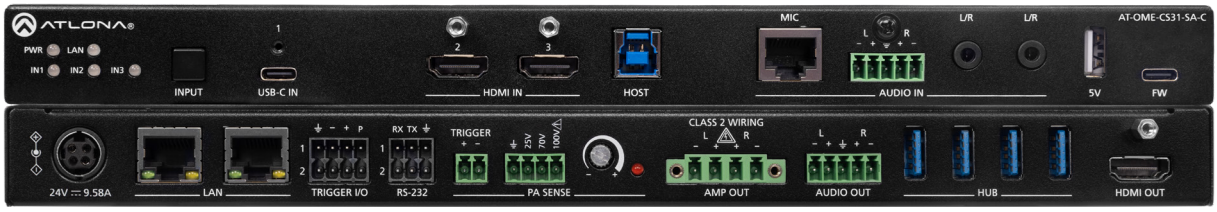
AV Presentation and Collaboration System



Introduction

The Atlona **AT-OME-CS31-SA-C** is an is an Omega™ Series AV presentation and collaboration system featuring AV switching, USB routing, audio mixing, amplification, and control making it ideal for modern classroom and meeting environments. The OME-CS31-SA-C supports switching between one USB-C input and two HDMI inputs to a single HDMI output. Sources connected to the inputs, such as laptops, computers, media players, and document cameras, can be selected then routed to the output connected to a projector or display.

The system features a four port USB hub for connecting cameras, speakerphones, interactive displays, and other devices as well the ability to switch them between two host devices. Making OME-CS31-SA-C ideal for use with popular video conferencing and UC (unified communications) platforms. The OME-CS31-SA-C offers three line level inputs for connecting a variety of audio devices. Its onboard mixer supports individual level adjustments of the line inputs, de-embedded HDMI audio, and USB audio. The integrated amplifier delivers either two channels of 25 watts or a single channel of 50 watts into 4 or 8 ohms. A line level output allows the mixed signal to be passed to an assistive listening system or separate amplifier. The OME-CS31-SA-C includes unique audio integration capabilities intended for classroom environments. Ducking automatically lowers the level on all other program audio sources when the teacher speaks into their microphone connected to the balanced line input. PA sense mutes the output of the amplifier whenever it detects activity on the school public address system. Both features ensure important lesson material and announcements are heard clearly.

For control, the OME-CS31-SA-C can automatically operate a display through TCP/IP, RS-232, or CEC, without the need for a separate control system, based on whether a device is connected. Alternatively, the switcher can trigger based on occupancy with the Atlona AT-OCS-900N or another sensor connected to its digital I/O. If a physical user interface is desired for system operation, the OME-CS31-SA-C can be controlled by Atlona's AT-VKP-8E keypad controller or a Velocity™ touch panel control system. The low profile enclosure allows the OME-CS31-SA-C to be mounted in a variety of locations such as behind a display or under a desk or table.

Applications

- **Classrooms**
  In addition to the AV switching, audio amplification, USB routing, and control needed by modern classrooms, the OME-CS31-SA provides additional features for education environments including ducking program audio for an instructor microphone and muting the system for public address messages.
- **Conference Rooms**
  The OME-CS31-SA is an all-in-one solution for hybrid meeting spaces that need AV switching, audio amplification, USB routing, and display control.

Key Features

- 3×1 AV switcher with one USB-C input, two HDMI inputs, and one HDMI output
- USB-C input delivers up to 60 watts of charging for laptops and mobile devices
- Integrated USB 3.0 hub with two host ports and four peripheral ports
- 2 x 25 watts @ 4/8 ohms amplifier (stereo or dual mono) or 1 x 50 watts @ 4/8 ohms (bridged)
- One balanced stereo line level input and two unbalanced stereo line level inputs
- Balanced stereo line level output allows the mixed signal to be passed to an assistive listening system or separate amplifier
- Powerful on-board digital signal processing
  - » Mix 3 line inputs, de-embedded HDMI audio, and USB audio to the amplifier and line outputs.
  - » Mix 3 line inputs and de-embedded HDMI audio to the USB audio output.
  - » Acoustic Echo Cancellation (AEC) automatically eliminates echo for remote USB audio.
- Ducking lowers the level of all inputs when audio, such as a teacher microphone, is present on the balanced audio input.
- Supports audio mute with contact closure or PA sense so announcements can be heard clearly.
- Dual Ethernet ports and integrated network switch allows a single connection to an AV LAN for IP control of a display and the switcher.
- Two RS-232 ports for control of the switcher or peripheral devices.
- Two digital I/O ports for automated control from occupancy sensors or other third party devices.
- 5V USB charging port for powering external devices such as a Bluetooth® receiver.
- Energy Star® qualified for power efficiency and cost savings.
- Automatic display control changes display power state via CEC, IP, or RS-232 based on active or standby mode of the switcher or status of an AT-OCS-900N network-enabled occupancy sensor or other sensors connected to the digital I/O ports.
- Auto-switching selects active input when sources are connected or if there is a change in source power status.
- Manages EDID communications with the source through the connected display's EDID or internally stored EDID.
- HDCP 2.2 compliant.
- 4K/UHD capability @ 60 Hz with 4:4:4 chroma sampling.
- Supports HDR10, HLG, and Dolby® Vision™ HDR formats.
- Intuitive GUI-based configuration using integrated web server.
- Front panel LED indicators provide status for power, input selection, and LAN.
- Low profile enclosure for mounting behind a display or under a desk or table.

Specifications

Video		
Signal	Input - 2 x HDMI, 1 x USB-C Output - HDMI	
Copy Protection	HDCP 2.2	
Pixel Clock	600 MHz	
UHD/HD/SD	4096x2160 (DCI) @ 24/25/30/50/60[1] Hz 3840x2160 (UHD) @ 24/25/30/50/60[1] Hz 1920x1080p @ 23.97/24/25/29.97/30/50/60 Hz 1920x1080i @ 50/60 Hz 1280x720p @ 30/50/60 Hz	720x576p @ 50 Hz 720x576i @ 25/50 Hz 720x480p @ 60 Hz 640x480p @ 60 Hz 640x480i @ 60 Hz
VESA All resolutions are 60 Hz	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, Hybrid-Log Gamma (HLG), and Dolby® Vision™ @ 60 Hz	

Audio			
HDMI Pass-Through Formats	LPCM 2.0 LPCM 5.1 LPCM 7.1	Dolby® Digital Dolby Digital Plus™ Dolby TrueHD Dolby Atmos®	DTS® Digital Surround™ DTS-HD Master Audio™ DTS:X®
Bit Depth	Up to 24 bits		
Sample Rate	32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz		
Analog Audio			
Format	Stereo 2-Channel		
Balanced Input	+4 dBu		
Unbalanced Input	-10 dBV		
Amplifier Output	2 x 25 W @ 4 or 8 Ω Frequency Response: 20 Hz to 20 kHz +/- 2 dB THD+N: < 0.1% @ 1 kHz SNR: 85 dB		
Balanced Output	+4 dBu Frequency Response: 20 Hz to 20 kHz +/- 0.5 dB THD+N: < 0.025% from 20 Hz to 20 kHz		

USB	
Compliance	3.0
Maximum Data Rate	5 Gbps
Internal Hubs	2 USB hubs

USB-C	
Power	Up to 60W power charging
DisplayPort Support	Version - 1.4 Video Lanes - 2 USB 3.0 Lanes - 2
Support	Audio, video, device and host data

Ethernet	
Port	2 x RJ45
Standards and Protocols	HTTP, HTTPS, Telnet, SSH, JSON over WebSockets
Speeds	10/100/1000 Mbps
Addressing	DHCP, Static – selectable through built-in web server and API commands

RS-232	
Port	2 x 3-pin captive screw
Use	Unit and external device control and configuration
Baud Rates	9600, 19200, 38400, 57600, 115200
Data Flow	Bidirectional

CEC	
Ports	1 x HDMI OUT, Type A, 19-pin female
Triggering	Through HDMI

Resolution / Distance	4K/UHD - Feet / Meters		1080p - Feet / Meters	
HDMI IN/OUT	15	5	30	10

Buttons and Indicators	
Buttons: INPUT	 1 x momentary, tact-type
Indicators: PWR LAN, IN1, IN2, IN3	 1 x LED, multicolor, green/red 5 x LED, green

Connectors	
HDMI IN	2 x Type A, 19-pin female
USB-C IN	1 x 24-pin female, DisplayPort Alt Mode
HDMI OUT	1 x Type A, 19-pin female
HOST	1 x USB type B, female
MIC	1 x RJ45
VOICE L/R	1 x 5-pin captive screw
L/R	2 x 3.5 mm mini-stereo
5V	1 x USB type A, female
FW	1 x USB type C, female
LAN	2 x RJ45
TRIGGER I/O	2 x 4-pin captive screw
RS-232	2 x 3-pin captive screw
PA SENSE TRIGGER	1 x 2-pin captive screw
PA SENSE GND/25V/75V/100V	1 x 4-pin captive screw
AMP OUT	1 x 4-pin captive screw
AUDIO OUT	1 x 5-pin captive screw
HUB	4 x USB type A, female
24V / 9.58A	1 x 4-pin DIN

Environmental	Fahrenheit	Celsius
Operating Temperature	+32 to +122	0 to +50
Storage Temperature	-4 to +140	-20 to +60
Operating Humidity (RH)	20% to 90%, non-condensing	

Power	
Consumption (max.)	---
BTU/h	---
External Power Supply	100 - 240 V AC, 50/60 Hz Output: 24 V / 9.58 A DC

Dimensions (H x W x D)	Inches	Millimeters
Unit	0.98 x 11.81 x 8.27	25 x 300 x 210
Power Supply (AT-PS-24958-D4)	1.6 x 2.6 x 6.2	40.6 x 66 x 157

Weight	Pounds	Kilograms
Device	3.8	1.7

Certification	
Device	CE, RoHS, FCC
Power Supply	CE, FCC, UL, CUL, TUV-GS, CB, PSE, CCC

Compliance		
NDAA-889	Yes	

Warranty		
3 years	View the full warranty information here: https://atlona.com/warranty	

Footnotes

(1) 4K/UHD @ 60 Hz only supports 4:2:0.

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20363-R1