4K / HDR
Multichannel Digital to Two-Channel Audio Converter
## Version Information

<table>
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<tr>
<th>Version</th>
<th>Release Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>07/18</td>
<td>Initial release</td>
</tr>
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Welcome to Atlona!

Thank you for purchasing this Atlona product. We hope you enjoy it and will take a few moments to register your new purchase.

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](http://www.atlona.com/registration)

Sales, Marketing, and Customer Support

<table>
<thead>
<tr>
<th>Main Office</th>
<th>International Headquarters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlona Incorporated</td>
<td>Atlona International AG</td>
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<td>Ringstrasse 15a</td>
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<td>Office: +41 43 508 4321</td>
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<td>Sales and Customer Service Hours</td>
</tr>
<tr>
<td>Sales and Customer Service Hours</td>
<td>Monday - Friday: 09:00 - 17:00 (UTC +1)</td>
</tr>
<tr>
<td>Monday - Friday: 6:00 a.m. - 4:30 p.m. (PST)</td>
<td></td>
</tr>
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http://www.atlona.com/

Operating Notes

As of this writing, there are no firmware updates for this product. When new firmware is released, update instructions will be included with the firmware and will be appended to this manual.

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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:

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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

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• Lifetime Limited Product Warranty for all cable products.

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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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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.
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- 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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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.
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 manufacturer’s 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 Attona AT-HDR-M2C-QUAD is an audio converter for extracting and downmixing multichannel PCM, Dolby, and DTS audio from HDMI. The HDR-M2C-QUAD provides simultaneous audio conversion for four HDMI sources. Each HDMI input features pass-through on its associated HDMI output. It also includes unbalanced analog and TOSLINK digital audio outputs with a down-mixed stereo signal. The HDR-M2C-QUAD is compatible with High Dynamic Range (HDR) formats and is HDCP 2.2 compliant. It supports 4K/UHD video @ 60 Hz with 4:4:4 chroma sampling, as well as HDMI data rates up to 18 Gbps. This quad HDMI audio conversion device includes EDID management features as well as audio volume and bass/treble controls for each converter, all available via Ethernet through the Attona Management System (AMS), the web GUI, or a control system. The HDR-M2C-QUAD is ideal for serving surround sound and/or two-channel audio systems from up to four HDMI sources, while facilitating pass-through to a matrix switcher.

Features

• HDMI audio de-embedding and multi-channel audio downmixing for four HDMI sources
• Downmixes multi-channel PCM, Dolby, and DTS formats to stereo audio
• 4K/UHD capability @ 60 Hz with 4:4:4 chroma sampling, plus support for HDR formats
• HDCP 2.2 compliant
• Delivers audio to HDMI, TOSLINK digital audio, and analog audio outputs
• Volume and tone adjustments
• EDID management
• Configured and managed by AMS

Package Contents

1 x AT-HDR-M2C-QUAD
4 x 3-pin captive screw blocks
1 x Wall/table mounting brackets
1 x Power cable
1 x Installation Guide
Panel Description

1. **RESET Button**
   Press and hold this button for 10 seconds to set the IP mode. Press and hold for 20 seconds to perform a factory reset. Refer to IP Configuration (page 12) and ## for more information.

2. **RESET LED Indicator**
   This indicator displays the current state of the AT-HDR-M2C-QUAD. During normal operation, this indicator will glow solid green. When a firmware update is in process, it will flash green.

3. **FW**
   Connect a mini USB cable from a computer to this port to update the firmware. Refer to ## for more information.

4. **LAN**
   Connect an Ethernet cable from this port to a Local Area Network (LAN). This port provides access to the web GUI.

5. **I/O 1 - I/O 4**
   The AT-HDR-M2C-QUAD provides four sets of audio and video input / output ports:
   - **AUDIO OUT**
     - **Analog Audio**
       Connect the included 3-pin captive screw block from this port to a two-channel audio output device. Refer to Audio Connector (page 3) for wiring information.
     - **Digital Audio**
       Connect an optical cable from this TOSLINK port to an AV receiver. Only two-channel audio output is supported.
   - **HDMI OUT**
     Connect an HDMI cable from this port to a display or other sink device. This output supports multichannel audio.
   - **IN**
     Connect an HDMI cable from this port to a source with multichannel audio.

6. **Power Button**
   Press this button to power-on or power-off the AT-HDR-M2C-QUAD.

7. **Power receptacle**
   Connect the included power cable from this receptacle to an available electrical outlet.
Installation

Audio Connector

The AT-HDR-M2C-QUAD provides analog audio output of two-channel audio, using the included 3-pin captive-screw terminal block.

1. Use wire strippers to remove a portion of the cable jacket.
2. Remove at least 3/16" (5 mm) from the insulation of each wire.
3. Insert the wires into the correct terminal on the included Phoenix 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.
1. Connect a UHD/HD source to each of the **HDMI IN** ports on the AT-HDR-M2C-QUAD.

2. Connect an HDMI cable from each **HDMI OUT** port on the AT-HDR-M2C-QUAD to a display or other sink device. HDMI OUT ports support multichannel audio.

   **NOTE:** The AT-HDR-M2C-QUAD is a High Dynamic Range (HDR) product. For best performance, use premium HDMI cables that are HDR-certified.

3. Connect an optical audio cable from each **OPTICAL** port on the AT-HDR-M2C-QUAD, to a sound bar or other audio output device. Audio output on this port is limited to two-channels.

4. Connect the included 3-pin captive screw block from each analog audio output to an amplifier or a set of powered speakers. Refer to **Audio Connector (page 3)** for wiring information.

5. Connect an Ethernet cable from the **LAN** port on the AT-HDR-M2C-QUAD, to the Local Area Network (LAN).

6. Connect the included power cable from the power receptacle on the AT-HDR-M2C-QUAD to an available electrical outlet.
IP Configuration

The AT-HDR-M2C-QUAD 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 bottom of the unit, to identify both the unit and its IP address on the network.

If the AT-HDR-M2C-QUAD is unable to detect a DHCP server within 15 seconds, then the unit will be placed in Auto IP mode and will be assigned an IP address within the range 169.254.xxx.xxx. If this occurs, the AT-HDR-M2C-QUAD can be set to a static IP address.

Using the Front Panel

1. Make sure the AT-HDR-M2C-QUAD is powered.
2. Press and hold the RESET button for 10 seconds, using the end of a paper clip or other pointed object.
3. Release the RESET button. The RESET LED indicator will flash green. The number of flashes will indicate the currently selected IP mode:

<table>
<thead>
<tr>
<th>PW LED flashes</th>
<th>Description</th>
<th>Description</th>
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<tr>
<td>Two</td>
<td>Static IP mode</td>
<td>IP address: 192.168.1.254</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Subnet mask: 255.255.0.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gateway: 192.168.1.1</td>
</tr>
<tr>
<td>Four</td>
<td>DHCP mode</td>
<td>---</td>
</tr>
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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-HDR-M2C-QUAD using RS-232 or Telnet.
  2. At the command line, execute the IPDHCP command using the off argument, as shown.

```
IPDHCP off
```

3. 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
```
The Web GUI

- Setting DHCP mode
  1. Connect to the AT-HDR-M2C-QUAD using RS-232 or Telnet.
  2. 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 21), in the web GUI, can be used to set the AT-HDR-M2C-QUAD to either DHCP or static IP mode. In order to access the web GUI, the IP address of the AT-HDR-M2C-QUAD must be known. Refer to Introduction to the Web GUI (page 14).

1. Open the desired web browser and enter the IP address of the AT-HDR-M2C-QUAD.
2. Log in, using the required credentials. The factory-default username and password are listed below:

   Username: root
   Password: Atlona

3. Click the System tab.

4. 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.

5. Click the Save button to save the changes.
The AT-HDR-M2C-QUAD includes a built-in web GUI. Atlona recommends that the web GUI be used to set up the AT-HDR-M2C-QUAD, as it provides intuitive management of all features.

The AT-HDR-M2C-QUAD 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-HDR-M2C-QUAD. If a static IP address is desired, refer to Setting the IP Address using the Web GUI (page 13) for more information. The default static IP address of the AT-HDR-M2C-QUAD is 192.168.1.254.

1. Launch a web browser.
2. In the address bar, type the IP address of the AT-HDR-M2C-QUAD.
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 20) for more information.
6. Click the Login button or press the ENTER key on the keyboard.
The Web GUI

7. The Info page will be displayed.

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, clicking A/V Settings, in the menu bar, will display the A/V Settings page.
The Web GUI

Info page

After logging in, the Info page is the first page to be displayed. The Info page is divided into three sections: System Info, Video Info, and Audio Info. The System Info section displays general information about the AT-HDR-M2C-QUAD, such as the model name, software, and boot loader version for each I/O block. The Video Info section displays information about the input video signal. The Audio Info section displays information about the audio format, sampling rate, and the number of audio channels.

- **Model Name**: The model name of the unit.
- **Software Version**: The version of software.
- **Boot Version**: Boot firmware version.
- **I/O 1 - I/O 4 Software Version**: Version of software.
The Web GUI

**Video Info**
**I/O 1 - I/O 4**

**Signal Type**
The type of input signal.

**Video Format**
The input resolution of the source device.

**Aspect**
Aspect ratio of the input signal.

**Color Space**
Displays the color space and chroma sub-sampling of the input signal.

**Color Depth**
The color depth of the input signal.

---

**Audio Info**
**I/O 1 - I/O 4**

**Audio Format**
The audio format detected on the input.

**Sampling Rate**
The sampling rate of the input audio signal, expressed in kilohertz (kHz).

**Channels**
The number of audio channels detected on the input signal.
The Web GUI

Video page

The Video page allows the preferred input timing to be selected as well as setting the HDCP mode.

Video

Prefer Timing (HDMI)
Click this drop-down list to select the desired input timing.

<table>
<thead>
<tr>
<th>Available Resolutions</th>
<th>3840x2160@60Hz</th>
<th>1920x1200</th>
<th>1366x768</th>
<th>1024x768</th>
</tr>
</thead>
<tbody>
<tr>
<td>3840x2160@30Hz</td>
<td>1920x1080</td>
<td>1280x800</td>
<td>800x600</td>
<td></td>
</tr>
<tr>
<td>2560x1440</td>
<td>1600x900</td>
<td>1280x720</td>
<td>Default - HDMI OUT</td>
<td></td>
</tr>
</tbody>
</table>

Input HDCP
Click this toggle to report HDCP compliance or non-compliance to the source device. Some computers will send HDCP content if an HDCP compliant display is detected. Setting this value to OFF, will force the computer to ignore detection of HDCP compliant displays. Disabling this feature will not decrypt HDCP content.

- **ON** - Reports to the source device that the AT-HDR-M2C is an HDCP-compliant sink.
- **OFF** - Reports to the source device that the AT-HDR-M2C is a non-HDCP-compliant sink.
Audio page

The Audio page provides options to control the volume, muting, treble, and bass, for the analog and TOSLINK audio outputs. These controls do not affect the HDMI Out port.

I/O 1 - I/O 4

Mute
Click this toggle to the OFF position to mute the analog and TOSLINK outputs. HDMI outputs are not affected.

Volume
Click and drag this slider bar to adjust the audio volume on the analog and TOSLINK outputs. Range: -80 to 6.

Output Bass
Click and drag this slider bar to adjust the bass on the analog and TOSLINK outputs. Range: -15 to 15.

Output Treble
Click and drag this slider bar to adjust the treble on the analog and TOSLINK outputs. Range: -15 to 15.
The Web GUI

Config page

The **Config** page provides management of usernames and passwords. The administrator username (“root”) cannot be changed.

**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.

**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 a username and password have been created.
The Web GUI

System page

The System page is divided into two sections: Network and System. The Network section allows configuration of the IP settings of the AT-HDR-M2C-QUAD. The System section provides controls for resetting the AT-HDR-M2C-QUAD to factory-default settings and updating the firmware.

Network

IP Mode
Click this toggle to set the AT-HDR-M2C-QUAD to DHCP or static mode. By default, the AT-HDR-M2C-QUAD is in DHCP mode.

IP
Enter the IP address of the AT-HDR-M2C-QUAD in this field. This field will only be available when the IP Mode is set to Static. The default static IP address is 192.168.1.254.

Netmask
Enter the subnet mask of the AT-HDR-M2C-QUAD in this field. This field will only be available when the IP Mode is set to Static.

Save
Click this button to save all changes in the Network group.

Gateway
Enter the gateway (router) address in this field. This field will only be available when the IP Mode is set to Static.

Telnet Port
Enter the Telnet port in this field. Telnet uses a default port number of 23.

Telnet Login Mode
Click this toggle to set the Telnet Login Mode to ON or OFF.

Telnet Timeout
Click this drop-down list to select the timeout interval, in seconds.

Broadcast
Click this toggle to set the Broadcast mode ON or OFF.
System

Factory Default
Click this button to reset the AT-HDR-M2C-QUAD to factory-default settings.

Choose File
Click this button to select the firmware file.

Update
Click this button to begin the firmware update procedure.

Refer to Updating the Firmware (page 23) for more information on firmware updates.
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-HDR-M2C-QUAD firmware can be updated using a USB-A to USB mini-B cable.

Requirements

- AT-HDR-M2C-QUAD
- Firmware file (.bin file)
- Computer

1. Connect an Ethernet cable from the computer, containing the firmware, to the same network where the AT-HDR-M2C-QUAD is connected.
2. Go to the System page (page 21) in the web GUI.
3. Click the Choose File button, under the Firmware Update section.
4. Browse to the location of the firmware file, select it, and click the Open button.
5. Click the Update button.
6. The following dialog will be displayed.
Appendix

7. Click the **OK** button to begin the firmware update process. Click the **Cancel** button to abort the process.

8. The update process will take approximately 60 seconds and will automatically reboot the AT-HDR-M2C-QUAD. During the update process, the **PWR** LED indicator will flash.

9. After the firmware update process is complete, the **Login** screen will be displayed.
4. Delete all files from the USB Drive folder, if any are present.
5. Drag-and-drop the firmware file to the drive.
6. The RESET LED indicator, on the rear panel, will flash green during the update procedure. Wait for the LED to turn solid green.
7. The AT-HDR-M2C-QUAD will automatically reboot, completing the firmware update process.
8. Disconnect the USB cable from both the computer and the AT-HDR-M2C-QUAD.
9. The firmware update process is complete.
Mounting Instructions

The AT-HDR-M2C-QUAD includes two rack ears, which can be used to install the unit into a rack. Use the two enclosure screws, on the sides of the unit to attach the rack ears.

1. Using a small Phillips screwdriver, remove the two screws from the left side of the enclosure.

![Image showing Step 1]

2. Position one of the rack ears, as shown below, aligning the holes on the side of the enclosure with one set of holes on the rack ear.

![Image showing Step 2]

3. Use the screws from Step 1 to attach the rack ear.

![Image showing Step 3]

4. Repeat Steps 1 through 3 to attach the second rack ear to the opposite side of the unit.

5. Install the assembly into a rack. Secure the unit to the rack using the oval-shaped holes, on each rack ear.

![Image showing Step 4]
## Default Settings

The following tables list the factory-default settings for the AT-HDR-M2C-QUAD.

### A/V Settings

<table>
<thead>
<tr>
<th>Video</th>
<th>Preferred Timing (HDMI)</th>
<th>1920 x 1080</th>
<th>Input HDCP</th>
<th>ON</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio</td>
<td>Mute</td>
<td>OFF</td>
<td>Output Volume</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Output Bass</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Output Treble</td>
<td>0</td>
</tr>
</tbody>
</table>

### Config

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Username (cannot be changed)</th>
<th>root</th>
<th>Password</th>
<th>Atlona</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### System

<table>
<thead>
<tr>
<th>Network</th>
<th>IP Mode</th>
<th>DHCP</th>
<th>IP</th>
<th>---</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Netmask</td>
<td>---</td>
<td>Gateway</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>Telnet Port</td>
<td>23</td>
<td>Telnet Login Mode</td>
<td>OFF</td>
</tr>
<tr>
<td></td>
<td>Telnet Timeout (seconds)</td>
<td>120</td>
<td>Broadcast</td>
<td>ON</td>
</tr>
</tbody>
</table>

**NOTE:** When the AT-HDR-M2C-QUAD is set to static IP mode, then the IP, Netmask, and Gateway settings will be used by default.
### Connectors, Controls, and Indicators

<table>
<thead>
<tr>
<th>Connector</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HDMI IN</strong></td>
<td>4 - Type A, 19-pin female</td>
</tr>
<tr>
<td><strong>HDMI OUT</strong></td>
<td>4 - Type A, 19-pin female</td>
</tr>
<tr>
<td><strong>OPTICAL OUT</strong></td>
<td>4 - TOSLINK™</td>
</tr>
<tr>
<td><strong>AUDIO OUT</strong></td>
<td>4 - 3-pin, captive screw</td>
</tr>
<tr>
<td><strong>LAN</strong></td>
<td>1 - RJ45</td>
</tr>
<tr>
<td><strong>FW</strong></td>
<td>1 - Mini USB Type B</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>1 - IEC connector</td>
</tr>
<tr>
<td><strong>Power Switch</strong></td>
<td>1 - Rocker type, SPST</td>
</tr>
<tr>
<td><strong>Status Indicator</strong></td>
<td>1 - LED, green</td>
</tr>
</tbody>
</table>

### Video

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UHD/HD/SD</strong></td>
<td>4096x2160@24/25/30/50/60Hz, 3840x2160@24/25/30/50/60Hz, 2048x1080p, 1080i/50/59.94/60Hz, 720p/50/59.94/60Hz, 576p, 576i, 480p, 480i</td>
</tr>
<tr>
<td><strong>VESA</strong></td>
<td>2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1152x768, 1024x768, 800x600, 640x480</td>
</tr>
<tr>
<td><strong>Color Space</strong></td>
<td>YUV, RGB</td>
</tr>
<tr>
<td><strong>Chroma Subsampling</strong></td>
<td>4:4:4, 4:2:2, 4:2:0</td>
</tr>
<tr>
<td><strong>Color Depth</strong></td>
<td>8-bit, 10-bit, 12-bit</td>
</tr>
<tr>
<td><strong>HDR</strong></td>
<td>HDR10 and Dolby® Vision™ @ 60 Hz</td>
</tr>
</tbody>
</table>

### Audio

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HDMI IN / HDBaseT IN</strong></td>
<td>PCM 2Ch, LPCM 5.1, LPCM 7.1, Dolby® Digital, DTS® 5.1, Dolby Digital Plus™, Dolby TrueHD, DTS-HD Master Audio™, DTS:X™</td>
</tr>
<tr>
<td><strong>Sample Rate</strong></td>
<td>32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz</td>
</tr>
<tr>
<td><strong>Bit Rate</strong></td>
<td>24-bit (max.)</td>
</tr>
</tbody>
</table>

### Resolution / Distance

<table>
<thead>
<tr>
<th>Format</th>
<th>4K - Feet</th>
<th>4K - Meters</th>
<th>1080p - Feet</th>
<th>1080p - Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HDMI IN / HDMI OUT</strong></td>
<td>15</td>
<td>5</td>
<td>30</td>
<td>10</td>
</tr>
</tbody>
</table>

### Signal

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum TMDS Clock</strong></td>
<td>600 MHz</td>
</tr>
<tr>
<td><strong>HDMI</strong></td>
<td>2.0</td>
</tr>
<tr>
<td><strong>HDCP</strong></td>
<td>2.2</td>
</tr>
</tbody>
</table>

### Temperature

<table>
<thead>
<tr>
<th>Format</th>
<th>Fahrenheit</th>
<th>Celsius</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating</strong></td>
<td>32 to 122</td>
<td>0 to 50</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>-4 to 140</td>
<td>-20 to 60</td>
</tr>
<tr>
<td><strong>Humidity (RH)</strong></td>
<td>20% to 90%, non-condensing</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix

<table>
<thead>
<tr>
<th>Power</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumption</td>
<td>28.6 W</td>
</tr>
<tr>
<td>Supply</td>
<td>Input: 100 - 240 VAC 50/60 Hz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Inches</th>
<th>Millimeters</th>
</tr>
</thead>
<tbody>
<tr>
<td>H x W x D</td>
<td>1.73 x 17.24 x 10.00</td>
<td>44.00 x 438.00 x 254.00</td>
</tr>
<tr>
<td>H x W x D (w/ ears)</td>
<td>2.18 x 18.93 x 10.23</td>
<td>55.50 x 481.00 x 260.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weight</th>
<th>Pounds</th>
<th>Kilograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device</td>
<td>7.15</td>
<td>3.24</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Certification</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>CE, FCC, cULus, RoHS, CCC, RCM</td>
</tr>
<tr>
<td>Product</td>
<td>CE, FCC</td>
</tr>
</tbody>
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