

H.264 120m HDMI Wallplate Extender over IP

User Manual



Introduction

The VIP-101-E-WP incorporates the advanced H.264 codec as the compression type, which makes it occupy lower bandwidth and transmit over the LAN more smoothly. It supports 120m over single cat5e/6 cable at point to point, as well as point to many and many to many over Ethernet switch. The VIP-101-E-WP works with the VIP-100 II encoders and decoders.

1. Features

- 1) Support Dynamic Host Configuration Protocol (DHCP)
- 2) Support one to one, one to many, many to one, many to many modes, with

large cascade

- 3) Following North American Wall plate standard
- 4) Transmit up to 120m over single Cat5e/6 cable
- 5) Using H.264 compression encoding, support resolution up to 1080p@60hz
- 6) Comply with TCP/IP protocol, streaming bit rate is 15Mbps
- 7) Support Analog 2.0 Audio Extraction at Receiver
- 8) Support LPCM audio format
- 9) Support PC tool control
- 10) Compatible with Video Player such as VLC etc

11) 802.3 of compliant POE (No need power supply when connecting with POE Switch)

- 12) HDCP Compliant
- 13) DC 5V 1A power supply

2.1 Specifications

Performance	
Protocol	H.264 encoder over TCP/IP
Support Video format	480i/480p/576i/576p/720p/1080i/1080p@60HZ
Support Audio format	LPCM, Audio sampling rate 48KHZ
Streaming Bit Rate	15Mbps/1080P
HDCP	Compliant
IP setting & Group ID setting	
Default IP	TX: 192.168.1.11 ; RX: 192.168.1.12
Request for Switch/Router	Support IGMP, support DHCP
Connectors on Transmitter	
Input	1xHDMI Female port input
Output	1x RJ45 output
Connectors on Receiver	
Input	1xRJ45 input
Output	1x HDMI Female port output, 1x Audio output
Environmental & Power Requirement	S
Operating temperature	-10 to +40 ℃ (+14 to +104°F)
Operating Humidity Range	20 to 90%RH (No Condensation)
Power supply	DC 5V 1A
Power consumption	TX: 4W RX: 3W
Physical	
Dimension	TX: 70x115x40mm ; RX: 70x115x40mm
Net Weight	TX: 0.12KG ; RX:0.13KG

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2. 1 Supported input resolution

Frequency	Resolution
	576i
	576P
50Hz	720P
	1080P
	1080i
	480i
	480P
60HZ/59.94HZ	720P
	1080P
30Hz/29.97Hz	1080P
24Hz	1080P
25Hz	1080P

VESA Resolution

Frequency	Resolution
	576i
	576P
50Hz	720P
	1080P
	1080i
	480i
	480P
60HZ/59.94HZ	720P
	1080P
30Hz/29.97Hz	1080P
24Hz	1080P
25Hz	1080P

3. Packing content

- 1). 1x Transmitter
- 3). 1x Manual
- 5). 4x 4#-32x5/8" screws
- 7). 2x Power supply
- 4. Panel description



- HDMI input
 Reset port 1
 CAT5e/6 output

- 2). 1x Receiver
- 4). 2x 6#-32x7/32" screws
- 6). 2x Phoenix plugs for power supply



2) Blue indicator of HDMI input 4) DC 5V

5. Installation and Configuration

5.1 Setup

When connecting point to point, no configuration is needed.

When connecting point to many, many to point and many to many, please make sure every TX and RX has unique IP and MAC address, every TX has unique group ID.

Our this over IP Extender has been assigned unique default MAC address for every TX and RX, so you don't have to set the MAC for the units. You just need to set the IP address and Group ID following bellowing steps.

5.1.1 Setting the IP address

A). DHCP (Dynamic host configuration protocol)

If you are using a Switch that supports DHCP, please enable DHCP so that the Switch will assign an unique IP for TX and RX, and you don't need to change the IP for the units manually.

Ethernet:											
Ula DHCD											
Default IP address: 192	16	8	1	-	11						
Default Netmask: 255	. 255		255	1	0	100					
Default Gateway: 192	. 168	-	1	7	1						
Submit											
Uart Setting:											
Baud Rate: 115200											
Dud Itute. The Do and											
Submit											
File to Upgrade Encoder	Firm	ware					1	贤	Upgra	ide!	
✓ Use DHCP											
Default IP address: 19	2	. 16	68].[1	. 12]			
Default Netmask: 255		255		25	5.	0					
Default Gateway: 192		168	<u> </u>	1		1					
Update DHCP											
Multicast Group: Grou Update	p 01(239.2	255.42	2.43	3) 🔽	Port	: 500)4			
Uart Baud Rate: 11520 Update	00 💌								-		
Reboot											

B). Set the IP via web browser

If you are using a Switch that doesn't support DHCP, please change the default IP for TX (192.168.1.11) and RX (192.168.1.12) manually. A HTTP server is embedded in each TX and RX. You can set up IP address for HDMI Extender via web browser The default IP address of the **TX is 192.168.1.11**, **user** name: admin, password: admin

The default IP address of the **RX is 192.168.1.12**

Step 1: Make sure the Transmitter and PC are in the same domain.

Access the Network Setting Control Panel in Windows and locate your Lan connection. Under Windows 7, this can be done by clicking Start > Control Panel >Network Sharing center>Change adapter settings > Properties >Internet Protocol Version4 (TCP/IPv4). Change the IP address fi eld to 192.168.1.1

(0-255). After that press "OK" to save the configuration.

Note * The PC and TX/RX should be in the same domain.
* The IP address of PC should be different from the IP address of TX and RX.

Step 2: Use an Ethernet Cable to connect the PC (or laptop) and the extender. the power LED for the extender is red and the green status is blinking.

Step 3: Login in IE: 192.168.1.11 (default IP for TX) or 192.168.1.12(default IP for RX), You can setup IP address for the TX and RX. TX requires user name: admin and password: admin

Please set IP address for each TX and each RX, IP: 192.168.1.XX (XX:1-255. all IP address for TX and RX must be different and can't be same as the PC's address.)

Step 4: After selecting "Use DHCP" or reset the IP Address, click "Submit" (transmitter) or "update DHCP" (Receiver).

Step 5: Click "Reboot".

Use DHCP					
Default IP address: 192	. 168	. 1	. 8		
Default Netmask: 255	. 255	. 255	. 0		
Default Gateway: 192	. 168	. 1	. 1		
Update DHCP					
Multicast Group: Group 01 Update	(239.255.4	(2.43)	Port:	5004	
Uart Baud Rate: 115200	•				
Reboot					
Ethernet:					
Use DHCP					
Default IP address: 192 .	168 . 1	. 1	1		
Default Netmask: 255 . 2	55 . 258	50			
Submit	58 . 1	. 1			
Uart Setting:					
Baud Rate: 115200 -					
Submit					
File to Upgrade Encoder Fi	mware:			浏览	Upgrade!
Encoder Reset Reboo	t Log	gOut			

Step 6: Restart the extender after resting the IP Address.

5.1.2 Set the group ID for TX and RX via web browser Step 1: Make sure the Transmitter and PC are in the same domain. (Refer to 5.1.1)

Step 2: Use an Ethernet Cable to connect the PC (or laptop) and the Extender. the power LED for the extender is red and the green status LED is blinking.

Step 3: Power on the TX or RX with 5V 1A power supply.

Step 4: Login in IE: 192.168.1.11 (default IP for TX) or 192.168.1.12(default IP for RX), TX requires user name: admin and pass word: admin.

Step5: Change the group ID at "Stream setting".

Step 6: Click "Submit" (transmitter) or update (receiver).

Stream Setting:

```
Transfer: I Multicast
Multicast IP: 00(239.255.42.42) ▼ Port: 5004
```

```
Multicast Group: Group 00(239.255.42.42) 
Port: 5004
Update
```

Note X Make sure the Group ID is different for each Transmitter under one to many and many to many mode.

5.2 Preparing the switch

When doing point to many and many to many, it requires a switch to distribute the sources. We suggest you use the Switch that supports IGMP and DHCP. IGMP feature help to manage the group ID which is related to switch the sources; DHCP allow the switch to assign an IP for TX and RX automatically, please enable DHCP of the switch.

5.3 Connection

Note X Please don't insert into or pull out HDMI cable when power on. Please connect cable only when power is off.

5.3.1 Point to point

- 1. Connect the source device and the Transmitter unit with HDMI Cable.
- 2. Connect HDMI display and the HDMI Receiver unit with HDMI Cable.
- 3. Connect the Transmitter and Receiver with Cat5e/6 cable
- 4. Power on Transmitter and Receiver with adapter 5V 1A.

NOTE: Insert/Extract cables gently.

5.3.3 Point to many

1. Setting the IP address for Transmitter & Receiver and preparing the switch following the steps as instructed above (5.1.1&5.2)

- 2. Connect the source device and the Transmitter unit with HDMI Cable.
- 4. Connect the transmitter and the switch/router with cat5e or cat6 cable.
- 5. Connect all the Receivers and the switch/ router with Cat5e/6 cable.

6. Connect the HDMI displays and the HDMI Receiver units with HDMI Cable.

7. Power on Transmitter and Receiver with adapter 5V1A, power on the switch with its adapter.

- $\mathbb{P}_{Note} \times \mathbb{P}$ Daisy chain the switch if its RJ45 port is not enough.
 - * The quantity of Receiver is up to 255pcs.
 - ※ Make sure the Group ID is different for each Transmitter under one to many and many to many mode.

5.3.4 Many to many

1. Setting the IP address for Transmitter & Receiver and preparing the switch following the steps as instructed above (5.1.1&5.2)

- 2. Connect the source device and the Transmitter unit with HDMI Cable.
- 3. Connect the transmitters and the switch/router with cat5e or cat6 cable
- 4. Connect the Receivers and the switch/ router with Cat5e/6 cable

5. Connect the HDMI displays and the HDMI Receiver units with HDMI Cable.

6. Power on Transmitter and Receiver with adapter 5V1A, power on the switch with its adapter.

7. Choose the source Web browser as instructed above (5.1.2)



 ote \approx Daisy chain the switch if its RJ45 port is not enough.

- % The total quantity of Transmitter and Receiver is less than 256 pcs.
- Make sure the Group ID is different for each Transmitter under one to many and many to many mode.



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Note ※The total qty of TX, RX, Switch is less than 256pcs.

6. Firmware update

We provide the firmware to upgrade the units when it is necessary. Please follow up bellowing steps to update the firmware.

Step1: Connect TX / RX to the PC with a short Cat5e cable

Step2: Power on TX/ RX with power adapter 5V1A.

Step3: Login TX or RX with their default IP (TX: 192.168.1.11; RX:192.168. 1.12) on web browser, TX requires user name: admin and password: admin Step4: Click "choose File" on the interface and find out the latest version firmware. Step5: Click "Upgrade", the process will takes seconds, please DO NOT interrupt or power off the units during the time.

File to Upgrade Firmware:

Choose File No file chosen

Upgrade!

7. PC Tool Instructions

Step 1: Make sure the Transmitter and PC are in the same domain. (Refer to 5.1.1)

Step 2: Open the PC Tool.



Step 3: Click "Start Scan".

IPTV Control Center tool 2.0 - Sy Device Scan Page Tx Setup Pa	stem IP(192.168.1.63) ge Rx Setup Page	45	
Scan Setup Device Scan 5 Time'	Seconds		Start Scan
Output Window Tx Device: 1 IPTX		Rx Device: O	

Step 4: Choose the TX or RX Name.

PTV	Dev Tx	ice Name:	IF 4	PTX 0 0 0 2016	.0627	Device I Encoder	IP :	192.168.1.11 7.1.2.0.11.20160627
PTX	Lan	Status:	Li	ink Vp	Video Lock	: Unloc	zk	HDCP: Off
rameter Se	tup							
P Setup		Vi	deo 1	Bitrate		Downscal	le Setup	
IP:	192 . 168 . 1 . 11		?HD:	15000	Kbps	F.,11	(n	
Netmask:	255 . 255 . 255 . 0	1	Ф:	12000	Kbps	HU.	Full HD	•
Gateway:	192 . 168 . 1 . 1		255	2		HD:	โหก	
DHCP :	0n		SD :	4000	Kbps		100	•
lisc Setup								
Group II)			-Vart Baud	rate			Update
[D			2400		•	•	
-Stream (Jutput Path			-Mac Addre	ss			Reboot
Loop	through and Network Outp	u v		00393D2B	CD93			
Device N	lame							Firmware Upgrade
TDTV								

7.1 Firmware Upgrade Upgrade for TX

Step 1: Click "Firmware Upgrade".

: Device Se IPTX IPTX	election	Tx Device] Device Name Tx Lan Status:	Info 2: II 4. L:	РТХ . 0. 0. 0. 2016 іпж Vp	30627 Video Loc	Device IP: Encoder k: Unlock	: 19 7. HD	2.168.1.11 1.2.0.11.20160627 CP: Off
arameter Se	stup							
IP Setup-	192 . 168 . 1	. 11	Video FHD:	Bitrate 15000	Kbps	Downscale	Setup	
Netmask:	255 . 255 . 255	. 0	HD:	12000	Kbps	Full J HII ·	Բսll հD	▼
Gateway:	192 . 168 . 1	. 1	SD:	4000	Kbps	ю: ј	Ю	•
DACP:	0n							
Misc Setup								
Group II)			-Vart Baud	Irate			Update
	0			2400		•		
Stream (Jutput Path			-Mac Addre	255			Reboot
Loop	through and Network	Outpu 🔻		00393D2B	CD93			
Device 1	lame							Firmware Upgrade
IPTX								

Step 2: Click "Upgrade Encoder FW" first.

v pevice perection	Tx Device I Device Name	nfo : IPTX	Device IP:	192. 168. 1. 11
IPTX	Lan Status:	4.0.0.0.2016062 Link Vp \	7 Encoder Video Lock: Unlock	HDCP: Off
Tx Upgra	de			
IP Setu			/	
IP:			Upgra	ide Tx FW
Netmasl				
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Gateway			Upgrade	Encoder FW
Gateway DHCP:			Upgrade	Encoder FW
Gateway DHCP:			Upgrade	Encoder FW
Gateway DHCP: Misc Ser			Upgrade	Encoder FW
Gateway DHCP: Misc Se Group 0		2400	Upgrade	Encoder FW
Gateway DHCP: Misc Se Group O	ath	2400 Mac Address	Upgrade	Encoder FW
Gateway DHCP: Group O Stream Output F Loopthrough	ath and Network Outpu 💌	2400 Mac Address 00393D2BCD93	Upgrade	Encoder FW
Gateway DHCP: Misc Se Group O Stream Output F Loopthrough Device Name	ath and Metwork Outpu 🔻	2400 Mac Address 00393D2BCD93	Upgrade	Encoder FW

x Device Selection-		Tx Device Info Device Name:	, IPTX	Device IP:	192. 168. 1. 11
IPTX Tx Upgra	de	T₩	4 0 0 0 20160627	Fncoder	7 1 2 0 11 20160627
arameter :					rade Tx FW
IP Setup IP:					e Encoder EW
Netmask:					
Gateway:				Upgrading	-
DHCP:					
DHCP: Misc Setup	Up	grade Result	Σ	3	
DHCP: Misc Setup Group ID 0	Upg	grade Result			Update
DHCP: Misc Setup Group ID O Stream Output Pa	Up	grade Result	Upgrade Is Success!		Update
DHCP: Misc Setup Group ID 0 Stream Output Pa Loopthrough a Device Name	th nd Ne	grade Result	Upgrade Is Success!		Update Reboot Firmware Upgrade

Step 3: After the step 2 is finished, click "Firmware Upgrade" again, then click "Upgrade TX FW".

x Device Selec	tion	Tx Device Info Device Name:	IPTX	Device IP:	192. 168. 1. 11
IPTX	•	Lan Status:	4.0.0.0.20160627 Link Vp Video	Lock: Unlock	HDCP: Off
arameter S Tx	Upgrade				23
TP.					
Netmask: Gateway: DHCP: Misc Setu Group I				Upgrad	de Encoder FW
Netmask: Gateway: DHCP: Misc Setu Group I			2400	Upgrad	de Encoder FW
Netmask: Gateway: DHCP: Misc Setu Group I O Stream Outp Loopthrc	ut Path-	ork Outpu 💌	L2400 Mac Address 00393D2BCD93	Upgrad	de Encoder FW

Upgrade for RX

Step 1: Click "Firmware Upgrade".

Rx Device Se	lection	Rx Device] Device Name Rx	info : I 4	PRX . 0. 0. 0. 2016	0627	Device IP Encoder		192. 168. 1. 12 7. 1. 2. 0. 11. 20160627
IPRX		Lan Status:	L	ink Up	Video Loci	a: Unlock		HDCP: Off
Parameter Se	tup							
IP Setup	192 168 1	12	Video FHD:	Bitrate 15000	Kbps	Downscale	Setup	
Netmask: 255 . 255 . 255 . 0	. 0	Ю:	12000	Kbps	Full Full F		•	
Gateway:	192 . 168 . 1	. 1	SD:	4000	Kbps	но: []	Ю	•
DHLP:	0n							
Group II	ı			-Vart Baud	rate			Update
	0			2400		•		
Stream (Jutput Path			Mac Addre	ss			Reboot
Loop	through and Network	: Outpu 🔻		00393D2B	2093			
Device M	lame							Firmware Upgrade
IPRX								

Step 2: Click "Upgrade Rx FW".

X Device S	Selection -	Rx Device Info Device Name: Rx Lan Status:	IPRX 4.0.0.0.20160627 Link Vp Video	Device IP: Encoder Lock: Unlock	192.168.1.12 7.1.2.0.11.20160627 HDCP: Off
arameter S	Rx Upgrade				23
Netmask: Gateway: DHCP: -Misc Setu -Group J				Upgrad	de Encoder FW
Netmask: Gateway: DHCP: -Misc Setu -Group J			2400	Upgrad	de Encoder FW
Netmask: Gateway: DHCP: Misc Setu Group J Stream Loo	Output Path	rk Outpu 🔻	2400 Mac Address 00393D2BCD93	Upgrad	de Encoder FW
Netmask: Gateway: DHCP: Misc Setu Group J Stream Loo: Device	Output Path pthrough and Netwo Name	rk Outpu 🔻	[2400 Mac Address 00393D2BCD93	Upgrad	de Encoder FW Reboot Firmware Upgrade

Duthanad		X
Kx Upgrade	Name and Address of the International States	
PRX		20160627
		Upgrade Rx FW
ameter		Upgrade Encoder FW
P Setu		
EP:		Upgrading
Netmas		
Fatawat		
Jacenay. 152 . 100 .	1 . 1	лш. HD 👻
DHCP: 0n	SD: 4000 Kbps	лш. <u>н</u> ш –
DHCP: 0n	SD: 4000 Kbps Upgrade Result	
DHCP: On	Upgrade Result	
DHCP: 0n isc Setup Group ID	Upgrade Result	rw. HD ▼
DHCP: On isc Setup Group ID O	Upgrade Result	NU. HU Vpdate
DHCP: 0n isc Setup Group ID 0 Stream Output Path	Upgrade Result	NU. HU V SS Vpdate Reboot
DHCP: On isc Setup Group ID O Stream Output Path Loopthrough and Ne	Upgrade Result	NU. HU Vpdate
DHCP: 0n isc Setup Group ID O Stream Output Path Loopthrough and Ne Davige Neme	L SD: 4000 Kbps Upgrade Result Firmware Upgrade Is Success!	NU. HD Vpdate

7.2 Other settings

Step 1: Change the IP/Net mask/Gateway/DHCP/Group ID/Mac Address/ Device name on the PC tool interface.

Step 2: Click "Update", after "Update" is finished, click "Reboot".

PTX PTX	•	Device Name Tx Lan Status:	LATO 2: I: 4 L	PTX . O. O. O. 2016 ink Up	30627 Video Lo	Device IP: Encoder ck: Unlock	192.168.1.11 7.1.2.0.11.20160627 HDCP: 0ff
rameter S	etup						
P Setup			Video	Bitrate		Downscale Se	etup
IP:	192 . 168 . 1	. 11	FHD:	15000	Kbps	Full Full	ו אח 🚽
Netmask:	255 . 255 . 255	. 0	HD:	12000	Kbps	HU.	
Gateway:	192 . 168 . 1 . 1		1000	-		HD: HD	-
DHCP :	0n		SD:	4000	Kbps		•
lisc Setuj	p						
Group I	D			-Vart Baud	rate		Update
	0			2400		•	
Stream	Output Path			-Mac Addre	55		Reboot
Loop	through and Network	Outpu 🔻		00393D2B	CD93		
Device	Name						Firmware Upgrade
TOTI							

ce Scan Fa x Device Se IPRX IPRX	ge Ix Setup Fage election	Rx Device I Device Name Rx Lan Status:	nfo : Il 4. L:	PRX 0.0.0.2016 ink Vp	30627 Video Loc	Device IP: Encoder :k: Unlock	192.168.1.12 7.1.2.0.11.20160627 HDCP: Off
arameter Se	etup						
IP Setup IP:	192 . 168 . 1	. 12	Video FHD:	Bitrate 15000	Kbps	Downscale Se	tup
Netmask: 255 . 255 . 255		. 0	HD:	12000	Kbps	Full Ful: HTI	1 HD 🔻
Gateway: DHCP:	192 . 168 . 1	. 1	SD:	4000	Kbps	Ш:	•]
Misc Setur							
Group II	D			-Vart Baud	Irate		Update
	0			2400		•	
Stream (Dutput Path			Mac Addre	:55		Reboot
Device 1	through and Networl Name	t Uutpu 💌		00393028	6033		Firmware Upgrade
IPRX							
							Factory Reset

7.3 Click "Factory Reset" on TX or RX.

t Device Se	election Tx Device Device Tx Lan St	vice Info e Name: I 4 tatus: L	PTX .0.0.0.2016 .ink Vp	50622 Video Lo	Device IP: Encoder ck: Unlock	192.168.1.11 7.1.2.0.11.20160622 HDCP: 0ff
arameter Se	etup					
IP Setup		Video	Bitrate		Downscale S	etup
IP:	192 . 168 . 1 . 11	FHD:	15000	Kbps	Full True	11 km –
Netmask:	255 . 255 . 255 . 0	HDD :	12000	Kbps	HTT.	
Gateway:	192 168 1 1				₩. Im	
DHCP :	On	SD:	4000	Kbps	In In	•
Misc Setup						
Group II)		- Vart Baud	Irate		Update
[0		2400		•	
Stream (Jutput Path		-Mac Addre	255		Reboot
Loop	through and Network Outpu 🔻	-	00393D2B	CD93		
Device N	lame					Firmware Upgrade
IPTX						

Device So IPRX	election	-Rx Device J Device Name Rx Lan Status:	[nfo : I] 4. L	PRX . 0. 0. 0. 2016 ink Vp	30622 Video Loc	Device Encoder k: Unlo	IP: ck	192.168.1.12 7.1.2.0.11.20160622 HDCP: Off
rameter S	etup							
P Setup			Video	Bitrate		Downsca	le Setup	
IP:	192 . 168 . 1 .	12	FHD:	15000	Kbps	Full	R	
Netmask:	255 . 255 . 255 .	0	HD:	12000	Kbps	HU	LUI U	,
Gateway.	100 160 1	_		12000		100.		
DHCP :	0n	1	SD:	4000	Kbps	лш :	Ш	•
lisc Setup	0							
Group II	0			-Vart Baud	Irate			Update
	0			2400			•	
-Stream	Dutput Path			-Mac Addre	.55			Reboot
Loop	through and Network	Outpu 🔻		00393D2B	CD93			
Device 1	Name							Firmware Upgrade
IPRX								
								Factory Reset

8. After sale Service and Warranty.

9. How to use VLC

Step1: Make sure the Transmitter and PC are in the same domain. (Refer to 5.1.1)

Step2: Connect the HDMI Source without HDCP with the transmitter and power on the device.

Step3: Connect the transmitter to the PC.

Step4: Check the Multicast Group on the web (refer to 5.1.3).

Step5: Click "Open Network Stream", click "Stream"> "Network", Input "UDP: //@ 239.255.42.42 :5004", then you can click "Play" to view the video.

