Introduction

The Atlona **AT-UHD-CLSO-601** is an advanced six-input, multi-format switcher with built-in 4K scaling and mirrored HDBaseT and HDMI outputs. It simplifies classroom and small office system integration by providing four HDMI and two multi-function analog inputs. The CLSO-601 is designed to be the central component of an automated AV system. Automatic display control powers the display automatically whenever a source is connected or disconnected. Automatic input selection on the CLSO-601 works by sensing the presence of any video signal.

The CLSO-601 combines the benefits of a scaling switcher with automatic display control and automatic input selection, and the advantages of HDBaseT signal transmission to extend AV, power, control, and Ethernet over a single cable. The switcher enables input selection from the front panel, RS-232, or TCP/IP commands. The CLSO-601 is ideal for applications where multiple signals with different resolutions must be optimized for a display. Professional audio features such as a microphone input with 48 volt phantom power and ducking are also included, allowing the switcher to address a wide array of AV needs often encountered in classrooms, conference rooms, boardrooms, training rooms, and other presentation settings. In addition to automated input selection, the switcher can be controlled via the Atlona AT-ANC-108D button control panel.

Applications

- **Complete system applications**
  The CLSO-601 provides a comprehensive yet value-oriented AV integration solution for classrooms, huddle rooms, small conference rooms, and other presentation spaces.

- **Conference rooms and meeting rooms**
  The CLSO-601 conveniently provides automatic switching and display control for simplified user operation, especially when laptops are brought into the system.

- **Presentation spaces where two displays are needed**
  This switcher can be installed in a lectern to serve a confidence monitor, plus the primary display in a remote location.

Key Features

Four HDMI inputs

- Digital inputs to support up to four DVI, HDMI and DisplayPort sources.
- Works with PCs, Blu-ray players, document cameras, teleconference systems, wireless solutions with industry standard digital audio/video outputs.

Two multi-function analog inputs on 15-pin HD connectors

- Accepts RGBHV, component, S-video, or composite signals using common adaptors and break out cables.
- Provides input options for legacy analog sources.

Mirrored, dual outputs on HDBaseT and HDMI

- Supports dual display applications with both local and extended distance displays up to 330 feet (100 meters).
- Eliminates cost associated with extra extension components; simplifies installation. HDMI output allows additional HDBaseT transmitter for dual long distance applications.

Automatic display control

- Automatically changes projector power state based on active or standby mode of switcher. Control signals transmitted via CEC, IP, or RS-232.
- Eliminates need for complex control system in AV systems. Enables display and volume control. CEC enables control of low-cost consumer displays.

Automatic input selection using video detection technology

- Selects active input when sources are connected or if there is a change in source power status.
- Eliminates need for complex control system in AV systems.

4K/UHD @ 30 Hz capability

- Compatible with Ultra High Definition sources and displays.
- Supports high resolution applications such as CAD, desktop publishing, and detailed financial reporting.

Built-in 4K scaler

- Scales to and from most resolutions up to 4K to optimize content from any source to any monitor or projector up to 4K. Down-scaling allows 4K sources to be displayed at 1080p or less.
- Eliminates the need for external scaling components.

AV, Ethernet, and control over HDBaseT

- Delivers 4K/UHD video, audio, 100BaseT Ethernet, and control through a single cable.
- Eliminates multiple cable runs between source, control system router and display.

Power over Ethernet for remote-powered HDBaseT receiver

- Industry standard IEEE 802.3af PoE supplied by the switcher over HDBaseT.
- No local AC outlet required saves time and integration costs.

TCP/IP, RS-232, and IR, control of switcher

- Flexible control options for compatibility with third-party control systems; RS-232 controlled from HDBaseT connection.
- Reduces integration time and costs.

EDID management

- Manages EDID communications between source and switcher; allows integrators to force sources to preferred resolution.
- Ensures desired audio formats and video resolutions are provided to the AV system; eliminates the need for EDID management device.

HDCP management

- Allows non-protected material from PCs to pass to non-compliant displays and teleconference systems while protected content is not transmitted.
- HDCP compliance can be switched on/off from control systems for use with non-compliant displays, streaming devices, and codecs.

Balanced line/mic input with 48V phantom power

- Provides professional audio input for wired and wireless microphones.
- Saves installation costs by eliminating external audio mixer.

Microphone ducking with advanced controls

- Automatically reduces program audio levels when mic is used.
- Ensures optimized voice-over performance.

Audio de-embedding

- De-embeds PCM audio from HDMI inputs to analog audio output.
- Provides audio signal routing to sound system.

Independent audio input switching

- Switches analog audio inputs separately from video sources; allows analog audio signal embedding for DVI sources.
- Simplifies audio signal management from DVI sources.

Balanced, stereo audio output on 6-pin captive screw connector

- Interfaces with analog commercial sound systems.
- Maintains proper audio gain structure; eliminates adaptors.

Adjustable volume and EQ

- Features independent gain control for each input, master audio level control, bass and treble EQ adjustment.
- Optimizes audio signals eliminating the need for an external mixer.

Front panel volume and mute controls

- Volume up and volume down buttons adjust output level to sound system.
- Provides quick level adjustment for operators.

Easy, GUI-based configuration using integrated web server

- Offers menu-based configuration of network settings, RS-232 settings, input switching, EDID and HDCP management and audio.
- Allows fast configuration of internal product settings and troubleshooting from a tablet, smart phone or PC in the field.

IP to RS-232 translation

- Converts TCP/IP commands to RS-232 commands for output to external devices.
- Enables single IP connection to control processor to control both IP and RS-232 connected devices.

Eight RS-232 ports

- Multiple bidirectional, RS-232 ports to control other devices in the system.
- Reduces cost associated with complex control processors.

Ethernet, RS-232 and IR HDBaseT insertion

- Adds control signals to the HDBaseT transmission including Ethernet, RS-232 and bi-directional IR.
- Simplifies display control from third-party control systems.

Rack mountable 1U, full rack width enclosure

- Installs easily in rack mounted systems with included 19" rack and wall mount brackets.
- Reduces installation time and cost.

Works with AMS

- This IP-controllable product can be remotely managed by the Atlona Management System software.
- Integrates product configuration, management, and updates to reduce installation time and enable remote support.

Included accessories

- User guide, desktop power supply, detachable power cable, IR hand held remote control, rack mount bracket kit.

Specifications

Video	
Signal	Input - HDMI Output - HDMI
Bandwidth	10.2 Gbps
HDCP	Switchable - Compliant / Non-compliant
UHD/HD/SD	4096x2160@60/50/30/25/24Hz 720p@60/59.94/50Hz 3840×2160@60/50/30/25/24Hz 576p@50Hz 2048x1080p 576i@25Hz 1920x1080p@60/59.9/50/30/29.97/25/ 480p@60/59.96Hz 24/23.98Hz 480i@30Hz 1920x1080i@30/29.97/25Hz
VESA All resolutions are 60Hz	2560x2048 1366×768 2560×1600 1360×768 2048×1536 1280×1024 1920×1200 1280×800 1680×1050 1280x768 1600×1200 1152×864 1600x900 1024×768 1440×900 800×600 1400×1050
Composite / S-Video	NTSC, NTSC4, PAL, PAL-M, PAL-N, SECAM
Color Space	YUV, RGB
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0
Color Depth	8-bit, 10-bit, 12-bit

Audio	
HDMI, HDBaseT, and Analog	PCM 2.0
Bit Depth	up to 24-bit
Sample Rate	32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz

Resolution / Distance	4K/UHD - Feet / Meters		1080p - Feet / Meters	
HDMI IN/OUT	15	5	30	10
CAT5e	230	70	330	100
CAT6/6a/7	330	100	330	100

Buttons and Indicators	
Control Buttons: POWER, INPUT, FUNCTION, MUTE, VOLUME	14 - momentary, tact-type

Connectors	
HDMI IN	4 - Type A, 19-pin female
HDMI OUT	1 - Type A, 19-pin female
HDBaseT OUT	1 - RJ45
AUDIO IN	2 - 6-pin captive screw, 1 - 3-pin captive screw
MIC / 48V / LINE	1 - slider switch, 3-position
RS-232	2 - 6-pin captive screw, 4 - 3-pin captive screw
IR IN/OUT	1 - 6-pin captive screw
LAN	1 - RJ45
FW	1 - Mini USB, Female
PWR - DC 48V	1 - 2-pin, captive screw

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

Power		
Consumption	33W	
BTU/h	112.5	
Supply	Input: 100 - 240 V AC, 50/60 Hz Output: 48 V / 3.125 A DC	

Dimensions	Inches	Millimeters
H x W x D	1.73 x 17.08 x 10.04	44 x 433 x 255
H x W x D (w/ feet)	2.17 x 17.08 x 10.04	55 x 433 x 255
Rack Unit	1 RU	

Weight	Pounds	Kilograms
Device	6.90	3.12

Certification		
Device	CE, FCC	
Power Supply	CE, FCC, cULus, RoHS, CCC, RCM	

Warranty	
Device	To view the product warranty, use the following link: https://atlona.com/warranty

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