



Product Engineering Specification

Atlona Product
Engineering Spec

Version Information

Version	Release Date	Notes
1	2017	Release
2	2018	Added AT-OMNI-111/112/121/122
3	Nov 2018	Added AT-UHD-SW-510W/-EU
4	June 2019	Added AT-OMNI-512/521
5	July 2019	Added AT-OPUS-46M/68M/810M/-RX and AT-OME-EX-KIT
6	March 2020	Removed AT-UHD-CLSO-840
7	May 2020	Added AT-OME-MS52W
8	Oct 2020	Updated OmniStream spec
9	Sept 2021	Added AT-WAVE-101
10	Feb 2023	Added AT-GAIN-120, AT-GAIN-60, and AT-GAIN-NET
11	July 2023	Updated Omnistream and added AT-CAP-SP100

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Introduction

The objective of this document is to serve as an engineering source or Specifier for Atlona's products, to help the designer in their project specification. The document is provided as a convenience to our customers and will require editing and customization to meet the project scope and requirements.

Disclaimer

Atlona Technologies shall not be liable for any damages arising out of using this guide. To insure accuracy of your design, please contact our design and support team at (800)-536-3976.

Manufacture

Basis of design subject to compliance with requirements to provide products of Atlona Technologies head quartered at 70 Daggett Drive, San Jose CA 95134. U.S. Office: +1.408.962.0515, EMEA: +41.43.508.43.21, and APAC: +65.6305.7575.

Installation, testing, and system's acceptance

Product installation, testing, customer training, and system acceptance shall be done by an Atlona Certified Partner/ Engineer.

Specifications summary

The AV system and devices shall meet the following as minimum for product operation:

- The UHD/4K, and HD Digital Transport System shall operate as a standalone point-to-point system, as well as a part of a larger switching system for delivering local AV content to far end sinks
- Audio/Video switching and distribution at native resolution without compression
- HDMI signal transport
- Audio signal transport
- CEC support
- RS-232 support
- HDCP 1.4 or greater support
- Deep Color support
- EDID pass through and or EDID management
- Display control support
- Auto signal detection
- Field Firmware upgradable
- Specification

Products

AT-CAP-FC110 Product Specifier

The Atlona Captivate™ AT-CAP-FC110 is an enterprise-grade ePTZ camera ideal for use in video conferencing, distance learning, and other applications in huddle rooms and small to medium- sized meeting spaces. It features the following professional specifications:

- ePTZ (electronic Pan-Tilt-Zoom) camera
- Supports resolutions as high as 3840 x 2160 using a 1/2.8" CMOS sensor.
- Fixed lens with a 110° horizontal field-of-view.
- Supports digital zoom up to 4X.
- Manual PTZ functionality as well as auto-framing of up to six (6) participants in a meeting space, with a setting for the maximum amount of zoom used when auto-framing as well as the sensitivity to motion that will trigger an auto-framing change.
- Includes two (2) microphones with a 5 meter (16 foot) audio pickup range and allows the user to disable the built-in microphones, in which case they will not appear as USB audio devices.
- USB-C output connector capable of supporting USB 3.0 and USB 2.0 operation with resolutions up to 4K and supported with USB 3.0 and resolutions up to 1080p supported with USB 2.0.
- Compatible with devices running Windows and macOS using standard UVC and UAC drivers.
- Supports auto focus, auto exposure, and auto white balance with options to manually control brightness, color, saturation, contrast, and sharpness.
- Anti-flicker control that can be configured for 50 Hz or 60 Hz operation.
- Supports backlight compensation.
- Ability to flip and mirror the image.
- Includes an IR remote that allows for manual PTZ operation, starting/stopping auto-framing, storage and recall of three camera presets, and access to product settings.
- Includes an adjustable mounting clip for installation on displays of different sizes that will include a 1/4-20 UNC tripod screw thread.
- Powered over USB with a maximum power consumption less than 2.5W.
- Operating temperature range of 0° to +40° C.

AT-GAIN-120 Product Specifier

The power amplifier shall support low or high impedance applications and feature a mode selector switch for two channels of 60 watts each into 4 or 8 ohms, or a single channel of 120 watts at 24, 70, or 100 volts. This Class D amplifier shall comply with the ENERGY STAR requirements, and feature convection cooling. It shall have balanced and network audio inputs for versatility and an amplified speaker output and line level audio output. The amplifier shall be controllable via TCP/IP or RS-232 and incorporate the specified device specifications:

- Selectable low or high impedance operation
- 2x60 watts @ 4 or 8 ohms
- 1x120 watts @ 24, 70, or 100 volts
- THD + N: < 0.1% @ 1kHz, 3 dB below clipping
- SNR: > 90 dBA WTD
- Switchable stereo balanced or network audio inputs
- Optional AT-GAIN-NET AES67/Dante network audio interface
- Amplified speaker output and line level output
- Audio formats: 24-bit uncompressed, selectable at 44.1, 48, 88.2, and 96 kHz sampling rate
- 5-Band adjustable EQ: 40Hz, 150Hz, 500Hz, 2kHz, and 10kHz bands, Range: -10 dB to +10 dB
- Class D amplifier
- ENERGY STAR qualified
- Convection cooled – no need for fans
- Automatic standby, configurable from 5 – 25 minutes of inactivity, complies with ENERGY STAR power
- Consumption limits of < 0.5W in standby mode
- Rear panel input control – Adjustable -22 dB to 0 dB
- Integrated protection circuitry automatically activates in the event of clipping, short circuit, thermal overload, and more
- TCP and RS232 control of volume level, muting, and tone controls
- Front panel button controls for input selection, mute, and volume level
- Rack mountable to rack shelf
- Certified for CE, RoHS, WEEE, FCC, ENERGY STAR®

AT-GAIN-60 Product Specifier

This professional power amplifier shall support low or high impedance applications. Amplifiers shall have a mode selector switch which enables the amplifier to deliver two channels of 30 watts each into 4 or 8 ohms, or a single channel of 60 watts at 24, 70, or 100 volts. Moreover, the amplifier shall be ENERGY STAR qualified and convection cooled and is UL 2043 plenum-rated for convenient installation. Both balanced and unbalanced inputs are included for versatility. Remote control is available via TCP/IP or RS-232. The amplifier is built to the following device specifications:

- Selectable low or high impedance operation
- 2x30 watts @ 4 or 8 ohms
- 1x60 watts @ 24, 70, or 100 volts
- THD + N: < 0.1% @ 1kHz, 3 dB below clipping
- SNR: > 95 dBA WTD
- Switchable stereo balanced or unbalanced audio inputs
- Audio formats: 24-bit uncompressed, selectable at 44.1, 48, 88.2, and 96 kHz sampling rate
- 2-Band adjustable EQ – Bass & Treble, Range: -10 dB to +10 dB
- Class D amplifier
- ENERGY STAR qualified
- Convection cooled – no need for fans
- UL 2043 Plenum rated
- Automatic standby, configurable from 5 – 25 minutes of inactivity, complies with ENERGY STAR power
- Rear panel input control – Adjustable -22 dB to 0 dB
- Integrated protection circuitry automatically activates in the event of clipping, short circuit, thermal overload, and more
- TCP and RS232 control of volume level, muting, and tone controls
- Front panel button controls for input selection, mute, and volume level
- Compact, rack-mountable enclosure
- Can be mounted to an optional rack shelf
- Certified for CE, RoHS, WEEE, FCC, ENERGY STAR®

AT-GAIN-NET Product Specifier

The GAIN-NET is a network audio interface card specifically designed for the AT-GAIN-120 power amplifier. It consists of an AES67 and Dante dual-channel audio bridge that allows the amplifier to accept two channels over a network from a Dante or AES67-equipped DSP, as well as OmniStream AV encoders. This card can be easily installed into a Gain 120 amplifier in the field. It features the following professional specifications:

- AES67 / Dante network audio interface card for the AT-GAIN-120 power amplifier
- Receives 2-channel audio over IP
- AES67 / Dante audio over IP routing configuration requires Dante Controller software
- 1 RJ45 port w/ speeds at 100Mbps
- Protocols: Dante, AES67, mDNS, PTP, SAP, TFTP

AT-HD-SC-500 Product Specifier

The 3x1 switcher scaler will have two HDMI inputs, VGA, as well as analog audio inputs for embedding onto HDMI output. The switcher scaler shall have Automatic display control using CEC, IP and RS-232, as well as Automatic input selection using video detection technology. The switcher scaler Shall be controlled via TCP/IP, RS-232. It will have ability to adjust volume control, input selection, and turning display power ON /OFF from the front panel. The System incorporates the following device specifications:

- Video resolution support for up to 1920 x 1200 including 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 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x864, 1024x768, 800x600, 640x480
- YUV and RGB Color Space
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- Automatic display control using Consumer Electronics Control (CEC)*, IP and RS-232
- Automatic input selection using video detection technology
- EDID management support
- HDCP Switchable- Compliant / non-compliant - 1.4 support
- PCM 2CH input audio
- Audio for HDMI IN and HDBaseT OUT: PCM 2Ch, LPCM 5.1, LPCM 7.1, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- Up to 24-bit rate
- TCP/IP and RS-232 control of switcher
- HDMI IN/OUT @ 1080p up to 10 meters / 30 feet
- Signal bandwidth of 6.75 Gbps
- Web GUI setup, management and support

AT-HDVS-150-TX Product Specifier

The 3X1 switcher / transmitter shall have two HDMI and one VGA inputs, as well as audio on 3.5 connector. The transport shall extend HDMI, VGA (including audio), RGBHV. The switching shall have input select, as well as display control buttons on the front panel. Device configuration, operation, and maintenance shall be available via Web GUI access. When two or more signal inputs are available, the transmitter shall include integrated switcher with signal sensing. The switcher shall switch to the last detected input (when not used with a control system by the same manufacturer). The 4K/UHD Input Switcher shall be an advanced signal extender system incorporating the following device specifications:

- 4K/UHD capability @ 60 Hz with 4:2:0 Chroma subsampling
- Full support of 4K/UHD streaming services and playback device
- Video resolution support for 4096x2160@24/25/30/50/60Hz*, 3840x2160@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 resolution support for 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480
- YUV and RGB Color Space
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- Signal bandwidth of 10.2 Gbps
- CEC Pass through
- HDCP 1.4 compliant - Adheres to latest specification for High-bandwidth Digital Content Protection
- PCM 2CH input audio
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- Up to 24-bit rate
- CAT5e/6 @ 4K up to 35 meters
- CAT5e/6 @ 1080p up to 60 meters
- CAT6a/7 @ 4K up to 40 meters
- HDMI IN/OUT @ 4K up to 5 meters
- HDMI IN/OUT @ 1080p up to 10 meters
- Signal bandwidth of 10.2 Gbps
- Web GUI setup, management and support
- Firmware upgradable via mini USB
- CE and FCC certified

AT-HDVS-150-TX-WP Product Specifier

The 2X1 switcher/ transmitter shall be able to extend HDMI, VGA (including audio), RGBHV, YUV, and Composite over HDBaseT port. The 2X1 switcher / transmitter shall have input select, as well as display control on the front panel. Device configuration, operation, and maintenance shall be available via software management and Web GUI access. When two signal inputs are available, the transmitter shall include integrated switcher with signal sensing. The switcher shall switch to the last detected input (when not used with a control system by the same manufacturer). The 4K /UHD Input Switcher shall be an advanced signal extender system incorporating the following device specifications:

- US, 2-gang Decora-style wall plate
- 2X1 HDBaseT Switcher - One HDMI input plus a VGA input with 3.5mm audio connector
- Front panel input select button
- Front panel display on/off control
- Front LED indication for PWR and signal status
- Video resolution support for 4096x2160@24/25/30/50/60Hz, 3840x2160@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 resolution support for 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480
- YUV and RGB Color Space
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- Automatic display control: Selects active input when sources are connected
- Automatic input selection using video detection technology
- CEC support
- HDCP 1.4 support
- PCM 2CH input audio
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- Up to 24-bit rate
- Transmits AV signals up to 230 ft. (70m)
- CAT5e/6 @ 4K up to 35 meters
- CAT5e/6 @ 1080p up to 60 meters
- CAT6a/7 @ 4K up to 40 meters
- HDMI IN/OUT @ 4K up to 5 meters
- HDMI IN/OUT @ 1080p up to 10 meters
- Signal bandwidth of 10.2 Gbps
- Web GUI setup, management and support
- Compatible with IP-Management System software
- Firmware upgradable via mini USB
- Power consumption up 18.7W (when paired)
- CE and FCC certified

AT-HDVS-150-RX Product Specifier

The HD Scaling receiver shall accept HDBaseT audio and video Signal, and outputs HDMI, as well as de-embedded balanced audio output, and RS-232 port. The HD scaling receiver shall be an advanced signal extender system incorporating the following device specifications:

- HD video scaler with HDMI output and input resolution control
- Front Panel Control for Menu setup
- Front LED indication for PWR and signal status
- Video resolution support for 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 resolution support for 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
- Power over Ethernet for associated TX
- YUV and RGB Color Space
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- CEC support
- HDCP 1.4 support
- PCM 2Ch, de-embedding analog audio out
- Master Audio for HDMI OUT and HDBaseT IN
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- Up to 24-bit rate
- Transmits IP and AV signals up to 328 ft. (100m)
- CAT5e/6 @ 1080p up to 70 meters
- HDMI IN/OUT @ 1080p up to 10 meters
- Signal bandwidth of 10.2 Gbps
- Web GUI setup, management and support
- Compatible with IP-Management System software
- Firmware upgradable via mini USB
- 48 Input Power
- CE and FCC certified

AT-HDVS-200-TX / PSK Product Specifier

The 3X1 switcher / transmitter shall have two HDMI and one VGA inputs, as well as audio on 3.5 mm mini-stereo connector. The transport shall extend HDMI, VGA (including audio), RGBHV, YUV, and Composite, as well as RS-232 and Ethernet over HDBaseT port. The switching shall have input select, as well as display and volume control buttons on the front panel. Device configuration, operation, and maintenance shall be available via software management and Web GUI access. When two or more signal inputs are available, the transmitter shall include integrated switcher with signal sensing. The switcher shall switch to the last detected input (when not used with a control system by the same manufacturer). The 4K /UHD Input Switcher shall be an advanced signal extender system incorporating the following device specifications:

- 3X1 HDBaseT Switcher - two HDMI inputs plus a VGA input with 3.5mm audio connector
- Front panel input select button
- Front panel display on/off control
- Front panel volume control
- Front LED indication for PWR, Input source selected, and signal status
- Video resolution support for 4096x2160@24/25/30/50*/60Hz, 3840x2160@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 resolution support for 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480
- YUV and RGB Color Space
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- Automatic display control: Selects active input when sources are connected
- Automatic input selection using video detection technology
- EDID management support
- CEC support
- HDCP 1.4 support
- PCM 2CH input audio
- PCM 2Ch, LPCM 5.1, LPCM 7.1, Dolby® Digital, DTS® 5.1, Dolby Digital Plus, Dolby TrueHD, DTS-HD Master Audio™ for HDMI IN and HDBaseT OUT
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- Up to 24-bit rate
- TCP/IP and RS-232 control of switcher
- Ethernet enabled, HDBaseT extension
- Transmits IP and AV signals up to 328 ft. (100m)
- CAT5e/6 @ 4K up to 70 meters
- CAT5e/6 @ 1080p up to 100 meters
- CAT6a/7 @ 4K up to 100 meters
- HDMI IN/OUT @ 4K up to 5 meters
- HDMI IN/OUT @ 1080p up to 10 meters
- Signal bandwidth of 10.2 Gbps
- Web GUI setup, management and support
- Compatible with IP-Management System software
- Firmware upgradable via mini USB
- CE and FCC certified

AT-HDVS-200-TX-WP Product Specifier

The 2X1 switcher/ transmitter shall be able to extend HDMI, VGA (including audio), RGBHV, YUV, and Composite over HDBaseT port. The 2X1 switcher / transmitter shall have input select, as well as display and volume control buttons on the front panel. Device configuration, operation, and maintenance shall be available via software management and Web GUI access. When two signal inputs are available, the transmitter shall include integrated switcher with signal sensing.

The switcher shall switch to the last detected input (when not used with a control system by the same manufacturer). The 4K /UHD Input Switcher shall be an advanced signal extender system incorporating the following device specifications:

- US, 2-gang Decora-style wall plate
- 2X1 HDBaseT Switcher - One HDMI input plus a VGA input with 3.5mm audio connector
- Front panel input select button
- Front panel display on/off control
- Front panel volume control
- Front LED indication for PWR and signal status
- Video resolution support for 4096x2160@24/25/30/50/60Hz, 3840x2160@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 resolution support for 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480
- YUV and RGB Color Space
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- Automatic display control: Selects active input when sources are connected
- Automatic input selection using video detection technology
- EDID management support
- CEC support
- HDCP 1.4 support
- PCM 2CH input audio
- PCM 2Ch, LPCM 5.1, LPCM 7.1, Dolby® Digital, DTS® 5.1, Dolby Digital Plus, Dolby TrueHD, DTS-HD Master Audio™ for HDMI IN and HDBaseT OUT
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- Up to 24-bit rate
- TCP/IP and RS-232 control of switcher
- Ethernet enabled, HDBaseT extension
- Transmits IP and AV signals up to 328 ft. (100m)
- CAT5e/6 @ 4K up to 70 meters
- CAT5e/6 @ 1080p up to 100 meters
- CAT6a/7 @ 4K up to 100 meters
- HDMI IN/OUT @ 4K up to 5 meters
- HDMI IN/OUT @ 1080p up to 10 meters
- Signal bandwidth of 10.2 Gbps
- Web GUI setup, management and support
- Compatible with IP-Management System software
- Firmware upgradable via mini USB
- Power consumption up 30W
- CE and FCC certified

AT-HDVS-200-RX Product Specifier

The HD Scaling receiver shall accept HDBaseT audio and video Signal, and outputs HDMI, as well as de-embedded balanced audio output. It shall have two RS-232 ports, and contact closure port for screen or display lift control. The scaler receiver shall have automatic display control via CEC or control system, as well as menu and volume adjustment via software management, web GUI, or front panel button control. The HD scaling receiver shall be an advanced signal extender system incorporating the following device specifications:

- HD video scaler with HDMI output and input resolution control
- Automatic display control - Automatically changes projector power state based on active or standby mode of scaler. Control signals transmitted via IP, RS-232, or CEC
- Front Panel Control for Menu, Auto, and Volume
- Front LED indication for PWR and signal status
- Video resolution support for 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 resolution support for 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800 1280x768, 1152x768, 1024x768, 800x600, 640x480
- Dual TCP/IP and RS-232 control
- Ethernet enabled, HDBaseT extension
- Contact closure for screen control or display lift control
- Auto Display Control
- Power over Ethernet for associated TX
- YUV and RGB Color Space
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- CEC support
- HDCP 1.4 support
- EDID management support
- PCM 2Ch, de-embedding analog audio out
- PCM 2Ch, LPCM 5.1, LPCM 7.1, Dolby® Digital, DTS® 5.1, Dolby Digital Plus™, Dolby TrueHD, DTS-HD Master Audio™ for HDMI OUT and HDBaseT IN
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- Up to 24-bit rate
- Transmits IP and AV signals up to 328 ft. (100m)
- CAT5e/6 @ 1080p up to 100 meters
- HDMI IN/OUT @ 1080p up to 10 meters
- Signal bandwidth of 10.2 Gbps
- Web GUI setup, management and support
- Compatible with IP-Management System software
- Firmware upgradable via mini USB
- 48V Input Power
- CE and FCC certified

AT-HDVS-210H-TX-WP Product Specifier

The 2X1 switcher/transmitter shall be able to extend 2 HDMI inputs over HDBaseT port. Device configuration, operation, and maintenance, shall be available via software management and Web GUI access. When two signal inputs are available, the transmitter shall include integrated switcher with signal sensing. The switcher shall switch to the last detected input (when not used with a control system by the same manufacturer). The 4K/UHD Input Switcher shall be an advanced signal extender system incorporating the following device specifications:

- US one-gang enclosure for Decora®-style wallplate openings
- 2x1 HDBaseT™ switcher with HDMI® inputs
- HDBaseT transmitter for AV, power, and control up to 330 feet (100 meters)
- 4K/UHD capability @ 60 Hz with 4:2:0 chroma subsampling
- Remotely powered via PoE (Power over Ethernet)
- Automatic input selection and automatic display control
- TCP/IP and RS-232 control
- UHD /HD/ SD resolutions 4096x2160@24/25/30/50*/60Hz*, 3840x2160@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 resolutions - 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800 1280x768, 1152x768, 1024x768, 800x600, 640x480
- YUV and RGB Color Space
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- CEC support
- HDCP 2.2 support
- PCM 2Ch, de-embedding analog audio out
- Master Audio for HDMI OUT and HDBaseT IN
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- Up to 24-bit rate
- Transmits IP and AV signals up to 328 ft. (100m)
- CAT5e/6 @ 4K up to 70 meters
- CAT5e/6 @ 1080p up to 100 meters
- HDMI IN/OUT @ 4K up to 5 meters
- HDMI IN/OUT @ 1080p up to 10 meters
- Signal bandwidth of 10.2 Gbps
- Web GUI setup, management and support
- Compatible with IP-Management System software
- Firmware upgradable via IP or mini USB
- CE, FCC certified

AT-OME-EX-KIT Product Specifier

The 4K /UHD Transport System shall be an advanced signal extender system incorporating the following device specifications:

- AV, USB 2.0, Ethernet, power, and control over HDBaseT - Receives 4K/UHD video, USB 2.0, embedded audio, 100Base-T Ethernet, power, and control through a single cable
- USB 2.0 data rate up to 120 Mbps.
- 2.5 Watts per USB device interface
- 4K/UHD capability @ 60 Hz with 4:2:0 Chroma subsampling
- Video resolution support for 4096x2160@24/25/30/50/60Hz*, 3840x2160@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 resolution support for 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480
- YUV and RGB Color Space
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- Transmitter powered by receiver via PoE (Power over Ethernet)
- Extends RS-232, CEC, and Ethernet control signals
- HDCP 2.2 compliant. Adheres to latest specification for High-bandwidth Digital Content Protection.
- USB 2.0 interfacing and extension up to 330 feet (100 meters)
- CEC pass thru
- Multi-channel audio compliant - Supports PCM, Dolby® Digital, Dolby Digital Plus™, Dolby TrueHD, Dolby Atmos®, DTS® Digital Surround™, DTS-HD Master Audio™, and DTS:X®
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- Field-updateable firmware via front panel USB port
- Front panel Power and Link status LEDs
- CAT5e/6 @ 4K up to 70 meters up to 230 feet
- CAT6a/7 @ 4K up to 100 meters up to 328 feet
- CAT5e/6 @ 1080p up to 100 meters up to 328 feet
- Power supply certified for CE, FCC, RoHS

AT-OME-MS42 Product Specifier

The 5x2 4K/UHD HDBaseT switcher shall have four inputs including USB-C, 2x HDMI and DisplayPort as well as an HDBaseT and HDMI output. The HDBaseT switcher shall have three USB 2.0 host ports with one via USB-C, balanced analog audio outputs, automatic input selection and automatic display control capability via CEC, RS-232 or IP. It shall transmit AV signals along with Ethernet, power, USB 2.0 and control over a single cable to a receiver up to 330 feet (100 meters). The System incorporates the following device specifications:

- Video resolution support for 4096x2160@24/25/30/50/60Hz, 3840x2160@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 resolution support for 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480
- YUV and RGB Color Space
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- Automatic display control: Selects active input when sources are connected
- Automatic input selection using video detection technology
- EDID management support
- CEC support
- HDMI 2.0 support
- HDCP 2.2 support
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- TCP/IP and RS-232 control of switcher
- Ethernet enabled, HDBaseT extension
- Transmits IP and AV signals up to 328 ft. (100m)
- Web GUI setup, management and support
- CE and FCC certified
- Power supply certified for CE, FCC, RoHS, cULus, RCM, CCC
- USB 2.0 Host switching and extension
- Up to 60W of power provided over USB-C
- USB 2.0 data rate over HDBaseT up to 120 Mbps

AT-OME-MS52W Product Specifier

The 5x2 4K/UHD HDBaseT switcher shall have four physical inputs including USB-C, 2x HDMI and DisplayPort as well as the ability to receive wireless streams via Apple Airplay, Google Cast and Miracast. The 5x2 HDBaseT switcher shall have two outputs consisting of one HDBaseT and HDMI output. The HDBaseT switcher shall have three USB 2.0 host ports with one via USB-C, balanced analog audio outputs, automatic input selection and automatic display control capability via CEC, RS-232 or IP. It shall transmit AV signals along with Ethernet, power, USB 2.0 and control over a single cable to a receiver up to 330 feet (100 meters). The System incorporates the following device specifications:

- Creates a secure wireless access point for which BYOD devices can connect.
- Creates a wireless bridge to another available wireless access point that is in range.
- Creates a custom splash screen via image upload or HTML.
- Mirrored HDBaseT and HDMI outputs
- Matrixed HDBaseT and HDMI outputs
- Wireless AV gateway for iOS®, Android™, Mac®, Chromebook™, and Windows devices 4K/ UHD capability @ 60 Hz with 4:2:0 chroma subsampling, plus support for 4K/60 4:4:4 and HDR formats on local ports (HDMI, USB-C, and DisplayPort), HDCP 2.2 compliant
- Automatic input selection and automatic display control
- Automated system on/off functionality including display control via scheduling (time of day, day of week)
- Built-in support for occupancy sensor triggering for system on/off including display control.
- USB-C port supports device charging for laptops, tablets, and smartphones
- It will have an audio output switcher, as well as audio embedding and de-embedding
- The switcher shall be controlled via TCP/IP, RS-232 and JSON over REST.
- For long term protection investment, the followings product and specification shall support a 10- year manufacture limited warranty.
- Supported video resolutions: 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, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1440x900, 1400x1050, 1280x1024, 1280x800, 1366x768, 1360x768, 1152x864, 1024x768, 800x600, 640x480
- Color space - YUV, RGB
- Chroma Subsampling - 4:4:4, 4:2:2, 4:2:0
- HDR † - HDR10 and Dolby® Vision™ @ 60Hz on local HDMI output
- USB-C Up to 4K/UHD @ 60Hz for devices supporting USB-C Alternate Mode video output
- Wireless: Up to 1080p @ 30Hz 4:2:0; dependent on wireless signal quality
- Audio Pass Through formats: PCM, Dolby® Digital, Dolby Digital Plus™, Dolby TrueHD, Dolby Atmos®, DTS® Digital Surround™, DTS-HD Master Audio™, and DTS:X®
- Analog Input - Unbalanced 2-channel, 3.5 mm
- Analog Output - Balanced / unbalanced 2-channel, 5-pin captive screw
- Sample Rate - 32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
- Bit Rate - 24-bit
- Signal bandwidth – 18 Gbps
- CEC Support on HDBaseT and HDMI outputs
- HDCP 2.2 compliant
- USB Ports: USB Type C: USB-C for AV input (Alternate Mode), USB 2.0 Type A for Wi-Fi® antenna modules (3 ports)

Products

- USB-C Power - Up to 60 W / 3 A at 20 V
- USB-C Device Charging Capability - Up to 20 V, 3 A Output: 60 W @ 20 V, 36 W @ 12 V, 15 W @ 5 V
- Ethernet Port: 1x RJ45
- Communication and discovery protocols - HTTP, HTTPS, Telnet, SSH, TCP/IP, mDNS
- Ethernet speed - 10/100 Mbps
- IP addressing - DHCP, static
- Wi-Fi - IEEE 802.11n/ac 2.5 GHz / 5 GHz
- Wi-Fi Protocols - WEP, WPA, PSK, WPA2 PSK, WPA Enterprise, WPA2 Enterprise
- Wifi dongles – 2x Antennas provided
- RS-232 – 1x Bidirectional, 3-pin captive screw
- Relay - 3-pin captive screw, normally open (NO), with adjustable Toggle and Pulse modes with Electrical rating: 48 V @ 1 A
- Trigger - 4-pin captive screw, Electrical rating: 30 V @ 1 A (max.)
- Device Certification - CE, FCC, UL

AT-OME-PS62 Product Specifier

The 6x2 4K/UHD HDBaseT matrix switcher shall have two HDBaseT inputs, three HDMI and one USB-C input as well as a HDBaseT and HDMI output. The HDBaseT matrix shall have three USB 2.0 host ports with one via USB-C, two balanced audio inputs, one mic/line input and two balanced audio outputs. While in mirrored mode, the switcher shall support automatic input selection and automatic display control via CEC, RS-232 or IP. The matrix shall transmit AV signals along with Ethernet, power, USB and control over a single cable to a receiver up to 330 feet (100 meters). The System incorporates the following device specifications:

- Video resolution support for 4096x2160@24/25/30/50/60Hz, 3840x2160@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 resolution support for 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480
- YUV and RGB Color Space
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- 4K Downscaling on HDMI output
- Automatic display control: Selects active input when sources are connected
- Automatic input selection using video detection technology
- EDID management support
- CEC support
- HDMI 2.0 support
- HDCP 2.2 support
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- TCP/IP and RS-232 control of switcher
- Ethernet enabled, HDBaseT extension
- Transmits IP and AV signals up to 328 ft. (100m)
- Web GUI setup, management and support
- CE and FCC certified
- Power supply certified for CE, FCC, RoHS, cULus, RCM, CCC
- USB 2.0 Host switching and extension
- Up to 60W of power provided over USB-C
- USB data rate over HDBaseT up to 120 Mbps
- Two USB-B and one USB-C Host port
- Two USB-A peripheral ports

AT-OME-ST31A Product Specifier

The 3x2 4K/UHD HDBaseT switcher shall have 3 inputs including USB-C and two HDMI as well as a mirrored HDBaseT and scaler HDMI output. The switcher shall have balanced audio output, automatic input selection and automatic display control via CEC, RS-232 or IP. The switcher shall transmit AV signals along with Ethernet and control over a single cable to a receiver up to 330 feet (100 meters). The System incorporates the following device specifications:

- Video resolution support for 4096x2160@24/25/30/50/60Hz, 3840x2160@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 resolution support for 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x 900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480
- YUV and RGB Color Space
- 4K Downscaling on HDMI output
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- Automatic display control: Selects active input when sources are connected
- Automatic input selection using video detection technology
- EDID management support
- CEC support
- HDMI 2.0 support
- HDCP 2.2 support
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- TCP/IP and RS-232 control of switcher
- Ethernet enabled, HDBaseT extension
- Transmits IP and AV signals up to 328 ft. (100m)
- Web GUI setup, management and support
- CE and FCC certified
- Power supply certified for CE, FCC, RoHS, cULus, RCM, CCC

AT-OMNI Product Specifier

Atlona OmniStream is a flexible, scalable, and cost-effective networked AV platform that delivers high-performance AV distribution with solid reliability, along with the unrestricted scalability and cost efficiency of integrating over data networks. The possibilities of networked AV systems are almost limitless in expansion and scope. AV over IP systems continue to be more and more widely adopted in applications where circuit-based distribution systems were the only viable option. The System incorporates the following device specifications:

- Low-latency, high-quality distribution of audio, video, and control over Gigabit Ethernet networks
- Video resolution support for 4K60 4:4:4 with support for HDR10, HLG, and Dolby Vision HDR formats
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- Encoders and decoders use HDMI as the input and output audio/video connectors
- Decoders have a separate balanced audio input and audio output
- Supports HDCP 1.4 and 2.2.
- Encoders have an option to disable HDCP support on the HDMI input
- End-to-end latency of less than one (1) frame
- Utilizes Constant Bit Rate (CBR) encoding with bit rates configurable from 15 Mbps to 900 Mbps
- Up to eight (8) channels of LPCM audio and pass-through of encoded audio formats, including support for Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos, DTS, and DTS Master Audio.
- LPCM down-mixing to stereo or mono audio
- Audio sample rates up to 192 kHz and bit depths up to 24-bit
- Supports simultaneous distribution of LPCM audio using RTP and AES67
- Encoders distribute encoded audio using RTP
- Encrypts audio and video using AES-128 and provides users with a way to encrypt each stream with a unique key to ensure content can only be viewed by authorized decoders
- Provides thumbnail snapshot of the HDMI input every two (2) seconds so that touch panels and monitoring systems can display the content being encoded. Thumbnails shall be in JPEG format and available from the encoder web pages
- Provides a default set of EDIDs and also allow for the use of custom EDIDs and EDIDs copied from displays connected to decoders
- Fast switching of video content at resolutions up to 4K60. Fast switching times shall be less than 250 ms
- Decoders are able to join a multicast or unicast stream with the audio and video streams configured separately so that audio and video content can be selected independently
- Scaling of the output video.
- Decoders support changing frame rate of the output video
- Decoders are configurable to operate together in a videowall configuration. Videowall is configurable with 0°, 90°, 180°, and 270° rotations. Videowall configurations allow for bezel compensation.
- Supports compositing video content from up to four (4) streams into a single video output (also known as multiview) without requiring additional equipment in the system. Decoders are able to be configured with one or more multiview layouts. Users are able to select different multiview layouts and reposition streams in a layout using the product web pages and API.

Products

- Encoders support configuration of the Differentiated Services Code Point (DSCP) for audio and video traffic so that a priority can be assigned to the traffic in applications where QoS is required
- Supports the use of Forward Error Correction (FEC) to protect against data loss. FEC shall be based on the SMPTE 2022-5:2013 standard with matrix sizes ranging from 1x4 to 20x20
- Supports RS-232 and IR control of external devices. Decoders shall additionally support CEC display control
- Decoders are able to automatically turn on the connected display when a source signal is detected and turn off the connected display when the source signal is removed
- Supports grouping two (2) or more encoders into a group that allows for the creation of a virtual switch that can auto-switch between encoders based on the most recently connected source
- Supports text and logo overlay. Text overlay options include the text itself, color, transparency, size, location, and scroll. Logo overlay options include the logo itself, location, aspect ratio, and size. Logos are required to be PNG format, and transparency in the logo shall be honored
- Supports display of full-screen images that can be displayed on-demand or in response to a loss of signal
- Supports 802.1X
- Supports LLDP and report network connection information
- Supports the upload and download of configuration files
- Supports field firmware updates and will reject any files uploaded for firmware update that are not applicable to that device
- Supports link testing between the encoders and decoders to validate the available throughput over the network between devices
- Powered using PoE (IEEE 802.3af) or an optional 48 VDC power supply. The total power consumption of each device shall be less than 12 W, with the exception of decoders using the balanced audio connections, which will consume less than 24 W
- Encoders are available in single-channel, dual-channel, and US dual-gang wallplate form factors
- Decoders are available in a single-channel form factor
- With the exception of the wallplate encoder, all devices are surface- or rack-mountable (using an accessory rack mount kit). When rack-mounted, two units are be able to be mounted side-by-side and occupy no more than one (1) rack unit
- Front-to-rear airflow with operation temperatures from 0° to 40° C with a maximum relative humidity of 90%
- NDAA-889 and TAA compliant
- Web pages device configuration and operation.
- JSON-over-WebSockets API and a Telnet API that are open for use with any control system
- Networked AV system based on the Atlona OmniStream products

AT-OPUS-RX Product Specifier

The 4K /UHD/HDR Transport System shall be an advanced signal receiver used in conjunction with any OPUS matrix system. The System incorporates the following device specifications:

- Video resolutions supported 4096x2160@24/25/30/50/60Hz, 3840x2160@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 resolutions supported 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800
- 1280x768, 1152x768, 1024x768, 800x600
- YUV, RGB Color spaces supported
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- EDID passthrough support
- HDR support HDR10 @ 60Hz and Dolby® Vision™ @ 30Hz
- HDCP up to 2.2 supported
- Supports HDMI 2.0
- AV, Ethernet, power, and control over HDBaseT - Receives 4K/UHD video, embedded audio, 100Base-T Ethernet, power, and control through a single cable
- Toslink input support PCM 2Ch, Dolby® Digital, DTS® 5.1
- HDMI output audio support of 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®
- Audio sample rates supported 32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
- Audio bit rate supported 24-bit (max.)
- IR passthrough from control system into matrix and then to display via the RX and from RX back to matrix and then to source
- Ethernet enabled, HDBaseT extension
- Remotely powered via PoE
- PoE powered device – remotely powered via PoE-compatible transmitter – Adheres to IEEE 802.3af PoE Powered Device (PD)
- Front panel Power and Link status LEDs
- CEC Pass through
- CAT5e/6 @ 4K up to 70 meters HDBaseT input
- CAT5e/6 @ 1080p up to 100 meters HDBaseT input
- CAT6a/7 @ 4K up to 100 meters HDBaseT input
- HDMI OUT @ 4K up to 5 meters HDBaseT input
- HDMI OUT @ 1080p up to 10 meters
- Signal bandwidth of 18 Gbps
- Firmware upgradable via HDBaseT connection to Matrix

AT-UHD-CLSO-601 Product Specifier

The UHD/ 4K multi-format switcher shall have four HDMI inputs, two multi-function analog inputs, and a mirrored HDMI, and HDBaseT output with a built-in 4K scaler. It will have Automatic display control using CEC, IP and RS-232, as well as Automatic input selection using video detection technology. The switcher Shall be controlled via TCP/IP, RS-232. The System incorporates the following device specifications:

- Video resolution support for 4096x2160@24/25/30/50/60Hz, 3840x2160@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 resolution support for 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480
- Composite / S-Video formats NTSC, NTSC4, PAL, PAL-M, PAL-N, SECAM
- Automatic display control using Consumer Electronics Control (CEC)*, IP and RS-232
- Automatic input selection using video detection technology
- EDID management support
- HDCP Switchable- Compliant / non-compliant - 1.4 support
- PCM 2CH input audio
- TCP/IP and RS-232 control of switcher
- Ethernet enabled, HDBaseT extension
- CAT5e/6 @ 4K up to 70 meters
- CAT5e/6 @ 1080p up to 100 meters
- CAT6a/7 @ 4K up to 100 meters
- HDMI IN/OUT @ 4K up to 5 meters
- HDMI IN/OUT @ 1080p up to 10 meters
- Signal bandwidth of 10.2 Gbps
- Web GUI setup, management and support

AT-UHD-CLSO-824 Product Specifier

The UHD/ 4K multi-format switcher shall have four HDMI inputs, three HDBaseT inputs, one multi-function analog inputs, two HDBaseT outputs as well as two HDMI mirrored outputs. It will have an audio output mixer, as well as Ethernet and RS-232 and IR HDBaseT insertion. The switcher shall be controlled via TCP/IP, RS-232. The System incorporates the following device specifications:

- Video resolution support for 4096x2160@24/25/30/50/60Hz, 3840x2160@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 resolution support for 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480
- YUV, RGB Color Space
- 4:4:4, 4:2:2 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- EDID management support
- HDCP Switchable- Compliant / non-compliant - 1.4 support
- PCM 2CH input audio
- Audio for HDMI IN and HDBaseT OUT: 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®
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- Up to 24-bit rate
- TCP/IP and RS-232 control of switcher
- Ethernet enabled, HDBaseT extension
- CAT5e/6 @ 4K up to 70 meters
- CAT5e/6 @ 1080p up to 100 meters
- CAT6a/7 @ 4K up to 100 meters
- HDMI IN/OUT @ 4K up to 5 meters
- HDMI IN/OUT @ 1080p up to 10 meters
- Signal bandwidth of 10.2 Gbps
- Web GUI setup, management and support

AT-UHD-EX-100CE-RX-PSE Product Specifier

The 4K /UHD Transport System shall be an advanced signal extender system incorporating the following device specifications:

- 4K/UHD capability @ 60 Hz with 4:2:0 Chroma subsampling
- Full support of 4K/UHD streaming services and playback device
- Video resolution support for 4096x2160@24/25/30/50/60Hz*, 3840x2160@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 resolution support for 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480
- YUV and RGB Color Space
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- Signal bandwidth of 10.2 Gbps
- CEC Pass through
- HDCP 2.2 compliant - Adheres to latest specification for High-bandwidth Digital Content Protection
- PoE power source – remotely powers a PoE-compatible transmitter – Adheres to IEEE 802.3af PoE Power Sourcing Equipment (PSE)
- AV, Ethernet, power, and control over HDBaseT - Receives 4K/UHD video, embedded audio, 100Base-T Ethernet, power, and control through a single cable
- Extended distance HDMI extension - Receives HDMI signals up to 330 feet (100 meters) @ 1080p with CAT5e/6 or 4K/UHD using CAT6a/7 cable
- Extends RS-232, CEC, and Ethernet control signals
- Audio format support for 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®
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- Up to 24-bit rate
- CAT5e/6 @ 4K up to 70 meters up to 230 feet
- CAT6a/7 @ 4K up to 100 meters up to 328 feet
- CAT5e/6 @ 1080p up to 100 meters up to 328 feet
- HDMI IN/OUT @ 4K up to 5 meters up to 15 feet
- HDMI IN/OUT @ 1080p up to 10 meters up to 30 feet
- Field-updatable firmware via Front panel USB port
- Front panel Power and Link status LEDs
- 1 inch (25 mm) high quarter rack-width enclosure
- Power supply certified for CE, FCC, RoHS, cULus, RCM, CCC

AT-UHD-EX-100CE-TX-PD Product Specifier

The 4K /UHD Transport System shall be an advanced signal extender system incorporating the following device specifications:

- 4K/UHD capability @ 60 Hz with 4:2:0 Chroma subsampling
- Remotely powered via PoE
- Video resolution support for 4096x2160@24/25/30/50/60Hz*, 3840x2160@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 resolution support for 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480
- YUV and RGB Color Space
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- Signal bandwidth of 10.2 Gbps
- CEC Pass through
- HDCP 2.2 compliant - Adheres to latest specification for High-bandwidth Digital Content Protection
- PoE power source – remotely powers a PoE-compatible transmitter – Adheres to IEEE 802.3af PoE Power Sourcing Equipment (PSE)
- AV, Ethernet, power, and control over HDBaseT - Receives 4K/UHD video, embedded audio, 100Base-T Ethernet, power, and control through a single cable
- Extended distance HDMI extension - Receives HDMI signals up to 330 feet (100 meters) @ 1080p with CAT5e/6 or 4K/UHD using CAT6a/7 cable
- Extends RS-232, CEC, and Ethernet control signals
- Multi-channel audio compliant - Supports PCM, Dolby® Digital, Dolby Digital Plus™, Dolby TrueHD, Dolby Atmos®, DTS® Digital Surround™, DTS-HD Master Audio™, and DTS:X®
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- Up to 24-bit rate
- CAT5e/6 @ 4K up to 70 meters up to 230 feet
- CAT6a/7 @ 4K up to 100 meters up to 328 feet
- CAT5e/6 @ 1080p up to 100 meters up to 328 feet
- HDMI IN/OUT @ 4K up to 5 meters up to 15 feet
- HDMI IN/OUT @ 1080p up to 10 meters up to 30 feet
- Field-updatable firmware via Front panel USB port
- Front panel Power and Link status LEDs
- 1 inch (25 mm) high quarter rack-width enclosure
- Power supply certified for CE, FCC, RoHS, cULus, RCM, CC

AT-UHD-SW-5000ED Product Specifier

The 5X1 4K/UHD switcher shall have two HDBaseT inputs, three HDMI inputs, mirrored HDMI and HDBaseT outputs, balanced audio outputs, automatic input selection, and automatic display control capability. It shall transmit AV signals along with Ethernet, power, and control over a single cable to displays up to 330 feet (100 meters). The System incorporates the following device specifications:

- Video resolution support for 4096x2160@24/25/30/50/60Hz, 3840x2160@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 resolution support for 2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480
- YUV and RGB Color Space
- 4:4:4, 4:2:2, 4:2:0 Chroma Subsampling
- 8-bit, 10-bit, 12-bit Color Depth
- Automatic display control using Consumer Electronics Control (CEC)*, IP and RS-232
- Automatic input selection using video detection technology
- EDID management support
- CEC support
- HDCP Switchable- Compliant / non-compliant - 1.4 support
- PCM 2CH input audio
- Audio for HDMI IN and HDBaseT OUT: 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®
- Audio sample rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
- Up to 24-bit rate
- TCP/IP and RS-232 control of switcher
- Ethernet enabled, HDBaseT extension
- Transmits IP and AV signals up to 330 ft. (100m)
- CAT5e/6 @ 4K up to 70 meters
- CAT5e/6 @ 1080p up to 100 meters
- CAT6a/7 @ 4K up to 100 meters
- HDMI IN/OUT @ 4K up to 5 meters
- HDMI IN/OUT @ 1080p up to 10 meters
- Signal bandwidth of 10.2 Gbps
- Web GUI setup, management and support
- Compatible with IP-Management System software
- Firmware upgradable via mini USB
- Power consumption up 24W
- CE and FCC certified
- Power supply certified for CE, FCC, Level VI, RoHS, cULus, RCM, CCC

AT-UHD-SW-510W / EU Product Specifier

The SW-510W is a wireless AV gateway and much more. It delivers complete yet simplified AV system integration for collaborative meeting spaces, with all the convenience and automation features that distinguish Atlona products among AV integrators. The System incorporates the following device specifications:

- Two HDMI, one DisplayPort, and one USB-C input, plus an input for wireless AV
- Ability to create a secure wireless access point for which BYOD devices can connect.
- Ability to create a wireless bridge to another available wireless access point that is in range.
- Ability to create a custom splash screen via image upload or HTML.
- Mirrored HDBaseTTM and HDMI outputs
- Matrixed HDBaseTTM and HDMI outputs
- Wireless AV gateway for iOS®, Android™, Mac®, Chromebook™, and Windows devices 4K/ UHD capability @ 60 Hz with 4:2:0 chroma subsampling, plus support for 4K/60 4:4:4 and HDR formats on local ports (HDMI, USB-C, and DisplayPort), HDCP 2.2 compliant
- Automatic input selection and automatic display control
- Automated system on/off functionality including display control via scheduling (time of day, day of week)
- Built-in support for occupancy sensor triggering for system on/off including display control.
- USB-C port supports device charging for laptops, tablets, and smartphones
- It will have an audio output switcher, as well as audio embedding and de-embedding
- The switcher shall be controlled via TCP/IP, RS-232 and JSON over REST.
- For long term protection investment, the followings product and specification shall support a 10- year manufacture limited warranty.
- Supported video resolutions: 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, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1440x900, 1400x1050, 1280x1024, 1280x800, 1366x768, 1360x768, 1152x864, 1024x768, 800x600, 640x480
- Color space - YUV, RGB
- Chroma Subsampling - 4:4:4, 4:2:2, 4:2:0
- HDR † - HDR10 and Dolby® Vision™ @ 60Hz on local HDMI output
- USB-C Up to 4K/UHD @ 60Hz for devices supporting USB-C Alternate Mode video output
- Wireless: Up to 1080p @ 30Hz 4:2:0; dependent on wireless signal quality
- Audio Pass Through formats: PCM, Dolby® Digital, Dolby Digital Plus™, Dolby TrueHD, Dolby Atmos®, DTS® Digital Surround™, DTS-HD Master Audio™, and DTS:X®
- Analog Input - Unbalanced 2-channel, 3.5 mm
- Analog Output - Balanced / unbalanced 2-channel, 5-pin captive screw
- Sample Rate - 32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
- Bit Rate - 24-bit
- Signal bandwidth – 18 Gbps
- CEC Support on HDBaseT and HDMI outputs
- HDCP 2.2 compliant
- USB Ports: USB Type C: USB-C for AV input (Alternate Mode), USB 2.0 Type A for Wi-Fi® antenna modules (3 ports)
- USB-C Power - Up to 60 W / 3 A at 20 V
- USB-C Device Charging Capability - Up to 20 V, 3 A Output: 60 W @ 20 V, 36 W @ 12 V, 15 W @ 5 V

Products

- Ethernet Port: 1x RJ45
- Communication and discovery protocols - HTTP, HTTPS, Telnet, SSH, TCP/IP, mDNS
- Ethernet speed - 10/100 Mbps
- IP addressing - DHCP, static
- Wi-Fi - IEEE 802.11n/ac 2.5 GHz / 5 GHz
- Wi-Fi Protocols - WEP, WPA, PSK, WPA2 PSK, WPA Enterprise, WPA2 Enterprise
- Wifi dongles – 2x Antennas provided
- RS-232 – 1x Bidirectional, 3-pin captive screw
- Relay - 3-pin captive screw, normally open (NO), with adjustable Toggle and Pulse modes with Electrical rating: 48 V @ 1 A
- Trigger - 4-pin captive screw, Electrical rating: 30 V @ 1 A (max.)
- Temperature Operating - 32 to 122 Fahrenheit, 0 to 50 Celsius
- Humidity (RH) - 20% to 90%, non-condensing
- Power consumption at full load – 121 W
- Idle power consumption – 35- 40 W
- Power Supply - Input: 100 – 240 V AC, 50/60 Hz, Output: 5 V DC
- Device weight – 3.70 LBS, 1.68 Kilograms
- Device Certification - CE, FCC, UL

AT-VCC-RS232-KIT Product Specifier

The VCC-RS232 shall act as a TCP to RS-232 command convertor for the Velocity Control System. In conjunction with the VGW-250 control processor, the VCC-RS232 will receive IP commands and convert them to the proper RS-232 commands for the connected devices. The VCC shall operate as a PoE PD device and does not require an external power supply. The VCC can be configured in software as a straight through configuration or null modem. The System incorporates the following device specifications:

- Network connectivity via RJ-45, 100/10 Mbps Ethernet Protocol
- Unit comes 5-foot (1.5 meter) RS-232 adapter cable
- Unit comes with DB9 male-male gender changer
- PoE powered device – remotely powered via PoE-compatible transmitter – Adheres to IEEE 802.3af PoE Powered Device (PD)
- RS-232 Full support for Tx, Rx, CTS, RTS, DTR, and DTS signals using bidirectional communication with hardware handshaking

AT-VCC-IR3-KIT Product Specifier

The Atlona AT-VCC-IR3-KIT is an accessory for the Velocity Control System. The VCC-IR3-KIT is remotely powered through Power over Ethernet (PoE), or locally from a USB power source. The included cable provides three independently addressable emitters allowing discrete IR control for three different AV devices. The System incorporates the following device specifications:

- 1. Network connectivity via RJ-45, 100/10 Mbps Ethernet Protocol
- 2. Unit comes 1ft TriPort IR cable
- 3. IR output uses 3.5 mm (supports IR emitter, IR blaster, Xantech compatible)
- 4. PoE powered device – remotely powered via PoE-compatible transmitter – Adheres to IEEE 802.3af PoE Powered Device (PD)
- 5. Supports IR learning in conjunction with the VGW-HW

AT-VCC-RELAY-KIT Product Specifier

The VCC-RELAY shall act as a TCP to relay trigger or sensor for the Velocity Control System. The VCC-RELAY can be composed of up to 4 independent SPST relays, 2 SPDT relays or 1 DPDT relay. The VCC-RELAY shall also have 4 sensor inputs that can be configured to voltage or contact sensors. The VCC-RELAY shall operate as a PoE PD device and does not require an external power supply. The System incorporates the following device specifications:

- 4 Terminal connection relays for SPST configuration. 2 Terminal connection relays for SPDT configuration. 1 Terminal connection relay for DPDT configuration.
- 4 sensor ports that can be configured as contact closure sensors or voltage sensors
- 4.5-foot (1.4 meter) cable
- PoE powered device – remotely powered via PoE-compatible transmitter – Adheres to IEEE 802.3af PoE Powered Device (PD)
- Voltage: AC/DC voltages ± 3 V to ± 24 V (RMS) supported for the voltage sensor
- 4 x SPST with transient voltage suppression 24 V AC/DC or 0.5 A NO contact

AT-VGW Product Specifier

The Velocity Control Gateway shall be the AV control processor for the Velocity Control System. It shall serve and control of up to 3 or 10 rooms per gateway including Atlona devices and third-party AV devices, dedicated Velocity touchpads, and BYOD control interfaces. It shall have dual Ethernet ports for isolating a dedicated AV LAN from the facility or corporate network. It will be setup and managed via any web browser for any OS platform. It shall support redundancy when two gateways are configured to work in such a fashion. The System incorporates the following device specifications:

- Uses Two Network Interface Controllers (NIC)
- Supports the following network standards and protocols DHCP, HTTP, HTTPS, SFTP, SMTP, SNMP, SSH, TCP, UDP, IEEE 802.1x
- Supports Ethernet speeds of 10/100/1000 Mbps
- Shall support the following Network addressing: DHCP and static
- HDMI out to support splash screen with IP and firmware information
- Gateway firmware shall be updated via web-GUI, drag and drop functionality
- Supports role-based features and management
- Uses LS 1.2, ECDHE_RSA with P-256, AES_128_GCM, HTTPS security.
- Ability to manage and control the gateway via cloud access with the appropriate license
- Built-in device management for configuration and firmware updates
- Supports integrated scheduling through Office 365 and Google G Suite
- Additional scheduling panels shall show the room schedule and allow for ad-hoc room booking
- Functionality and control shall be configured through an intuitive GUI
- The control solution shall support the ability to create and customize the user touch panel control pages
- Configuration shall support room triggers, variables, and conditions that allow for flexibility in system functionality and event-based operation

AT-VTP-550-BL/WH Product Specifier

The VTP-550, Velocity 5.5-inch touch panel shall act as a control interface for the Velocity Control System. It shall work in conjunction with the VGW-HW to control either Atlona or other third-party AV devices. It shall operate as a PoE PD devices and requires no external power supply. The System incorporates the following device specifications:

- The panel is a Capacitive touch, 8" LCD, 1280 x 800
- Color depth of the panel 8 bits per channel / 16.7 million colors
- Supports Electro-optical Ambient light sensor
- Uses Advance "time-of-flight" sensor as the proximity sensor
- PoE powered device – remotely powered via PoE-compatible transmitter – Adheres to IEEE 802.3af PoE Powered Device (PD)
- Touch screen uses capacitive glass surface that supports multi-touch and gesture interactions
- Can be installed into a standard US 2 gang backbox
- Has a microphone using Digital MEMS (MicroElectro-Mechanical Systems) for future functionality

AT-VTP-800-BL/WH Product Specifier

The VTP-800, Velocity 8-inch touch panel shall act as a control interface for the Velocity Control System. It shall work in conjunction with the VGW-HW to control either Atlona or other third-party AV devices. It shall operate as a PoE PD devices and requires no external power supply. The System incorporates the following device specifications:

- The panel is a Capacitive touch, 8" LCD, 1280 x 800
- Color depth of the panel 8 bits per channel / 16.7 million colors
- Supports Electro-optical Ambient light sensor
- Uses Advance "time-of-flight" sensor as the proximity sensor
- PoE powered device – remotely powered via PoE-compatible transmitter – Adheres to IEEE 802.3af PoE Powered Device (PD)
- Touch screen uses capacitive glass surface that supports multi-touch and gesture interactions
- Can be installed into a standard US 2 gang backbox
- Has a microphone using Digital MEMS (MicroElectro-Mechanical Systems) for future functionality

AT-WAVE-101 Product Specifier

The Wireless BYOD receiver shall have the ability to receive up to four (4) wireless streams simultaneously from either Apple Airplay, Google Cast and/or Miracast. The Wireless BYOD receiver shall also allow for the playback of local image and video content and YouTube videos. The device shall have the ability to stream the HDMI output to YouTube live for remote viewing of the content. The Wireless BYOD receiver shall have the ability to control a connected Display either via IP (TCP) or with an optional USB-to-RS232 cable. Additional feature requirements include:

- Creates a secure wireless access point for which BYOD devices can connect.
- Connects to an existing wireless access point for which BYOD devices can connect.
- Supports multiple simultaneous networks at the same time.
- Ability to Firewall IP traffic between the devices wireless access point the and wired network
- Provides a dedicated end user webpage for managing content on the system, initiating a live stream to Youtube, changing the layout and managing the volume.
- Supports control of a display based on time of day and day of week via IP or an optional USB-to-RS232 cable.
- Supports customization the Welcome screen on the HDMI output.
- Detects the device and browser type of the client connected to the device's webserver. Providing more accurate instructions on how to wireless stream from said device.
- Analyzes all active content and arrange the content optimally on the HDMI output.
- Supports output up to 4k60 video.

