Introduction

The Atlona **JunoX™ 451 HDBT** (**AT-JUN0-451-HDBT**) is a 4x1 switcher for high dynamic range (HOR) 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 HDBaseT™ extension 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 IA 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 (30 Hz for HDBaseT input).

• 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.

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 (30 Hz for HDBaseT input)

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	