VIP-STREAM-100
HDMI Streaming Encoder
USER MANUAL

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For technical support, please contact us at support@purelinkav.com.

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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
  - http://main.purelinkav.com/main/index.php?dispatch=categories.view&category_id=83

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
    - 1080p60
    - 1080p30
    - 1080p24
    - 720p60
    - 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

HDMI LED indicator
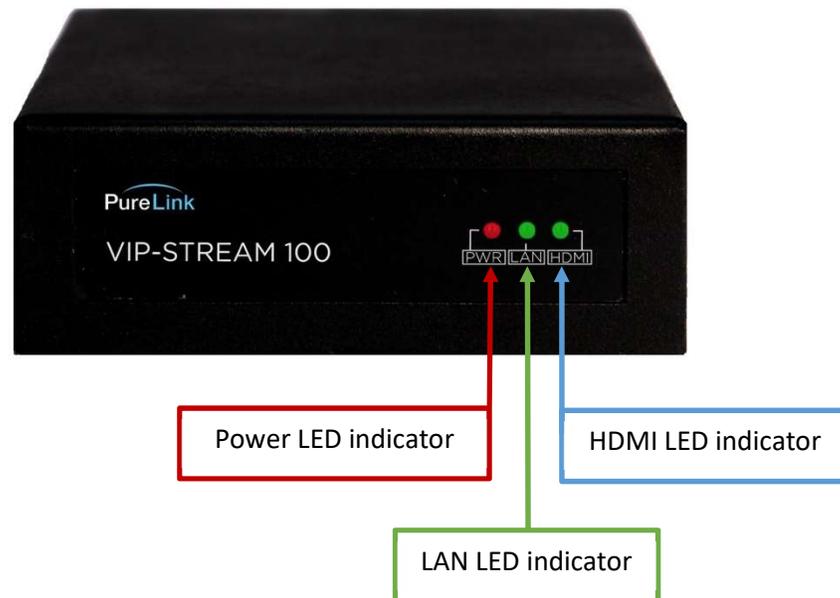
LAN LED indicator

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)

12v DC Power Input

HDMI input

Reset button

LAN connection
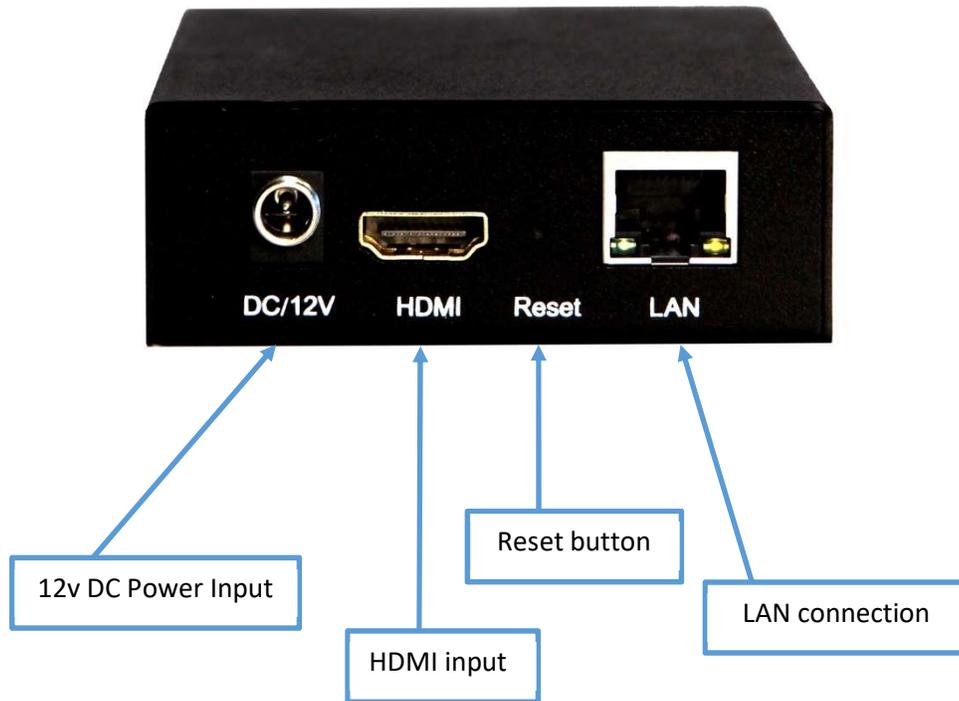
Things to Know Before You Start

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"
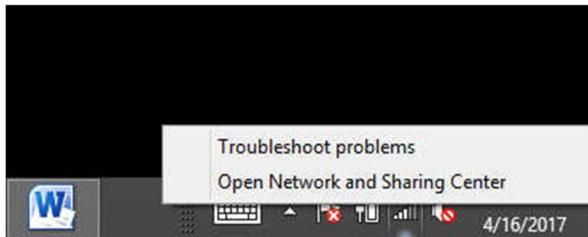
Option 2: Use the search window and type "Network and Sharing Center". When the search function provides choices below, select Network and Sharing Center.
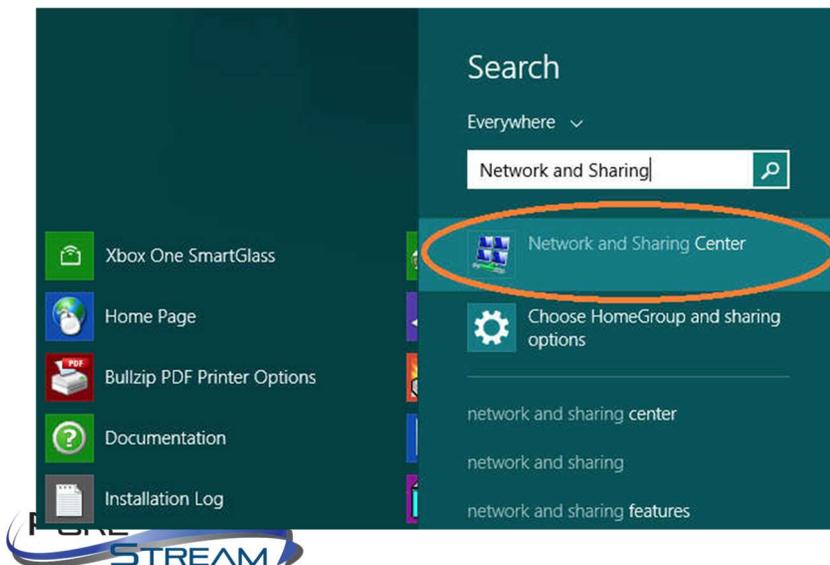
The next page will be as shown below. Select the "Change Adapter Settings"
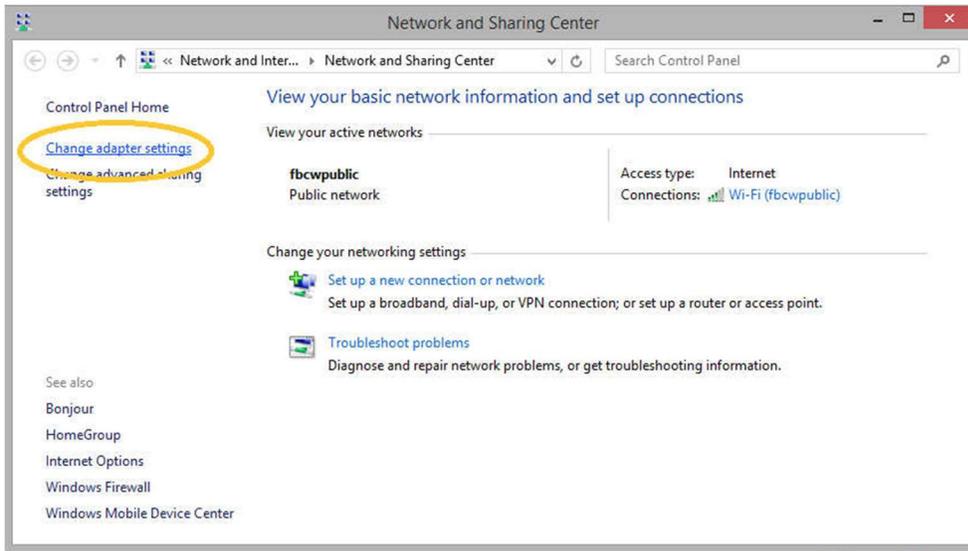
When you are in the Change Adapter Settings page as shown below, select the LAN adapter that you will use to communicate with the VIP-STREAM-100 system.
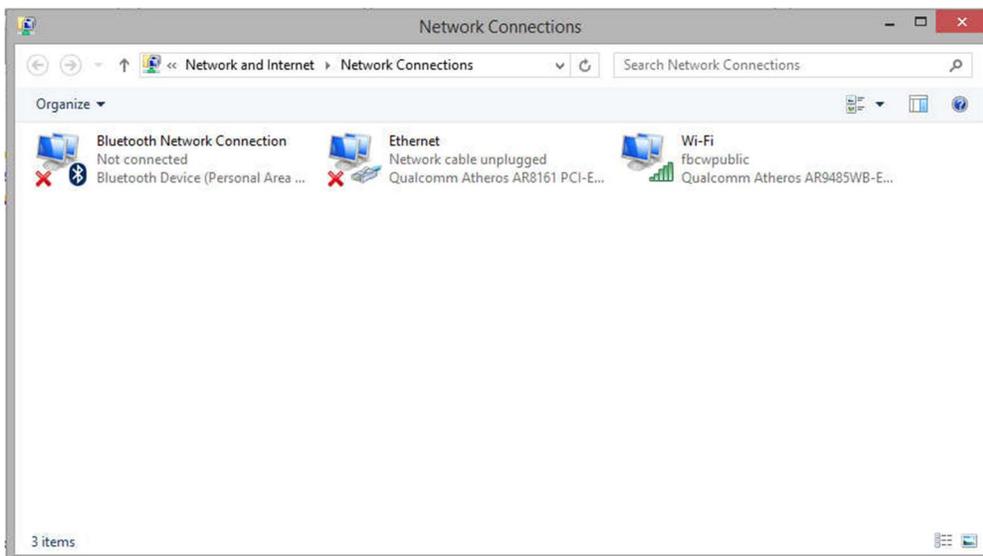
For this example, we will select the middle listing, Qualcomm Atheros LAN Adapter. Double click on the listing. The properties page will open as shown below.
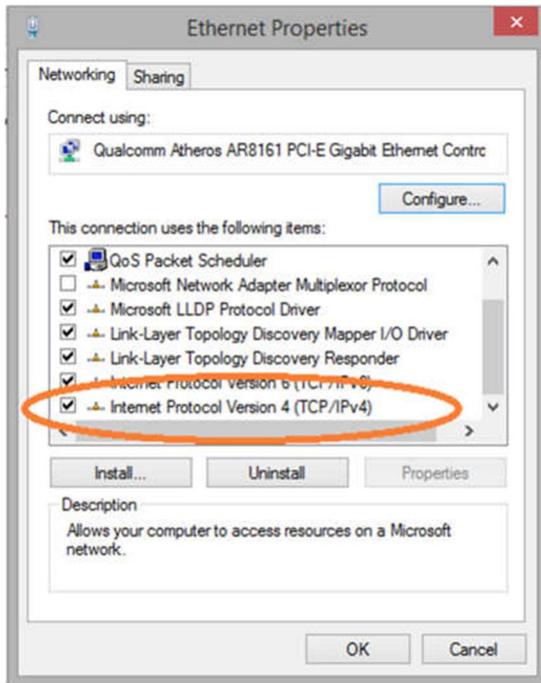
Select "Internet Protocol Version 4 (TCP/IPv4)" by double click on the text.
        Note: Do not deselect the checkbox or change the selections of any other properties in the menu.

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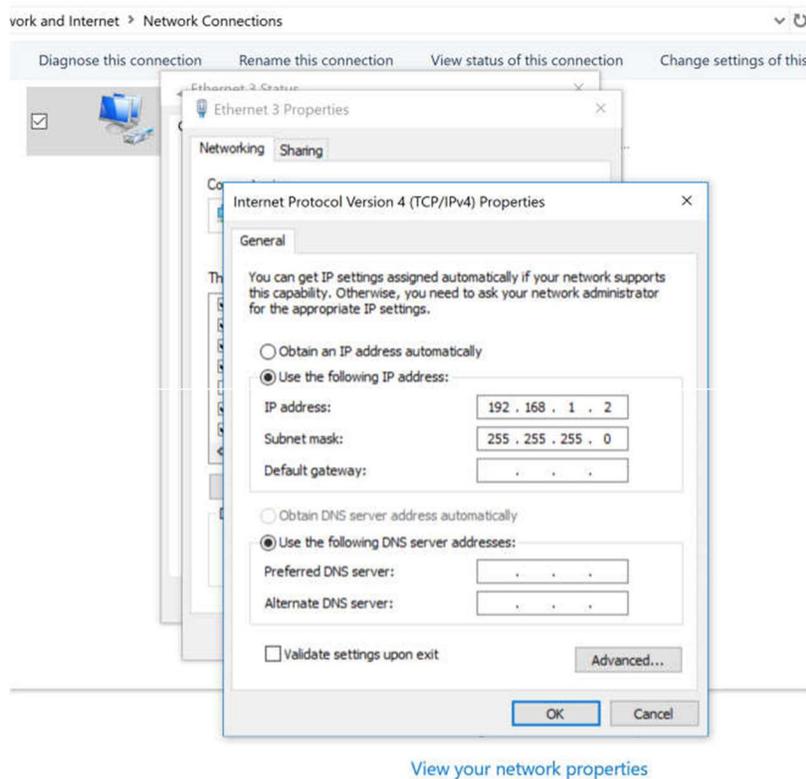
Note: Performing a factory default of the VIP-STREAM-100 will set the IP address to static, 192.168.1.168.

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'
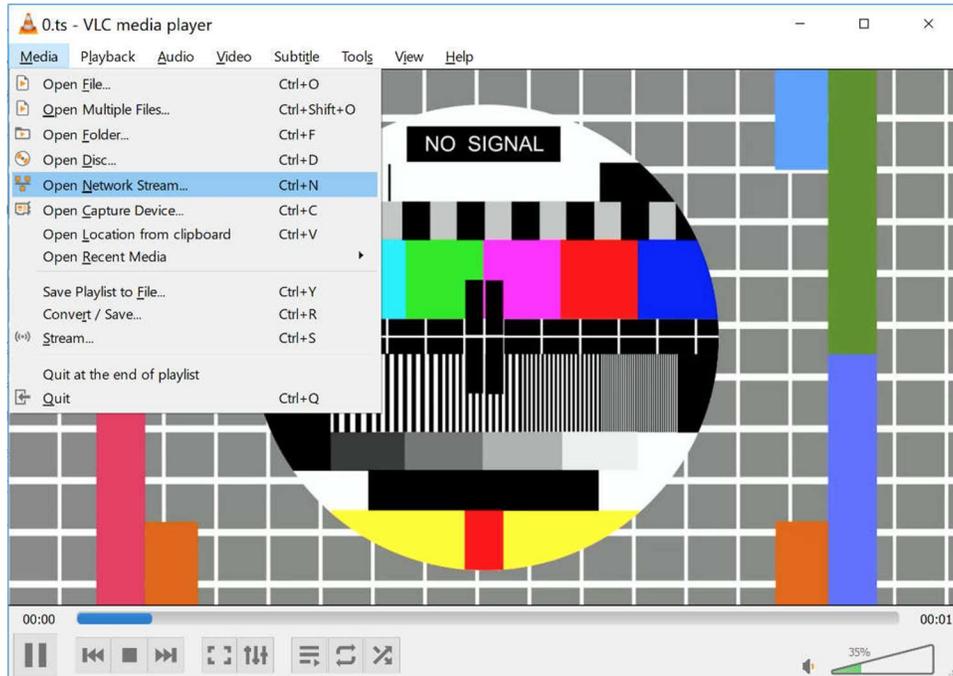
The 'Open Media' popup window will appear. In the 'Network' tab, enter the TS URL stream url, found on the
Status page of the VIP-STREAM-100 web page.
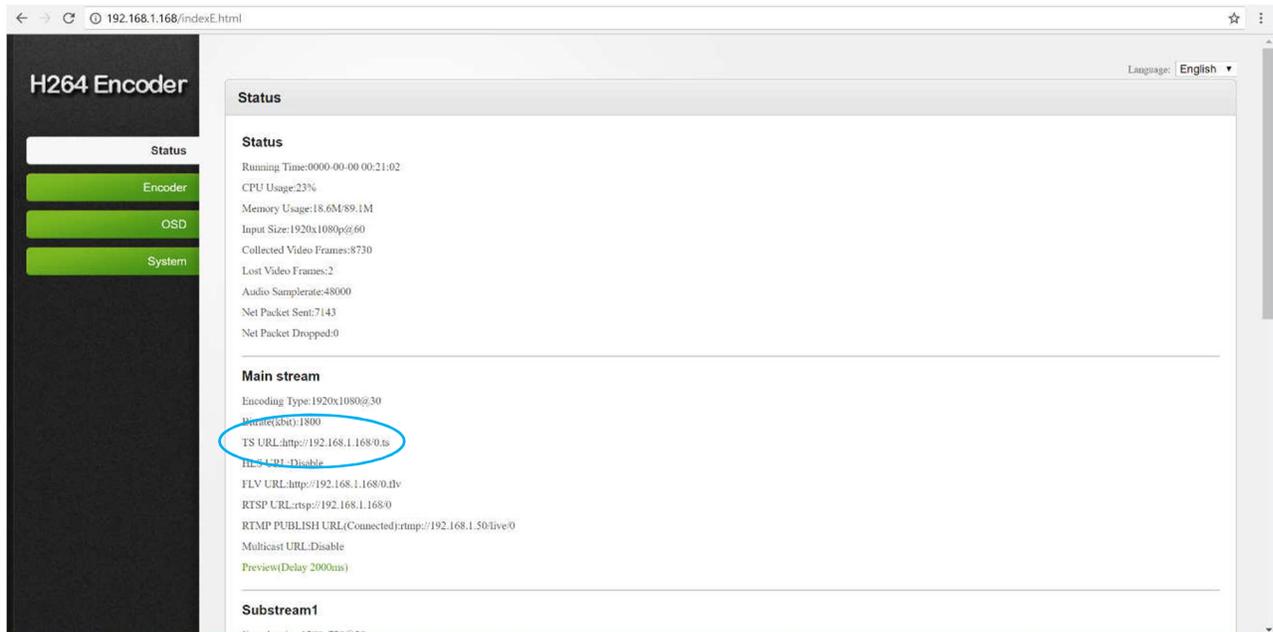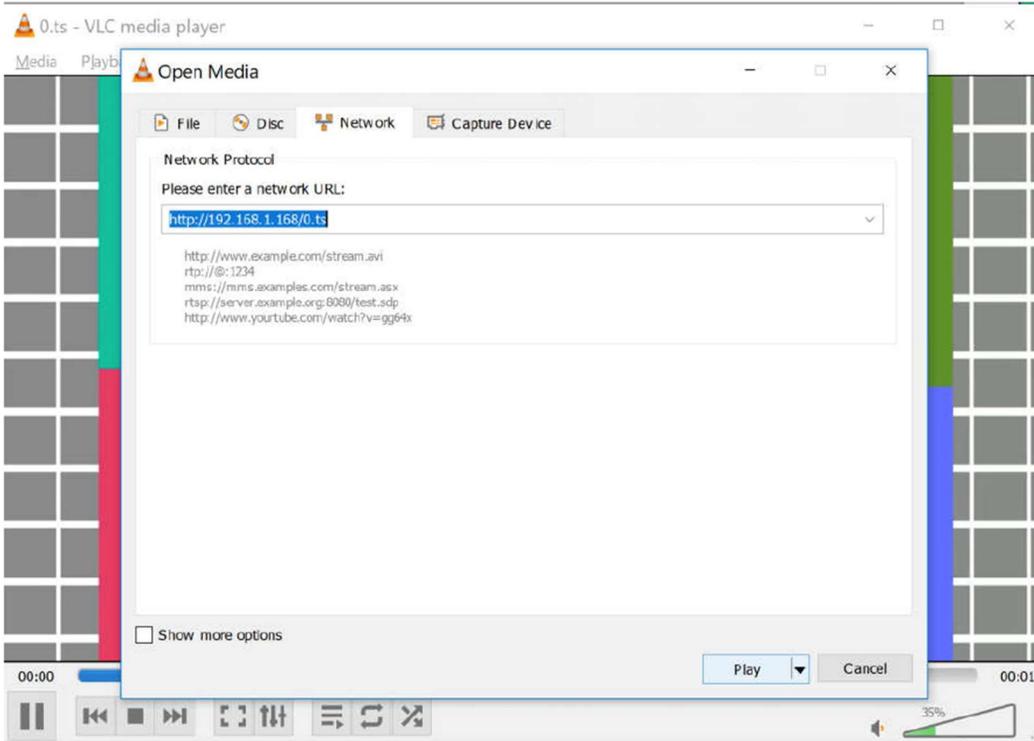
Press the 'Play' button. Your stream should now appear.

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: https://www.youtube.com/live_dashboard

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
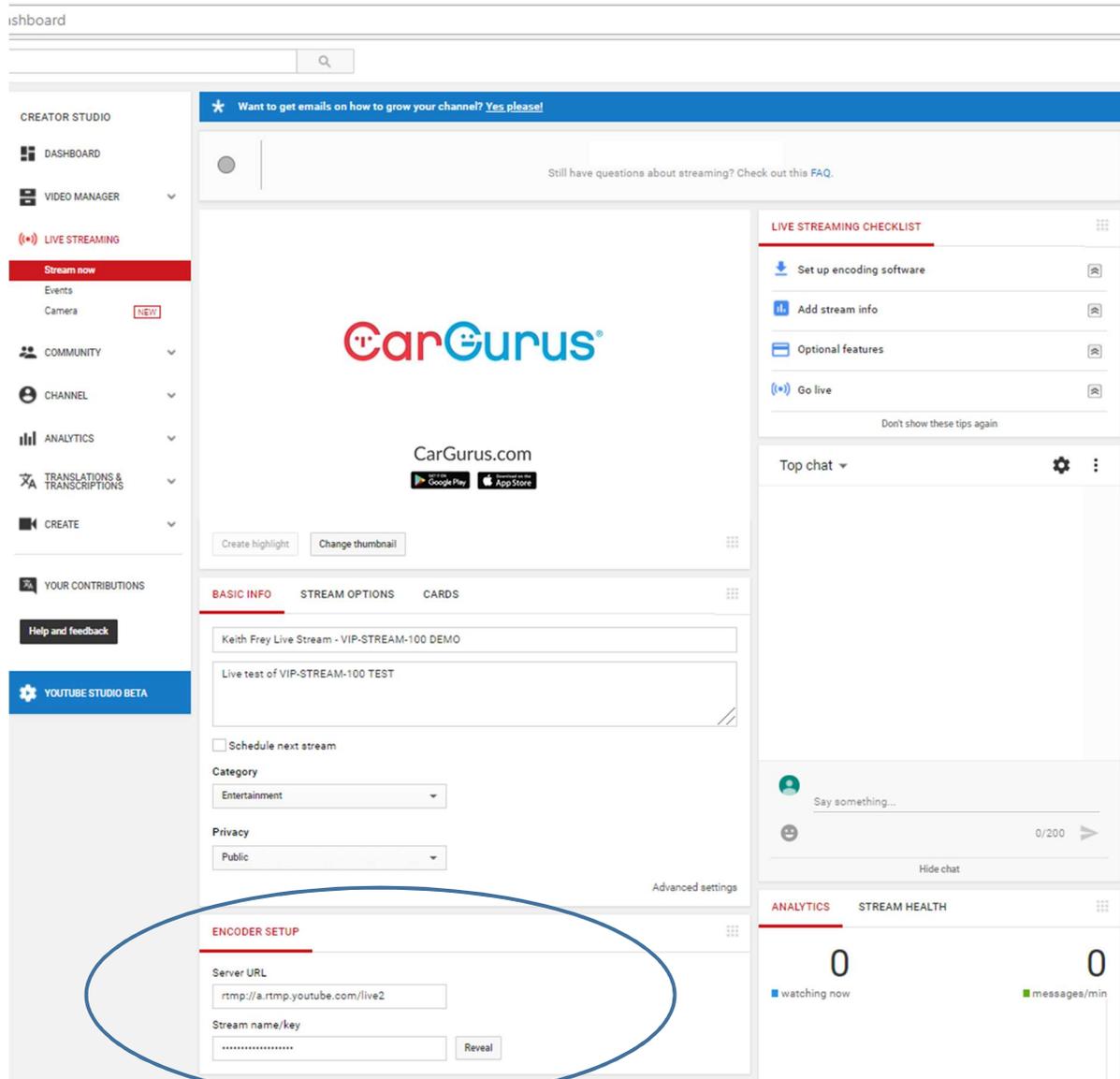
- Select the Encoder tab on the left navigation pane of the VIP-STREAM-100 main page.
- Select Main stream or any substream from the left navigation.
- Enter the Server URL and key in the RTMP PUBLISH URL text field.
- Select Enable from the pulldown menu to the right.
- Press the Apply button.
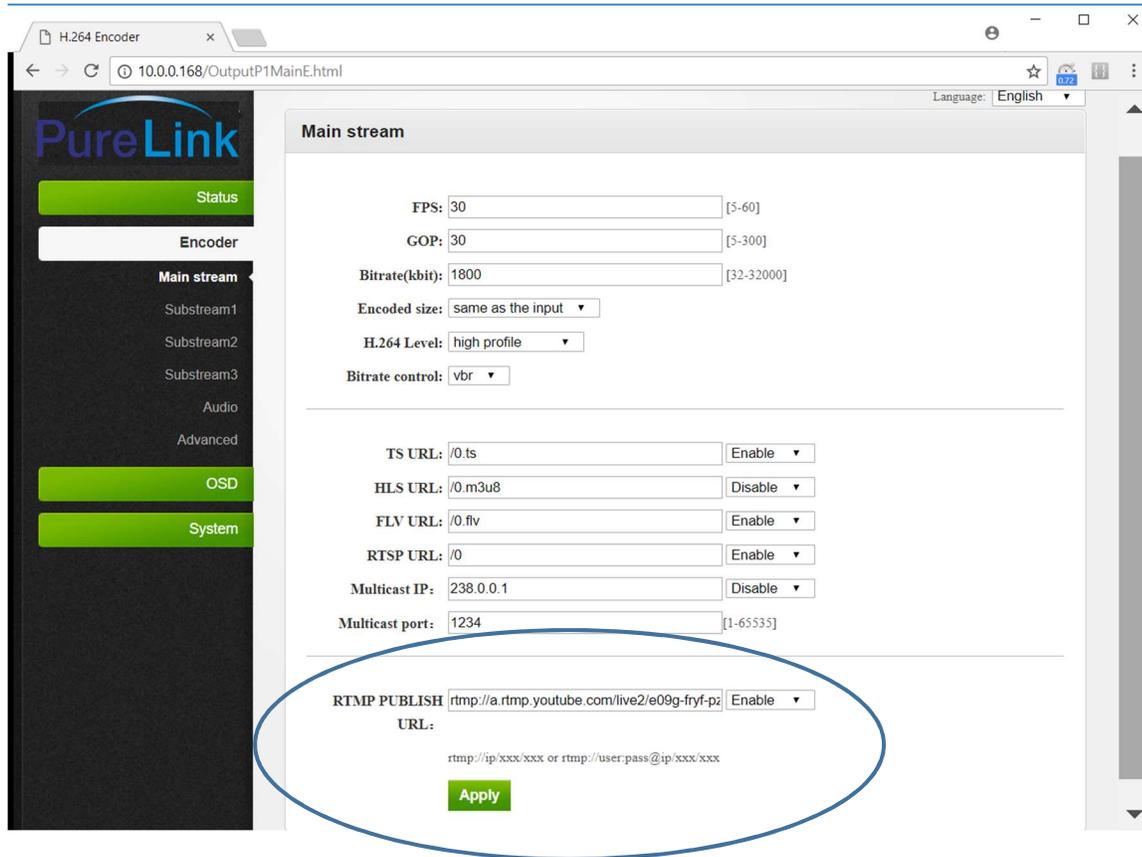
Return to your YouTube Live dashboard, and select the Go Live operation.
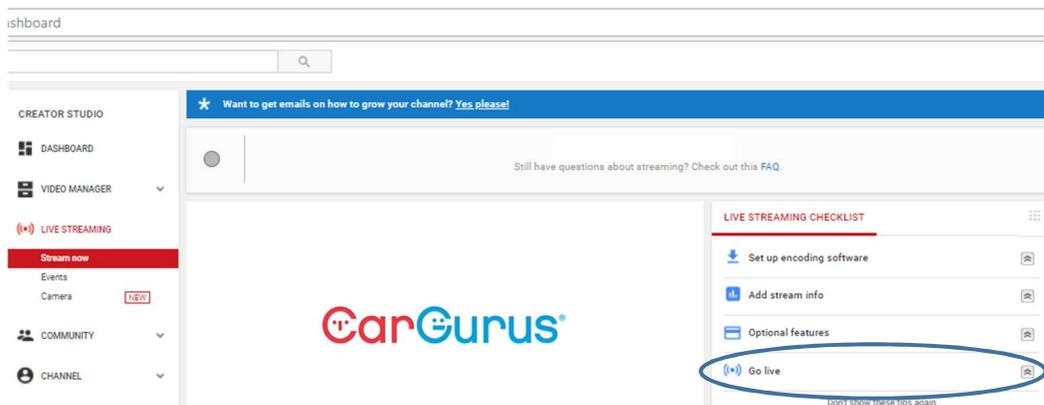
Decoding/Viewing with Facebook Live

Log in to your Facebook account and select Live Video
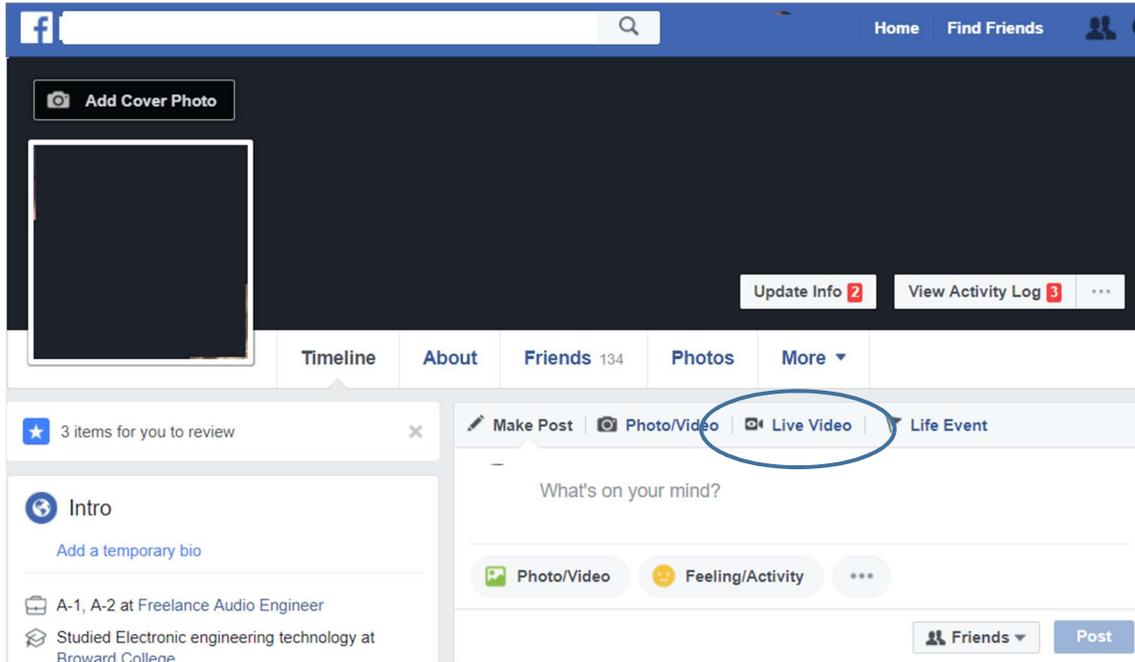
The next page will allow you to acquire the Server URL and Stream Key.
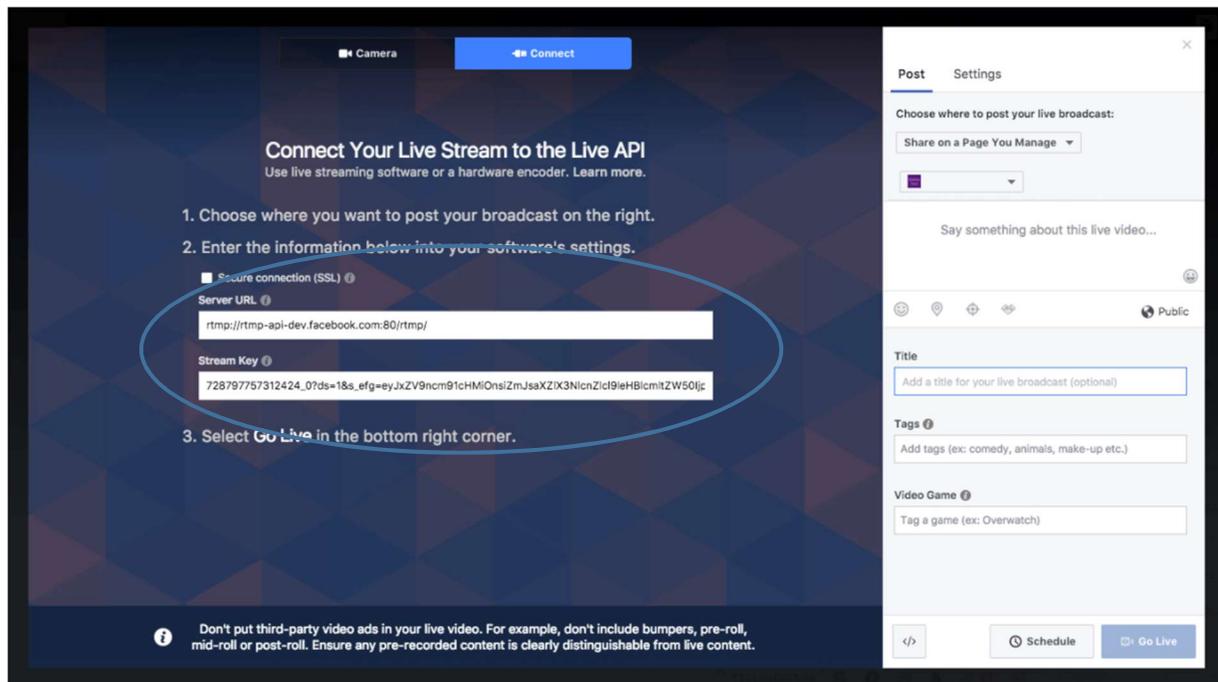
- Select the Encoder tab on the left navigation pane of the VIP-STREAM-100 main page.
- Select Main stream or any substream from the left navigation.
- Enter the Server URL and key in the RTMP PUBLISH URL text field.
- Select Enable from the pulldown menu to the right.
- Press the Apply button.
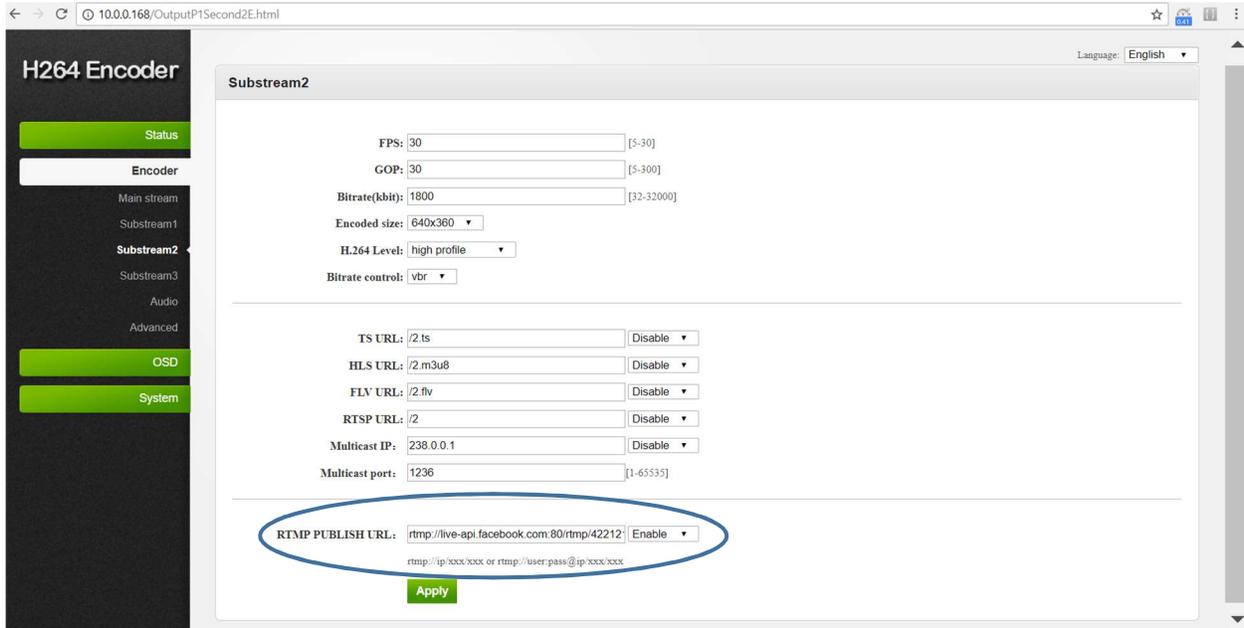
When the VIP-STREAM-100 is streaming to Facebook, you will see the preview. When you are ready to stream live, enter a description and title in the right pane, and either schedule the stream to start, or select Go Live
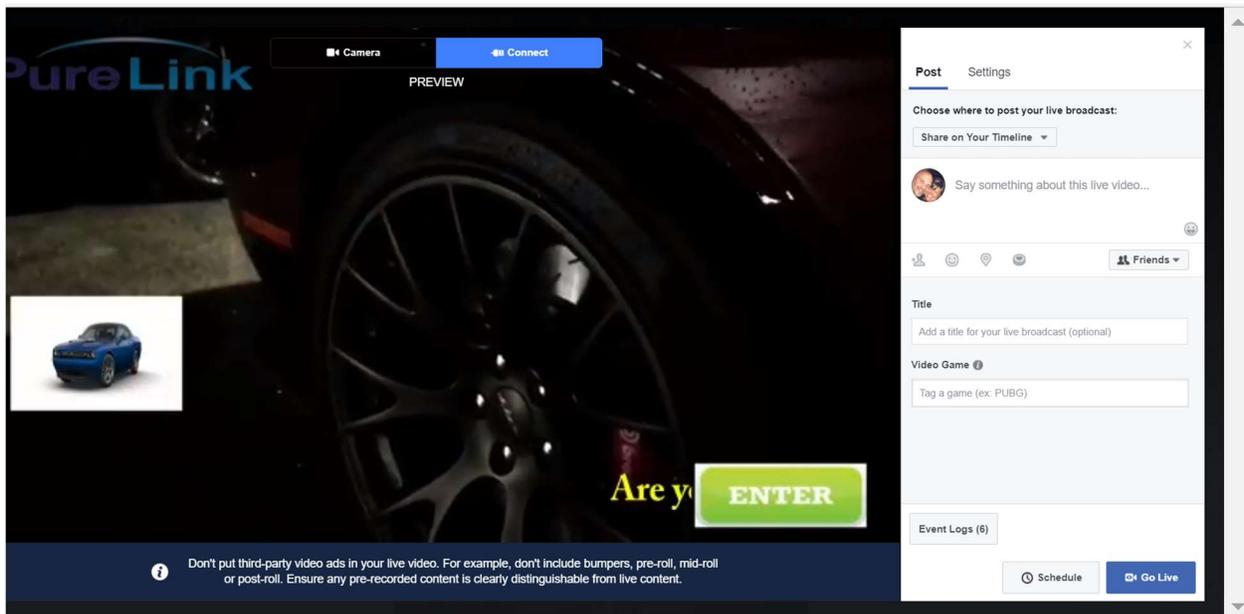
Glossary

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

PureLink™ Three (3) Year Limited Warranty

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 www.purelinkav.com.
For immediate assistance please contact PureLink's Customer Care Team at +1 (201) 488-3232