

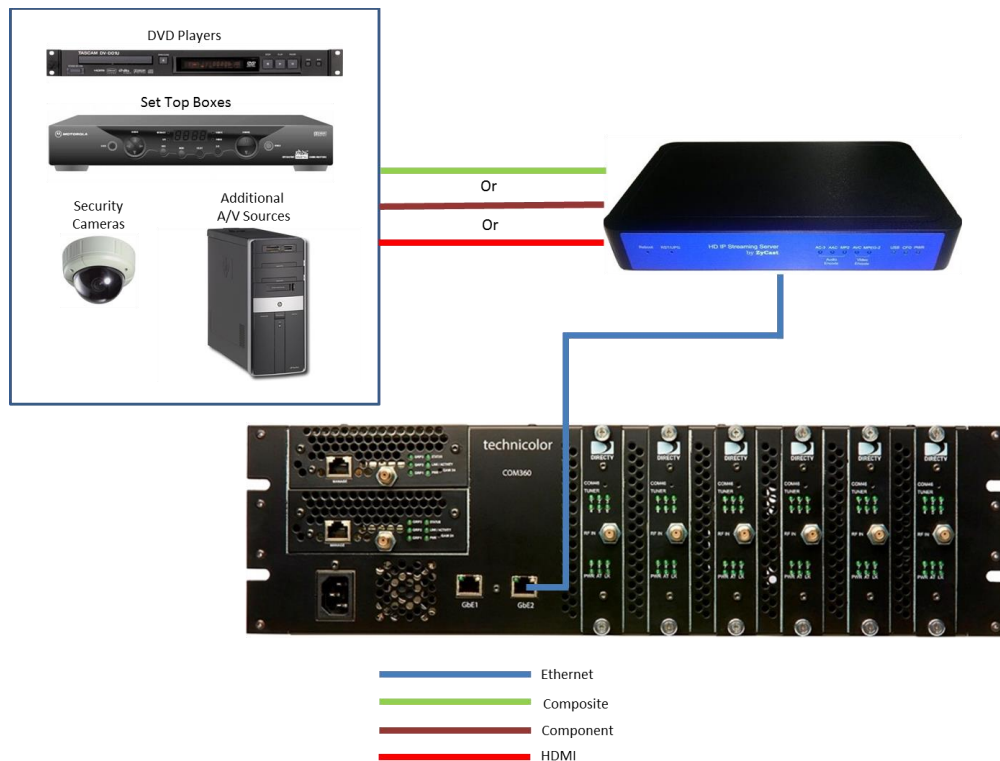


Inserting HD/SD Local Content with the COM2000 System

The Technicolor COM2000 system has the ability to accept and insert Local Content into the COM2000 system using the HD IP Streamer and the Technicolor QAM. The Local Content is inserted into the HD IP Streamer which can output either a Unicast or Multicast formatted stream that is then inserted into the COM2000 System. The Technicolor QAM is used assign a QAM channel to the IP stream and incorporates the local channel into the system.

The content source (a media player or other source) is connected to the HD IP streamer via a Composite, Component, or HDMI connection. Using the HD IP Streamer, a MPEG-2 SPTS (Single Program Transport Stream) is created and is output via a 1Gbe port. The HD IP Streamer encodes the Audio and Video content. The Integrator sets up a Unicast or Multicast Stream via the Web management pages of the encoder.

The HD IP Streamer is manufactured by ZyCast Technology, Inc. and offers a Composite, Component, and HDMI Input. By connecting the HD IP Streamer either with a Component, HDMI, or Composite cable to the source (i.e. Digital Signage Media Player). The Streamer can be setup to output a MPEG-2 CBR SPTS stream in either a Multicast or Unicast format. An Ethernet cable from the Streamer is connected to the GbE1 or GbE2 port on the COM360. (Note: If both GbE ports are in use the Integrator will need to introduce a 1Gbe Ethernet Switch into the design/setup).



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Setting up the HD IP Encoder with the COM360 to insert Local Content using Unicast:

1) Enter the IP address of the HD IP Streamer into any browser.

The IP address can be found by using Wireshark or by connecting the Streamer directly into a PC and allowing the UPnP- functionality of the device to be discovered and the devices.

Wireshark Capture example:

4973	10.405013000		MPEG TS	1358 NULL packet
4974	10.405016000	169.254.5.98	224.1.1.1	MPEG TS 1358 NULL packet

Example: 169.254.5.98:8888

(Include the SOAP port '8888' of the Device when entering in the IP address in the browser)


Device Shown on PC as a Media Device:



Click Network. The HD IP Streamer will be displayed on the right panel under Media Devices. Right Click and Select 'View Devices Webpage'. IP address will be loaded into your browser automatically.



2) Once the IP address is entered the Integrator will be presented with the Overview page of the Encoder.



1969-12-31 19:29:55
GMT-0500 (EST)
Up 29 minutes

IP Streamer

Overview
Encoder Setup
Streaming Setup
Network Setup
Administration

Welcome!

Need VLC plugin!

Device Name: HDIP066914

Program Name: DEMO-TV

Model Number: HDIP-930A

Serial Number: 1434 066914

MAC Address: F8:0D:EA:41:05:62


Firmware Version: 2014082216

Streaming: Multicast

	Video	Audio
Input Source	NONE / ??	Analog
Output Format	MPEG-2 CBR / 480p30	AC-3
Output Bitrate	4.000 Mbps	128 Kbps
Actual Output	4.943 Mbps	
Encoder Status	Freerun	
Clients	1	

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3) By selecting the 'Encoder Setup' tab the user will be presented with a login screen



To view this page, you must log in to area "Protected" on 169.254.5.98:8888.

Your password will be sent unencrypted.

Name:

Password:

Remember this password in my keychain

Name/Login: **admin** Password: **Admin123**



4) Encoder Setup page settings:

Overview

Encoder Setup

Streaming Setup

Network Setup

Administration

Encoder Setup

This page allows the user to configure the encoder's settings. After changes are made use the Save and Confirm button. The encoder will reboot and apply the new settings.

Device Name:	HDIP066914
Program Name:	DEMO-TV
Video Input:	Auto detect
Video Output:	MPEG-2 CBR
AVC Profile:	Default
AVC Level:	Default
Video Bitrate:	
HD Source:	10.000 Mbps (10~20 Mbps)
SD Source:	4.000 Mbps (2~8 Mbps)
Aspect Ratio:	16:9
Audio Input:	Auto detect
Audio Output:	AC-3
Audio Bitrate:	128 Kbps

Select **MPEG-2 CBR** as the Video Output and Select **AC-3** Audio Output.

5) Save and Confirm all changes made on the Encoder Page.

Save and Confirm Cancel

(Note: The Save and Confirm function will save all changes to the Encoder and bring the Integrator back to the Overview Page.)

6) Determine the Unicast Destination Port to be set of the HD IP Streamer:

The Integrator of the COM2000 must determine the **Destination Port** for Step 7 of the QAM Channel to send the video of the Streamer to. See below for Port number determination:

To send the video stream from the HD IP Streamer to the 23-1 on COM2000 we need to determine the correct Destination Port for Channel 23-1

(From the table below we see that Chan 23 is on Qam1)

Example 1: to insert the Local Channel on 23-1 Determine the Destination Port:

Port = QAMChannel * 16 + QamSubChannel

Port= (Qam1*16+1) = (1*16+1) Port = 17.

Destination IP address:192.168.6.9

Destination Port: 17

(From the table below we see that Chan 24 is on Qam2)

Example 2: to insert the Local Channel on 24-1 Determine the Destination Port:

Port = QAMChannel * 16 + QamSubChannel

Port= (Qam2*16+1) = (2*16+1) Port = 33.

Destination IP address:192.168.6.9

Destination Port: 33

(From the table below we see that Chan 25 is on Qam3)

Example 3: to insert the Local Channel on 25-2 Determine the Destination Port:

Port: Port = QAMChannel * 16 + QamSubChannel

Port = (Qam3*16+2) = (3*16+2) Port = 50.

Destination IP address:192.168.6.9

Destination Port: 50



EdgeQAM Modulator

Which EdgeQam (192.168.6.1+chassis):

Mega-Bits Per Second

Port = QamChannel * 16 + QamSubChannel

	PortBase	Chan	-1	-2	-3	-4	total
Qam1	16	23	8.2	1.5	6.8	1.5	18.1
Qam2	32	24	0.0	0.0	0.0	0.0	0.0
Qam3	48	25	0.0	0.0	0.0	0.0	0.0

Note: Local content can be inserted on any QAM Channel provided the total bitrate is less than 38.8 Mbps per QamChannel.

7) *Select the Streaming Tab*

Note: The HD IP Streamer can support Multicast or Unicast when working with the COM System. ***Unicast is the preferred Stream method for the COM2000 System.***



- Overview
- Encoder Setup
- Streaming Setup
- Network Setup
- Administration

Streaming Setup

This page allows the user to configure the streaming settings.

HTTP (DLNA Default)

Enable HTTP:
 Enable Auth.:
 RADIUS IP:
 RADIUS Secret:

Multicasting

Enable Multicast:
 Group IP:
 Multicast Port:
 Multicast TTL:
 Enable RTP:

Unicasting

Protocol:
 Destination IP:
 Destination Port:

 Casting List:

- 7a) Uncheck 'Enable Multicast' check box.
- 7b) Select UDP under Unicasting.
- 7c) Enter the Destination IP of the COM2000 QAM.
- 7d) Enter the Destination Port of the QAM Channel.
- 7e) Click Add.
- 7f) Save and Confirm all changes.

Note: Unicast address is displayed in the Casting List window above.



- Overview
- Encoder Setup
- Streaming Setup
- Network Setup**
- Administration

Network Configuration

This page allows the user to configure the encoder's network settings.

CAUTION: Incorrect settings may cause the encoder to lose network connectivity. Recovery options will be provided on the next page.

Device Network

Hostname:	<input type="text" value="HDIP066914"/>
MAC Address:	F8:0D:EA:41:05:62
	<input type="checkbox"/> Enable DHCP
IP Address:	<input type="text" value="192.168.6.55"/>
Subnet Mask:	<input type="text" value="255.255.0.0"/>
Default Gateway:	<input type="text"/>
DNS Server:	<input type="text"/>
NTP Server:	<input type="text"/>
Time Zone:	(GMT-05:00) Eastern Time (US ▾)
Speed & Duplex:	Auto ▾

DLNA Settings

Device Name:	<input type="text" value="HDIP066914"/>
Program Name:	<input type="text" value="DEMO-TV"/>
HTTP/SOAP Port:	<input type="text" value="8888"/>

- 8a) Uncheck 'Enable DHCP' for Static IP address.
- 8b) Enter an IP address in the same IP scheme of the COM2000 system.
- 8c) Enter the Subnet Mask.
- 8d) Enter the Default Gateway (if required).
- 8e & 8f) Set NTP Server and Select Time Zone (as required).
- 8g) Save and Confirm all changes.

Note: Installer will loose connectivity after changing the IP address and saving the new settings.

- Remember to set the PC in the same IP Scheme as newly configured IP address of the device.
- The **SOAP Port** of the device is used as part of the IP address entered into the browser to manage the device (192.168.6.55:8888)



9) *Once all the settings are made connect an Ethernet cable from the Streamer to the 1Gbe or 2Gbe port on the COM360.*

10) *Continue setting up COM2000 as usual.*

Note: We highly recommended backing up your config files for the streamer. See Administration Tab for Backup and Restore Functions.

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