

HDMI IP Encoder

MPEG-2 / H.264 (AVC) / H.265 (HEVC)

for up to 4 HD or SD Programs



Stock #	Model Name	Description
6567	Clearview™ HDMI4	4 Channel HDMI Encoder Module; 1RU



Product Introduction

The **Clearview HDMI4** can accept up to four HD or SD programs from the four HDMI input connectors located on the rear panel. The Clearview HDMI4 can encode to MPEG-2, H.264/MPEG-4 (AVC), or H.265 (HEVC) in all major resolutions from 480i through 1080p60.

Key Features:

- Supports (4) HDMI 2.0b inputs for local ingest
- Supports video encoding to MPEG-2, H.264, or H.265
- Supports audio encoding to Dolby® Digital AC3, AAC, MP3
- Supports output data rates from 2 to 19 Mb9



IMPORTANT NOTE BEFORE YOU BEGIN!

This unit does not currently support HDCP in any capacity. All HDMI sources NEED to be clear/unencrypted.

Before You Begin

Unpacking the Unit

You will find the following items in the box:

- **Clearview HDMI4** Encoder (QTY=1)
- Power Cord with IEC C13 line socket and 3-pin Type B NEMA 5 plug (QTY=1)

Step 1: Setup and Install of the Unit

The **Clearview HDMI4** is designed to be installed in a standard 19-inch (483 mm) rack (EIA 310-D, IEC 60297, and DIN 41494 SC48D).

To install, secure the unit's front panel to the rack by inserting four (4) machine screws, with cup washers, through the four (4) mounting holes in the front panel. A 1RU open space is recommended above the unit for ventilation.

1



DO NOT BLOCK THE UNIT'S AIR INTAKE OR AIR DISCHARGE OPENINGS

The Unit performance will be degraded without proper ventilation.
Excessive heat will shorten the life of the unit.

To power the unit up, connect the IEC line cord to the receptacle on the rear panel. Then connect the other end to a 120 VAC power outlet. The input power receptacle is equipped with a fuse-holder and fuse (SLO-BLO, 3.0 Amp, 250V).

2



WARNING

For safe and reliable operation, the ground pin of the power cord must be grounded properly.

Step 2: Connecting to a PC/Laptop

ETHERNET ACCESS:

Local or remote communication with the unit is only possible through a GUI-based menu via web browser (Chrome or Firefox is recommended). Before you can communicate with the unit, you must configure your computer's IP address to be in the same subnet as the unit's default IP address. To do so, follow these steps:

- 1 Connect one end of the Ethernet cable to the “**Control**” port on the unit front-panel interface. Connect the other end of the Ethernet cable to your computer.
- 2 The factory default IP address of the Control port is “**172.16.70.1**”. In order to communicate with the Control port, you must first change your computer's IP address.

The following steps explain how to do this for a computer with **Windows 7**, **Windows 8.x** or **Windows 10** operating software:

(a) On your computer, navigate to the “Network and Sharing Center”.

(Note: It can be found using the search box in the Start Menu or for Windows 8.x, the Start Screen)

(b) Once open, click on “Change Adapter Settings” on left hand side of the window.

(c) Right-click on the “Local Area Connection”, and then click on the “Properties”.

(d) A dialog box entitled “Local Area Connection Properties” will appear. In this box, double-click on the “Internet Protocol Version 4 (TCP/IPv4)”.

(e) A dialog box entitled “Internet Protocol Version 4 (TCP/IPv4) Properties” will appear. Select the “Use the following IP address” option and enter the following addresses:

IP address: **172.16.70.2**

Subnet mask: **255.255.255.0**

No need to enter a value for the Default Gateway.

Click OK to close the dialog box. Your computer is now ready to communicate with the unit.



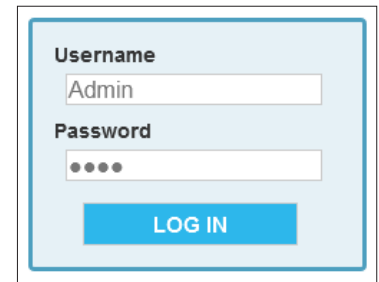
IMPORTANT NOTE ON PORT CONFIGURATION

The “**Control**” port and “**IP Video**” port should not be configured to be within the same IP subnet. The “**Control**” port and “**IP Video**” port should also not be physically connected to the same network without proper network segmentation.

It is possible to access the unit's user interface via the “**IP Video**” port by using the IP address assigned to EC1.

Step 3: Login to the Controller

An Ethernet Cable should be connected between your PC and the “Control” port on the unit. Open a Web browser (Chrome or Firefox recommended) and type <http://172.16.70.1> in to your web browser to view and configure your Clearview HDMI4. Enter the username “Admin” and “pass” as the password and click [LOG IN].

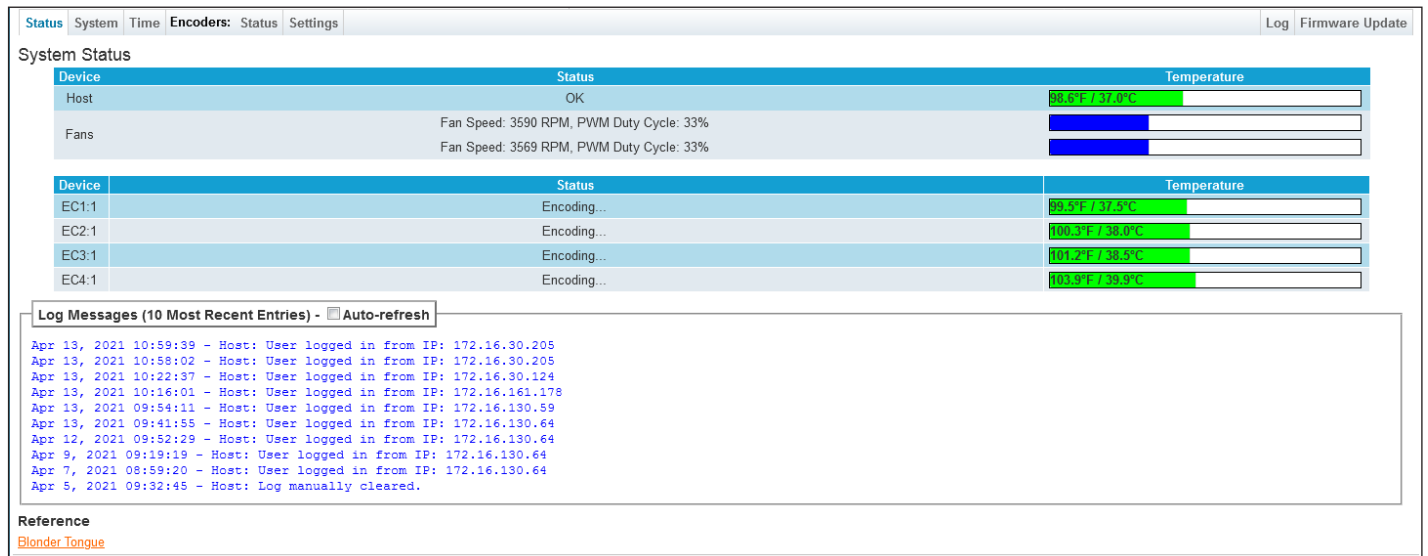


The login form is a light blue box with a white border. It contains two input fields: 'Username' with the text 'Admin' and 'Password' with four dots. Below the fields is a blue button labeled 'LOG IN'.

Step 4: Basic Configuration

System Status

Once you are logged into the unit, you will be presented with the “System Status” page (“Status” tab):



The screenshot shows the 'System Status' page with a navigation bar at the top containing 'Status', 'System', 'Time', 'Encoders', 'Status', and 'Settings'. There are 'Log' and 'Firmware Update' links on the right. The main content area is divided into two tables. The first table shows 'Host' status as 'OK' and 'Fans' with 'Fan Speed: 3590 RPM, PWM Duty Cycle: 33%'. The second table shows encoder statuses: EC1:1 (Encoding...), EC2:1 (Encoding...), EC3:1 (Encoding...), and EC4:1 (Encoding...). Below the tables is a 'Log Messages (10 Most Recent Entries)' section with an 'Auto-refresh' checkbox. The log entries show user login events from various IP addresses and a manual log clear. A 'Reference' section at the bottom points to 'Blonder Tongue'.

Status Page - Full View

This section provides status messages, temperatures, and fan RPM for the host system as well as each encoder used.

The page also features a recent logged message box beneath the main status area which shows the 10 most recent entries within the Event Log. To see a more in-depth log of event messages, click the “Log” tab located on the right side of the navigation menu at the top.

System Settings

Go to the “System” tab to change the System Settings, including unit identification and network settings.

The user is also able to reboot the unit and upload/download configuration files. Once downloaded, the settings can be applied to the unit or the user can choose to set the unit back to the default factory settings with a click of a button.



IMPORTANT

A reboot is required after applying a configuration file.

The following Ethernet Settings can be changed: IP address, Subnet Mask, Default Gateway, and the Primary and Secondary DNS. In addition, the network settings for each encoder slave are individually configurable. Click “Apply Settings” in order to save new or changed settings.

Step 4: Basic Configuration (continued)

The screenshot shows the 'System Page - Full View' with the following sections:

- Unit Operations:** Includes a 'Unit Reboot' button and a 'Reboot' button.
- Settings Configuration:** Includes 'Default Unit Settings', 'Download Configuration File', 'Config File (2MB Maximum)', 'Browse...', 'No file selected', and 'Load & Apply Configuration File'.
- Command/Control Ethernet Settings:**
 - Unit Name: HDMI Unit 4
 - Unit Location: Room 100
 - MAC Address: 00:14:39:00:f3:60
 - IP: IP Address: 172.16.130.31, Subnet Mask: 255.255.255.0, Default Gateway: 172.16.130.254
 - DNS: Primary: 8.8.8.8, Secondary: 8.8.4.4
- IP Video Ethernet Settings:**

Encoder	IP Address	Subnet Mask	Default Gateway
EC1	172.16.81.50	255.255.255.0	172.16.81.254
EC2	172.16.81.60	255.255.255.0	172.16.81.254
EC3	172.16.81.70	255.255.255.0	172.16.81.254
EC4	172.16.81.80	255.255.255.0	172.16.81.254

System Page - Full View

Encoder Ethernet Settings

This section allows the user to individually configure the network settings for each numbered encoder (EC1 to EC4).



REMINDER

If the IP Address is changed, the procedure in Step 3 must be repeated using the new IP address in place of the default IP address in order to re-access the control panel.

Step 5: Encoder Configuration

Encoders: Settings

The final information to setup within the unit is located in the “Encoders:” > “Settings” tab.

The screenshot shows the 'Encoders: Settings' page with the following components:

- Encoder Configuration Diagram:** Shows four encoders (EC1:1, EC2:1, EC3:1, EC4:1) each with an 'Encode' block and an 'HDMI' output. The EC2:1 encoder is highlighted in blue.
- Settings Table:**

EC1:1	EC2:1	EC3:1	EC4:1
Video/Audio Pipeline Settings			
Pipeline Control: Enable			
Output Resolution: 1080p60			
Output Video Encoding Format: MPEG-2			
Output Video Bitrate: 8.0Mbps			
Output Audio Encoding Format: AC3 (2.0)			
Output Audio Bitrate: 192Kbps			
Output Audio Gain: 0 - Unity			
Output Stream URI: UDP // 239.50.50.72 2500			

Encoders: Settings Page - Example

On this page, the user is able to set up the Video and Audio Pipeline settings, located on the right side.

The visual representation of the encode pipeline on the left side is interactive. Clicking on a encode block displays the corresponding settings in the “Video/Audio Pipeline Settings” table, located on the right side. The corresponding tab is also highlighted for persistent indication of the Encode pipeline settings currently being shown.

Step 5: Encoder Configuration (continued)

Encoders: Status

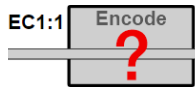
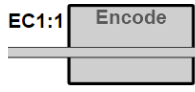
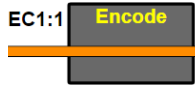
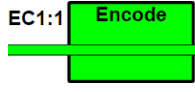

The information shown on this screen indicates the status of each encoder. A visual status of the pipeline is also shown on the left side. When hovering over an encode block, the corresponding status table highlights.

The screenshot shows the 'Encoders: Status' page. On the left, a vertical 'ETHERNET' label is next to a pipeline of four 'Encode' blocks (EC1:1, EC2:1, EC3:1, EC4:1). Each block is connected to an HDMI output (1, 2, 3, 4). The blocks are green, indicating they are active. On the right, a table provides detailed status for each encoder.




EC1:1	
Status	Encoding...
In - Video	1080p59.93
In - Video Information	YCbCr 4:4:4 @ 8 bits per color
Out - Video	1080p60 MPEG-2 @ 8.0Mbps
Out - Audio	AC3 @ 192Kbps
Out - Stream	UDP://239.50.50.71:2500
EC2:1	
Status	Encoding...
In - Video	1080i59.93
In - Video Information	YCbCr 4:4:4 @ 8 bits per color
Out - Video	1080p60 MPEG-2 @ 8.0Mbps
Out - Audio	AC3 @ 192Kbps
Out - Stream	UDP://239.50.50.72:2500
EC3:1	
Status	Encoding...
In - Video	720p59.99
In - Video Information	RGB 4:4:4 @ 8 bits per color
Out - Video	1080p60 MPEG-2 @ 8.0Mbps
Out - Audio	AC3 @ 192Kbps
Out - Stream	UDP://239.50.50.73:2500
EC4:1	
Status	Encoding...
In - Video	720p59.99
In - Video Information	RGB 4:4:4 @ 8 bits per color
Out - Video	1080p60 MPEG-2 @ 8.0Mbps
Out - Audio	AC3 @ 192Kbps
Out - Stream	UDP://239.50.50.74:2500

Encoders: Status Page - Visual and Informational Status

Encoder Status States

-  **Light Gray (Red Question Mark):** The encoder has not been detected yet.
-  **Light Gray:** The encoder is disabled.
-  **Dark Gray (Orange Arrow):** The encoder is idle.
-  **Green:** The encoder is active.
-  **Red:** The encoder has failed.

HDMI Status States

-  **Black:** The HDMI has no connection.
-  **Green:** The HDMI is connected and sending a signal.
-  **Red:** The HDMI is connected and has an error.

Non-Standard Network Configuration

Example network configuration:

1. The Video Source device's control port is configured to be at **192.168.3.18**.
2. The **Clearview HDMI4** IP Video ports are configured to be at **192.168.6.71 - 192.168.6.74** (**EC1** at "192.168.6.71", **EC2** at "192.168.6.72", etc.) with subnet masks of **255.255.0.0**.
3. The Management PC is configured to be at **192.168.3.5** with a subnet mask of **255.255.0.0**.

Note: The subnet mask of the Video Source device must be configured to be on the same subnet mask as the Management PC.

Accessing devices from the Management PC:

- To access the Video Source device, go to <http://192.168.3.18>
- To access the **Clearview HDMI** unit, go to EC1 at <http://192.168.6.71>

Note: Additional **Clearview HDMI** units sharing the same network with a single Video Source device need to have their encoder (EC1 - EC4) IP addresses assigned to avoid collisions with EC IP addresses on other **Clearview HDMI** units. In other words, all EC IP addresses on a network ***must*** be unique across all **Clearview HDMI** units.

Troubleshooting

For technical support please contact us at 1-800-523-6049 between the hours of 8am and 5pm EST.

Please refer to the User Manual for additional information.

Product and Documentation Updates

Download the latest User Manual (PDF) by visiting our website. Navigate to the product page by entering the full Model Name or Stock Number in the search field. Upon reaching the product page, the "User Manual" download link will be located beneath the product image. **Firmware Updates** are available under "Tech Support" in the "Resources" section of the website. General instructions for the FTP site, as well as updating your firmware, are provided on this page.

Returning Product for Repair (or Credit)

A Return Material Authorization (RMA) Number is required on all products returned to Blonder Tongue, regardless if the product is being returned for repair or credit. Before returning product, please contact the Blonder Tongue Service Department at 1-800-523-6049, Ext. 4256 or visit our website: www.blondertongue.com for further information.



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