RESIDENTIAL PRODUCTS

Networked AV:
OMNI-512 HDR
OMNI-521 HDR

Extenders:
HDR-EX-70-2PS HDR
HDR-EX-70C-KIT HDR
HDR-EX-100CEA-KIT HDR
UHD-EX-70-2PS
UHD-EX-70
UHD-EX-70C
UHD-EX-100CE
UHD-EX-100CEA

Matrix Switchers
HDR-H2H-44MA HDR
HDR-H2H-88MA HDR
PRO3-44M
PRO3-66M
PRO3-88M
PRO3-1616M

Switcher:
JUNO-451 HDR

Distribution Amps:
Rondo-442 HDR
Rondo-444 HDR

Accessories:
AT-HDR-M2C HDR
AT-HDR-SYNC HDR

The Story Behind Atlona

Celebrating 15 years of innovation, Atlona is a leading global manufacturer of 4K/UHD and HDR signal routing, switching, and distribution solutions. Atlona's products fit perfectly within a variety of residential AV integration systems. From simple HDMI switching to complex routing of long-distance 4K HDR video, only Atlona can provide you with solutions to meet your customer's needs for the latest HDMI standards while ensuring compliance with HDCP content protection.

There are several advantages to partnering with Atlona:

- Award-winning, 10-year warranty
  - The industry's leading 10-year limited warranty applies to all Atlona products purchased on or after June 1, 2013. Warranty begins on the date of purchase by the end-purchaser.
- Atlona Academy Training and Certification
  - An exclusive and valuable training resource offered to all partners. This free curriculum is designed to help you increase your knowledge of A/V distribution solutions. Learn more at https://atlona.com/training/.
- Technical Support
  - Technical advice is available seven-days-a-week with a guaranteed initial response time of one hour or less.
- Free Technical Sales Support
  - Atlona also offers technical sales support and advice for specifications, product features, and system design solutions; phone consultations are available Monday through Friday.

The Atlona Difference

Atlona's award-winning products and support enable you to offer systems featuring ease-of-use, simplified installation, minimal maintenance and maximized versatility. Backed by our 10-year warranty, Atlona's customer-driven products are designed and developed with the features, performance and reliability that your education customers demand. More information about Atlona is available at https://atlona.com/. Follow Atlona on Twitter at @Atlona.

Read on to learn more: On the following pages, we'll explain how these unique technologies benefit your customer. Plus, we'll identify other Atlona technologies that elevate the viewing experience, enhance ease-of-use and always deliver consistently amazing pictures. **Remember, it's not about the box, it's about the system you offer your customer, Atlona is the Innovation behind your system solution!**

UPDATED: APRIL 2018

A Closer Look:

HDBaseT™

Distance is a critical factor in high definition AV signal transmission. Many products feature HDMI input and output connectivity. While this interface is very good for transferring uncompressed video and compressed or uncompressed digital audio, high quality cables must be used to overcome the challenges of maintaining signal integrity at increased distances. This may be impractical for many home theater projects you will design for your customers. Many Atlona products utilize HDBaseT technology from Valens, to allow the transport of video, audio, Ethernet, control, and power over a single CAT5e/6 LAN cable:

- **Video** – Uncompressed UHD video in up to 4K resolution
- **Audio** – Any standard digital audio format including Dolby® TrueHD, Dolby Atmos®, and DTS-HD Master Audio™
- **Ethernet** – 100BaseT Ethernet
- **Control** – Various control signals including CEC, RS-232, USB 2.0 and IR
- **Power** – Ability to supply power to remote devices using Power over Ethernet (PoE)

AV signal distance over HDBaseT varies based on the class of extenders and type of category cable used:

Class A or "100-meter HDBaseT"	**Class B or "70-meter HDBaseT"**
• CAT5e/6 @ 1080p up to 328 feet (100 m) • CAT5e/6 @ 4K up to 230 feet (70 m) • CAT6a/7 @ 4K up to 328 feet (100 m)	• CAT5e/6 @ 1080p up to 197 feet (60 m) • CAT6a/7 @ 1080p up to 230 feet (70 m) • CAT5e/6 @ 4K up to 115 feet (35 m) • CAT6a/7 @ 4K up to 130 feet (40 m)

Atlona Extender products will note this class information by the 70 or 100 in their model names. Example: AT-UHD-EX-70C or AT-UHD-EX-100CE.

HDR – High Dynamic Range Video

4K describes the *quantity* of pixels, but HDR that describes *quality*. While 4K might be stealing a lot of the limelight because it offers more pixels, High Dynamic Range (HDR) is really the change you've been waiting for. What HDR is promising is better pixels: Bright whites are brighter, dark blacks are darker and 10-bit panels are finally able to display all 1 billion colors.[1]

HDR video is different from HDR photography. In HDR Photography, separate photos are taken at different exposures, these are combined into one photo providing better luminosity, or perceived brightness, by the viewer. In video, updated content sources provide video signals with additional information about brightness and color across a much wider range. HDR-capable displays can read that information and show an image built from a wider gamut of color and brightness. Besides the wider range, HDR video simply contains more data to describe more steps in between the extremes. HDR information beyond standard HDMI signals travels with the HDMI signal in the *metadata* information. This requires more data (18 Gbps for HDR vs 10.2 Gbps for 4K) and different sources like a streaming service or UHD Blu-Ray. Types of HDR include HDR10, Dolby Vision, and the forthcoming Hybrid Log-Gamma (HLG).[2]

Look for these **Atlona products that feature HDR compatibility**: **Juno** Switcher, **Rondo** Distribution Amps, **HDR-EX** Extenders, **Etude** EDID Emulator, and the **HDR-M2C** Audio Converter.

References:
[1]TechRadar, HDR TV: What is HDR, and what does High Dynamic Range mean for television? [LINK]
[2]PC Mag: What Is HDR (High Dynamic Range) for TVs? [LINK]

OmniStream™ R-Type

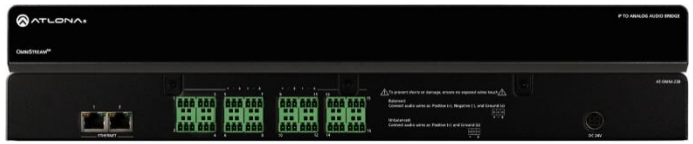
The Atlona **OmniStream™ R-Type Series** is designed for high performance, flexible distribution of AV over Gigabit Ethernet in residential and commercial applications. OmniStream R-Type **supports 4K HDR, including HDR10 @ 60 Hz and 10-bit color**, as well as **HLG (Hybrid Log-Gamma)** for future 60p HDR broadcasts. OmniStream delivers the image quality you demand from baseband video, using high performance, visually lossless compression optimized for fast-motion video content.

OmniStream R-Type delivers the best of both worlds – uncompromised picture quality and **just half a frame of encode-decode latency**, the lowest for any AV over Gigabit Ethernet platform. This equates to a delay of just 8 ms with 60 Hz video.

Experience effortless, intuitive AV routing with the **Atlona Management System** (AMS). AMS is a powerful network resource for **centralized configuration and management of OmniStream** and other Atlona AV system installations throughout a facility or residence. AMS is essential for accessing all capabilities of OmniStream endpoint devices and features an intuitive, flexible, and powerful GUI for routing video, audio, control, and data between sources and destinations.

OmniStream R-Type is 4K HDR distribution infrastructure, now and the future. Free yourself from the past limitations of other AV over IP systems with a fully capable, scalable, and dependable platform – backed by our industry-leading 10-year warranty.

OmniStream R-Type	AT-OMNI-512 Encoder	AT-OMNI-521 Decoder
MSRP	$1,600.00	$1,100.00
Bitrate	900 Mbps	
Resolution	4096×2160@24Hz, 3840×2160@24/25/30Hz (UHD) 1080p@23.98/24/25/29.97/30/50/59.94/60Hz 1080i@25/29.97/30Hz, 720p@30/50/59.94/60Hz	
Color depth	8-bit, 10-bit, 12-bit	
CEC	Yes	
HDCP	Supports up to HDCP 2.2 Specification	
In/Out Ports		
Video	2 x HDMI Input	1 x HDMI Output
Ethernet, Video Stream	2 x 10/100/1000 Mbps Input	1 x 10/100/1000 Mbps Output
RS-232	2 x 3-pin captive screw	
LAN	RJ45, TCP/IP control	
General Specifications		
Dimensions (H x W x D Inches)	1.34 x 8.19 x 4.41	
Power	Local PSU or PoE	PoE
Web page	https://atlona.com/product/at-omni-512/	https://atlona.com/product/at-omni-521/



Also Available: OMNI-238 IP to Analog Audio Bridge
https://atlona.com/product/at-omni-238/

HDR-EX Series Extenders

Atlona's **HDR-EX** Series of HDBaseT™ extenders are cost-effective and ideal for applications requiring the latest as well as emerging **4K/UHD and HDR** sources and displays. It is compatible with all video resolutions, audio formats, and color space formats supported in the HDMI 2.0b specification, plus the ability to pass metadata for HDR content. The HDR-EX Series supports **4K HDR10 @ 60 Hz** and **Dolby Vision @ 30 Hz**. HDR and 4K/60 4:4:4 video content requires data rates exceeding 10 Gbps and up to 18 Gbps – a significant challenge for extending signals over HDBaseT. The HDR-EX Series provides the answer with visually lossless video compression technology that applies extremely light compression with no latency. This enables transmission of HDR and 4K/60 4:4:4 over a single category cable while ensuring very high, pristine image quality.

HDR Extenders	AT-HDR-EX-70-2PS	AT-HDR-EX-70C	AT-HDR-EX-100CEA
Packaging	Kit Only	Kit only	Kit Only
MSRP	$400.00	$600.00	$920.00
Video signal	HDMI w/HDR	HDMI w/HDR	HDMI w/HDR
Extension technology	HDBaseT w/Visually Lossless Compression	HDBaseT w/Visually Lossless Compression	HDBaseT w/Visually Lossless Compression
Control extension	No	Yes: IR & RS-232	Yes: IR & RS-232
Ethernet extension	No	No	Yes
Return optical audio path	No	No	Yes
PoE – Remote power to receiver	No (local PS)	Yes	Yes
4K/UHD capability @ 60 Hz with 4:4:4 and w/HDCP 2.2 support	Yes	Yes	Yes
4K HDR10 @ 60Hz and Dolby® Vision™ @ 30Hz	Yes	Yes	Yes
1080p Range Cat 5e/6	200ft (60m)	200ft (60m)	330ft (100m)
1080p Range Cat 6a/7	230ft (70m)	230ft (70m)	330ft (100m)
4K/UHD 60Hz Range Cat 5e/6	115ft (35m)	115ft (35m)	295ft (70m)
4K/UHD 60Hz Range Cat 6a/7	130ft (40m)	130ft (40m)	330ft (100m)
Dimensions per unit (H x W x D Inches)	1 x 4.3 x 3	1.02 x 4.29 x 5	1.02 x 5.74 x 3.74
Web page	https://atlona.com/product/at-hdr-ex-70-2ps/	https://atlona.com/product/at-hdr-ex-70c-kit/	https://atlona.com/product/at-hdr-ex-100cea-kit/

UHD-EX Series Extenders

Atlona's **UHD-EX** Series of HDBaseT™ extenders offer **4K/UHD** resolution capability at refresh rates up to 60 Hz for compatibility with the latest generation of Ultra High Definition displays and sources. These extenders are HDCP 2.2 compliant, adhering to the latest High-bandwidth Content Protection specification. Except for the AT-UHD-EX-70-2PS version, all models offer Power over Ethernet capability to save installation time and integration costs by remotely powering the receiver over the same category cable as the AV signals. The AT-UHD-EX-70C and AT-UHD-EX-100CE versions offer bi-directional IR control and are designed to work with standard 12V IR receiver modules. All models pass all multi-channel audio signal including Dolby® TrueHD and Dolby Atmos® plus DTS-HD Master Audio™.

UHD Extenders	AT-UHD-EX-70-2PS	AT-UHD-EX-70	AT-UHD-EX-70C	AT-UHD-EX-100CE	AT-UHD-EX-100CEA
Packaging	Kit Only	Kit Only	Kit, Tx, or Rx	Kit, Tx, or Rx	Kit, Tx, or Rx
MSRP Transmitter Receiver	$310.00 N/A N/A	$400.00 N/A N/A	$500.00 $300.00 $250.00	$700.00 $375.00 $350.00	$750.00 N/A N/A
Video signal	HDMI	HDMI	HDMI	HDMI	HDMI
Extension technology	HDBaseT	HDBaseT	HDBaseT	HDBaseT	HDBaseT
Control extension	No	No	Yes: IR & RS-232	Yes: IR & RS-232	Yes: IR & RS-232
Ethernet extension	No	No	No	Yes	Yes
Return optical audio path	No	No	No	No	Yes
PoE – Remote power to receiver	No (local PS)	Yes	Yes	Yes	Yes
4K/UHD 60Hz 4:2:0 8bit w/HDCP 2.2 support	Yes	Yes	Yes	Yes	Yes
4K HDR10 @ 24Hz, 4:2:0 chroma subsampling, 10-bit color	Yes	Yes	Yes	Yes	Yes
1080p Range Cat 5e/6	197ft (60m)	197ft (60m)	197ft (60m)	330ft (100m)	328ft (100m)
1080p Range Cat 6a/7	230ft (70m)	230ft (70m)	230ft (70m)	330ft (100m)	328ft (100m)
4K/UHD 60Hz Range Cat 5e/6	115ft (35m)	115ft (35m)	115ft (35m)	230ft (70m)	295ft (70m)
4K/UHD 60Hz Range Cat 6a/7	130ft (40m)	130ft (40m)	130ft (40m)	330ft (100m)	328ft (100m)
Dimensions per unit (H x W x D Inches)	1 x 4.3 x 3	0.98 x 4.29 x 3.5	0.98 x 4.29 x 3.5	0.98 x 4.29 x 3.5	1.02 x 5.75 x 3.5
Web page	https://atlona.com/product/at-uhd-ex-70-2ps/	https://atlona.com/product/at-uhd-ex-70-kit/	https://atlona.com/product/at-uhd-ex-70c-kit/	https://atlona.com/product/at-uhd-ex-100ce-kit/	https://atlona.com/product/at-uhd-ex-100cea-kit/

HDR-H2H Series HDMI Matrix Switchers

Atlona's **HDR-H2H** Series of HDMI matrix switchers are designed for **high dynamic range** (HDR) formats. They are HDCP 2.2 compliant and support 4K/UHD video @ 60 Hz with 4:4:4 chroma sampling, as well as HDMI data rates up to 18 Gbps. They are compatible with all video resolutions, audio formats, and color space formats supported in the HDMI 2.0b specification, plus the ability to pass metadata for HDR content. The HDR-H2H Series includes EDID and HDCP management features and can send CEC display control independently to each output. An unbalanced analog audio output is paired with each HDMI input for sending de-embedded HDMI audio to a whole-house audio system. Each matrix can be controlled via Ethernet, RS-232, and IR. A handheld IR remote control is included.

HDMI Matrix Switchers	AT-HDR-H2H-44MA	AT-HDR-H2H-88MA
MSRP	$2,100.00	$4,000.00
Bandwidth	10.2 Gbps	
Resolution	4096×2160@24/25/30/50[2]/60Hz[2] 3840×2160@24/25/30/50[2]/60Hz[2] 1080p@23.98/24/25/29.97/30/50/59.94/60Hz	
Color depth	8-bit, 10-bit, 12-bit	
CEC	Pass through	
HDCP	Supports up to HDCP 2.2 Specification	
In/Out Ports		
Video input	4 x HDMI	8 x HDMI
Video output	4 x HDMI	8 x HDMI
Audio output	4x 4-pin captive screw	8 x 4-pin captive screw
RS-232	3-pin captive screw	
LAN	RJ45, TCP/IP control	
IR input	2-pin captive screw	
Firmware upgrade	Mini-B USB Port	
General Specifications		
Dimensions (H x W x D Inches)	1.73 x 17.24 x 10	
Rack size	1U	
Web page	https://atlona.com/product/at-hdr-h2h-44ma/	https://atlona.com/product/at-hdr-h2h-88ma/

HDR

PRO3 Series HDMI to HDBaseT Matrix Switchers

Matrix switchers route multiple sources to multiple displays so devices can be shared in several spaces simultaneously. Atlona's **UHD-PRO3 Series** of HDMI to HDBaseT™ matrix switchers are capable of routing 4K/UHD @ 60Hz video signals. These matrix switchers **feature a mix of both 330-foot and 230-foot HDBaseT outputs**. Independently **selectable HDMI outputs** are available to mirror any HDBaseT output for routing HDMI-based audio signals to AVRs or these outputs can become additional matrix outputs for local HDMI destinations. HDCP 2.2 copy protection capability ensures compatibility with ultra-high definition PCs and other sources and displays. Each matrix features several **stereo line level outputs for audio de-embedding** on captive screw connectors with volume, mute, and 5-band EQ. Other advanced features include EDID management, support for 192 kHz/24-bit digital audio and flexible control options over TCP/IP, RS-232, and IR. **NOTE:** Ethernet pass-through is not available with HDBaseT receivers connected to UHD-PRO3 Series matrix switchers.

Compatible receivers:

AT-UHD-EX-100CE-RX (330 foot performance with control, powered via PoE from matrix switcher, includes AT-IR-CS-TX IR emitter cable)[1]
AT-UHD-EX-70C-RX (230 foot performance with control, powered via PoE from matrix switcher, includes AT-IR-CS-TX IR emitter cable)

HDMI to HDBaseT Matrix Switchers	AT-UHD-PRO3-44M	AT-UHD-PRO3-66M	AT-UHD-PRO3-88M	AT-UHD-PRO3-1616M
MSRP	$2,800.00	$5,000.00	$7,000.00	$17,000.00
Bandwidth	10.2 Gbps			
Resolution	4096×2160@24/25/30/50[2]/60Hz[2] 3840×2160@24/25/30/50[2]/60Hz[2] 1080p@23.98/24/25/29.97/30/50/59.94/60Hz			
Color depth	8-bit, 10-bit, 12-bit			
CEC	Pass through			
HDCP	Supports up to HDCP 2.2 Specification			
In/Out Ports				
Video input	4x HDMI	6 x HDMI	8 x HDMI	
Video output	4 x HDBaseT, RJ45 1 x 100m; 3 x 70m 1 x HDMI	6 x HDBaseT, RJ45 2 x 100m; 4 x 70m 2 x HDMI	8 x HDBaseT, RJ45 4 x 100m; 4 x 70m 2 x HDMI	16 x HDBaseT, RJ45 8 x 100m; 8 x 70m 4 x HDMI
Audio output	3 x 4-pin captive screw	4 x 4-pin captive screw	6 x 4-pin captive screw	12 x 4-pin captive screw
RS-232	3-pin captive screw			
LAN	RJ45, TCP/IP control			
IR input	5 x 2-pin captive screw	7 x 2-pin captive screw	9 x 2-pin captive screw	17 x 2-pin captive screw
IR output	4 x 2-pin captive screw	6 x 2-pin captive screw	8 x 2-pin captive screw	16 x 2-pin captive screw
Firmware upgrade	LAN Port			
General Specifications				
Dimensions (H x W x D Inches)	2.17 x 17.31 x 10	3.90 x 17.31 x 11.88		
Rack size	1U	2U		
Web page	http://atlona.com/product/at-uhd-pro3-44m/	http://atlona.com/product/at-uhd-pro3-66m/	https://atlona.com/product/at-uhd-pro3-88m/	https://atlona.com/product/at-uhd-pro3-1616m/

[1]*Ethernet pass-through is not available on the AT-UHD-EX-100CE-RX receiver when used with the UHD-PRO3 series.*
[2]*4096×2160@50/60Hz & 3840×2160@50/60Hz supported @ chroma subsampling 4:2:0 8-bit only.*

JunoX Series HDMI Switcher

The Atlona **JunoX™ 451** (AT-JUNO-451) is a 4×1 HDMI switcher for high dynamic range (HDR) formats. 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 is ideal for residential applications with the latest as well as emerging **4K/UHD and HDR sources and displays**. It is compatible with all video resolutions, audio formats, and color space formats supported in the HDMI 2.0a specification, plus the ability to pass metadata for HDR content. The JunoX 451 includes EDID management features and automatic input switching. It also **supports the HDMI Audio Return Channel (ARC)** for receiving digital audio from a television. A TOSLINK digital audio output is provided for sending ARC or de-embedded HDMI audio to an AV receiver or soundbar. This JunoX Series HDMI switcher can be controlled via Ethernet, RS-232, and IR. **A handheld IR remote control is included**.

HDMI Switcher	AT-JUNO-451
MSRP	$400.00
Bandwidth	18 Gbps
Resolution	4096×2160@24/25/30/50/60Hz 3840×2160@24/25/30/50/60Hz 1080p@23.98/24/25/29.97/30/50/59.94/60Hz
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0
Color depth	8-bit, 10-bit, 12-bit
CEC	Pass through
HDCP	Supports up to HDCP 2.2 Specification
Video input	4 x HDMI
Video output	1 x HDMI
Audio output	1 X S/PDIF
RS-232	3-pin captive screw
LAN	RJ45, TCP/IP control
IR input	2-pin captive screw
Firmware upgrade	Mini-B USB Port
Dimensions (H x W x D Inches)	1 x 8.6 x 5.9
Web page	https://atlona.com/product/at-juno-451/

HDR

Rondo Series HDMI Distribution Amplifiers

The Atlona **Rondo™ Series** are HDMI distribution amplifiers for high dynamic range (HDR) formats. They are HDCP 2.2 compliant and support 4K/UHD video @ 60 Hz with 4:4:4 chroma sampling, as well as HDMI data rates up to 18 Gbps. These DAs are ideal for applications requiring the latest as well as emerging **4K/UHD and HDR sources and displays**. It is compatible with all video resolutions, audio formats, and color space formats supported in the HDMI 2.0a specification, plus the ability to pass metadata for HDR content. The Rondo Series HDMI DAs include EDID management features, front panel LED indicators for power and signal status, and the capability to cascade several units without compromising performance.

HDMI Distribution Amplifiers	AT-RON-442	AT-RON-444
MSRP	$340.00	$430.00
Bandwidth	18 Gbps	
Resolution	4096×2160@24/25/30/50/60Hz 3840×2160@24/25/30/50/60Hz 1080p@23.98/24/25/29.97/30/50/59.94/60Hz	
Color depth	8-bit, 10-bit, 12-bit	
HDCP	Supports up to HDCP 2.2 Specification	
In/Out Ports		
Video input	1 x HDMI	
Video output	2 x HDMI	4 x HDMI
Firmware upgrade	Mini-B USB Port	
General Specifications		
Dimensions (H x W x D Inches)	1.02 x 4.29 x 3.5	1.73 x 8.64 x 9.98
Rack size		1U
Web page	https://atlona.com/product/at-ron-442/	https://atlona.com/product/at-ron-444/

HDR

HDR

EDID Emulator for 4K HDR HDMI Signals

The Atlona **Etude™ Sync** (AT-ETU-SYNC) provides EDID emulation and Hot Plug Detect communication between HDMI sink and source devices. It **detects and corrects for signal integrity issues associated with cabling or connections**, and can resolve compatibility problems between a source and sink. The Etude Sync 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. In addition to addressing HDMI signal and device-related issues, the Etude Sync reports HDCP compliance at the source and destination, and can manage EDID communication with the source. This device is ideal for AV system troubleshooting as well as ensuring reliable, consistent performance.

Web page: https://atlona.com/product/at-etu-sync/

HDR

4K HDR Multi-Channel Digital to Two-Channel Audio Converter

The Atlona **AT-HDR-M2C** is an audio converter for **extracting and downmixing multi-channel PCM, Dolby, and DTS audio from HDMI sources**. It features an HDMI input with pass-through, and **delivers stereo downmixed audio over a separate HDMI output**, as well as unbalanced analog and TOSLINK digital audio outputs. The HDR-M2C 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 audio converter includes EDID management features as well as audio volume and bass / treble controls, all available via Ethernet through the Atlona Management System (AMS), the web GUI, or a control system. The HDR-M2C can conveniently serve surround sound and two-channel audio systems from a multi-channel audio source.

Web page: https://atlona.com/product/at-hdr-m2c/

Glossary

What it's called	What it does	What's in it for me?
4K/UHD	Combines 4K (4096 H x 2160 V) and UHD 3840 H ×2160 V) video resolutions into one statement. 4K has four times the number of pixels as 1080p HDTV (1920 H x 1080 V).	You can provide a customer with technology that promises better resolution and color. Learn more at: http://atlona.com/wp-content/uploads/2014/09/4KUHD.pdf
CEC – Consumer Electronics Control[1]	Aa feature of HDMI designed to allow users to command and control devices connected through HDMI by using only one remote control.	Simplified system automation where a customer can activate an Atlona product and the display will automatically power up/down.
EDID – Extended Display Identification Data	Data exchange method where sources (Blu-ray players, set-top boxes, game consoles) and sinks (displays/projectors) communicate their capabilities to each other. EDID travels over digital links such as HDMI.	Plug and play capability within a system where the proper output resolution of the source is matched to the sink's capability. EDID is also used to determine the proper audio format between devices.
HDBaseT™	Method of transmitting video, audio, control (IR and serial), Ethernet and power over a long distance using standard Cat 5e/6/7 cable. Used to overcome the distance limitation of HDMI cables.	You can design systems with HDMI signals that can be routed up to 230 feet or 328 feet along with control signals. You can easily terminate and test cables in the field.
HDCP – High-bandwidth Digital Copy Protection	This is a means of encrypting digital content carried over HDMI to prevent piracy. Each source has a certain number of HDCP keys that unlock content for sinks.	You must ensure that all components within a system are compliant to guarantee signals will pass. 4K/UHD signals require HDCP 2.2 in all components or signals may not pass.
HDMI™ - High-Definition Multimedia Interface	A digital signal interface for transferring uncompressed video and compressed or uncompressed digital audio. Features a bit rate up to 18 Gbps and capable of carrying 4K/UHD signals.	You can route high definition video, multi-channel audio, and inter-device communications through a single cable.
HDR – High Dynamic Range [Video]	Updated content sources like Ultra Blu-ray provide video signals with additional information about brightness and color across a much wider range. HDR-capable displays can read that information and show an image built from a wider gamut of color and brightness.[2]	If 4K describes the quantity of pixels, then HDR describes the quality. Bright whites are brighter, dark blacks are darker and 10-bit panels are finally able to display all 1 billion colors.[3]
PoE – Power over Ethernet	**Industry standard**. Method of delivering power to remote devices over standard Cat 5e/6/7 cable. Atlona Products from Jan. 2015.	You save time, hassle and expense of running more cables. You can install devices where no electrical outlets exist.
RS-232	A port for connecting external whole-home control systems or PCs for advanced control.	You can customize how you want to control the system. For example, you can add a central remote to control every component with a single convenient system.

References:

[1]Wikipedia: Consumer Electronics Control. [LINK]
[2]TechRadar: HDR TV: What is HDR, and what does High Dynamic Range mean for television? [LINK]
[3]PC Mag: What Is HDR (High Dynamic Range) for TVs? [LINK]