HDMI	Input	
Tier RX 4	Winput 17	Video	HOMI	Input	
G Advanced Lighting	The Is	Video	HOMI	Input	
Ci reserves oftend	- here 19	Melan	HOMI	Serve #	



Enabling and Creating Macros

- 1. Under Agents in Composer, click on Add, and add Macros to the Agents window if not already there.
- 2. In the *Macros* window, click on *Add* and name the macro according to the function it will perform.
- 3. Repeat step 3 until all macros have been created.

Agents		Available Agents				
Agents Add.	Remove	Agent Name OK	1		Macros	Add Delete
4Store Backup Custom Buttons		Access]		Name	
Macros Scheduler Variables	Delete	Advanced Lighting Carlos Announcements Communication Email Notification History Light Properties Media Scenes Push Notification Screen Saver SNMP Configuration Timer UI Configuration Wakeup			Tiling Quad Layout Tiling Primary Left Layout Tiling Primary Right Layout Tiling Set PV RX1 Tiling Set PV RX2 Tiling Set PV RX3 Tiling Set PV RX4 Tiling Set PA RX1 Tiling Set PA RX2 Tiling Set PA RX3 Tiling Set PA RX4 Tiling Picture-in-Picture Layou	ut
	Add	Macros			All Mac	ros
					_	
		Macros Add.	. Delete	Create New Macro ×		
		Name	N	ame Tiling Quad Layout Create Cancel		
		" Crea	æ & Name I	Macro		

Programming Macros

To change the output format of a Tiling Transmitter, the command must be sent to the IP of the Transmitter board.

- 1. Go to the Programming tab of Composer
- 2. On the right bar under **Actions**, choose the RS232-IP server driver that is assigned to the IP of the Transmitter named Tiler Layout Control in an earlier section
- 3. Below in **Commands**, choose **Device Specific Command** and then the dropdown option for **Console Command** (Advanced)
- 4. Using the Tiling Transmitter manual available at support.justaddpower.com, enter the desired command. Examples below:

Name	Command
Layout: Quad View	_4in1_layout.sh 4
Layout: Secondary Right	_4in1_layout.sh 2
Layout: Secondary Bottom	_4in1_layout.sh 3
Set RX1 as Primary Video	_4in1_primary_video.sh 1
Set RX1 as Primary Audio	_4in1_focus.sh 1

