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 compatible with the Atlona UHD-PRO3, UHD-CAT, and SW Series for data rates up to 10 Gbps. It will be capable of receiving 4K HDR and 18 Gbps from forthcoming Atlona matrix switchers. 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.

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.

Applications

- **Residential installations**
  The JunoX 451 HDBT is designed for AV systems with the latest UHD and HDR sources such as Ultra HD Blu-ray players, plus compatible televisions and projectors.

- **Local HDMI switching**
  The JunoX 451 HDBT is ideal for residential and commercial applications with HDMI switchers for rooms that can also receive content from shared AV sources via a centralized matrix switcher.

- **Professional AV applications**
  Atlona 4K HDR products are ideal for full-motion, highly detailed 4K graphics presentations for visualization, 3D renderings, simulations, and more.

Key Features

4x1 HDMI and HDBaseT Switcher

- Delivers high performance, reliable HDMI and HDBaseT signal switching.
- HDBaseT input receives AV, control, and Ethernet up to 330 feet (100 meters) @ 1080p with CAT5e/6 or 4K HDR using CAT6a/7 cable.
- Easy to install and deploy in residential and commercial applications.

4K/UHD capability @ 60 Hz with 4:4:4 chroma sampling, plus support for HDR formats

- Compatibility with new and emerging 4K/UHD and HDR-capable sources and displays.
- Compatible with 4K HDR10 and Dolby® Vision™ @ 60 Hz.
- Fully supports video resolutions, audio formats, and color space formats in the HDMI 2.0b specification.

HDCP 2.2 compliant

- Adheres to latest specification for High-bandwidth Digital Content Protection.
- Allows protected content stream to pass between devices.

Automatic input selection using hot plug detect and video detection technology

- Selects active input when sources are connected or if there is a change in source power status.
- Enables simplified, automatic system operation with no user intervention necessary.

EDID management

- Manages EDID communications with the source through a display's EDID or internally stored EDID.
- Ensures desired audio formats and video resolutions are provided to the AV system.

Delivers return audio from a TV via ARC to an optical digital audio output

- Supports the HDMI Audio Return Channel and provides a return audio pathway from a television to an AV receiver or soundbar over the TOSLINK digital audio output.
- Easy and convenient integration of television audio for over-the-air broadcasts, over-the-top (OTT) media services, and more.

Visually lossless VESA Display Stream Compression

- Enables HDBaseT transmission of HDMI up to 18 Gbps using extremely light video compression.
- Innovative signal extension solution delivers very high, pristine image quality. Compatible with forthcoming Atlona matrix switchers with 4K HDR-enabled HDBaseT outputs.
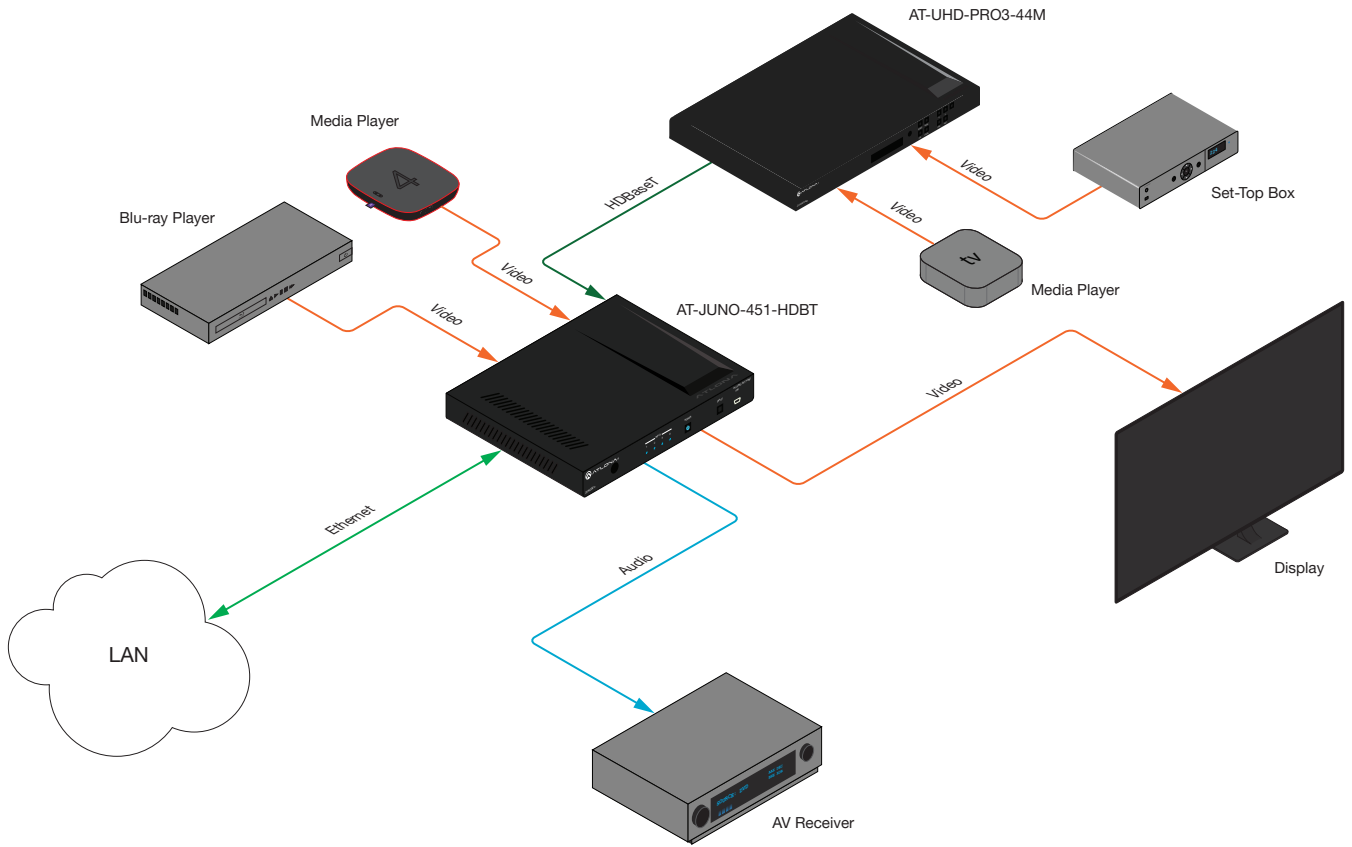
TCP/IP, RS-232, and IR control

- Flexible control options for compatibility with Atlona Velocity™ and third-party control systems.
- Reduces integration time and costs. Includes a convenient handheld IR remote control.

HDMI audio de-embedding

- Extracts HDMI two-channel PCM or multi-channel bitstream audio to the TOSLINK digital audio output.
- Provides an additional integration option for AV receivers and soundbars.

Connection Diagram

Media Player

AT-UHD-PRO3-44M

Blu-ray Player

Video

HDBaseT

Video

Video

Set-Top Box

Video

AT-JUNO-451-HDBT

Media Player

Video

Display

Ethernet

Audio

LAN

AV Receiver

Specifications

Connectors, Controls, and Indicators	
HDMI IN	3 - Type A, 19-pin female
HDMI OUT	1 - Type A, 19-pin female
USB	1 - Type mini-B, 5-pin female
RS-232 / IR	1 - 5-pin captive screw
OPTICAL	1 - TOSLINK™
HDBaseT	1 - RJ45
LAN	1 - RJ45
DC 5V	1 - Barrel connector, 5.5 mm, locking
Power button	1 - Momentary, tact-type, backlit power LED
Input select button	1 - Momentary, tact-type
Video input indicators	4 - LED, blue

Video	
UHD/HD/SD	4096×2160@24/25/30/50/60Hz, 3840×2160@24/25/30/50/60Hz, 2048x1080p, 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

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	