



4K / UHD Four-Input HDMI Switcher with Auto-Switching and Return Optical Audio



AT-JUNO-451-HDBT

Atlona Manuals
Switchers

Version Information

Version	Release Date	Notes
1	6/18	Initial release

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Registration only takes a few minutes and protects this product against theft or loss. In addition, you will receive notifications of product updates and firmware. Atlona product registration is voluntary and failure to register will not affect the product warranty.

To register your product, go to <http://www.atlona.com/registration>

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Operating Notes



IMPORTANT: Visit <http://www.atlona.com/product/AT-JUNO-451-HDBT> for the latest firmware updates and User Manual.

- **NOTE:** For HDR and 4K/60 4:4:4 content (HDMI data rates exceeding 10 Gbps), the AT-JUNO-451-HDBT is not compatible with transmitters for the AT-HDR-EX-70-2PS, AT-HDR-EX-70C-KIT, or AT-HDR-EX-100CEA-KIT.

Atlona, Inc. (“Atlona”) Limited Product Warranty

Coverage

Atlona warrants its products will substantially perform to their published specifications and will be free from defects in materials and workmanship under normal use, conditions and service.

Under its Limited Product Warranty, Atlona, at its sole discretion, will either:

- repair or facilitate the repair of defective products within a reasonable period of time, restore products to their proper operating condition and return defective products free of any charge for necessary parts, labor and shipping.

OR

- replace and return, free of charge, any defective products with direct replacement or with similar products deemed by Atlona to perform substantially the same function as the original products.

OR

- refund the pro-rated value based on the remaining term of the warranty period, not to exceed MSRP, in cases where products are beyond repair and/or no direct or substantially similar replacement products exist.

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Atlona Limited Product Warranty Period begins on the date of purchase by the end-purchaser. The date contained on the end-purchaser’s sales or delivery receipt is the proof purchase date.

Limited Product Warranty Terms – New Products

- 10 years from proof of purchase date for hardware/electronics products purchased on or after June 1, 2013.
- 3 years from proof of purchase date for hardware/electronics products purchased before June 1, 2013.
- Lifetime Limited Product Warranty for all cable products.

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- 3 years from proof of purchase date for all Refurbished (B-Stock) hardware and electronic products purchased on or after June 1, 2013.

Remedy

Atlona recommends that end-purchasers contact their authorized Atlona dealer or reseller from whom they purchased their products. Atlona can also be contacted directly. Visit www.atlona.com for Atlona’s contact information and hours of operation. Atlona requires that a dated sales or delivery receipt from an authorized dealer, reseller or end-purchaser is provided before Atlona extends its warranty services. Additionally, a return merchandise authorization (RMA) and/or case number, is required to be obtained from Atlona in advance of returns.

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Exclusions

This Limited Product Warranty excludes:

- Damage, deterioration or malfunction caused by any alteration, modification, improper use, neglect, improper packaging or shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature.

Atlona, Inc. (“Atlona”) Limited Product Warranty

- Damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Atlona to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product.
- Equipment enclosures, cables, power supplies, batteries, LCD displays, and any accessories used in conjunction with the product(s).
- Products purchased from unauthorized distributors, dealers, resellers, auction websites and similar unauthorized channels of distribution.

Disclaimers

This Limited Product Warranty does not imply that the electronic components contained within Atlona’s products will not become obsolete nor does it imply Atlona products or their electronic components will remain compatible with any other current product, technology or any future products or technologies in which Atlona’s products may be used in conjunction with. Atlona, at its sole discretion, reserves the right not to extend its warranty offering in instances arising outside its normal course of business including, but not limited to, damage inflicted to its products from acts of god.

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The maximum liability of Atlona under this limited product warranty shall not exceed the original Atlona MSRP for its products. To the maximum extent permitted by law, Atlona is not responsible for the direct, special, incidental or consequential damages resulting from any breach of warranty or condition, or under any other legal theory. Some countries, districts or states do not allow the exclusion or limitation of relief, special, incidental, consequential or indirect damages, or the limitation of liability to specified amounts, so the above limitations or exclusions may not apply to you.

Exclusive Remedy

To the maximum extent permitted by law, this limited product warranty and the remedies set forth above are exclusive and in lieu of all other warranties, remedies and conditions, whether oral or written, express or implied. To the maximum extent permitted by law, Atlona specifically disclaims all implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose. If Atlona cannot lawfully disclaim or exclude implied warranties under applicable law, then all implied warranties covering its products including warranties of merchantability and fitness for a particular purpose, shall provide to its products under applicable law. If any product to which this limited warranty applies is a “Consumer Product” under the Magnuson-Moss Warranty Act (15 U.S.C.A. §2301, ET SEQ.) or other applicable law, the foregoing disclaimer of implied warranties shall not apply, and all implied warranties on its products, including warranties of merchantability and fitness for the particular purpose, shall apply as provided under applicable law.

Other Conditions

Atlona’s Limited Product Warranty offering gives legal rights, and other rights may apply and vary from country to country or state to state. This limited warranty is void if (i) the label bearing the serial number of products have been removed or defaced, (ii) products are not purchased from an authorized Atlona dealer or reseller. A comprehensive list of Atlona’s authorized distributors, dealers and resellers can be found at www.atlona.com.

Important Safety Information



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT OPEN ENCLOSURE OR EXPOSE TO RAIN OR MOISTURE. NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the product.

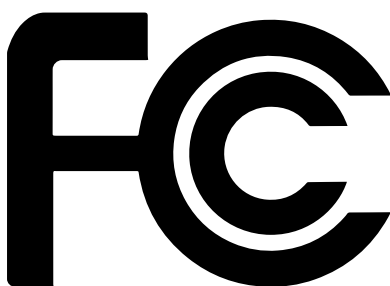


The information bubble is intended to alert the user to helpful or optional operational instructions in the literature accompanying the product.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this product near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install or place this product near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of a polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the product.
11. Only use attachments/accessories specified by Atlona.
12. To reduce the risk of electric shock and/or damage to this product, never handle or touch this unit or power cord if your hands are wet or damp. Do not expose this product to rain or moisture.
13. Unplug this product during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the product has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the product, the product has been exposed to rain or moisture, does not operate normally, or has been dropped.



FCC Statement



FCC Compliance and Advisory Statement: This hardware device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference, and 2) this device must accept any interference received including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed or used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: 1) reorient or relocate the receiving antenna; 2) increase the separation between the equipment and the receiver; 3) connect the equipment to an outlet on a circuit different from that to which the receiver is connected; 4) consult the dealer or an experienced radio/TV technician for help. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Where shielded interface cables have been provided with the product or specified additional components or accessories elsewhere defined to be used with the installation of the product, they must be used in order to ensure compliance with FCC regulations.

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Introduction

The Atlona **JunoX™451 HDBT (AT-JUNO-451-HDBT)** is a 4x1 switcher for high dynamic range (HDR) formats. The JunoX 451 HDBT features three HDMI inputs, plus an HDBaseT input for receiving video, embedded audio, and Ethernet over distances up to 330 feet (100 meters). It is HDCP 2.2 compliant and supports 4K/UHD video @ 60 Hz with 4:4:4 chroma sampling, as well as HDMI data rates up to 18 Gbps. The JunoX 451 HDBT is ideal for receiving 4K HDR over HDBaseT from an Atlona Opus™ Series matrix switcher, and is also compatible with the Atlona UHD-PRO3, UHD-CAT, and SW Series for data rates up to 10 Gbps. It includes EDID management features and automatic input switching. The JunoX 451 HDBT also supports the HDMI Audio Return Channel for receiving digital audio from a television, and includes a TOSLINK digital audio output for sending this audio to an AV receiver or soundbar. This JunoX Series switcher can be controlled via Ethernet, RS-232, and IR. A handheld IR remote control is included.

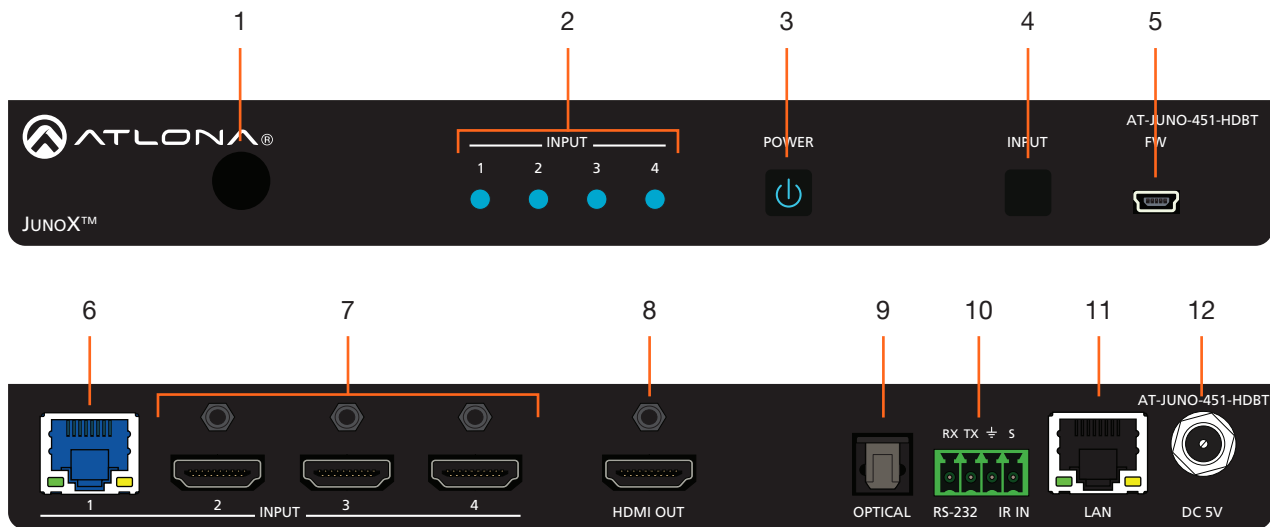
Features

- 4x1 HDMI Switcher
- 4K/UHD capability @ 60 Hz with 4:4:4 chroma sampling, plus support for HDR formats
- HDCP 2.2 compliant
- Automatic input selection using hot plug detect and video detection technology
- EDID management
- Delivers return audio from a TV to an optical digital audio output
- TCP/IP, RS-232, and IR control
- Front panel input selection status LEDs
- Award-winning 10 year limited product warranty

Package Contents

1 x AT-JUNO-451-HDBT
1 x 4-pin captive screw connector
2 x Mounting plates
4 x Rubber feet
4 x Screws
1 x IR remote control
1 x DC 5V power supply
1 x IEC cord
1 x Installation Guide

Panel Description



1 IR Window

Receives IR signals from the included IR remote.

2 Input Indicators

These LED indicators glow solid blue to indicate the active input.

3 POWER

Press this button to power-on or power-off the unit.

4 INPUT

Press and release this button to cycle through each of the inputs.

5 FW

Connect a mini USB cable to this port to update the firmware.

6 HDBaseT Input

Connect a transmitter, such as the AT-UHD-PRO3-44M, to this port using an Ethernet cable.

7 HDMI Inputs

Connect an HD/UHD source to each of these HDMI ports.

8 HDMI OUT

Connect an HDMI cable from this port to a display or other sink device. This output supports multichannel audio.

9 OPTICAL

Connect an optical audio cable from this TOSLINK port to an audio output device. This port is part of the Audio Return Channel (ARC): audio from the display is routed upstream, back to the switcher over HDMI, to this port.

10 RS-232 / IR IN

Connect the included 4-pin captive screw block to this port. Refer to [RS-232 / IR Connector \(page 11\)](#) for wiring information, if necessary.

11 LAN

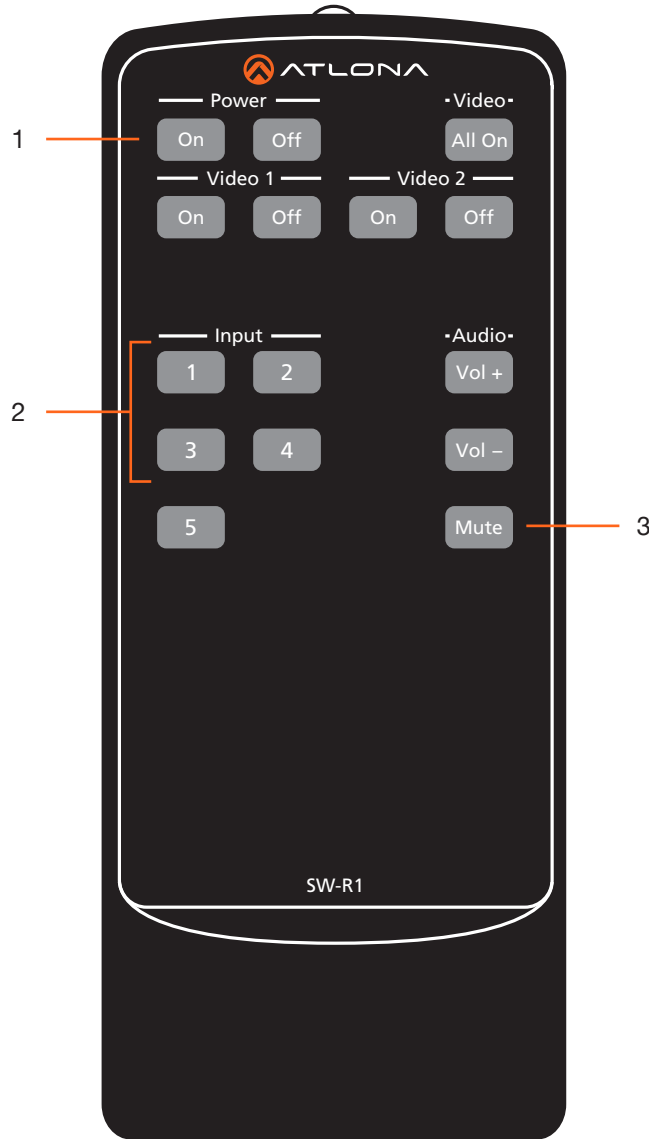
Connect an Ethernet cable from this port to a Local Area Network (LAN).

12 DC 5V

Connect the included 5 V DC power supply to this power receptacle.

IR Remote Control

The AT-JUNO-451-HDBT includes an IR remote control unit, allow the control of the AT-JUNO-451-HDBT from a remote location.



1 On / Off buttons

Press the **On** button to power-on the unit. Press the **Off** button to power-off the unit.

2 Input

Press these buttons (1 - 4) to select the desired input.

3 Mute

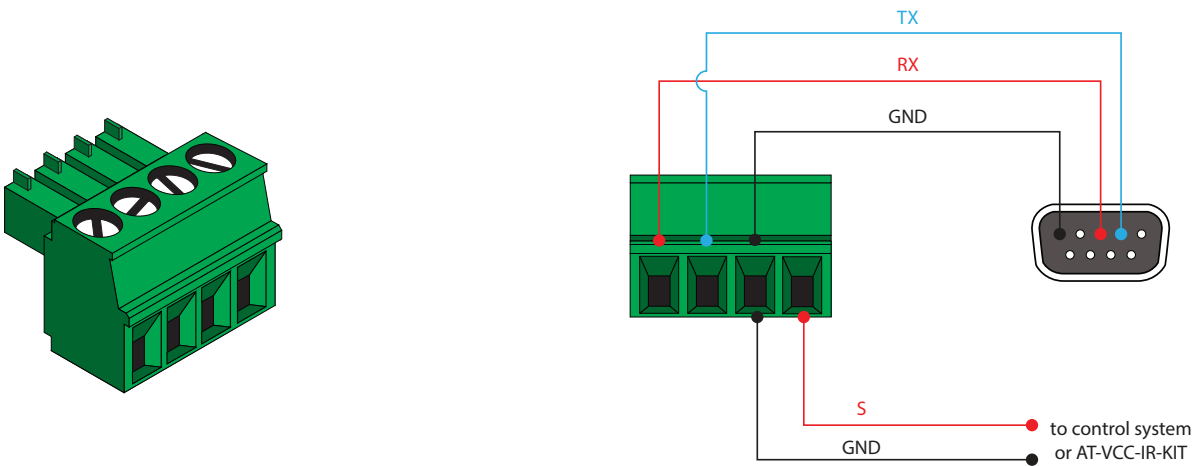
Press this button to toggle audio muting on the **HDMI OUT** port. The **Output 1** toggle switch, in the web GUI, will also change to reflect the current muting state. Refer to [AV Settings page \(page 19\)](#) for more information.

Installation

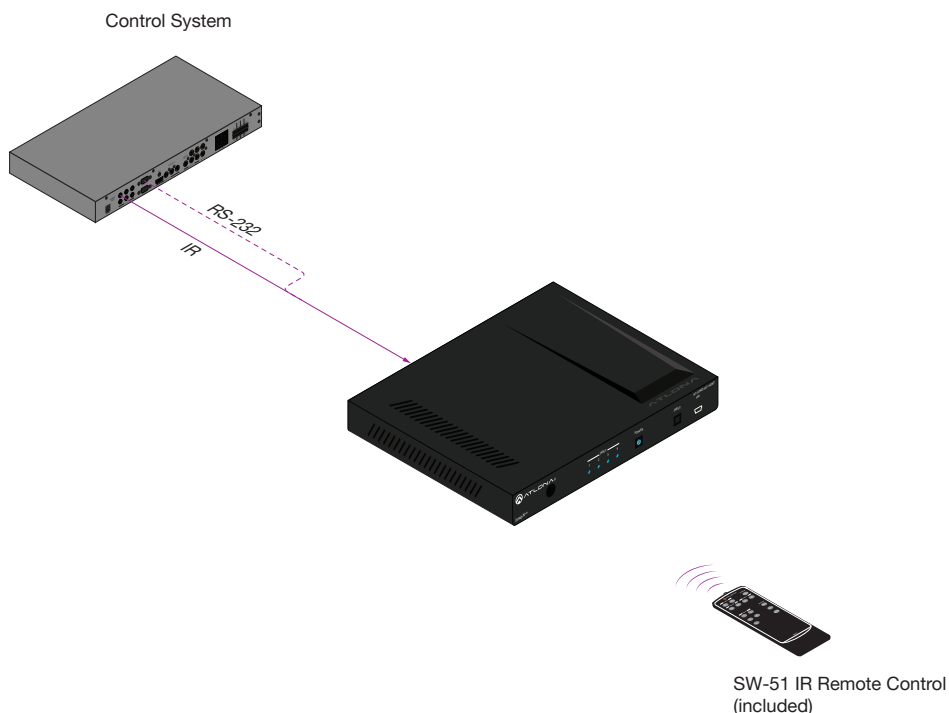
RS-232 / IR Connector

The AT-JUNO-451-HDBT provides RS-232 and IR control, using the included four-pin captive screw connector. Electrical IR or RS-232 signals, from a control system, can be used to control the AT-JUNO-451-HDBT. Atlona recommends the AT-LC-CS-IR-2M (sold separately) for easy connection to the captive screw connector.

1. Use wire strippers to remove a portion of the cable jacket.
2. Remove at least 3/16" (5 mm) of insulation, from the end of each wire.
3. Insert the wires into the correct terminal on the included captive screw block, as shown below.
4. Tighten the screws to secure the wires. Do not use high-torque devices as this may damage the screws and/or connector block.



The illustration below, shows an example of how electrical IR or RS-232, from a control system, or the included IR remote, can be used to control the AT-JUNO-451-HDBT.



Connection Instructions

1. Connect an HD/UHD source to each of the three HDMI inputs (**INPUT 2 - INPUT 4**).
2. Connect an optical audio cable from the **OPTICAL** port to a sound bar or other audio output device.
3. Connect an Ethernet cable from the **LAN** port to the Local Area Network (LAN). Ethernet cables should use EIA/TIA-568B termination:
4. Connect a compatible transmitter to the HDBaseT (**INPUT 1**) port on the AT-JUNO-451-HDBT.

Refer to the tables below for recommended cabling when using Altona products with HDBaseT technology. The green bars indicate the signal quality when using each type of cable. Higher-quality signals are represented by more bars. *These tables are for guidance, only. Performance may vary, based on environmental factors.*



IMPORTANT: For HDR and 4K/60 4:4:4 content (HDMI data rates exceeding 10 Gbps), the AT-JUNO-451-HDBT is not compatible with transmitters for the AT-HDR-EX-70-2PS, AT-HDR-EX-70C-KIT, or AT-HDR-EX-100CEA-KIT.

Core	Shielding	CAT5e	CAT6	CAT6a	CAT7
Solid	UTP (unshielded)	■	■■■	■■■■	N/A
	STP (shielded)	■■	■■■■	■■■■■	■■■■■
Performance Rating (MHz)		350	500	600	800

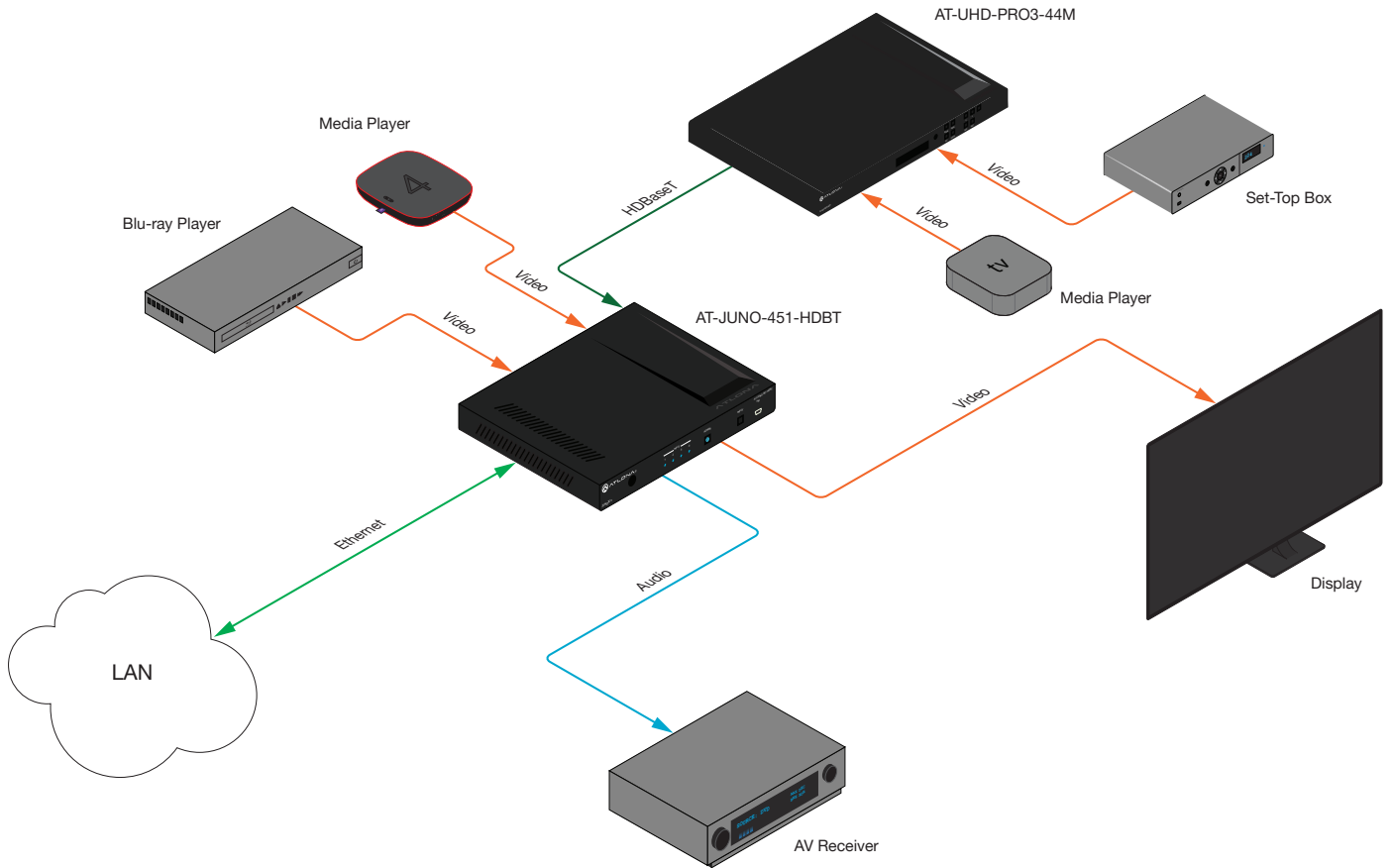
Cable	Max. Distance @ 4K	Max. Distance @ 1080p
CAT5e / CAT6	295 feet (90 meters)	330 feet (100 meters)
CAT6a / CAT7	330 feet (100 meters)	330 feet (100 meters)



IMPORTANT: Stranded or patch cable is not recommended due to performance issues. Shielded cables are strongly recommended to minimize signal noise and interference.

5. Connect the included four-pin captive screw block to the **RS-232 / IR IN** port. Refer to [RS-232 / IR Connector \(page 11\)](#) for wiring information, if necessary.
6. Connect the included 5 V DC power supply to the **DC 5V** power receptacle.
7. Connect the power supply to an available electrical outlet.

Connection Diagram



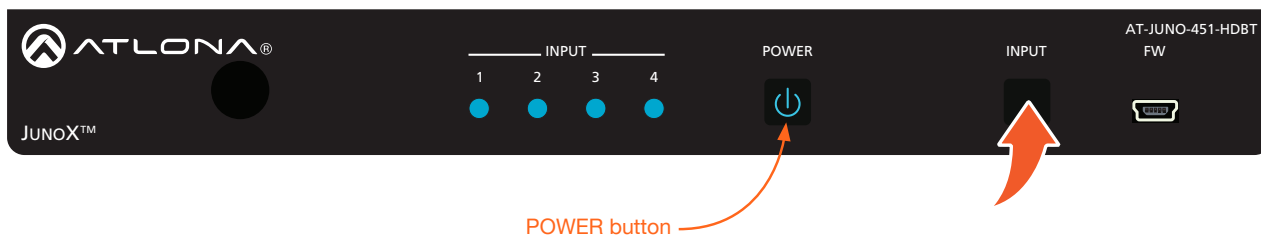
IP Configuration

The AT-JUNO-451-HDBT is shipped with DHCP enabled. Once connected to a network, the DHCP server (if available), will automatically assign an IP address to the unit. Use an IP scanner, along with the MAC address on the back of the unit, to identify both the unit and its IP address on the network. If a static IP address is desired, the unit can be switched to static IP mode. Use one of the following procedures to switch between DHCP and static IP mode. The default static IP address of the AT-JUNO-451-HDBT is 192.168.1.254.

If the AT-JUNO-451-HDBT is unable to detect a DHCP server within 15 seconds, then the unit will set all IP settings to zero.

Setting the IP Mode

1. Make sure the AT-JUNO-451-HDBT is powered.
2. Connect an Ethernet cable between the LAN port of the AT-JUNO-451-HDBT and the Local Area Network (LAN).



3. Press and hold the **INPUT** button on the front panel for approximately 10 seconds. Release the **INPUT** button once the **POWER** button begins to flash blue and red. The number of flashes will indicate the currently selected IP mode.

POWER button flashes	Description
Two	Static IP mode
Four	DHCP mode

Setting the IP Address Using Commands

Use the IPStatic and IPDHCP commands to switch between DHCP and IP mode through RS-232 or Telnet. Refer to API documentation for more information. All commands and their arguments are case-sensitive.

- **Setting static IP mode**

1. Connect to the AT-JUNO-451-HDBT using RS-232 or Telnet.
2. At the command line, execute the IPDHCP command using the off argument, as shown.

```
IPDHCP off
```

- Execute the IPStatic command. This command requires three arguments: the desired IP address of the AT-JUNO-451-HDBT, the subnet mask, and the gateway address. All arguments must be entered in dot-decimal notation. The following is an example:

```
IPStatic 192.168.1.112 255.255.255.0 192.168.1.1
```

└───┬───┘ └───┬───┘ └───┬───┘
IP address Subnet mask Gateway

- **Setting DHCP mode**

- Connect to the AT-JUNO-451-HDBT using RS-232 or Telnet.
- At the command line, execute the IPDHCP command using the on argument, as shown. All characters are case-sensitive.

```
IPDHCP on
```

Once DHCP is enabled, the unit will be assigned an IP address by the DHCP server (if present).

Setting the IP Address using the Web GUI

The **System** page (page 24), in the web GUI, allows the AT-JUNO-451-HDBT to use either DHCP or static IP mode. In order to access the web GUI, the IP address of the AT-JUNO-451-HDBT must be known. Refer to [Introduction to the Web GUI](#) (page 16).

- Open the desired web browser and enter the IP address of the AT-JUNO-451-HDBT.
- Log in, using the required credentials. The factory-default username and password are listed below:

Username: root
Password: Atlona

- Click the **System** tab.

IP Mode:	<input type="radio"/> DHCP <input checked="" type="radio"/> STATIC IP	
IP:	<input type="text" value="10.0.1.109"/>	
Netmask:	<input type="text" value="255.255.255.0"/>	<input type="button" value="Save"/>
Gateway:	<input type="text" value="10.0.1.1"/>	
Telnet Port:	<input type="text" value="23"/>	

- Click the **IP Mode** toggle to switch between the **DHCP** and **STATIC IP** setting. When set to **STATIC IP**, the **IP**, **Netmask**, and **Gateway** fields can be modified.
- Click the **Save** button to save the changes.

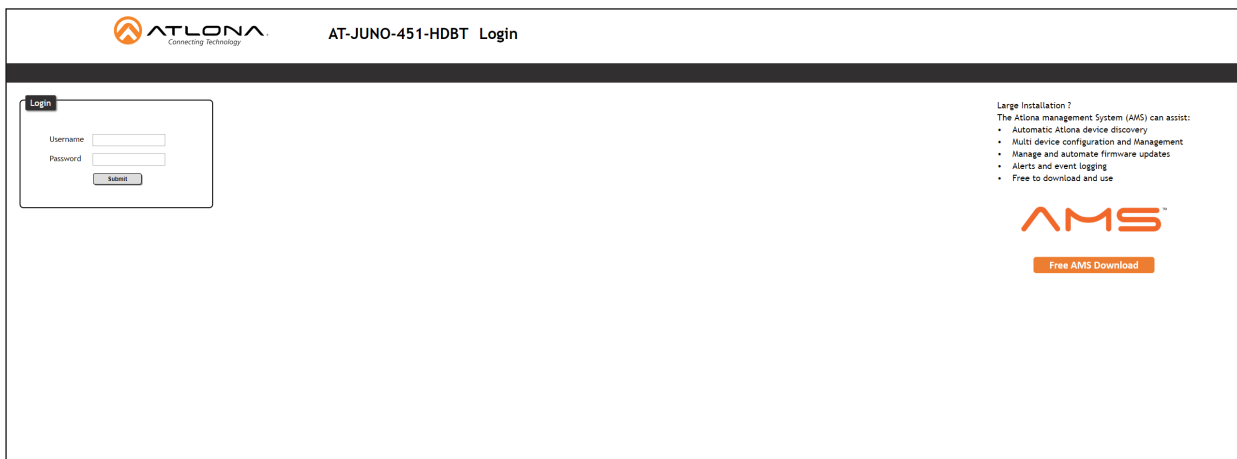
The Web GUI

Introduction to the Web GUI

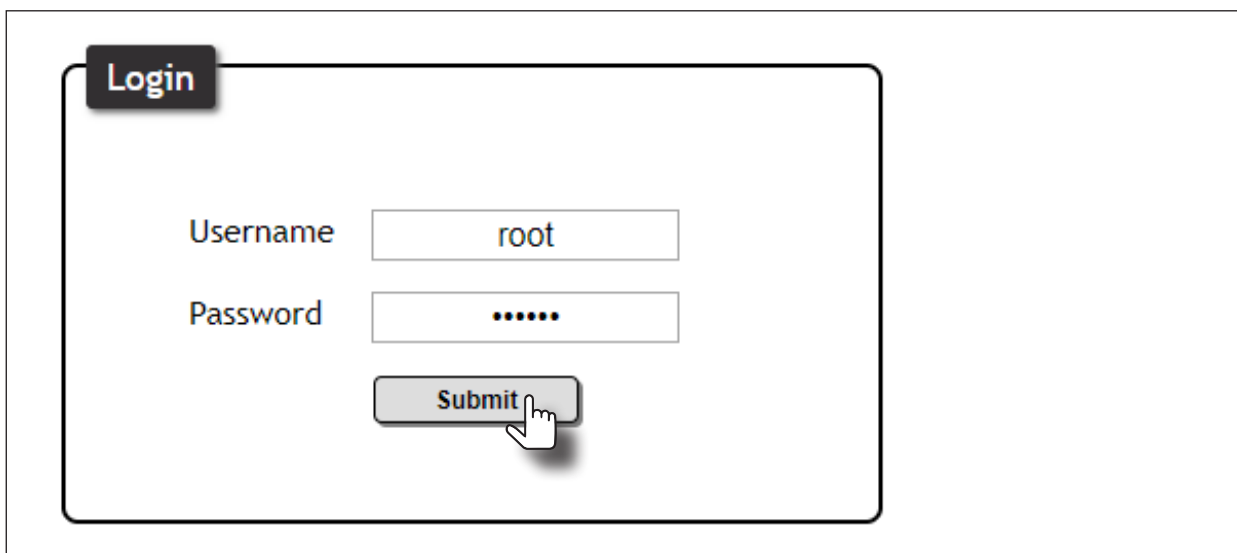
The AT-JUNO-451-HDBT includes a built-in web GUI. Atlona recommends that the web GUI be used to set up the AT-JUNO-451-HDBT, as it provides intuitive management of all features.

The AT-JUNO-451-HDBT is shipped with DHCP enabled. Once connected to a network, the DHCP server will automatically assign an IP address to the unit. Use an IP scanner to determine the IP address of the AT-JUNO-451-HDBT. If a static IP address is desired, refer to [IP Configuration \(page 14\)](#). The default static IP address of the AT-JUNO-451-HDBT is 192.168.1.254.

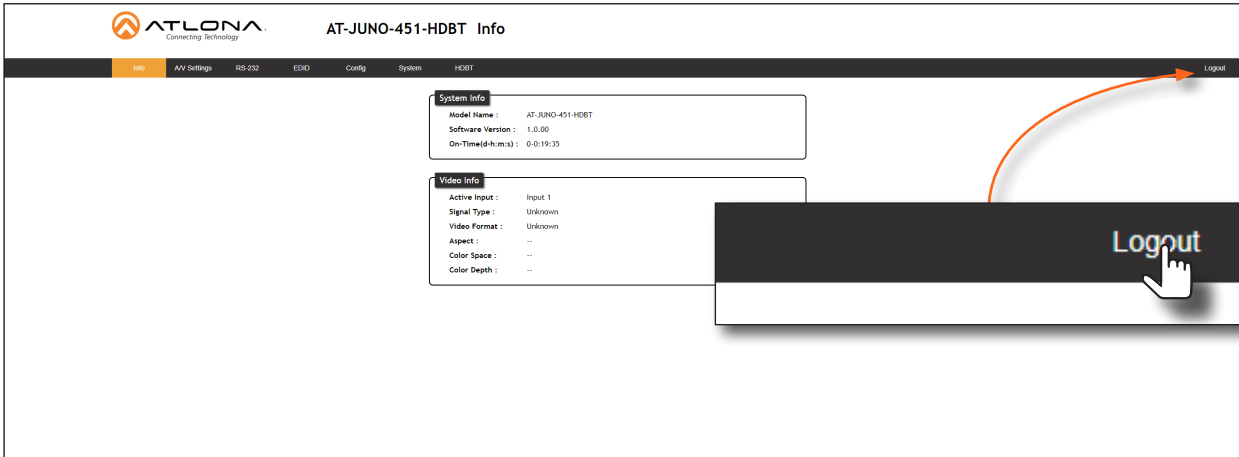
1. Launch a web browser.
2. In the address bar, type the IP address of the AT-JUNO-451-HDBT.
3. The **Login** page will be displayed.



4. Type root, using lower-case characters, in the **Username** field.
5. Type Atlona in the **Password** field. This is the default password. The password field is case-sensitive. When the password is entered, it will be masked. The password can be changed, if desired. Refer to the [Config page \(page 23\)](#) for more information.
6. Click the **Submit** button or press the ENTER key on the keyboard.



7. The **Info** page will be displayed.

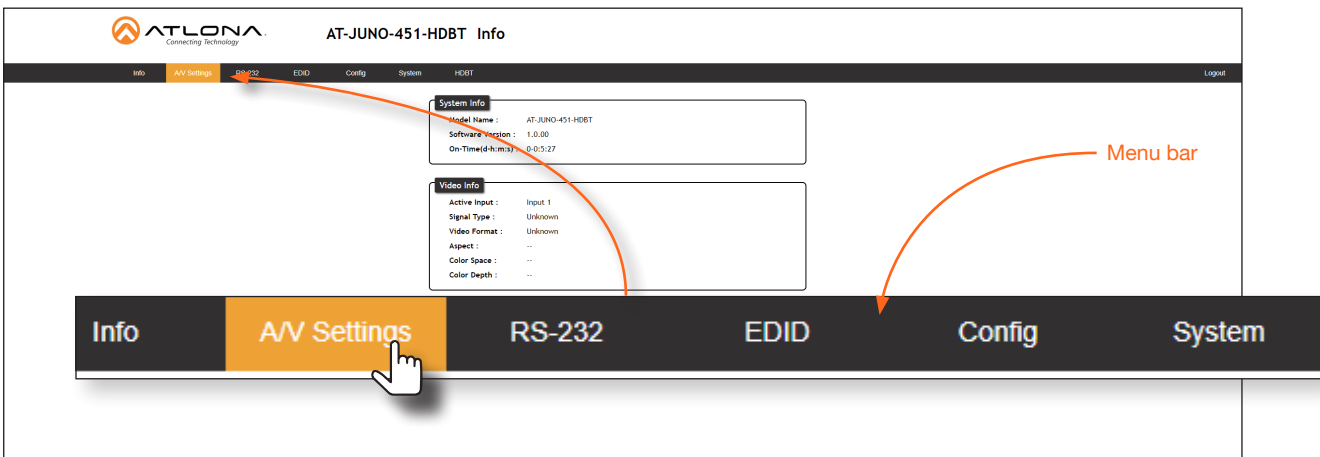


8. Click **Logout**, on the far-right side of the menu bar, to log out of the web GUI and return to the **Login** page.

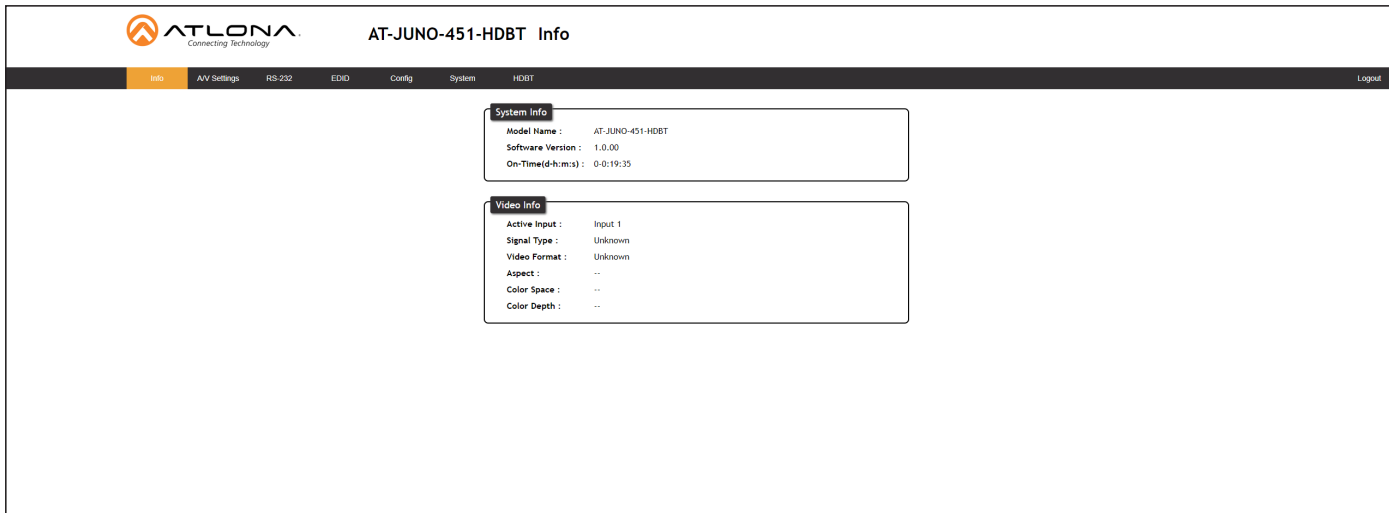
Menu Bar

The dark-colored bar, near the top of the screen, is the menu bar. When the mouse is moved over each menu element, it will be highlighted in light orange. Once the desired menu element is highlighted, click the left mouse button to access the settings within the menu.

In this example, moving the mouse over the **A/V Settings** menu item will highlight it. Click the **A/V Settings** menu item to display the **A/V Settings** page.



Info page



The screenshot shows the 'Info' page for the AT-JUNO-451-HDBT device. The page has a navigation bar with tabs for 'Info', 'AV Settings', 'RS-232', 'EDID', 'Config', 'System', and 'HDBT'. The 'Info' tab is selected. The main content area displays two sections: 'System Info' and 'Video Info'.

System Info	
Model Name :	AT-JUNO-451-HDBT
Software Version :	1.0.00
On-Time(d-h:m:s) :	0-0:19:35

Video Info	
Active Input :	Input 1
Signal Type :	Unknown
Video Format :	Unknown
Aspect :	--
Color Space :	--
Color Depth :	--

Model Name

The model SKU of this product.

Software Version

The version of firmware that the AT-JUNO-451-HDBT is running. Always make sure to check the AT-JUNO-451-HDBT product page, on the Atlona web site, for the latest version of firmware.

On-Time (h-m)

The time elapsed since the unit was last powered-on. Turning the unit "off", using the PWOFF command, will not reset this field.

Active Input

The currently selected input. The active input can be changed under the [AV Settings page \(page 19\)](#) or by pressing and releasing the **INPUT** button on the front panel.

Signal Type

Displays the input resolution of the source device.

Video Format

Displays the video format.

Aspect

Displays the aspect ratio of the input video source.

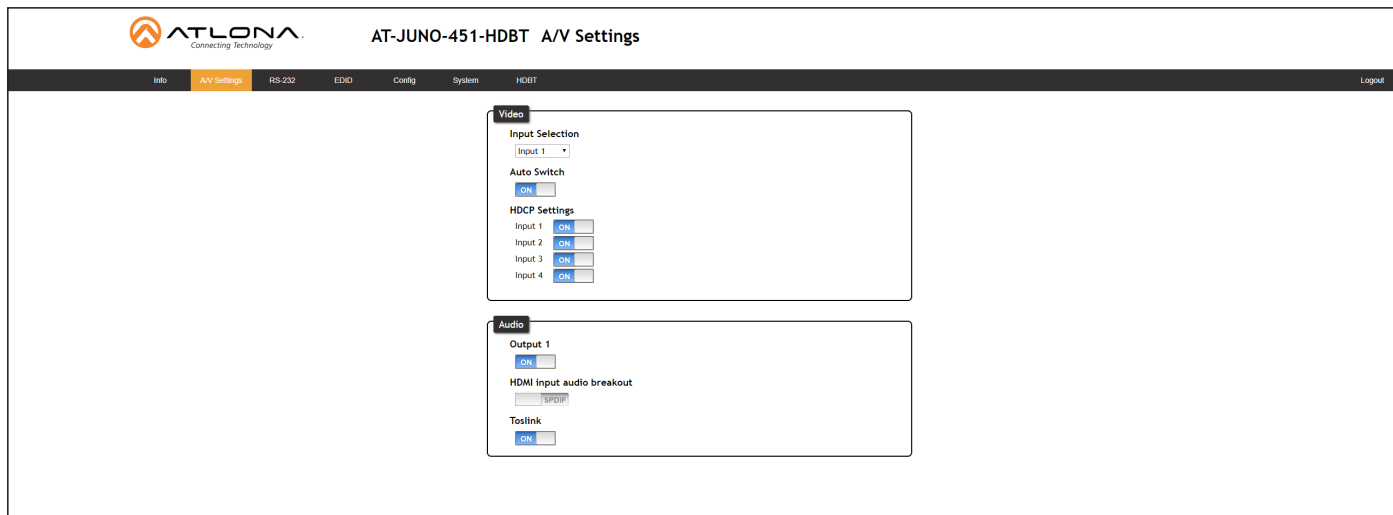
Color Space

Displays the color space of the input video source.

Color Depth

Displays the color depth of the input video source.

A/V Settings page



Video

Input Selection

Click this drop-down list to select the desired input.

Setting	Port
Input 1	INPUT 1 (HDBaseT)
Input 2	INPUT 2
Input 3	INPUT 3
Input 4	INPUT 4

Auto Switch

Set the **Auto Switch** mode toggle to ON to enable auto-switching. When auto-switching is enabled, the switcher will automatically switch to the previous input, if a signal loss is detected on the current input. If a new source is connected, the AT-JUNO-451-HDBT will automatically switch to that input. The default setting is ON.

HDCP Settings

Sets the HDCP reporting mode of the specified HDMI port: Input 1 = INPUT 1 (HDBaseT), Input 2 = INPUT 2, Input 3 = INPUT 3, Input 4 = INPUT 4. Some devices will transmit HDCP content if an HDCP-compliant display/sink is detected. Setting this value to OFF, will instruct the source to send non-HDCP content (if possible) to non-HDCP display and/or sink devices. Note that setting this value to OFF will not decrypt HDCP content.

Setting	Description
ON	HDCP content is always transmitted by the source
OFF	Instructs the source to send non-HDCP content, if possible

Audio

Output 1

Mutes or un-mutes the HDMI audio output. Set the **Output** toggle to OFF to disable HDMI audio on the output. The default setting is ON.

HDMI Input audio breakout

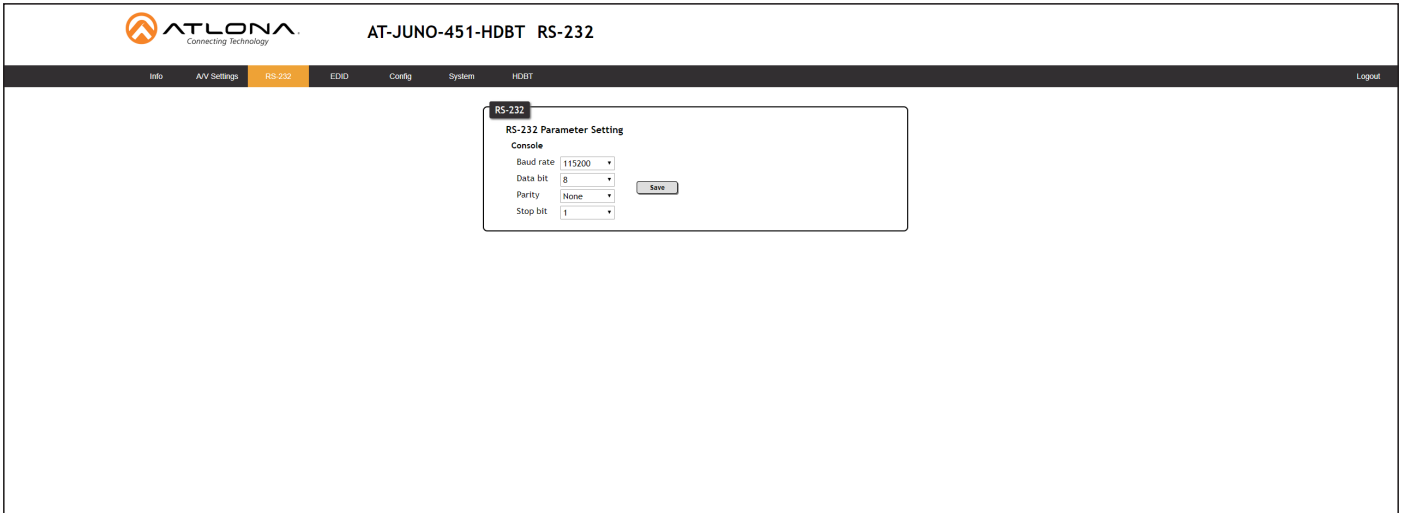
Sets the audio source used by the **OPTICAL** port on the unit. The default setting is SPDIF.

Setting	Description
SPDIF	The HDMI output audio will also be output using the OPTICAL port on the back of the unit.
ARC	Audio being returned from the display, over ARC, will be output on the OPTICAL port on the AT-JUNO-451-HDBT. It should be noted that the audio is limited to formats supported by the SPDIF output, such as PCM, Dolby® Digital, and some formats of DTS. Lossless audio formats, such as Dolby TrueHD and DTS-HD Master Audio™, are not supported by ARC or SPDIF.

Toslink

Click this toggle to enable or disable the **OPTICAL** port on the back panel. By default, this option is set to OFF (disabled).

RS-232 page

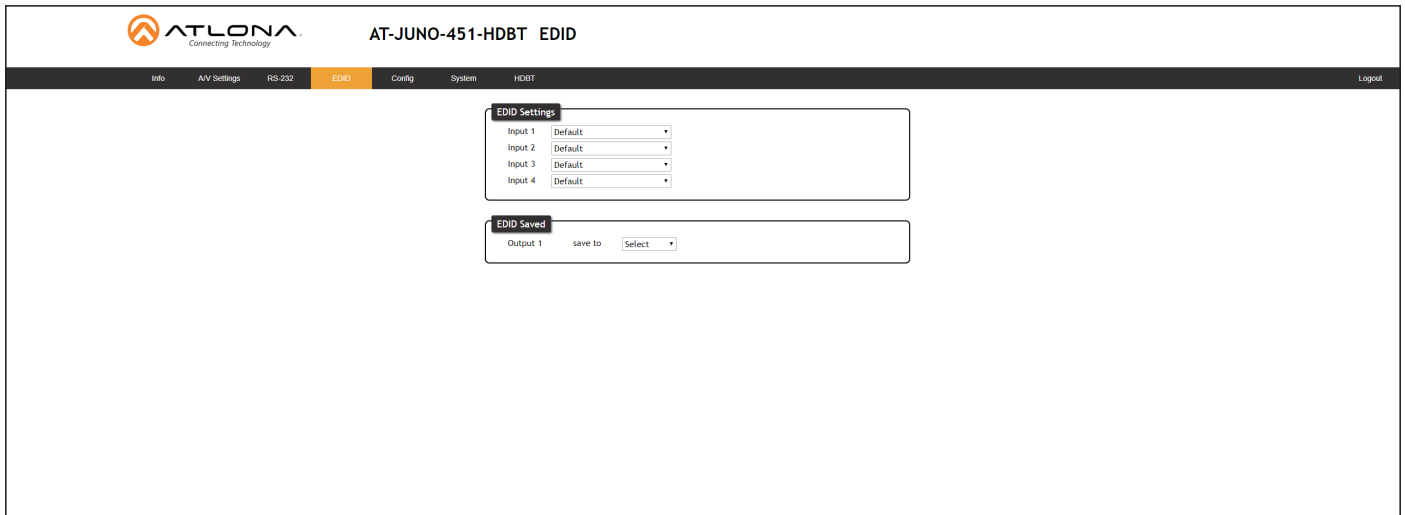


RS-232 Parameter Setting

Click each of these drop-down boxes to select the desired baud rate, data bits, parity bit, and stop bit.

Setting	Description
Baud rate	Sets the baud rate. The following options are available: 2400, 9600, 19200, 38400, 56000, 57600, 115200.
Data bit	Sets the number of data bits used to represent each character of data. The following options are available: 7 or 8.
Parity	Sets the parity bit, which can be included with each character to detect errors during the transmission of data. The following options are available: None, Odd, or Even.
Stop bit	Sets the stop bit. Stop bits are sent at the end of each character, allowing the client to detect the end of a character stream. The following options are available: 1 or 2.

EDID page



EDID Settings

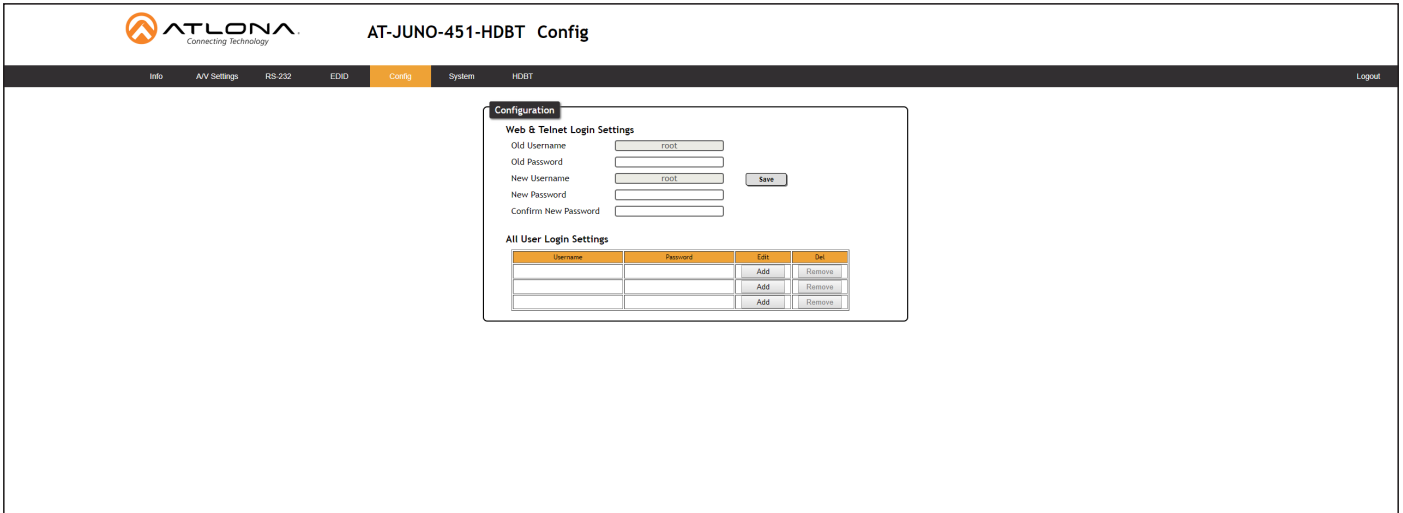
Click these drop-down lists to select the desired EDID to be used for each input. Input 1 = INPUT 1, Input 2 = INPUT 2, Input 3 = INPUT 3, Input 4 = INPUT 4. The source device will use the information in the EDID, before sending A/V data to the sink device. For a summary of timings and audio capabilities of each EDID, refer to [Internal EDID Data \(page 30\)](#).

EDID listing	
Default	1280x800 DVI
1080P 2CH	1920x1200 DVI
1080P MCH	3840x2160@60 4:2:0 2CH
1080P DD	3840x2160@60 4:2:0 MCH
1080P 3D 2CH	3840x2160@30 4:4:4 2CH
1080P 3D MCH	3840x2160@30 4:4:4 MCH
1080P 3D DD	4096x2160@60 4:2:0 2CH
720P 2CH	4096x2160@60 4:2:0 MCH
720P DD	3840x2160@60 4:4:4 2CH
1280x800 2CH	3840x2160@60 4:4:4 MCH
1366x768 2CH	4K 60 4:2:0 HDR 2CH
1080P DVI	4K 60 4:2:0 HDR multichannel audio (HD lossless)

EDID Saved

Click this drop-down list to select the memory location to save the downstream EDID. Eight memory locations are available. Once an EDID is saved to a memory location, it can be access from the **EDID Settings** drop-down lists.

Config page



Configuration

Web & Telnet Login Settings

Old Username:

Old Password:

New Username:

New Password:

Confirm New Password:

All User Login Settings

Username	Password	Edit	Del
		<input type="button" value="Add"/>	<input type="button" value="Remove"/>
		<input type="button" value="Add"/>	<input type="button" value="Remove"/>
		<input type="button" value="Add"/>	<input type="button" value="Remove"/>

Old Username

This field cannot be changed. "root" is the administrator user.

Old Password

Enter the current password for the "root" username in this field. The default password is "Atlona".

New Username

This field cannot be changed.

Save

Click this button to save all changes.

New Password

Enter the new password for the "root" username in this field.

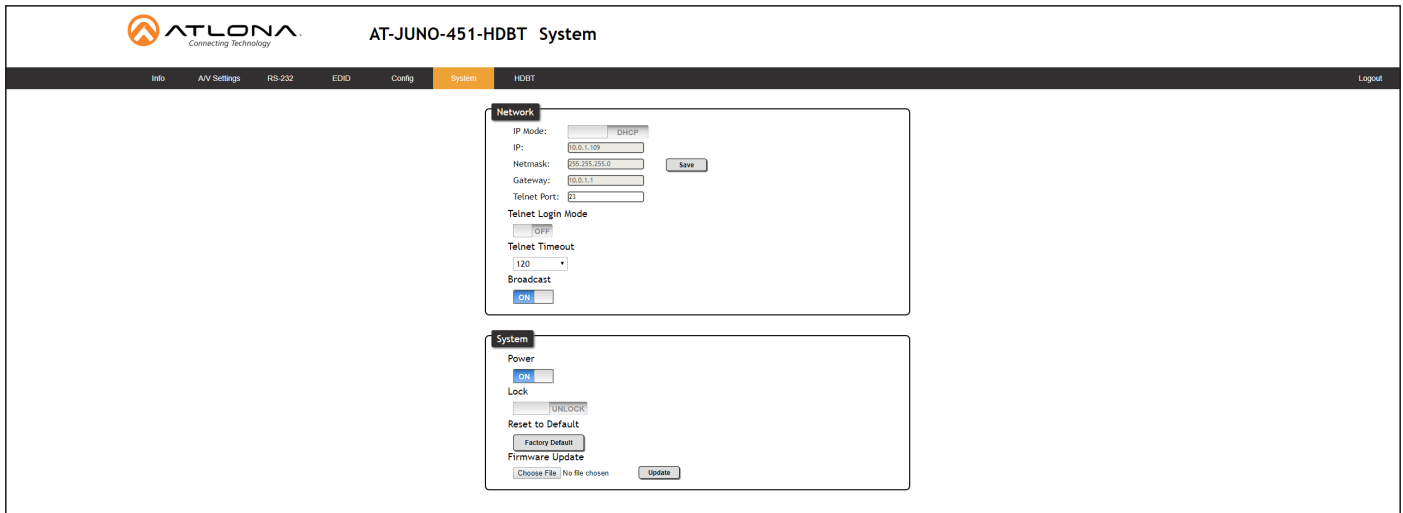
Confirm New Password

Verify the new password by retyping it in this field.

All User Login Settings

- Username**
 Displays the username.
- Password**
 Displays the password for the associated username.
- Edit**
 Click the **Add** button, in this column, to edit the username and password in the row.
- Del**
 Click the **Remove** button to delete the user in the row. This button will only be available if both a username and password have been created.

System page



Network

IP Mode

Click this toggle to set the IP mode of the AT-JUNO-451-HDBT. The default setting is DHCP. Available settings: **STATIC IP, DHCP**.

IP

Enter the IP address of the AT-JUNO-451-HDBT in this field. This field will only be available if **IP Mode** is set to **STATIC IP**. The default IP address is 192.168.1.254.

Netmask

Enter the subnet mask in this field. This field will only be available if **IP Mode** is set to **STATIC IP**.

Gateway

Enter the gateway (router) address in this field. This field will only be available if **IP Mode** is set to **STATIC IP**.

Telnet Port

Enter the Telnet listening port in this field.

Telnet Login Mode

Click this toggle to set the login mode to either **ON** or **OFF**. If this feature is set to **ON**, then the AT-JUNO-451-HDBT will prompt for both the username and password at the start of a Telnet session. Use the same credentials as the web GUI.

Telnet Timeout

Click this drop-down list to select the timeout interval, in seconds, before the Telnet connection is automatically closed after no activity. Range: 1 to 3600 (seconds).

Broadcast

By default, broadcast mode is set to **ON**. When set to **ON**, any system changes will be announced over TCP/IP connections. To separate control between the web GUI and Telnet, set this feature to OFF. Read queries, such as IPCFG and Type commands, are not announced and will only return information to the requester.

System

Power

Under normal operation conditions, this toggle is set to **ON**. Click this toggle to **OFF**, to turn the AT-JUNO-451-HDBT “off”. When “off”, the **POWER** LED indicator on the front panel will turn red. The PWOFF and PWON commands can also be used to control the power state.

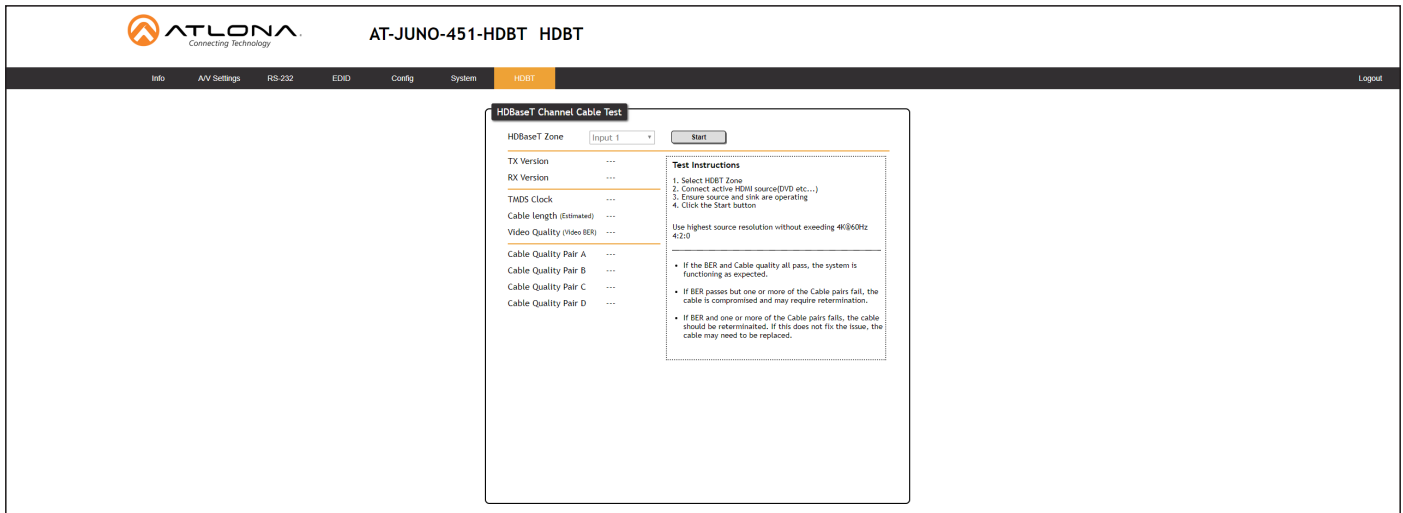
Reset to Default

Click the **Factory Default** button to set the AT-JUNO-451-HDBT to factory-default settings.

Firmware Update

Click the **Choose File** button to select the firmware file, when upgrading the firmware on the AT-JUNO-451-HDBT. Once the firmware file is selected, click the **Update** button. Refer to [Updating the Firmware \(page 27\)](#) for more information.

HDBT page



HDBaseT Zone

The AT-JUNO-451-HDBT has only a single HDBaseT output. Therefore, this drop-down list is disabled.

Start

Click the **Start** button to begin the HDBaseT testing process. During testing, the button text will change to “Stop”. Click the **Stop** button to halt the HDBaseT testing process. HDBaseT testing can be performed at any time, while the unit is powered. Refer to the instructions on this web page for information on how to interpret the BER and cable test results.

TX Version

The version of the Valens chip on the transmitter.

RX Version

The version of the Valens chip on the receiver.

TMD5 Clock

Displays the pixel clock speed. If no source is connected, then this field will display as “None”.

Cable length (Estimated)

This field indicates the approximate length of the Ethernet cable connected between the HDBaseT port on the AT-JUNO-451-HDBT and the receiver. If the cable length is less than 15 feet, then this value will be displayed as 0 (zero).

Video Quality (Video BER)

The Bit Error Rate (BER). This field displays either PASS or FAIL during a test.

Cable Quality Pair (A, B, C, D)

Each of these fields will display either PASS or FAIL during a test.

Appendix

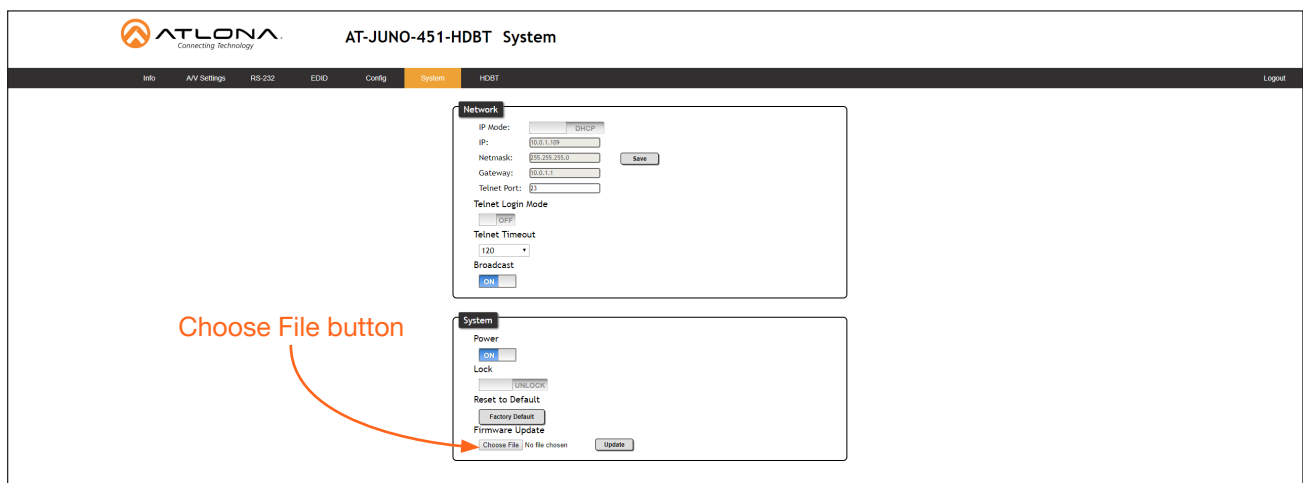
Updating the Firmware

Updating the firmware can be completed using either the USB interface or the web GUI. Atlona recommends using the web GUI for updating the firmware. However, if a network connection is not available, the AT-JUNO-451-HDBT firmware can be updated using a USB-A to USB mini-B cable.

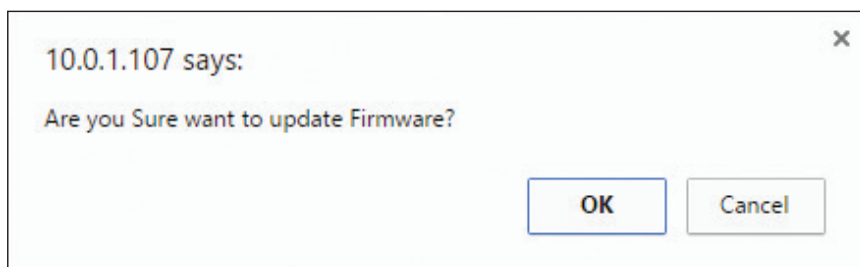
Using the Web GUI

Requirements:

- AT-JUNO-451-HDBT
 - Firmware file
 - Computer running Microsoft Windows
1. Connect an Ethernet cable from the computer, containing the firmware, to the same network where the AT-JUNO-451-HDBT is connected.
 2. Go to the [System](#) page (page 24) in the web GUI.



3. Click the **Choose File** button, under **Firmware Update**.
4. Browse to the location of the firmware file, select it, and click the **Open** button.
5. Click the **Update** button to begin the update process.
6. The following message box will be displayed.



7. Click the **OK** button to begin the firmware update process. Click the **Cancel** button to cancel the process.
8. After the firmware update process is complete, the **Login** screen will be displayed.

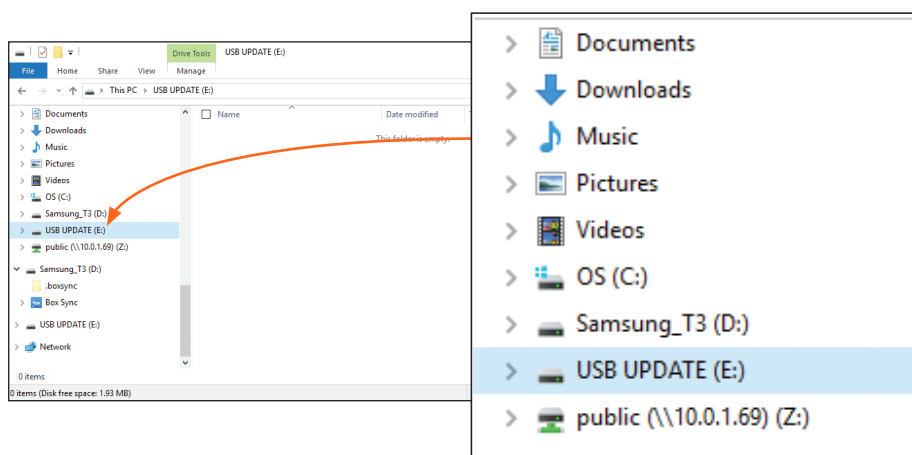
Using USB

Requirements:

- AT-JUNO-451-HDBT
- Firmware file
- Computer running Microsoft Windows
- USB-A to USB mini-B cable

1. Disconnect power from the AT-JUNO-451-HDBT.
2. Press and hold the **INPUT** button while connecting power to the AT-JUNO-451-HDBT.
3. Release the INPUT button. The **POWER** button will glow solid red, indicating that the AT-JUNO-451-HDBT is in update mode.
4. Connect the USB-A to USB mini-B cable between the PC and the firmware port on the AT-JUNO-451-HDBT. The unit will be powered by the USB cable.
5. The USB UPDATE folder will be displayed.

If this folder is not displayed, automatically, select the USB UPDATE drive from Windows Explorer.



7. Delete all files from the USB UPDATE drive, if any are present.
8. Drag-and-drop the firmware file to the drive. During the firmware update procedure, the **POWER** button will flash.
9. After the file has been copied, disconnect the USB cable from both the computer and the AT-JUNO-451-HDBT.
10. The firmware update process is complete.

Default Settings

The following tables list the factory-default settings for the AT-JUNO-451-HDBT.

Feature	Settings	
A/V Settings	Video Input Selection Input 1 Auto Switch ON HDCP Settings Input 1 ON Input 2 ON Input 3 ON Input 4 ON Audio Output 1 ON HDMI input audio breakout SPDIF Toslink ON	
RS-232	Baud rate 115200 Data bit 8 Parity None Stop bit 1	
EDID	EDID Settings Input 1 Default Input 2 Default Input 3 Default Input 4 Default EDID Saved Output 1 ---	
Config	Username (default) root Password (default) Atlona	
System	Network IP Mode DHCP Static IP Address (default) 192.168.1.254 Netmask 255.255.255.0 Gateway 192.168.1.1 Telnet Port 23 Telnet Login Mode OFF Telnet Timeout 120 Broadcast ON System Power ON Lock UNLOCK	
HDBT	HDBaseT Zone Input 1 (cannot be changed)	

Internal EDID Data

The AT-JUNO-451-HDBT comes with 24 pre-programmed EDID selections. The timing and audio summary (if applicable) for each EDID, is listed below. Raw data is also provided and can be used to view the full EDID structure.

EDID	Description
Default	Pass-through (downstream EDID)

EDID	Description
1080P 2CH	<p>Native/preferred timing 1920x1080p at 60Hz (16:9)</p> <p>Standard timings supported 720 x 400p at 70Hz - IBM VGA 640 x 480p at 60Hz - IBM VGA 800 x 600p at 60Hz - VESA 1024 x 768p at 60Hz - VESA 1280 x 1024p at 60Hz - VESA STD 1024 x 768p at 60Hz - VESA STD 800 x 600p at 60Hz - VESA STD 640 x 480p at 60Hz - VESA STD</p> <p>CE video identifiers (VICs) - timing/formats supported 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) [Native] 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 480p at 60Hz - EDTV (4:3, 8:9)</p> <p>CE audio data (formats supported) LPCM 2-channel, 16/20/24 bit depths at 32/44/48 kHz</p> <p>Raw data 00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 00 01 15 01 03 80 10 09 78 0A EE 91 A3 54 4C 99 26 0F 50 54 A1 08 00 81 80 61 40 45 40 31 40 01 01 01 01 01 01 01 01 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 00 00 00 FD 00 39 3F 1F 52 10 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 20 31 30 38 30 50 20 32 43 48 01 20 02 03 1C F1 47 10 22 20 05 84 03 02 23 09 07 07 67 03 0C 00 10 00 B8 2D E3 05 03 01 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 01 1D 80 18 71 1C 16 20 58 2C 25 00 A0 5A 00 00 00 9E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 8C 0A D0 8A 20 E0 2D 10 10 3E 96 00 A0 5A 00 00 00 18 26 36 80 A0 70 38 1F 40 30 20 25 00 A0 5A 00 00 00 1A 00 00 00 00 00 00 00 00 00 00 00 00 00 90</p>

EDID	Description
1080P MCH	<p>Native/preferred timing 1920x1080p at 60Hz (16:9)</p> <p>Standard timings supported 640 x 480p at 60Hz - IBM VGA</p> <p>CE video identifiers (VICs) - timing/formats supported 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) [Native] 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 480p at 60Hz - EDTV (4:3, 8:9)</p> <p>CE audio data (formats supported) LPCM 2-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz LPCM 6-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz LPCM 8-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz AC-3 6-channel, 680k max. bit rate at 32/44/48 kHz DTS 6-channel, 1536k max. bit rate at 32/44/48/88/96 kHz DD+ 8-channel at 32/44/48 kHz DVD-A 8-channel at 48/96/192 kHz DTS-HD 8-channel, 16-bit at 44/48/88/96/176/192 kHz</p> <p>CE speaker allocation data FL/FR, FLFE, FC, RL/RR, RC, RLC/RRC</p> <p>Raw data 00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 01 01 15 01 03 80 10 09 78 0A EE 91 A3 54 4C 99 26 0F 50 54 20 00 00 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 00 00 00 FC 00 41 54 4C 20 31 30 38 30 50 20 4D 43 48 00 00 00 FD 00 39 3F 1F 52 10 00 0A 20 20 20 20 20 20 01 1D 02 03 35 F6 47 10 22 20 05 84 03 02 38 09 7F 07 0D 7F 07 0F 7F 07 15 07 55 3D 1F C0 57 07 00 67 54 00 5F 7E 01 83 5F 00 00 67 03 0C 00 10 00 B8 2D E3 05 03 01 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 01 1D 80 18 71 1C 16 20 58 2C 25 00 A0 5A 00 00 00 9E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 8C 0A D0 8A 20 E0 2D 10 10 3E 96 00 A0 5A 00 00 00 18 00 00 63</p>

EDID	Description
1080P DD	<p>Native/preferred timing 1920x1080p at 60Hz (16:9)</p> <p>Standard timings supported 720 x 400p at 70Hz - IBM VGA 640 x 480p at 60Hz - IBM VGA 800 x 600p at 60Hz - VESA 1024 x 768p at 60Hz - VESA 1280 x 1024p at 60Hz - VESA STD 1024 x 768p at 60Hz - VESA STD 800 x 600p at 60Hz - VESA STD 640 x 480p at 60Hz - VESA STD</p> <p>CE video identifiers (VICs) - timing/formats supported 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) [Native] 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 480p at 60Hz - EDTV (4:3, 8:9)</p> <p>CE audio data (formats supported) AC-3 6-channel, 680k max. bit rate at 32/44/48 kHz DTS 6-channel, 1536k max. bit rate at 32/44/48/88/96 kHz</p> <p>CE speaker allocation data FL/FR, FLFE, FC, RL/RR</p> <pre> 00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 00 01 15 01 03 80 10 09 78 0A EE 91 A3 54 4C 99 26 0F 50 54 A1 08 00 81 80 61 40 45 40 31 40 01 01 01 01 01 01 01 01 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 00 00 00 FD 00 39 3F 1F 52 10 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 20 31 30 38 30 50 20 44 44 0A 01 4B 02 03 23 F1 47 10 22 20 05 84 03 02 26 15 07 55 3D 1F C0 67 03 0C 00 10 00 B8 2D E3 05 03 01 83 0F 00 00 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 01 1D 80 18 71 1C 16 20 58 2C 25 00 A0 5A 00 00 00 9E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 8C 0A D0 8A 20 E0 2D 10 10 3E 96 00 A0 5A 00 00 00 18 26 36 80 A0 70 38 1F 40 30 20 25 00 A0 5A 00 00 00 1A 00 00 7E </pre>

EDID	Description
1080P 3D 2CH	<p>Native/preferred timing 1920x1080p at 60Hz (16:9)</p> <p>Standard timings supported 720 x 400p at 70Hz - IBM VGA 640 x 480p at 60Hz - IBM VGA 640 x 480p at 67Hz - Apple Mac II 640 x 480p at 72Hz - VESA 640 x 480p at 75Hz - VESA 800 x 600p at 60Hz - VESA 800 x 600p at 72Hz - VESA 800 x 600p at 75Hz - VESA 832 x 624p at 75Hz - Apple Mac II 1024 x 768p at 60Hz - VESA 1024 x 768p at 70Hz - VESA 1024 x 768p at 75Hz - VESA 1280 x 1024p at 75Hz - VESA 1152 x 870p at 75Hz - Apple Mac II 1152 x 864p at 75Hz - VESA STD 1280 x 720p at 60Hz - VESA STD 1280 x 800p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1440 x 900p at 60Hz - VESA STD 1600 x 900p at 60Hz - VESA STD 1680 x 1050p at 60Hz - VESA STD</p> <p>CE video identifiers (VICs) - timing/formats supported 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) [Native] 1280 x 720p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 720 x 480p at 60Hz - EDTV (16:9, 32:27) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 720 x 480i at 60Hz - Doublescan (16:9, 32:27)</p> <p>CE audio data (formats supported) LPCM 2-channel, 16/20/24 bit depths at 32/44/48 kHz</p> <p>CE speaker allocation data FL/FR</p> <p>CE vendor specific data (VSDB) 3D structures supported.. Top-and-bottom, Side-by-side w. horizontal sub-sampling 3D formats supported..... Mandatory formats plus some primary VICs 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) [Native] 1280 x 720p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1)</p>

EDID	Description
1080P 3D 2CH	<p>Raw data</p> <pre>00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 02 01 15 01 03 80 59 32 78 0A EE 91 A3 54 4C 99 26 0F 50 54 BD EF 80 71 4F 81 C0 81 00 81 80 95 00 A9 C0 B3 00 01 01 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 66 21 56 AA 51 D0 1E 30 46 8F 33 00 A0 5A 00 00 00 1E 00 00 00 FD 00 18 4B 0F 51 17 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 20 33 44 20 32 43 48 0A 20 20 01 E6 02 03 2C F1 47 90 04 05 03 20 22 07 23 09 07 07 83 01 00 00 E2 00 0F E3 05 03 01 70 03 0C 00 10 00 B8 2D 21 D0 06 01 40 00 37 20 50 01 1D 80 18 71 1C 16 20 58 2C 25 00 A0 5A 00 00 00 9E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 8C 0A D0 8A 20 E0 2D 10 10 3E 96 00 A0 5A 00 00 00 18 00 F5</pre>

EDID	Description
1080P 3D MCH	<p>Native/preferred timing 1920x1080p at 60Hz (16:9)</p> <p>Standard timings supported 640 x 480p at 60Hz - IBM VGA</p> <p>CE video identifiers (VICs) - timing/formats supported 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) [Native] 1280 x 720p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 720 x 480p at 60Hz - EDTV (16:9, 32:27) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1)</p> <p>CE audio data (formats supported) LPCM 2-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz LPCM 6-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz LPCM 8-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz AC-3 6-channel, 680k max. bit rate at 32/44/48 kHz DTS 6-channel, 1536k max. bit rate at 32/44/48/88/96 kHz DD+ 8-channel at 32/44/48 kHz DVD-A 8-channel at 48/96/192 kHz DTS-HD 8-channel, 16-bit at 44/48/88/96/176/192 kHz</p> <p>CE speaker allocation data FL/FR, FLFE, FC, RL/RR, RC, RLC/RRC</p> <p>CE vendor specific data (VSDB) 3D structures supported.. Top-and-bottom, Side-by-side w. horizontal sub-sampling 3D formats supported..... Mandatory formats plus some primary VICs 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) [Native] 1280 x 720p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1)</p>

EDID	Description
1080P 3D MCH	Raw data 00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 03 01 15 01 03 80 59 32 78 0A EE 91 A3 54 4C 99 26 0F 50 54 20 00 00 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 00 00 00 FE 00 0A 20 20 20 20 20 20 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 20 33 44 20 4D 43 48 0A 20 20 00 00 00 FD 00 18 4B 0F 51 17 00 0A 20 20 20 20 20 20 01 8A 02 03 40 F4 46 90 04 05 03 20 22 38 09 7F 07 0D 7F 07 0F 7F 07 15 07 55 3D 1F C0 57 07 00 67 54 00 5F 7E 01 83 5F 00 00 70 03 0C 00 10 00 B8 2D 21 D0 06 01 40 00 37 20 50 E2 00 0F E3 05 03 01 01 1D 80 18 71 1C 16 20 58 2C 25 00 A0 5A 00 00 00 9E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 8C 0A D0 8A 20 E0 2D 10 10 3E 96 00 A0 5A 00 00 00 18 00 00 00 00 00 00 00 00 00 4F

EDID	Description
1080P 3D DD	Native/preferred timing 1920x1080p at 60Hz (16:9) Standard timings supported 640 x 480p at 60Hz - IBM VGA CE video identifiers (VICs) - timing/formats supported 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) [Native] 1280 x 720p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 720 x 480p at 60Hz - EDTV (16:9, 32:27) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) CE audio data (formats supported) AC-3 6-channel, 680k max. bit rate at 32/44/48 kHz DTS 6-channel, 1536k max. bit rate at 32/44/48/88/96 kHz CE speaker allocation data FL/FR, FLFE, FC, RL/RR CE vendor specific data (VSDB) 3D structures supported.. Top-and-bottom, Side-by-side w. horizontal sub-sampling 3D formats supported..... Mandatory formats plus some primary VICs 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) [Native] 1280 x 720p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1)

EDID	Description
1080P 3D DD	<p>Raw data</p> <pre>00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 04 01 15 01 03 80 59 32 78 0A EE 91 A3 54 4C 99 26 0F 50 54 20 00 00 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 00 00 00 FE 00 0A 20 20 20 20 20 20 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 20 33 44 20 44 44 0A 20 20 20 00 00 00 FD 00 18 4B 0F 51 17 00 0A 20 20 20 20 20 20 01 B9 02 03 2E F4 46 90 04 05 03 20 22 26 15 07 55 3D 1F C0 70 03 0C 00 10 00 B8 2D 21 D0 06 01 40 00 37 20 50 83 0F 00 00 E2 00 0F E3 05 03 01 01 1D 80 18 71 1C 16 20 58 2C 25 00 A0 5A 00 00 00 9E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 8C 0A D0 8A 20 E0 2D 10 10 3E 96 00 A0 5A 00 00 00 18 00 71</pre>

EDID	Description
720P 2CH	<p>Native/preferred timing 1280x720p at 60Hz (16:9)</p> <p>Standard timings supported 640 x 480p at 60Hz - IBM VGA</p> <p>CE video identifiers (VICs) - timing/formats supported 1280 x 720p at 60Hz - HDTV (16:9, 1:1) [Native] 1280 x 720p at 50Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1920 x 1080i at 50Hz - HDTV (16:9, 1:1) 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 480i at 60Hz - Doublescan (16:9, 32:27)</p> <p>CE audio data (formats supported) LPCM 2-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz</p> <p>CE speaker allocation data FL/FR</p> <p>Raw data</p> <pre>00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 05 01 15 01 03 80 34 21 78 EE EE 91 A3 54 4C 99 26 0F 50 54 00 00 00 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 1D 00 72 51 D0 1E 20 6E 28 55 00 C4 8E 21 00 00 1E 65 1D 00 BC 52 D0 1E 20 B8 28 55 40 C4 8E 21 00 00 1E 00 00 00 FC 00 41 54 4C 20 37 32 30 50 32 43 48 0A 20 00 00 00 FD 00 38 4C 1E 53 11 01 0A 20 20 20 20 20 20 01 FA 02 03 1B 71 46 84 13 05 14 03 07 23 09 7F 07 83 01 00 00 67 03 0C 00 10 00 00 11 01 1D 00 72 51 D0 1E 20 6E 28 55 00 C4 8E 21 00 00 1E 01 1D 00 BC 52 D0 1E 20 B8 28 55 40 C4 8E 21 00 00 1E 8C 0A D0 8A 20 E0 2D 10 10 3E 96 00 C4 8E 21 00 00 18 00 5B</pre>

EDID	Description
720P DD	<p>Native/preferred timing 1280x720p at 60Hz (16:9)</p> <p>Standard timings supported 640 x 480p at 60Hz - IBM VGA</p> <p>CE video identifiers (VICs) - timing/formats supported 1280 x 720p at 60Hz - HDTV (16:9, 1:1) [Native] 1280 x 720p at 50Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1920 x 1080i at 50Hz - HDTV (16:9, 1:1) 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 480i at 60Hz - Doublescan (16:9, 32:27)</p> <p>CE audio data (formats supported) AC-3 6-channel, 680k max. bit rate at 32/44/48 kHz DTS 6-channel, 1536k max. bit rate at 32/44/48/88/96 kHz</p> <p>CE speaker allocation data FL/FR, FLFE, FC, RL/RR</p> <p>Raw data 00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 05 01 15 01 03 80 34 21 78 EE EE 91 A3 54 4C 99 26 0F 50 54 00 00 00 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 1D 00 72 51 D0 1E 20 6E 28 55 00 C4 8E 21 00 00 1E 65 1D 00 BC 52 D0 1E 20 B8 28 55 40 C4 8E 21 00 00 1E 00 00 00 FC 00 41 54 4C 20 37 32 30 50 20 44 44 0A 20 00 00 00 FD 00 38 4C 1E 53 11 01 0A 20 20 20 20 20 20 01 0F 02 03 1E 71 46 84 13 05 14 03 07 26 15 07 55 3D 1F C0 83 0F 00 00 67 03 0C 00 10 00 00 11 01 1D 00 72 51 D0 1E 20 6E 28 55 00 C4 8E 21 00 00 1E 01 1D 00 BC 52 D0 1E 20 B8 28 55 40 C4 8E 21 00 00 1E 8C 0A D0 8A 20 E0 2D 10 10 3E 96 00 C4 8E 21 00 00 18 00 49</p>

EDID	Description
1280x800 2CH	<p>Native/preferred timing 1280x800p at 60Hz</p> <p>Standard timings supported</p> <p>720 x 400p at 70Hz - IBM VGA 640 x 480p at 60Hz - IBM VGA 640 x 480p at 67Hz - Apple Mac II 640 x 480p at 72Hz - VESA 640 x 480p at 75Hz - VESA 800 x 600p at 56Hz - VESA 800 x 600p at 60Hz - VESA 800 x 600p at 72Hz - VESA 800 x 600p at 75Hz - VESA 832 x 624p at 75Hz - Apple Mac II 1024 x 768p at 60Hz - VESA 1024 x 768p at 70Hz - VESA 1024 x 768p at 75Hz - VESA 1280 x 1024p at 75Hz - VESA 1152 x 870p at 75Hz - Apple Mac II 1600 x 1200p at 60Hz - VESA STD 1440 x 900p at 60Hz - VESA STD 1400 x 1050p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1280 x 800p at 60Hz - VESA STD 1280 x 720p at 120Hz - VESA STD 1024 x 768p at 120Hz - VESA STD 800 x 600p at 120Hz - VESA STD</p> <p>CE video identifiers (VICs) - timing/formats supported</p> <p>720 x 480p at 60Hz - EDTV (16:9, 32:27) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) [Native] 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480i at 60Hz - Doublescan (4:3, 8:9) 720 x 480i at 60Hz - Doublescan (16:9, 32:27) 1440 x 480p at 60Hz - DVD (4:3, 4:9) 1440 x 480p at 60Hz - DVD (16:9, 16:27) 720 x 576p at 50Hz - EDTV (16:9, 64:45) 720 x 576p at 50Hz - EDTV (4:3, 16:15) 1280 x 720p at 50Hz - HDTV (16:9, 1:1) 1920 x 1080i at 50Hz - HDTV (16:9, 1:1) 720 x 576i at 50Hz - Doublescan (4:3, 16:15) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 1920 x 1080p at 25Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 640 x 480p at 60Hz - Default (4:3, 1:1)</p> <p>CE audio data (formats supported) LPCM 2-channel, 16/20/24 bit depths at 32/44/48 kHz</p> <p>CE speaker allocation data FL/FR</p>

EDID	Description
1280x800 2CH	Raw data 00 FF FF FF FF FF FF 00 06 8C 25 27 01 01 01 01 27 14 01 03 80 00 00 78 0A A5 DF A2 59 5C 8F 23 DC 50 5E BF EF 80 A9 40 95 00 90 40 81 80 81 00 81 FC 61 7C 45 7C 9E 20 00 90 51 20 1F 30 48 80 36 00 00 00 00 00 00 1E 00 00 00 FF 00 52 53 34 31 30 33 39 30 36 35 35 37 0A 00 00 00 FD 00 32 78 1F 64 11 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 20 50 43 57 58 47 41 32 43 48 01 49 02 03 24 C1 83 01 00 00 65 03 0C 00 10 00 51 03 84 05 02 06 07 0E 0F 12 11 13 14 15 16 21 22 01 23 09 07 07 8C 0A D0 8A 20 E0 2D 10 10 3E 96 00 00 00 00 00 00 18 01 1D 00 72 51 D0 1E 20 6E 28 55 00 00 00 00 00 00 1E 01 1D 80 18 71 1C 16 20 58 2C 25 00 00 00 00 00 9E 8C 0A D0 90 20 40 31 20 0C 40 55 00 00 00 00 00 18 01 1D 00 BC 52 D0 1E 20 B8 28 55 40 00 00 00 00 1E 00 04

EDID	Description
1366x768 2CH	<p>Native/preferred timing 1366x768p at 60Hz</p> <p>Standard timings supported 720 x 400p at 70Hz - IBM VGA 640 x 480p at 60Hz - IBM VGA 640 x 480p at 67Hz - Apple Mac II 640 x 480p at 72Hz - VESA 640 x 480p at 75Hz - VESA 800 x 600p at 56Hz - VESA 800 x 600p at 60Hz - VESA 800 x 600p at 72Hz - VESA 800 x 600p at 75Hz - VESA 832 x 624p at 75Hz - Apple Mac II 1024 x 768p at 60Hz - VESA 1024 x 768p at 70Hz - VESA 1024 x 768p at 75Hz - VESA 1280 x 1024p at 75Hz - VESA 1152 x 870p at 75Hz - Apple Mac II 1600 x 1200p at 60Hz - VESA STD 1440 x 900p at 60Hz - VESA STD 1400 x 1050p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1280 x 800p at 60Hz - VESA STD 1280 x 720p at 120Hz - VESA STD 1024 x 768p at 120Hz - VESA STD 800 x 600p at 120Hz - VESA STD</p> <p>CE video identifiers (VICs) - timing/formats supported 720 x 480p at 60Hz - EDTV (16:9, 32:27) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) [Native] 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480i at 60Hz - Doublescan (4:3, 8:9) 720 x 480i at 60Hz - Doublescan (16:9, 32:27) 1440 x 480p at 60Hz - DVD (4:3, 4:9) 1440 x 480p at 60Hz - DVD (16:9, 16:27) 720 x 576p at 50Hz - EDTV (16:9, 64:45) 720 x 576p at 50Hz - EDTV (4:3, 16:15) 1280 x 720p at 50Hz - HDTV (16:9, 1:1) 1920 x 1080i at 50Hz - HDTV (16:9, 1:1) 720 x 576i at 50Hz - Doublescan (4:3, 16:15) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 1920 x 1080p at 25Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 640 x 480p at 60Hz - Default (4:3, 1:1)</p> <p>CE audio data (formats supported) LPCM 2-channel, 16/20/24 bit depths at 32/44/48 kHz</p> <p>CE speaker allocation data FL/FR</p>

EDID	Description
1366x768 2CH	<p>Raw data</p> <pre>00 FF FF FF FF FF FF 00 06 8C 25 27 01 01 01 01 27 14 01 03 80 00 00 78 0A A5 DF A2 59 5C 8F 23 DC 50 5E BF EF 80 A9 40 95 00 90 40 81 80 81 00 81 FC 61 7C 45 7C 66 21 56 AA 51 00 1E 30 46 8F 33 00 00 00 00 00 00 1E 00 00 00 FF 00 52 53 34 31 30 33 39 30 36 35 35 37 0A 00 00 00 FD 00 32 78 1F 64 11 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 20 54 56 57 58 47 41 32 43 48 01 10 02 03 24 C1 83 01 00 00 65 03 0C 00 10 00 51 03 84 05 02 06 07 0E 0F 12 11 13 14 15 16 21 22 01 23 09 07 07 8C 0A D0 8A 20 E0 2D 10 10 3E 96 00 00 00 00 00 00 18 01 1D 00 72 51 D0 1E 20 6E 28 55 00 00 00 00 00 00 1E 01 1D 80 18 71 1C 16 20 58 2C 25 00 00 00 00 00 9E 8C 0A D0 90 20 40 31 20 0C 40 55 00 00 00 00 00 18 01 1D 00 BC 52 D0 1E 20 B8 28 55 40 00 00 00 00 00 1E 00 04</pre>

EDID	Description
1080P DVI	<p>Native/preferred timing 1920x1080p at 60Hz</p> <p>Standard timings supported</p> <pre>720 x 400p at 70Hz - IBM VGA 640 x 480p at 60Hz - IBM VGA 800 x 600p at 60Hz - VESA 1024 x 768p at 60Hz - VESA 1280 x 720p at 60Hz - VESA STD 1280 x 960p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1440 x 900p at 60Hz - VESA STD 1600 x 1200p at 60Hz - VESA STD 1680 x 1050p at 60Hz - VESA STD 1920 x 1080p at 60Hz - VESA STD</pre> <p>Raw data</p> <pre>00 FF FF FF FF FF FF 00 06 8C 72 29 01 01 01 01 1B 16 01 03 80 33 1D 78 2A 77 C5 A3 54 4F 9F 27 11 50 54 A1 08 00 81 C0 81 40 81 80 95 00 A9 40 B3 00 D1 C0 01 01 02 3A 80 18 71 38 2D 40 58 2C 45 00 FD 1E 11 00 00 1E 00 00 00 FD 00 32 4C 18 5E 11 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 20 31 30 38 30 50 20 44 56 49 00 00 00 FF 00 33 43 4D 32 32 37 30 32 39 53 0A 20 20 00 4A</pre>

EDID	Description
1280x800 DVI	<p>Native/preferred timing 1280x800p at 60Hz</p> <p>Standard timings supported</p> <p>720 x 400p at 70Hz - IBM VGA 640 x 480p at 60Hz - IBM VGA 640 x 480p at 67Hz - Apple Mac II 640 x 480p at 72Hz - VESA 640 x 480p at 75Hz - VESA 800 x 600p at 56Hz - VESA 800 x 600p at 60Hz - VESA 800 x 600p at 72Hz - VESA 800 x 600p at 75Hz - VESA 832 x 624p at 75Hz - Apple Mac II 1024 x 768p at 60Hz - VESA 1024 x 768p at 70Hz - VESA 1024 x 768p at 75Hz - VESA 1280 x 1024p at 75Hz - VESA 1152 x 870p at 75Hz - Apple Mac II 1600 x 1200p at 60Hz - VESA STD 1440 x 900p at 60Hz - VESA STD 1400 x 1050p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1280 x 800p at 60Hz - VESA STD 1280 x 720p at 120Hz - VESA STD 1024 x 768p at 120Hz - VESA STD 800 x 600p at 120Hz - VESA STD</p> <p>Raw data</p> <pre>00 FF FF FF FF FF FF 00 06 8C 25 27 01 01 01 01 27 14 01 03 80 00 00 78 0A A5 DF A2 59 5C 8F 23 DC 50 5E BF EF 80 A9 40 95 00 90 40 81 80 81 00 81 FC 61 7C 45 7C 9E 20 00 90 51 20 1F 30 48 80 36 00 00 00 00 00 00 1E 00 00 00 FF 00 52 53 34 31 30 33 39 30 36 35 35 37 0A 00 00 00 FD 00 32 78 1F 64 11 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 20 50 43 57 58 47 41 44 56 49 00 24</pre>

EDID	Description
1920x1200 2CH	<p>Native/preferred timing 1920x1200p at 60Hz</p> <p>Standard timings supported 720 x 400p at 70Hz - IBM VGA 640 x 480p at 60Hz - IBM VGA 640 x 480p at 67Hz - Apple Mac II 640 x 480p at 72Hz - VESA 640 x 480p at 75Hz - VESA 800 x 600p at 56Hz - VESA 800 x 600p at 60Hz - VESA 800 x 600p at 72Hz - VESA 800 x 600p at 75Hz - VESA 832 x 624p at 75Hz - Apple Mac II 1024 x 768p at 60Hz - VESA 1024 x 768p at 70Hz - VESA 1024 x 768p at 75Hz - VESA 1280 x 1024p at 75Hz - VESA 1152 x 870p at 75Hz - Apple Mac II 1600 x 1200p at 60Hz - VESA STD 1440 x 900p at 60Hz - VESA STD 1400 x 1050p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1280 x 800p at 60Hz - VESA STD 1280 x 720p at 120Hz - VESA STD 1024 x 768p at 120Hz - VESA STD 800 x 600p at 120Hz - VESA STD</p> <p>CE video identifiers (VICs) - timing/formats supported 720 x 480p at 60Hz - EDTV (16:9, 32:27) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) [Native] 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480i at 60Hz - Doublescan (4:3, 8:9) 720 x 480i at 60Hz - Doublescan (16:9, 32:27) 1440 x 480p at 60Hz - DVD (4:3, 4:9) 1440 x 480p at 60Hz - DVD (16:9, 16:27) 720 x 576p at 50Hz - EDTV (16:9, 64:45) 720 x 576p at 50Hz - EDTV (4:3, 16:15) 1280 x 720p at 50Hz - HDTV (16:9, 1:1) 1920 x 1080i at 50Hz - HDTV (16:9, 1:1) 720 x 576i at 50Hz - Doublescan (4:3, 16:15) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 1920 x 1080p at 25Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 640 x 480p at 60Hz - Default (4:3, 1:1)</p> <p>CE audio data (formats supported) LPCM 2-channel, 16/20/24 bit depths at 32/44/48 kHz</p> <p>CE speaker allocation data FL/FR</p>

EDID	Description
1920x1200 2CH	Raw data 00 FF FF FF FF FF FF 00 06 8C 25 27 01 01 01 01 27 14 01 03 80 00 00 78 0A A5 DF A2 59 5C 8F 23 DC 50 5E BF EF 80 A9 40 95 00 90 40 81 80 81 00 81 FC 61 7C 45 7C 35 3C 80 A0 70 B0 23 40 30 20 36 00 00 00 00 00 00 1E 00 00 00 FF 00 52 53 34 31 30 33 39 30 36 35 35 37 0A 00 00 00 FD 00 32 78 1F 64 11 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 20 57 55 58 47 41 32 43 48 0A 01 EF 02 03 24 C1 83 01 00 00 65 03 0C 00 10 00 51 03 84 05 02 06 07 0E 0F 12 11 13 14 15 16 21 22 01 23 09 07 07 8C 0A D0 8A 20 E0 2D 10 10 3E 96 00 00 00 00 00 00 18 01 1D 00 72 51 D0 1E 20 6E 28 55 00 00 00 00 00 00 1E 01 1D 80 18 71 1C 16 20 58 2C 25 00 00 00 00 00 9E 8C 0A D0 90 20 40 31 20 0C 40 55 00 00 00 00 00 18 01 1D 00 BC 52 D0 1E 20 B8 28 55 40 00 00 00 00 1E 00 04

EDID	Description
3840x2160 60 Hz, 4:2:0, 2CH	Native/preferred timing 3840x2160p at 30Hz (16:9) Standard timings supported 720 x 400p at 70Hz - IBM VGA 640 x 480p at 60Hz - IBM VGA 800 x 600p at 60Hz - VESA 1024 x 768p at 60Hz - VESA 1280 x 1024p at 60Hz - VESA STD 1024 x 768p at 60Hz - VESA STD 800 x 600p at 60Hz - VESA STD 640 x 480p at 60Hz - VESA STD CE video identifiers (VICs) - timing/formats supported 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) [Native] 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) CE audio data (formats supported) LPCM 2-channel, 16/20/24 bit depths at 32/44/48 kHz

EDID	Description
3840x2160 60 Hz, 4:2:0, 2CH	Raw data 00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 00 14 1A 01 03 80 10 09 78 0A EE 91 A3 54 4C 99 26 0F 50 54 A1 08 00 81 80 61 40 45 40 31 40 01 01 01 01 01 01 01 01 04 74 00 30 F2 70 5A 80 B0 58 8A 00 BA 88 21 00 00 1E 02 3A 80 18 71 38 2D 40 58 2C 45 00 BA 88 21 00 00 1E 00 00 00 FD 00 17 3D 0F 44 1E 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 20 34 4B 34 32 30 32 43 48 0A 01 E8 02 03 32 F1 4B 10 22 20 05 84 03 02 5D 5F 5F 5F 23 09 07 07 6D 03 0C 00 10 00 B8 3C 2F 00 60 01 03 04 E3 05 03 01 E3 06 07 01 E7 0E 60 61 65 66 6A 6B 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 01 1D 80 18 71 1C 16 20 58 2C 25 00 A0 5A 00 00 00 9E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 00 38

EDID	Description
3840x2160 60 Hz, 4:2:0, MCH	Native/preferred timing 3840x2160p at 30Hz (16:9) Standard timings supported 640 x 480p at 60Hz - IBM VGA CE video identifiers (VICs) - timing/formats supported 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) [Native] 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) CE audio data (formats supported) LPCM 2-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz LPCM 6-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz LPCM 8-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz AC-3 6-channel, 680k max. bit rate at 32/44/48 kHz DTS 6-channel, 1536k max. bit rate at 32/44/48/88/96 kHz DD+ 8-channel at 32/44/48 kHz DVD-A 8-channel at 48/96/192 kHz DTS-HD 8-channel, 16-bit at 44/48/88/96/176/192 kHz CE speaker allocation data FL/FR, FLFE, FC, RL/RR, RC, RLC/RRC

EDID	Description
3840x2160 60 Hz, 4:2:0, MCH	Raw data 00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 01 14 1A 01 03 80 10 09 78 0A EE 91 A3 54 4C 99 26 0F 50 54 20 00 00 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 04 74 00 30 F2 70 5A 80 B0 58 8A 00 BA 88 21 00 00 1E 02 3A 80 18 71 38 2D 40 58 2C 45 00 BA 88 21 00 00 1E 00 00 00 FC 00 41 54 4C 20 34 4B 34 32 30 4D 43 48 0A 00 00 00 FD 00 17 3D 0F 44 1E 00 0A 20 20 20 20 20 20 01 E5 02 03 4B F6 4B 10 22 20 05 84 03 02 5D 5F 5F 5F 38 09 7F 07 0D 7F 07 0F 7F 07 15 07 55 3D 1F C0 57 07 00 67 54 00 5F 7E 01 83 5F 00 00 6D 03 0C 00 10 00 B8 3C 2F 00 60 01 03 04 E3 05 03 01 E3 06 07 01 E7 0E 60 61 65 66 6A 6B 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 01 1D 80 18 71 1C 16 20 58 2C 25 00 A0 5A 00 00 00 9E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 1D

EDID	Description
3840x2160 30 Hz, 4:4:4, 2CH	<p>Native/preferred timing 3840x2160p at 30Hz (16:9)</p> <p>Standard timings supported</p> <ul style="list-style-type: none"> 720 x 400p at 70Hz - IBM VGA 640 x 480p at 60Hz - IBM VGA 800 x 600p at 60Hz - VESA 1024 x 768p at 60Hz - VESA 1024 x 768p at 75Hz - VESA 1280 x 1024p at 60Hz - VESA STD 1024 x 768p at 60Hz - VESA STD 800 x 600p at 60Hz - VESA STD 640 x 480p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1600 x 1200p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1600 x 1200p at 60Hz - VESA STD <p>CE video identifiers (VICs) - timing/formats supported</p> <ul style="list-style-type: none"> 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 576p at 50Hz - EDTV (16:9, 64:45) 1280 x 720p at 50Hz - HDTV (16:9, 1:1) 1920 x 1080i at 50Hz - HDTV (16:9, 1:1) 1920 x 1080p at 50Hz - HDTV (16:9, 1:1) 720 x 480i at 60Hz - Doublescan (16:9, 32:27) 720 x 480i at 60Hz - Doublescan (16:9, 32:27) <p>CE audio data (formats supported)</p> <ul style="list-style-type: none"> LPCM 2-channel, 16/20/24 bit depths at 32/44/48/96/192 kHz LPCM 2-channel, 16/20/24 bit depths at 32/44/48/96/192 kHz LPCM 2-channel, 16/20/24 bit depths at 32/44/48/96/192 kHz

EDID	Description
3840x2160	Raw data
30 Hz,	00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 01 14 1A 01 03 80 10 09 78
4:4:4,	0A EE 91 A3 54 4C 99 26 0F 50 54 20 00 00 01 01 01 01 01 01 01 01 01 01
2CH	01 01 01 01 01 01 04 74 00 30 F2 70 5A 80 B0 58 8A 00 BA 88 21 00 00 1E
	02 3A 80 18 71 38 2D 40 58 2C 45 00 BA 88 21 00 00 1E 00 00 00 FC 00 41
	54 4C 20 34 4B 34 32 30 4D 43 48 0A 00 00 00 FD 00 17 3D 0F 44 1E 00 0A
	20 20 20 20 20 20 01 E5 02 03 4B F6 4B 10 22 20 05 84 03 02 5D 5F 5F 5F
	38 09 7F 07 0D 7F 07 0F 7F 07 15 07 55 3D 1F C0 57 07 00 67 54 00 5F 7E
	01 83 5F 00 00 6D 03 0C 00 10 00 B8 3C 2F 00 60 01 03 04 E3 05 03 01 E3
	06 07 01 E7 0E 60 61 65 66 6A 6B 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0
	5A 00 00 00 1E 01 1D 80 18 71 1C 16 20 58 2C 25 00 A0 5A 00 00 00 9E 01
	1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 1D

EDID	Description
3840x2160 30 Hz, 4:4:4, MCH	<p>Native/preferred timing 3840x2160p at 30Hz (16:9)</p> <p>Standard timings supported</p> <ul style="list-style-type: none"> 720 x 400p at 70Hz - IBM VGA 640 x 480p at 60Hz - IBM VGA 800 x 600p at 60Hz - VESA 1024 x 768p at 60Hz - VESA 1024 x 768p at 75Hz - VESA 1280 x 1024p at 60Hz - VESA STD 1024 x 768p at 60Hz - VESA STD 800 x 600p at 60Hz - VESA STD 640 x 480p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1600 x 1200p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1600 x 1200p at 60Hz - VESA STD <p>CE video identifiers (VICs) - timing/formats supported</p> <ul style="list-style-type: none"> 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 576p at 50Hz - EDTV (16:9, 64:45) 1280 x 720p at 50Hz - HDTV (16:9, 1:1) 1920 x 1080i at 50Hz - HDTV (16:9, 1:1) 1920 x 1080p at 50Hz - HDTV (16:9, 1:1) 720 x 480i at 60Hz - Doublescan (16:9, 32:27) 720 x 480i at 60Hz - Doublescan (16:9, 32:27) <p>CE audio data (formats supported)</p> <ul style="list-style-type: none"> LPCM 2-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz LPCM 6-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz LPCM 8-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz AC-3 6-channel, 680k max. bit rate at 32/44/48 kHz DTS 6-channel, 1536k max. bit rate at 32/44/48/88/96 kHz DD+ 8-channel at 32/44/48 kHz DVD-A 8-channel at 48/96/192 kHz DTS-HD 8-channel, 16-bit at 44/48/88/96/176/192 kHz

EDID	Description
3840x2160 30 Hz, 4:4:4, MCH	Raw data 00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 00 05 1A 01 03 80 10 09 78 0A EE 91 A3 54 4C 99 26 0F 50 54 A1 0A 00 81 80 61 40 45 40 31 40 81 80 A9 40 81 80 A9 40 04 74 00 30 F2 70 5A 80 B0 58 8A 00 BA 88 21 00 00 1E 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 00 00 00 FD 00 17 3F 0F 52 1E 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 34 4B 5F 4D 43 48 34 34 34 0A 01 22 02 03 56 F1 52 10 22 20 05 04 03 02 5D 5F 5F 5F 61 12 13 14 1F 07 5F 38 09 7F 07 0D 7F 07 0F 7F 07 15 07 55 3D 1F C0 57 07 00 67 54 00 5F 7E 01 6C 03 0C 00 10 00 F8 3C 20 00 40 03 01 67 D8 5D C4 01 78 80 00 E3 05 03 01 E3 06 07 01 E8 0E 60 61 65 66 6A 6B 02 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 00 00 00 00 00 60

EDID	Description
4096x2160 60 Hz, 4:2:0, 2CH	<p>Native/preferred timing 3840x2160p at 30Hz (16:9)</p> <p>Standard timings supported 720 x 400p at 70Hz - IBM VGA 640 x 480p at 60Hz - IBM VGA 800 x 600p at 60Hz - VESA 1024 x 768p at 60Hz - VESA 1280 x 1024p at 60Hz - VESA STD 1024 x 768p at 60Hz - VESA STD 800 x 600p at 60Hz - VESA STD 640 x 480p at 60Hz - VESA STD</p> <p>CE video identifiers (VICs) - timing/formats supported 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) [Native] 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9)</p> <p>CE audio data (formats supported) LPCM 2-channel, 16/20/24 bit depths at 32/44/48 kHz</p> <p>Raw data 00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 00 14 1A 01 03 80 10 09 78 0A EE 91 A3 54 4C 99 26 0F 50 54 A1 08 00 81 80 61 40 45 40 31 40 01 01 01 01 01 01 01 01 04 74 00 30 F2 70 5A 80 B0 58 8A 00 BA 88 21 00 00 1E 02 3A 80 18 71 38 2D 40 58 2C 45 00 BA 88 21 00 00 1E 00 00 00 FD 00 17 3D 0F 44 1E 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 20 34 4B 34 32 30 32 43 48 0A 01 E8 02 03 32 F1 4B 10 22 20 05 84 03 02 5D 5F 65 66 23 09 07 07 6D 03 0C 00 10 00 B8 3C 2F 00 60 01 03 04 E3 05 03 01 E3 06 07 01 E7 0E 60 61 65 66 6A 6B 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 01 1D 80 18 71 1C 16 20 58 2C 25 00 A0 5A 00 00 00 9E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 2B</p>

EDID	Description
4096x2160 60 Hz, 4:2:0, MCH	<p>Native/preferred timing 3840x2160p at 30Hz (16:9)</p> <p>Standard timings supported 640 x 480p at 60Hz - IBM VGA</p> <p>CE video identifiers (VICs) - timing/formats supported 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) [Native] 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9)</p> <p>CE audio data (formats supported) LPCM 2-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz LPCM 6-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz LPCM 8-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz AC-3 6-channel, 680k max. bit rate at 32/44/48 kHz DTS 6-channel, 1536k max. bit rate at 32/44/48/88/96 kHz DD+ 8-channel at 32/44/48 kHz DVD-A 8-channel at 48/96/192 kHz DTS-HD 8-channel, 16-bit at 44/48/88/96/176/192 kHz</p> <p>CE speaker allocation data FL/FR, FLFE, FC, RL/RR, RC, RLC/RRC</p> <p>Raw data 00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 01 01 15 01 03 80 10 09 78 0A EE 91 A3 54 4C 99 26 0F 50 54 20 00 00 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 01 04 74 00 30 F2 70 5A 80 B0 58 8A 00 BA 88 21 00 00 1E 02 3A 80 18 71 38 2D 40 58 2C 45 00 BA 88 21 00 00 1E 00 00 00 FC 00 41 54 4C 20 34 4B 34 32 30 4D 43 48 0A 00 00 00 FD 00 17 3D 0F 44 1E 00 0A 20 20 20 20 20 20 01 FD 02 03 4B F6 4B 10 22 20 05 84 03 02 5D 5F 65 66 38 09 7F 07 0D 7F 07 0F 7F 07 15 07 55 3D 1F C0 57 07 00 67 54 00 5F 7E 01 83 5F 00 00 6D 03 0C 00 10 00 B8 3C 2F 00 60 01 03 04 E3 05 03 01 E3 06 07 01 E7 0E 60 61 65 66 6A 6B 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 01 1D 80 18 71 1C 16 20 58 2C 25 00 A0 5A 00 00 00 9E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 10</p>

EDID	Description
3840x2160 60 Hz, 4:4:4, 2CH	<p>Native/preferred timing 3840x2160p at 60Hz (16:9)</p> <p>Standard timings supported</p> <ul style="list-style-type: none"> 720 x 400p at 70Hz - IBM VGA 640 x 480p at 60Hz - IBM VGA 800 x 600p at 60Hz - VESA 1024 x 768p at 60Hz - VESA 1024 x 768p at 75Hz - VESA 1280 x 1024p at 60Hz - VESA STD 1024 x 768p at 60Hz - VESA STD 800 x 600p at 60Hz - VESA STD 640 x 480p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1600 x 1200p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1600 x 1200p at 60Hz - VESA STD <p>CE video identifiers (VICs) - timing/formats supported</p> <ul style="list-style-type: none"> 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 576p at 50Hz - EDTV (16:9, 64:45) 1280 x 720p at 50Hz - HDTV (16:9, 1:1) 1920 x 1080i at 50Hz - HDTV (16:9, 1:1) 1920 x 1080p at 50Hz - HDTV (16:9, 1:1) 720 x 480i at 60Hz - Doublescan (16:9, 32:27) 720 x 480i at 60Hz - Doublescan (16:9, 32:27) <p>CE audio data (formats supported)</p> <ul style="list-style-type: none"> LPCM 2-channel, 16/20/24 bit depths at 32/44/48/96/192 kHz LPCM 2-channel, 16/20/24 bit depths at 32/44/48/96/192 kHz LPCM 2-channel, 16/20/24 bit depths at 32/44/48/96/192 kHz <p>Raw data</p> <pre> 00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 00 05 1A 01 03 80 10 09 78 0A EE 91 A3 54 4C 99 26 0F 50 54 A1 0A 00 81 80 61 40 45 40 31 40 81 80 A9 40 81 80 A9 40 08 E8 00 30 F2 70 5A 80 B0 58 8A 00 BA 88 21 00 00 1E 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 00 00 00 FD 00 17 3F 0F 52 3C 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 34 4B 5F 32 43 48 34 34 34 0A 01 A7 02 03 47 F1 52 10 22 20 05 04 03 02 5D 5F 62 64 61 12 13 14 1F 07 60 29 09 57 07 09 57 07 09 57 07 6C 03 0C 00 10 00 F8 3C 20 00 40 03 01 67 D8 5D C4 01 78 80 00 E3 05 03 01 E3 06 07 01 E8 0E 60 61 65 66 6A 6B 02 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 01 1D 80 18 71 1C 16 20 58 2C 25 00 A0 5A 00 00 00 9E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 00 00 C1 </pre>

EDID	Description
3840x2160 60 Hz, 4:4:4, MCH	<p>Native/preferred timing 3840x2160p at 60Hz (16:9)</p> <p>Standard timings supported</p> <ul style="list-style-type: none"> 720 x 400p at 70Hz - IBM VGA 640 x 480p at 60Hz - IBM VGA 800 x 600p at 60Hz - VESA 1024 x 768p at 60Hz - VESA 1024 x 768p at 75Hz - VESA 1280 x 1024p at 60Hz - VESA STD 1024 x 768p at 60Hz - VESA STD 800 x 600p at 60Hz - VESA STD 640 x 480p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1600 x 1200p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1600 x 1200p at 60Hz - VESA STD <p>CE video identifiers (VICs) - timing/formats supported</p> <ul style="list-style-type: none"> 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 480p at 60Hz - EDTV (4:3, 8:9) 720 x 576p at 50Hz - EDTV (16:9, 64:45) 1280 x 720p at 50Hz - HDTV (16:9, 1:1) 1920 x 1080i at 50Hz - HDTV (16:9, 1:1) 1920 x 1080p at 50Hz - HDTV (16:9, 1:1) 720 x 480i at 60Hz - Doublescan (16:9, 32:27) 720 x 480i at 60Hz - Doublescan (16:9, 32:27) <p>CE audio data (formats supported)</p> <ul style="list-style-type: none"> LPCM 2-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz LPCM 6-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz LPCM 8-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz AC-3 6-channel, 680k max. bit rate at 32/44/48 kHz DTS 6-channel, 1536k max. bit rate at 32/44/48/88/96 kHz DD+ 8-channel at 32/44/48 kHz DVD-A 8-channel at 48/96/192 kHz DTS-HD 8-channel, 16-bit at 44/48/88/96/176/192 kHz

EDID	Description
3840x2160 60 Hz, 4:4:4, MCH	Raw data 00 FF FF FF FF FF FF 00 06 8C 11 20 00 00 00 00 05 1A 01 03 80 10 09 78 0A EE 91 A3 54 4C 99 26 0F 50 54 A1 0A 00 81 80 61 40 45 40 31 40 81 80 A9 40 81 80 A9 40 08 E8 00 30 F2 70 5A 80 B0 58 8A 00 BA 88 21 00 00 1E 02 3A 80 18 71 38 2D 40 58 2C 45 00 A0 5A 00 00 00 1E 00 00 00 FD 00 17 3F 0F 52 3C 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 34 4B 5F 4D 43 48 34 34 34 0A 01 8C 02 03 56 F1 52 10 22 20 05 04 03 02 5D 5F 62 64 61 12 13 14 1F 07 60 38 09 7F 07 0D 7F 07 0F 7F 07 15 07 55 3D 1F C0 57 07 00 67 54 00 5F 7E 01 6C 03 0C 00 10 00 F8 3C 20 00 40 03 01 67 D8 5D C4 01 78 80 00 E3 05 03 01 E3 06 07 01 E8 0E 60 61 65 66 6A 6B 02 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 01 1D 00 72 51 D0 1E 20 6E 28 55 00 A0 5A 00 00 00 1E 00 00 00 00 00 57

EDID	Description
4K 60 Hz, 4:2:0 HDR, 2CH	<p>Native/preferred timing 3840x2160p at 60Hz (16:9)</p> <p>Standard timings supported</p> <ul style="list-style-type: none"> 640 x 480p at 60Hz - IBM VGA 800 x 600p at 60Hz - VESA 1024 x 768p at 60Hz - VESA 1152 x 864p at 75Hz - VESA STD 1280 x 720p at 60Hz - VESA STD 1280 x 800p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1440 x 900p at 60Hz - VESA STD 1600 x 900p at 60Hz - VESA STD 1680 x 1050p at 60Hz - VESA STD <p>CE video identifiers (VICs) - timing/formats supported</p> <ul style="list-style-type: none"> 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 50Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1920 x 1080i at 50Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080p at 25Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) 1280 x 720p at 50Hz - HDTV (16:9, 1:1) 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 576p at 50Hz - EDTV (16:9, 64:45) 720 x 480i at 60Hz - Doublescan (16:9, 32:27) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) <p>CE audio data (formats supported) LPCM 2-channel, 16/20/24 bit depths at 44/48/96/192 kHz</p> <p>CE speaker allocation data FL/FR</p>

EDID	Description
4K 60 Hz, 4:2:0 HDR, 2CH	Raw data 00 FF FF FF FF FF FF 00 06 8C 00 00 00 00 00 01 19 01 03 81 00 00 78 02 EE 91 A3 54 4C 99 26 0F 50 54 21 08 00 71 4F 81 C0 81 00 81 80 95 00 A9 C0 B3 00 01 01 08 E8 00 30 F2 70 5A 80 B0 58 8A 00 50 1D 74 00 00 1E 02 3A 80 18 71 38 2D 40 58 2C 45 00 50 1D 74 00 00 1E 00 00 00 FD 00 18 4B 0F 87 3C 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 20 36 47 48 44 52 32 43 48 0A 01 0D 02 03 4B F0 57 10 1F 05 14 20 21 22 04 13 03 12 07 16 5D 5E 5F 62 63 64 61 60 66 65 23 09 56 07 83 01 00 00 6E 03 0C 00 10 00 38 3C 20 08 80 01 02 03 04 67 D8 5D C4 01 78 80 03 E2 00 0F E3 06 07 01 E3 05 FF 01 E4 0F 00 00 78 01 1D 80 D0 72 1C 16 20 10 2C 25 80 50 1D 74 00 00 9E 66 21 56 AA 51 00 1E 30 46 8F 33 00 50 1D 74 00 00 1E 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 96

EDID	Description
4K 60 Hz, 4:2:0 HDR, MCH (HD loss- less)	<p>Native/preferred timing 3840x2160p at 60Hz (16:9)</p> <p>Standard timings supported</p> <ul style="list-style-type: none"> 640 x 480p at 60Hz - IBM VGA 800 x 600p at 60Hz - VESA 1024 x 768p at 60Hz - VESA 1152 x 864p at 75Hz - VESA STD 1280 x 720p at 60Hz - VESA STD 1280 x 800p at 60Hz - VESA STD 1280 x 1024p at 60Hz - VESA STD 1440 x 900p at 60Hz - VESA STD 1600 x 900p at 60Hz - VESA STD 1680 x 1050p at 60Hz - VESA STD <p>CE video identifiers (VICs) - timing/formats supported</p> <ul style="list-style-type: none"> 1920 x 1080p at 60Hz - HDTV (16:9, 1:1) 1920 x 1080p at 50Hz - HDTV (16:9, 1:1) 1920 x 1080i at 60Hz - HDTV (16:9, 1:1) 1920 x 1080i at 50Hz - HDTV (16:9, 1:1) 1920 x 1080p at 24Hz - HDTV (16:9, 1:1) 1920 x 1080p at 25Hz - HDTV (16:9, 1:1) 1920 x 1080p at 30Hz - HDTV (16:9, 1:1) 1280 x 720p at 60Hz - HDTV (16:9, 1:1) 1280 x 720p at 50Hz - HDTV (16:9, 1:1) 720 x 480p at 60Hz - EDTV (16:9, 32:27) 720 x 576p at 50Hz - EDTV (16:9, 64:45) 720 x 480i at 60Hz - Doublescan (16:9, 32:27) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) 720 x 576i at 50Hz - Doublescan (16:9, 64:45) <p>CE audio data (formats supported)</p> <ul style="list-style-type: none"> LPCM 2-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz LPCM 6-channel, 16/20/24 bit depths at 44/48/88/96/176/192 kHz LPCM 8-channel, 16/20/24 bit depths at 32/44/48/88/96/176/192 kHz AC-3 6-channel, 640k max. bit rate at 32/44/48 kHz DTS 6-channel, 1536k max. bit rate at 44/48/88/96 kHz DD+ 8-channel at 44/48 kHz DTS-HD 8-channel, 16-bit at 44/48/88/96/176/192 kHz <p>CE speaker allocation data FL/FR, FLFE, FC, RL/RR, RLC/RRC</p>

EDID	Description
4K 60 Hz, 4:2:0 HDR, MCH (HD loss- less)	Raw data 00 FF FF FF FF FF FF 00 06 8C 00 00 00 00 00 01 19 01 03 81 00 00 78 02 EE 91 A3 54 4C 99 26 0F 50 54 21 08 00 71 4F 81 C0 81 00 81 80 95 00 A9 C0 B3 00 01 01 08 E8 00 30 F2 70 5A 80 B0 58 8A 00 50 1D 74 00 00 1E 02 3A 80 18 71 38 2D 40 58 2C 45 00 50 1D 74 00 00 1E 00 00 00 FD 00 18 4B 0F 87 3C 00 0A 20 20 20 20 20 20 00 00 00 FC 00 41 54 4C 20 36 47 48 44 52 4D 43 48 0A 01 F2 02 03 5D F0 57 10 1F 05 14 20 21 22 04 13 03 12 07 16 5D 5E 5F 62 63 64 61 60 66 65 35 09 7F 07 0D 7E 07 0F 7F 07 15 07 50 3D 1E C0 57 06 00 5F 7E 01 83 4F 00 00 6E 03 0C 00 10 00 38 3C 20 08 80 01 02 03 04 67 D8 5D C4 01 78 80 03 E2 00 0F E3 06 07 01 E3 05 FF 01 E4 0F 00 00 78 66 21 56 AA 51 00 1E 30 46 8F 33 00 BA 88 21 00 00 1E 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 22

Specifications

Connectors, Controls, and Indicators	
INPUT (HDBaseT)	1 - RJ45
INPUT (HDMI)	3 - Type A, 19-pin female
OUTPUT	1 - Type A, 19-pin female
OPTICAL	1 - TOSLINK™
RS-232 / IR	1 - 5-pin captive screw
LAN	1 - RJ45
DC 5V	1 - Barrel connector, 5.5 mm, locking
FW	1 - Type mini-B, 5-pin female
INPUT button	1 - momentary, tact-type
POWER button	1 - momentary, tact-type, backlit power LED
Input Indicators	4 - LED, blue
IR window	1 - Round, front panel

Video	
UHD/HD/SD	4096×2160@24/25/30/50/60Hz, 3840×2160@24/25/30/50/60Hz, 2048×1080p, 1080p@23.98/24/25/29.97/30/50/59.94/60Hz, 1080i@50/59.94/60Hz, 720p@50/59.94/60Hz, 576p, 576i, 480p, 480i
VESA	2560×2048, 2560×1600, 2048×1536, 1920×1200, 1680×1050, 1600×1200, 1600×900, 1440×900, 1400×1050, 1366×768, 1360×768, 1280×1024, 1280×800, 1280×768, 1152×768, 1024×768, 800×600, 640×480
Color Space	YUV, RGB
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0*
Color Depth	8-bit, 10-bit, 12-bit
HDR	HDR10 and Dolby® Vision™ @ 60 Hz

Audio	
HDMI IN / HDBaseT IN	PCM 2Ch, LPCM 5.1, LPCM 7.1, Dolby® Digital, DTS® 5.1, Dolby Digital Plus™, Dolby TrueHD, DTS-HD Master Audio™, Dolby Atmos®, DTS:X
Sample Rate	32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
Bit Rate	24-bit (max.)

Resolution / Distance	4K - Feet	4K - Meters	1080p - Feet	1080p - Meters
HDMI IN/OUT	15	5	30	10
CAT5e/6	115	35	200	60
CAT6a/7	130	40	230	70

*4096x2160@50/60Hz and 3840x2160@50/60Hz supports 8-bit 4:2:0 chroma subsampling, only.

Signal	
Maximum TMDS Clock	600 MHz
HDBaseT	18 Gbps
HDMI	2.0
USB	2.0
HDCP	2.2

Temperature	Fahrenheit	Celsius
Operating	32° to 122°	0° to 50°
Storage	-4° to 140°	-20° to 60°
Humidity (RH)	20% to 90%, non-condensing	

Power	
Consumption	6.6 W
Idle Consumption	5.9 W
Supply	Input: 100 - 240 V AC, 50/60 Hz, Output: 5 V DC

Dimensions	Inches	Millimeters
H x W x D	1.0 x 8.6 x 5.9	26 x 219 x 152

Weight	Pounds	Kilograms
Device	1.82	0.82

Certification	
Device	CE, FCC
Power Supply	CE, FCC, Level VI, RoHS, cULus, RCM, CCC

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