

VIP-STREAM-100 HDMI Streaming Encoder USER MANUAL



PureLink[™] 535 East Crescent Avenue Ramsey, NJ 07446 USA Tel: +1.201.488.3232 Fax: +1.201.621.6118 E-mail: <u>sales@purelinkav.com</u>

For order support, please contact your local dealer. For technical support, please contact us at support@purelinkav.com.



Table of Contents

What's in The Box	3
Product Description	4
Things to Know Before You Start	7
Setting your computer to communicate with VIP-STREAM-100	7
Network switch requirements	11
Network switch recommendations	11
Setting Up a VIP-STREAM-100 System:	12
Connections	12
Encoding	12
Decoding/Viewing with VLC Player	13
Decoding/Viewing with YouTube Live	15
Decoding/Viewing with Facebook Live	
Glossary	19
PureLink™ Three (3) Year Limited Warranty	20



What's in The Box

VIP-STREAM100 Encoder

- 1 x VIP-STREAM100 encoder
- 1 x AC to DC power adapter

Optional Accessories

- VIP-STREAM-100 RACK4 (provides rack mounting of 4 transmitters in a 1RU rack space)
- PureStream VIP-NET Video over IP Network Switches
 - o <u>http://main.purelinkav.com/main/index.php?dispatch=categories.view&category_id=83</u>

Use Manual can be found online in the Resources tab of the VIP-STREAM-100 product page.



Product Description

The VIP-STREAM100 product provides input support of up to 1080P60 resolutions and HDCP 1.3. The output is H.264 multicast stream and is supported by several software applications that can grab the video/audio stream, including VLC Player.

Specifications

- Input video support
 - o 1080p60
 - o **1080p30**
 - o **1080p24**
 - o **720p60**
 - o **720p30**
- Input audio support
 - HDMI input
 - HDCP compliance
 - HDCP 1.3
- Data rate

•

- Up to 16Mbps
- Latency
 - Up to .5 seconds

Front Panel - TX (encoder/transmitter)



Power LED indicator

Illuminates when correct power source is applied to the 12-volt d.c. inlet.

LAN LED indicator

Illuminates when LAN connection is confirmed.

HDMI LED indicator

Illuminates when there is a successful connection to the HDMI source.



Rear Panel - TX (encoder/transmitter)





Things to Know Before You Start

VIP-STREAM-100 encoders are set factory default to a unique IP address of 192.168.1.168.

Setting your computer to communicate with VIP-STREAM-100

Devices that need to communicate with each other on a network must be in the same IP subnet and not separated by a VLAN configuration.

You will need to set your computer to be on the same subnet. While the interface and steps on achieving this will be different for each OS and versions of OS, they all require that you set the ipv4 settings of your LAN adapter. You may have more than one LAN adapter, so be certain you are working with the correct one.

Windows 8.1 and Windows 10 Computer LAN Port Setup

Opening Network Page

Option 1: Right Click on the taskbar icon that looks like a signal strength indicator. Then click on "Open Network and Sharing Center"



Option 2: Use the search window and type "Network and Sharing Center". When the search function provides choices below, select Network and Sharing Center.





The next page will be as shown below. Select the "Change Adapter Settings"

When you are in the Change Adapter Settings page as shown below, select the LAN adapter that you will use to communicate with the VIP-STREAM-100 system.





For this example, we will select the middle listing, Qualcomm Atheros LAN Adapter. Double click on the listing. The properties page will open as shown below.

ternorrang	Sharing		
Connect us	ing:		
🔮 Qual	comm Athero	s AR8161 PCI-E Gig	abit Ethernet Contro
			Configure
This connect	ction uses the	e following items:	
	crosoft Netwo crosoft LLDP ik-Layer Topo ik-Layer Topo crimer Protoco emet Protoco	ork Adapter Multiplex Protocol Driver ology Discovery Map ology Discovery Res of Version 6 (TCP/IP) of Version 4 (TCP/IP)	v4)
insta	I	Uninstall	Properties

Select "Internet Protocol Version 4 (TCP/IPv4)" by double click on the text. **Note:** Do not deselect the checkbox or change the selections of any other properties in the menu.



When the window changes to the Properties page for the Internet Protocol Version 4, enter the same IP subnet as the VIP-STREAM-100 system. The default address of the VIP-STREAM-100 is 192.168.1.168.

Please see example below of one possible setting to connect to the device. Be careful to not use the same IP address as another device on the network.

Diagnose this connection	Rename this connection	liew status of this connection	Change settings of th
CC	Internet 3 Properties working Sharing Internet Protocol Version 4 (TCP General You can get IP settings assigned this capability. Otherwise, you n for the appropriate IP settings. O Obtain an IP address auton	/IPv4) Properties automatically if your network supp eed to ask your network administra	× ports ator
	Use the following IP address IP address: Subnet mask: Default gateway: Obtain DNS server address @ Use the following DNS server Preferred DNS server: Alternate DNS server: Use Validate settings upon exit	s: 192.168.1.2 255.255.255.0 automatically er addresses: Advance	ed
		ОК	Cancel

Note: Performing a factory default of the VIP-STREAM-100 will set the IP address to static, 192.168.1.168.



Network switch requirements

The minimum requirements of a network switch for the VIP-STREAM100 are:

- 100BaseT Port speeds
- Backplane data rate performance that exceeds the total data rate of your VIP-STREAM100 system and total network data load
- Jumbo Frame: recommended setting of 9k, your application may vary.
- IGMP Snooping: enabled

Network switch recommendations

It is recommended from a system design standpoint that you consider VLAN management to isolate the multicast traffic generated by the transmitters from devices other than the receivers.



Setting Up a VIP-STREAM-100 System:

Connections

Power

Each VIP-STREAM-100 transmitter comes with an AC to DC power adapter. We recommend a surge protected outlet to plug the power adapter in to.

Network Category

The VIP-STREAM-100 supports standard category RJ45 connectivity. It is recommended to use CAT6a cabling to ensure best performance. Use pre-terminated cables when possible, and use best practices for cables runs.

Video

The VIP-STREAM-100 accepts HDMI 1.3 video formats using standard HDMI cables. HDCP 1.3 signals are accepted.

Encoding

The VIP-STREAM-100 automatically begins encoding of any compatible signals. If no changes have been made to the settings of the device, the encoded signal will be available at the following URL: http://192.168.1.168/0.ts



Decoding/Viewing with VLC Player

At the time of this manual writing, **VLC 3.0.0** was used for verification.



Open the Media pulldown menu and select 'Open Network Stream'

The 'Open Media' popup window will appear. In the 'Network' tab, enter the TS URL stream url, found on the

Status page of the VIP-STREAM-100 web page.

→ C ① 192.168.1.168/inde	xEhtml	
		Language: English •
1264 Encoder	Status	
Status	Status	
Status	Running Time:0000-00-00 00:21:02	
Encoder	CPU Usage:23%	
Construction of the owner owner owner owner ow	Memory Usage:18.6M/89.1M	
OSD	Input Size:1920x1080p@60	
	Collected Video Frames:8730	
System	Lost Video Frames:2	
	Audio Samplerate:48000	
	Net Packet Sent:7143	
	Net Packet Dropped:0	
	Main stream	
아이 아이 같은 것이다.	Encoding Type:1920x1080@30	
[영상] 유명 정상]	Bitrate((kbit):1800	
	TS URL:http://192.168.1.168/0.ts	
	HLS URL Disable	
보니 김동국 전원적 수	FLV URL:http://192.168.1.168/0.flv	
	RTSP URL:rtsp://192.168.1.168/0	
	RTMP PUBLISH URL(Connected):rtmp://192.168.1.50/live/0	
	Multicast URL:Disable	
	Preview(Delay 2000ms)	
	Substream1	
	Finesdar.size:1280v720/230	



a second s				
на Рјаур	📥 Open Media	_33	×	
	🗈 File 📎 Disc 👎 Network 🖼 Capture Device			
	Network Protocol			
	Please enter a network URL:			
	http://192.168.1.168/0.ts		~	
	rtp://wiw.samples.com/stream.asx rtsp://server.example.org:9080/test.adp http://www.yourtube.com/watch?v=9g64x			
	Show more options			

Press the 'Play' button. Your stream should now appear.

Note: If you 'pause' the stream, VLC player will buffer the stream. Therefore, it will pick up where you paused. If you then pause the actual source, you will not see the effect until the time in the buffered stream where the pause occurred.



Decoding/Viewing with YouTube Live

Log in to your YouTube Live dashboard: <u>https://www.youtube.com/live_dashboard</u>

If you have not set up your YouTube Live dashboard, you will need to do that first.

Obtain the Server URL and Stream name/key from your YouTube Live dashboard from the Encoder Setup section. Concatenate the URL and key together using a forward slash between the two. An example would look like: rtmp://a.rtmp.youtube.com/live2/e09g-fryf-pz34-56mg

	Q		
CREATOR STUDIO	Want to get emails on how to grow your channel? Yes please!		
DASHBOARD	Still have questions about streaming?	Check out this FAQ.	
VIDEO MANAGER V		LIVE STREAMING CHECKLIST	
I) LIVE STREAMING		Set up encoding software	*
Events Camera NEW		1. Add stream info	*
COMMUNITY	©ar©urus [®]	Optional features	*
CHANNEL		((•)) Go live	*
		Don't show these tips again	
TRANSLATIONS &		Top chat 👻	\$ 3
YOUR CONTRIBUTIONS B Help and feedback	Create Nightlight Change thumbhail ASIC INFO STREAM OPTIONS CARDS		
c	actegory Entertainment	Sav something	
P	rivacy Public Advanced settings	Hide chat	0/200 >>
E	NCODER SETUP	ANALYTICS STREAM HEALTH	
s s	erver URL rtmp://a.rtmp.youtube.com/live2 tream name/key	0 • watching now	∎ messages/mi



- Select the Encoder tab on the left navigation pane of the VIP-STREAM-100 main page.
- Select Main stream or any substream from the left navigation.
- Enter the Server URL and key in the RTMP PUBLISH URL text field.
- Select Enable from the pulldown menu to the right.
- Press the Apply button.

🗎 H.264 Encoder 🛛 🗙 📃				Θ	- [×
← → C () 10.0.0.168/OutputP1MainE	html			z	۲ 0.72	÷
PureLink	lain stream		Langu	age: Englis	h ▼	•
Status	FPS:	30	[5-60]			
Encoder	GOP:	30	[5-300]			
Main stream 🔸	Bitrate(kbit):	1800	[32-32000]			
Substream1	Encoded size:	same as the input ·				
Substream2	H.264 Level:	high profile •				
Substream3	Bitrate control:	vbr •				
Audio						
Advanced	TS URL:	/0.ts	Enable •			
OSD	HLS URL:	/0.m3u8	Disable •			
System	FLV URL:	/0.flv	Enable •			
	RTSP URL:	/0	Enable •			
	Multicast IP:	238.0.0.1	Disable •			
	Multicast port:	1234	[1-65535]			
	RTMP PUBLISH URL:	rtmp://a.rtmp.youtube.com/live2/e09g-fryf-pz	Enable •			
		rtmp://ip/xxx/xxx or rtmp://user:pass@ip/xxx/xxx				
		Apply				
						•

Return to your YouTube Live dashboard, and select the Go Live operation.

		Q		
CREATOR STUDIO		* Want to get emails on how to grow your channel? <u>Yes please</u>		
DASHBOARD		Still have que	stions about streaming? Check out this FAQ.	
VIDEO MANAGER	~	1		
((+)) LIVE STREAMING			LIVE STREAMING CHECKLIST	
Stream now			Set up encoding software	~
Camera	NEW		1. Add stream info	*
	~	Careurus	Optional features	*
e CHANNEL	~		((*)) Go live	8
			Don't show these tips again	



Decoding/Viewing with Facebook Live

f		Q		-	Home	Find Friends	11	9
Add Cover Photo				Update Info 2	Vie	w Activity Log 3	•••	
Timeline	Abo	out Friends 134	Photos	More •				
★ 3 items for you to review	×	🖋 Make Post 🛛 🙆 Ph	oto/Video	Live Video	Lif	e Event		
		-		\smile				
Intro		What's on yo	ur mind?					
Add a temporary bio			-					
🖶 A-1, A-2 at Freelance Audio Engineer		Photo/Video	🙂 Feeling	Activity ••				
Studied Electronic engineering technology at Broward College						👢 Friends 🔻	Post	

Log in to your Facebook account and select Live Video

The next page will allow you to acquire the Server URL and Stream Key.

Camera de Connect	Post Settings
Connect Your Live Stream to the Live API Use live streaming software or a hardware encoder. Learn more.	Choose where to post your live broadcast: Share on a Page You Manage 💌
 Choose where you want to post your broadcast on the right. Enter the information below into your software's settings. 	Say something about this live video
Server URL rtmp://rtmp-api-dev.facebook.com:80/rtmp/ Stream Key 728797757312424_0?ds=18s_efg=eyJxZV9ncm91cHMiOnsiZmJsaXZIX3NicnZicI9ieHBicmltZW50(j;	Image: Second
3. Select Go Live in the bottom right corner.	Tags Add tags (ex: corredy, animals, make-up etc.) Video Game Tag a game (ex: Overwatch)
	reg a gania (an annuaidh
Don't put third-party video ads in your live video. For example, don't include bumpers, pre-roll, mid-roll or post-roll. Ensure any pre-recorded content is clearly distinguishable from live content.	() Schedule C+ Go Live



- Select the Encoder tab on the left navigation pane of the VIP-STREAM-100 main page.
- Select Main stream or any substream from the left navigation.
- Enter the Server URL and key in the RTMP PUBLISH URL text field.
- Select Enable from the pulldown menu to the right.
- Press the Apply button.

← → C ③ 10.0.0.168/OutputP1S	econd2E.html		*	7	H :
H264 Encoder			Language. Englis	h 🔹	•
TIZO-F LITCOUEI	Substream2				
Status	FPS:	30	[5-30]		
Encoder	GOP:	30	[5-300]		
Main stream	Bitrate(kbit):	1800	[32-32000]		
Substream1	Encoded size:	640x360 •			
Substream2 <	H.264 Level:	high profile 🔹			
Substream3	Bitrate control:	vbr 🔻			
Audio					
Advanced	TSURL	/2 ts	Disable		
OSD	HLS URL:	/2.m3u8	Disable •		
Contemporter and the second	FLV URL:	/2.flv	Disable •		
System	RTSP URL:	/2	Disable •		
	Multicast IP:	238.0.0.1	Disable •		
	Multicast port:	1236	[1-65535]		
	PTMP PUBLISH UPL	rtmn://live.ani.facebook.com:80/rtmn/42212	Fnahle		
	KIMP PUBLISH UKL!	tmp://in/www.www.or.tmp://user.pass@in/www/ww			
		Apply			
		Арру			

When the VIP-STREAM-100 is streaming to Facebook, you will see the preview. When you are ready to stream live, enter a description and title in the right pane, and either schedule the stream to start, or select Go Live





Glossary

FPS	Frames Per Second – common settings are 24fps, 25fps, 30fps, and 60 fps
FLV	Flash Video streaming utilizing Adobe Flash Player version6 or higher
HLS	HTTP Live Streaming, found with browsers such as Chrome, Firefox, and Safari
GOP	Group of Pictures – terminology used when encoding MPEG video
Bitrate	quantity of bits per second sent from the encoder, in kilobits
Encoded Size	Horizontal and vertical pixel counts of output image resolution
H.264	high quality, low bitrate motion-compensation based compression standard
Bitrate Control	refers to VBR (Variable Bit Rate), or CBR (Constant Bit Rate)
CBR	Constant Bit Rate, used to save file size when content has similar motion throughout
VBR	Variable Bit Rate, used vary bit rate dependent on content changes and provides most favorable results.
TS	Transport Stream, commonly used for audio/video streaming based on MPEG-2
RTSP	Real Time Streaming Protocol for request communications between media servers and clients
Multicast IP	IP address for data (audio/video) broadcasting. An audio/video encoder such as the VIP-STREAM-100 will have both a device IP address (192.168.1.168) and a multicast IP address for broadcasting the audio/video stream (e.g.: 238.0.0.1:1234)
RTMP	Real Time Messaging Protocol, a TCP based streaming protocol with persistent c connectivity
AAC	Audio coding standard used by YouTube, Apple, Sony, etc.
ONVIF	Open Network Video Interface Forum, a standardization of IP based security products
G711A	A PCM audio companding standard used in telephony



Dtrovision, LLC. (hereinafter "PureLink") warrants its HDTools[™] and PureStream[™] branded products (hereinafter "Product") purchased directly from PureLink or Dealer shall be free from defects in workmanship and materials, under normal use and service, for a period of three (3) years on parts and three (3) years on labor. Any repaired or replaced equipment related to Product shall be covered only under the remaining portion of the warranty. This warranty has no relationship to and exists independently of any warranty offered by Dealer. This warranty is a limited warranty and gives you specific legal rights. You may also have other rights which vary from state to state.

TERMS & CONDITIONS

PureLink shall repair or replace the Product if it develops a material fault during the period of warranty, on condition that i) the Product has only been subject to normal use in a domestic or commercial environment in a manner consistent with its specification and functionality, ii) the Product has been cared for reasonably and only subjected to reasonable wear and tear, iii) the defect has not been caused by willful or negligent abuse or neglect, or any accident or improper installation procedure, iv) the serial number of the Product has not been altered or removed.

This warranty only applies to the original purchaser, and shall be the exclusive remedy to the original purchaser. PureLink shall not be liable for any damages whatsoever caused by Product or the failure of Product to perform, including incidental or consequential damages. PureLink shall not be liable for any claim made by a third party or made by the purchaser for a third party.

Except as expressly set forth in this warranty, PureLink makes no other warranties, expressed or implied, including any implied warranties of merchantability and fitness for a particular purpose. PureLink expressly disclaims all warranties not satisfied in this limited warranty. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supersedes all previous warranties.

WARRANTY/RETURNS/REPAIRS/EXCHANGES

No merchandise may be returned without prior authorization from PureLink, and a Return Materials Authorization (RMA) number. Failure to comply with these conditions will result in rejection of the returned merchandise.

Any warranty service on Products must be arranged through Dealer. Authorized returns must be shipped freight prepaid and fully insured to PureLink, Ramsey, NJ USA, with the RMA number clearly marked on the outside of all shipping boxes and containers. PureLink reserves the right at its sole discretion to refuse any shipments arriving freight collect or without an RMA number. Any authorized returned merchandise must be accompanied by a note describing the reason for return, along with contact information including name, phone number, return mailing and shipping addresses, e-mail address, and RMA number.

On any products returned and accepted with an RMA number, return freight charges following repair of items under warranty shall be paid by PureLink, shipping by the standard ground carrier of its choice.

ADVANCE WARRANTY REPLACEMENTS

PureLink's advance replacement service offers a Replacement Unit upon request - free of charge for eligible products purchased less than one (1) year of the warranty claim. Products purchased more than one (1) year prior to the warranty claim do not qualify for advance replacement services.



Advance replacement requests must be validated by a member of PureLink's Technical Support Team. Replacement units may be new or refurbished and is subject to availability. PureLink is responsible for shipping the Replacement Unit to your designated location by standard ground service. All other shipping methods will be responsibility of the Dealer.

Original Unit Return – the Original Unit must be returned within thirty (30) calendar days of the return authorization date. Failure to return the Original Unit within this period will be subject to a minimum 15% re-stocking fee. Dealer is solely responsible for the shipping of the Original Unit to PureLink.

TO MAKE A WARRANTY CLAIM

To make a warranty claim, promptly notify PureLink within the warranty periods described above by calling PureLink's Technical Support Department at 1-201-488-3232. PureLink, in its sole discretion, will determine what action, if any, is required under this warranty.

Most problems can be corrected over the phone through close cooperation between Customer and a PureLink technician. To better enable PureLink to address a warranty claim, please have the Product's serial and model numbers. If PureLink, in its sole discretion, determines that an on-site visit or other remedial action is necessary, PureLink may send a representative to Customer's site.

CUSTOMER SERVICE

Technical support inquiries can be submitted electronically at <u>www.purelinkav.com</u>. For immediate assistance please contact PureLink's Customer Care Team at +1 (201) 488-3232

