



Introduction

The Atlona **AT-OME-ST31** is a 3×1 switcher and HDBaseT transmitter with HDMI and USB-C inputs. It features mirrored HDMI and HDBaseT outputs and is HDCP 2.2 compliant. The USB-C input is ideal for AV interfacing for newer Mac®, Chromebook™, and Windows® PCs, as well as smartphones and tablets. Video signals up to 4K/60 4:2:0 can be transmitted over HDBaseT up to 330 feet (100 meters). All inputs and the local HDMI output support 4K HDR and 4K/60 4:4:4 at HDMI data rates up to 18 Gbps. Additionally, 4K downscaling to 1080p is available for the HDMI output when connected to an HD sink. The OME-ST31 is designed for use with Omega™ Series receivers and switchers, select HDVS Series receivers, the AT-UHD-EX-100CE-RX receiver, and other Atlona switchers with HDBaseT inputs.

Applications

- Complete system integration**
 The OME-ST31 and a compatible HDBaseT receiver provide a compact, yet comprehensive and cost-effective integration solution. When installed below a meeting table, the available Pocket™ 3H (AT-PKT-3H) provides convenient tabletop AV cable access for easy BYOD connectivity.
- Larger system applications**
 The OME-ST31 is ideal for extending AV connectivity from a lectern or a conference table to a remote display, where presenters can easily access the system.
- Auditoriums and lecture halls**
 This switcher can be used for presenting 4K video content through the projector, while also optimizing for a 1080p confidence monitor.

Key Features

3x1 HDBaseT switcher with HDMI and USB-C inputs

- USB-C and two HDMI inputs.
- Immediate compatibility with laptops and tablets with USB-C ports supporting AV.*
- No need to provide USB-C to HDMI adapters.

**USB-C port supports AV and device charging (with optional AT-PS-245-D4 power supply), but not USB data.*

Mirrored HDBaseT and HDMI outputs

- HDBaseT output transmits AV, control, and Ethernet up to 330 feet (100 meters) @ 1080p with CAT5e/6 or 4K/UHD using CAT6a/7 cable.*
- Mirrored 18 Gbps HDMI and 10 Gbps HDBaseT outputs provide flexible options for AV system designs and applications.

** To achieve optimal HDBaseT performance, CAT6a or CAT7 shielded twisted pair cable is highly recommended.*

4K/UHD capability @ 60 Hz with 4:4:4 chroma sampling on local ports (HDMI and USB-C), plus support for HDR formats

- HDBaseT output supports 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling.
- Local HDMI and USB-C ports are compatible with 4K HDR10 @ 60 Hz and Dolby Vision™ @ 60 Hz, as well as HLG (Hybrid Log-Gamma) for future 60p HDR broadcast services.

HDCP 2.2 compliant

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

** HDBaseT receiver or switcher must also be HDCP 2.2 compliant.*

4K to 1080 downscaling

- Integrated video processing available on the HDMI output for automatic 4K/UHD @ 60 Hz to 1080 (based on connected display EDID).
- Ideal for applications with a mix of 1080p and UHD sink devices.

Remote PoE (Power over Ethernet) or local powering

- Industry standard IEEE 802.3af PoE is supplied by Atlona receiver or switcher over HDBaseT.
- Allows convenient switcher installation at a table or other remote location, without the need for local AC power.
- Also can be locally powered by the optional AT-PS-245-D4 power supply – to supply PoE to a receiver and charge a USB-C mobile device.

Automatic display control

- Automatically changes display power state based on active or standby mode of the switcher. Control signals to display are transmitted via IP, RS-232, or CEC.
- Enables display and volume control. CEC enables control of consumer displays (as supported by the display manufacturer).
- Also can be configured to power off display after a period of inactivity.
- Eliminates the need for a complex AV control system.

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 without user intervention.

Audio embedding

- Embeds incoming analog two-channel audio onto the HDMI and HDBaseT outputs.
- Allows simple integration of audio from PCs.

Multi-channel audio compliant

- Passes through multi-channel audio formats from the HDMI or USB-C inputs.
- Supports PCM, Dolby® Digital, Dolby Digital Plus™, Dolby TrueHD, Dolby Atmos®, DTS® Digital Surround™, DTS-HD Master Audio™, and DTS:X®.

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.

HDCP management

- Automatically reports HDCP compliance status to the source based on the sink device.
- Allows non-protected material from PCs to pass to non-compliant displays, streaming devices, and teleconference systems; protected content is not transmitted.
- Displays a green splash screen as visual confirmation that protected content is being blocked from transmission to a non-compliant display.

Integrated HDBaseT link status monitoring

- Web GUI provides real-time link status.
- Quick, easy verification or troubleshooting of RJ-45 termination or twisted pair cable quality.

Easy, GUI-based configuration using integrated web server

- Offers menu-based configuration of device settings including network access, input switching, display control, HDCP and EDID management, and more.
- Allows fast configuration of internal product settings and troubleshooting from a mobile device or PC in the field.

TCP/IP and RS-232 control

- Flexible control options for compatibility with Atlona Velocity™ and third-party control systems.
- Reduces integration time and costs.

Easy to configure and manage with AMS (Atlona Management System)

- Centralized, network-based configuration and management of Atlona IP-controllable products and systems.
- Manage configuration and firmware updates for AV devices spanning a facility, building, enterprise, or residence.
- Available as a cost-effective server appliance, or a free software download.

Field-updatable firmware

- Device can be updated in the field via AMS or the web GUI.
- USB port also available for firmware updates.

Front panel power and signal status LEDs

- LED indicators provide power, HDBaseT link, and input selection status information.
- Provides local, convenient setup and troubleshooting when network access is not available.

Low-profile, 1.02 inch (26 mm) high enclosure

- Easy installation into confined spaces below tables and in furniture.

Included accessories

- Installation guide, surface mounting hardware, and 2 meter (6.5 foot) USB-C male-to-male cable (USB 3.1 Gen 1).

Award-winning 10 year limited product warranty

- Ensures long-term product reliability and performance in commercial and residential systems.
- Specify, purchase, and install with confidence.

Specifications

Connectors, Controls, and Indicators	
HDMI IN	2 - Type A, 19-pin female
HDMI OUT	1 - Type A, 19-pin female
USB-C*	1 - USB Type-C v3.1, 24-pin female
HDBaseT OUT	1 - RJ45
LAN	1 - RJ45
RS-232	1 - 3-pin captive screw (bidirectional)
AUDIO IN	1 - 3.5 mm, unbalanced 2-channel
IP MODE button	1 - momentary, tact-type
RESET button	1 - momentary, tact-type
DC 24V	1 - 4-pin, locking
PWR indicator	1 - LED, green
LINK indicator	1 - LED, amber
Control Buttons: INPUT, DISPLAY, IP MODE, RESET	4 - momentary, tact-type
Input Indicators: USB-C, HDMI IN 1, HDMI IN 2	3 - LED, green

*USB-C port supports AV and device charging (with optional AT-PS-245-D4 power supply), but not USB data.

Video		
UHD/HD/SD	4096x2160@60/30/25/24Hz*, 3840x2160@60/30/25/24Hz*, 1080p@60/59.9/50/30/29.97/25/24/23.98Hz, 1080i@60/59.94/50Hz, 720p@60/59.94/50Hz, 576p@50Hz, 576i@50Hz, 480p@60/59.96Hz, 480i@60Hz	
VESA	2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1440x900, 1400x1050, 1280x1024, 1280x800, 1366x768, 1360x768, 1152x864, 1024x768, 800x600, 640x480	
Scaler	IN	OUT
	4K @ 24 Hz 4K @ 30 Hz 4K @ 60 Hz, 4:2:0	1080p @ 24 Hz 1080p @ 30 Hz 1080p @ 60 Hz (YUV/RGB, 4:4:4)
USB-C	Up to 4K/UHD @ 60Hz	
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, Hybrid-Log Gamma (HLG), and Dolby® Vision™ @ 60Hz; HDMI inputs only	

Audio	
Pass-Through Formats	PCM, Dolby® Digital, Dolby Digital Plus™, Dolby TrueHD, Dolby Atmos®, DTS® Digital Surround™, DTS-HD Master Audio™, and DTS:X®
Sample Rate	32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
Bit Rate	24 Mbits/s max

Resolution / Distance	4K/UHD - Feet / Meters		1080p - Feet / Meters	
HDMI IN/OUT	15	5	30	10
CAT5e/6	295	90	330	100
CAT6a/7	330	100	330	100

Signal	
Maximum TMDS Clock	600 MHz (300 MHz over HDBaseT)
HDMI	HDMI 2.0*
HDBaseT	10 Gbps †
CEC Support	Yes
HDCP	2.2

* 18 Gbps supported for HDMI 2.0 output. † HDBaseT output limited to 10 Gbps.

USB	
USB-C Device Charging Capability	60 W @ 20 V / 3 A, 36 W @ 12 V / 3 A, and 15 W @ 5 V / 3 A

IP	
Protocols	DHCP, HTTP, Telnet
Ethernet Speed	10/100 Mbps
Addressing	DHCP, static

Temperature	Fahrenheit	Celsius
Operating	32 to 113	0 to 45
Storage	-4 to 140	-20 to 60
Humidity (RH)	20% to 60%, non-condensing	

Power	
Total power consumption	77.52 W
Type-C	60 W
System consumption	9.68 W
Idle	8.1 W
PSE	9.42 W
Supply	Input: 100 - 240 V AC, 50/60 Hz Output: 24 V / 6.25 A DC

Dimensions	Inches	Millimeters
H x W x D	1.02 x 8.62 x 5.98	26 x 219 x 152

Weight	Pounds	Kilograms
Device	1.95	0.88

Certification	
Device	CE, FCC, UL