PureLink

VIP-200

PURE STREAM

Video over IP Extender and Matrix System

Many to Point Switching Configuration
Quick Start Guide

PureLink™
535 East Crescent Avenue
Ramsey, NJ 07446
USA

Contents

What is in the box

Transmitter kit

1x transmitter (VIP200H/D/V-TX)
1x Power Adapter
1x Infrared Receiver

Receiver kit

1x transmitter (VIP200H/DV-RX)
1x Power Adapter
1x Infrared Emitter
Remote Control

HDMI Transmitter

VIP200H-TX

HDMI Receiver

VIP200H-RX

VGA Transmitter

VIP200V-TX

DVI Transmitter

VIP200D-TX

VGA/DVI Receiver

VIP200DV-RX

Remote control for receivers VIP200H-RX and VIP200DV-RX

Rack Mount Option Plates

VIP200H-TX-RACK3
VIP200H-RX-RACK3
VIP200DV-TX/RX-RACK2

Overview

The VIP200 series allows point to point, point to many, many to point, and many to many configurations. The VIP200 series allows easy configuration of many transmitters to one receiver. You can operate a many to one VIP200 system easily with the supplied remote control or the VPX software. The VIP200 utilizes the VPX Software to discover and configure the system for quick implementation and easy operation.

Using the VIP200's Auto IP assignment method provides the easiest and fastest setup. There may be applications where you want to use a network switch that either provides DHCP addressing where the switch assigns all devices an IP address, or manual addressing where you set the IP addresses of the devices.

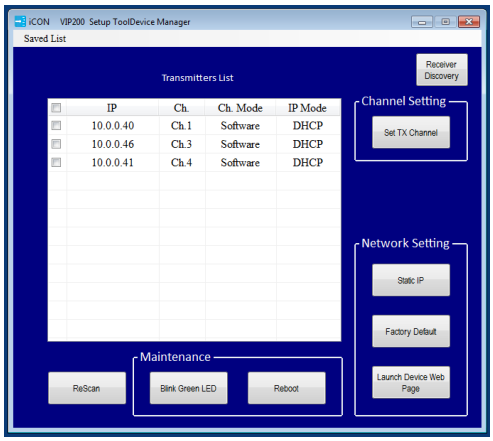
The VIP200 series provides three modes of IP addressing.

Auto IP Addressing

The VIP200 system default configuration provides automatic IP addressing in the 169.254.xxx.xxx range. The Auto IP method provides instant and easy setup and operation of the VIP200 devices when a specific manual IP address method is not required, and DHCP is not required.

Manual (Static) IP Addressing

The VIP200 device IP addresses can be configured manually (static). Using our simple software application (iCON VIP Device Manager) to identify the devices current IP scheme and address, you can then access their built in web page interface to change the devices to Manual IP mode if not already set. Manual IP addressing is utilized when the network is not DHCP, and the Auto IP range 169.254.xxx.xxx does not work with the current network, or the intended design. These settings are normally done prior to adding on to a network. Please see the 'Setting Devices for Manual IP Addressing" in this manual.



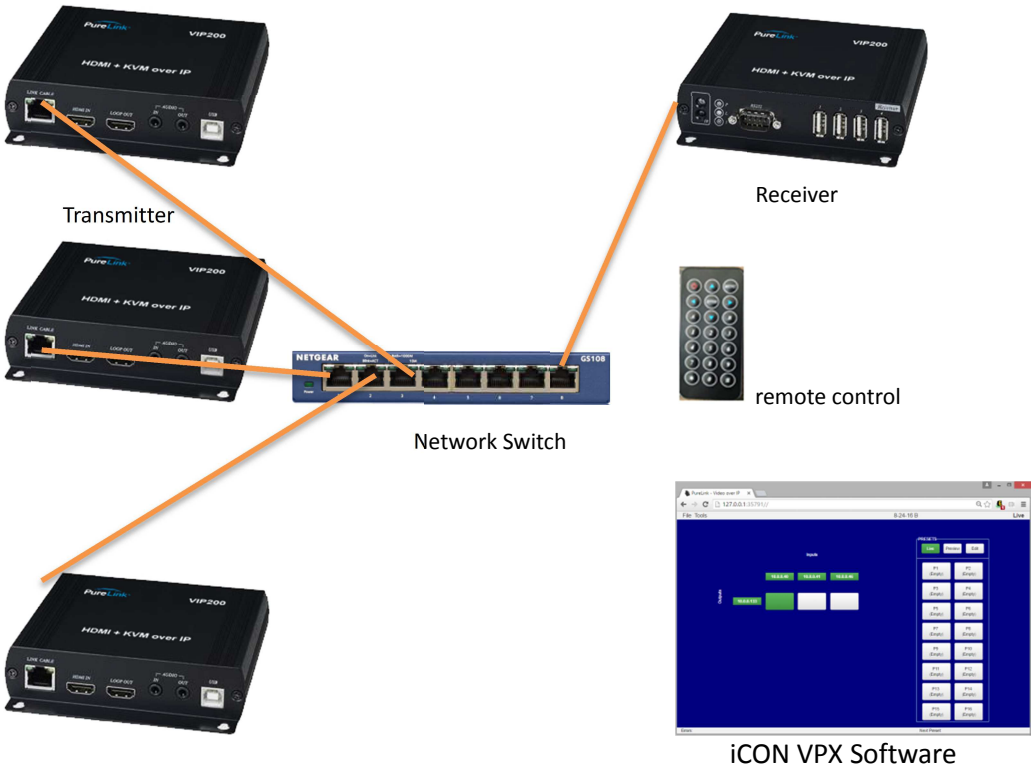
iCON VIP200 Setup Tool – Device Manager

DHCP Addressing

The VIP200 device IP addresses can be configured to accept IP addresses using DHCP. Using our simple software application to identify the devices, you can then access their built in web page interface to change the devices to DHCP IP mode.

NOTE: Because transmitters create continuous streaming traffic of video on the network, it is recommended when possible to create your IP video network independent of your data network, or use a managed network switch to create a VLAN. Use of gigabit switches with jumbo frame and IGMP support will create the most appropriate scenario for both independent IP video networks, and cases where IP video systems are included within your data network.

Many Transmitters to One Receiver Setup (Many to Point Distribution)



Example Application – Many to One

Many to point connection via CAT5e or better cable (CAT6a cable recommended)

VIP200 Transmitters and Receivers ship in Auto IP mode, which allows them to discover each other with no configuration required. While it is possible to reconfigure the transmitter and receiver to Manual IP or DHCP IP mode, it may not be necessary to make these changes in a many to point configuration, unless you need them to be on a network with other devices, or a network that has a DHCP or static IP method already employed.

- Connect the transmitters to your network switch
- Connect your receiver to the network switch
- Connect your source to the input of your transmitter
- Connect a display to the output of each receiver
- If desired, connect your confidence monitor to the loop out of the transmitter
- Connect the power adapters for each unit, and apply power. The system will go through a normal boot up sequence that takes approximately ten seconds to display the image.

KVM Operation

The receiver has four USB ports, the first port operates at 1.1 speeds, and the remaining ports operate at 2.0 speeds. Please use ports 2,3 or 4 when using a mouse or keyboard via USB to ensure ultra-low latency. All receivers are by default enable to connect via USB to the transmitter. You can disable the USB for each receiver if desired using our utility software, or from the OSD.

Typical reference streaming rates

Resolution (@60Hz)	Average Bandwidth (Mbps)
1080p	77 (24 ~ 91)
720p	46 (29 ~ 150)
480p	63 (36 ~ 73)
1600x1200 (UXGA)	59 (24 ~ 73)
1280x1024 (SXGA)	58 (31 ~ 76)
1024x768 (XGA)	118 (56 ~ 138)
800x600 (SVGA)	83 (64 ~ 107)

Use of USB may add up to 50 mpbs to stream rate, depending on the USB device(s).

Remote Control

Initial setup of remote control

A remote being used for the first time, or after battery replacement, needs to be assigned an ID

The universal ID that will control all receivers is 8. Press the 'Power' and '8' button at the same time.

Typical remote control operation for Point to Point Operation

OSD will clear ten seconds from displaying any menu.

- Display receiver MAC address
  - "Menu", "0", "Enter"
- Display Local (Receiver) address
  - "Menu", "1", "Enter"
- Display Host (Transmitter) address
  - "Menu", "2", "Enter"
- Display Receiver Firmware
  - "Menu", "5", "Enter"
- Restart Link
  - "Menu", "6", "Enter"

- Stop Link
  - "Menu", "7", "Enter"

- Enable Channel Buttons on Receiver (*one transmitter = one channel*)
  - "Menu","26","Enter"

- Disable Channel Buttons on Receiver (*recommended setting*)
  - "Menu","27","Enter"
    - *In order to avoid system errors, it is recommended when using one transmitter, such as point to many distribution, to disable the channel buttons, as you will always use only one channel. You can reverse this setting if needed.*

- Display Selected Channel
  - "Enter"
    - *In a point to many configuration, it is recommended to use the default transmitter channel 1.*
- Set to Receiver to Factory Default
  - "Menu","333","Enter"
    - Sets the Receiver only to factory default
- Receiver reboot
  - "Menu","999","Enter"

It is recommended for a one to many configuration that the transmitter is set on channel 1. The receiver must match in order to receive the signal. Setting the units to factory default will set the transmitter to channel 1 and Auto IP, and the receiver to listen for channel 1 and Auto IP.

Mute/unmute image

Press the 'Power' button to toggle mute/unmute. Note: there is an approximate four second delay to unmute.

Troubleshooting – Many to One

Transmitter reports no source (via OSD on Receiver lower left corner)

- Check source is active
- Ensure input cable is plugged in to correct port on transmitter (input vs loop out)
- Confirm cable passes signal and is not damaged
- Check power to transmitter is on

Receiver displays "looking for transmitter" in lower left of display

- Receiver may not be set to a channel that a transmitter is broadcasting on
  - Solution: Set the receiver to a different channel using the minus/plus buttons on the receiver, or the supplied remote control.

- More than one transmitter has the same channel
  - Solution: Check the transmitters using the VIP200 Setup Tool Utility program, and reprogram broadcast channels as necessary.

- Check that the CAT cables at both the transmitter and receiver are plugged in
- Check that all VIP200 devices have an illuminated green power LED.

Infrared remote control not operating the receiver

- Check that the IR confirmation LED on the receiver blinks when you send a command from the remote control
  - Check remote control battery (CR2025)
  - Check line of sight to IR receiver is not obstructed
  - If using an extension IR receiver, make sure the plug is inserted all the way in to the IR In jack.

Appendix

Methods to determine Auto IP assignments

There are two ways to determine the IP assignments of the transmitters and receivers.

1. On Screen Display

   Once the receiver discovers the transmitter that equals the channel it is assigned to, it will display both IP addresses in the lower right corner when no video signal is present. If

a video signal is present, you can request display of the host (transmitter) and client (receiver) with the following remote control buttons:

2. Network Discovery

   This method is available only when the transmitter(s) and receiver(s) are connected together via a network switch, and a computer running the iCON VIP Device Manager discovery tool is utilized. The computer's ip4v address must be set correctly to detect the devices.

Specifications

Subject to change without notice

ITEM NO.	VIP200H-TX	VIP200D-TX	VIP200V-TX
Support Resolution	480i / 480p / 720p / 1080i / 1080p @ 24Hz、25Hz、30Hz、50Hz、60Hz		
Transmission Distance	CAT.5e：150M / CAT.6：180M (Max)		
USB Connector	USB Type B x 1		
RS232 Connector	DB9 (Female) x 1		
Video Input Connector	HDMI type A x 1	DVI-I x 1 (29 Pin) Digital Only	15-pin Mini D-sub
Video Loop Output Connector	HDMI type A x 1	DVI-I x 1 (29 Pin) Digital Only	15-pin Mini D-sub
Link Connector	RJ45 x 1		
Audio Connector	3.5 mm Phone Jack x 2 (10KΩ / 1Vpp)		
IR Receiver (Internal)	30-60Khz / ±45° / 5M		
IR Emitter (External)	3.5mm Stereo Phone Jack		
Power Supply	DC 5V 2A		
Power Consumption	750mA (Typical) / 1000mA (Max)		
Temperature	Operation: 0 to 55℃, Storage: -20 TO 85℃, Humidity: up to 95%		
Dimensions mm	125x140x30	167x105.5x40	167x105.5x40
Weight g	380	470	460

ITEM NO.	VIP200H-RX	VIP200DV-RX
Support Resolution	480i / 480p / 720p / 1080i / 1080p @ 24Hz、25Hz、30Hz、50Hz、60Hz	
Transmission Distance	CAT.5e：150M / CAT.6：180M (Max)	
USB Connector	USB Type A x 4	
RS232 Connector	DB9 (Male) x 1	
Video Output Connector	HDMI Type A x 1	DVI-I x 1 (29 Pin) Digital Only / 15-pin Mini D-sub
Link Connector	RJ45 x 1	
Audio Connector	3.5 mm Phone Jack x 2 (10KΩ / 1Vpp)	
IR Receiver (Internal)	30-60Khz / ±45° / 5M	
IR Emitter (External)	3.5mm Stereo Phone Jack	
Power Supply	DC 5V 2A	
Power Consumption	750mA (Typical) / 1000mA (Max) Without USB Power Consumption	
Temperature	Operation: 0 to 55℃, Storage: -20 TO 85℃, Humidity: up to 95%	
Dimensions mm	125x140x30	167x105.5x40
Weight g	390	480

Network Switch Requirements

While a Point to Point normally is configured with the transmitter and receiver directly connected to each other by CAT cable, it is possible to have point to point over a network switch. The requirements for a network switch are:

- IGMP
- JumboFrame

The VIP-200 devices do not require a managed switch to operate. When the VIP devices are specifically on their own independent network switch, an unmanaged switch is sufficient. However, a managed switch may provide value in an application where the VIP devices reside on a network with other devices that may be impeded due to network traffic created by the VIP video/audio/usb streams.

Pure Assurance Tested Network Switches

Subject to change without notice. Please check our website for current updated listing.

PureLink

VIP-NET 1G and 10G managed switches
http://main.purelinkav.com/main/index.php?dispatch=news.view&news_id=210

Netgear

GS108: 8 port unmanaged switch
https://www.netgear.com/support/product/GS108?cid=wmt_netgear_organic

JGS524E: 24 port unmanaged switch
https://www.netgear.com/support/product/JGS524E.aspx?cid=wmt_netgear_organic

The VIP lines of PureStream IP Video products can be found at the purelinkav.com website

http://main.purelinkav.com/main/index.php?dispatch=products.view&product_id=223