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Introduction

The Atlona **AT-HDVS-150-RX** is an HDBaseT receiver and HD scaler for video signals up to 1080p, plus embedded audio over distances up to 230 feet (70 meters). The HDVS-150-RX is designed for use with the HDVS-150-TX switching transmitters, and together serve as a compact, automated AV system with the convenience of automatic input selection, display control, and HD scaling. The HDVS-150-RX remotely powers the HDVS-150-TX through Power over Ethernet (PoE). The HDVS-150-RX offers advanced scaling capabilities including image adjustment capability, and a feature for automatically matching incoming signals to the display's native resolution. Integrated scaling and video processing help optimize image quality and switching performance. This receiver also features audio de-embedding and third-party RS-232 control of the scaler, switcher, and display. The HDVS-150-RX combines the benefits of HD scaling and integrated display control, and the advantages of HDBaseT signal extension. It incorporates many popular integration convenience features while delivering excellent value for classrooms, huddle rooms, and meeting spaces. The HDVS-150-RX can be surface-mounted for easy installation behind a display or above a projector. When used in conjunction with an HDVS-150-TX transmitter, the HDVS-150-RX can provide control to a display through RS-232, without the need for a separate control system. This simplifies system design and integration while reducing costs. With automatic display control, the HDVS-150-RX can trigger a display to power on automatically whenever a laptop or other device is connected to the HDVS-150-TX. At the end of the presentation, when the presenter disconnects the laptop, the HDVS-150-RX forces the display to power off. Ease of presenter interaction with the system, and the savings incurred by automatic display shutdown provide a significant return on investment. The HDVS-150-RX display control capability can also be triggered by an external control system.

Applications

•   The HDVS-150-RX is ideal for use in complete system applications with HDVS-150-TX transmitters to provide a two or three-input AV system supporting HDMI and VGA signals, auto-switching, display control, and scaling plus 230 foot (70 meter) extension to displays.

Key Features

Audio de-embedding

- Provides two channel, analog audio signal on balanced captive screw connectors.

- Improves AV system audio with the use of an external amplifier such as the Atlona AT-PA100-G2.

Long distance HDMI extension

- Receives HDMI and VGA/Audio signals up to 230 ft (70m) @ 1080p over CAT6a/7 and 197 feet (60 m) @ 1080p over CAT5e/6.

- Uses easy-to-integrate category cable for low-cost, reliable system installation.

HD video scaler with HDMI output and input resolution control

- Scales video signals up to 1080p/60Hz and 1920×1200.

- Set desired input resolution from 800×600 to 1920×1200 for a PC source.

- Incoming signals can be automatically scaled to the display's native resolution.

EDID management

- Manages EDID communications with a source connected to the HDVS-150-TX.

- Allows integrators to set or match a PC's graphics resolution.

HDCP management

- HDCP compliance can be disengaged through the on-screen menu, control software, or a control system.

- Allows non-protected material from PCs to pass to non-compliant displays, streaming devices, and teleconference systems; protected content is not transmitted.

RS-232 scaler and switcher control

- Input switching (at the AT-HDVS-150-TX), image adjustments, resolution settings, and auto-set to display's native resolution can be made from a third party control system.

- Seamless integration with larger, control system-based AV systems.

RS-232 display control

- Facilitates On/Off display control; Included software simplifies programming.

- Eliminates need for complex control system in small AV system.

Power over Ethernet for AT-HDVS-150-TX

- Industry standard IEEE 802.3af PoE supplied by the receiver over HDBaseT.

- No local AC outlet required at the AT-HDVS-150-TX switcher; saves time and integration costs.

Field-updatable firmware

- Rear panel USB port provides an easy means for device updates.

- Ensures long-term system return on investment.

Included accessories

- User guide and external universal power supply.

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.

HDBaseT Scaler
with HDMI and Analog Outputs

Specifications

Video

Video	
Signal Type	HDMI
HDCP	1.4
Pixel Clock	300MHz
UHD/HD/SD	1080p@60/59.94/50/30/29.97/25/24/23.98Hz 1080i@60/59.94/50Hz 720p@60/59.94/50/30/29/25Hz 576p 576i 480p 480i
VESA	1920×1200RB 1680×1050 1600×1200 1600×900 1440×900 1400×1050 1366×768 1280×1024 1280×960 1280×800 1280×768 1152×854 1024×768 800×600 720×400 640×480
Scaler Up/Down	1080p@60/59.94/50/30/29.97/25/24/23.98Hz, 1080i@60/59.94/50Hz, 720p@60/59.94/50/30/29/25Hz, 1920×1200RB, 1680×1050, 1600×1200, 1600×900 1440×900, 1400×1050, 1366×768, 1280×1024, 1280×960, 1280×800, 1280×768 1152×854, 1024×768, 800×600, 720×400, 640×480
Color Space	YUV, RGB
Chroma Subsampling	4:4:4, 4:2:2
Color Depth	8-bit, 10-bit, 12-bit

Audio

Audio	
Analog Output	PCM 2Ch (de-embedded)
HDMI Out / HDBaseT In	PCM 2.0
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

Control

Control	
RS-232	Device control and configuration Bidirectional pass-through from control system over HDBaseT Supported baud rates: 2400, 4800, 9600, 19200, 38400, 57600, 115200
CEC Support	Yes

Resolution / Distance

Resolution / Distance	1080p - Feet / Meters	
HDMI IN/OUT	15	10
CAT5e/6	200	60
CAT6a/7	230	70

Buttons and Indicators

Buttons and Indicators	
Buttons: MENU, UP, DOWN,	3 - momentary, tact-type
Indicators: PW LINK	 1 - LED, green 3 - LED, yellow

Specifications (continued)

Connectors	
HDBaseT IN	1 - RJ45, female
HDMI OUT	1 - Type A, 19-pin female
AUDIO OUT	1 - 5-pin captive screw, balanced / unbalanced 2-channel
RS-232	1 - 3-pin captive screw
FW	1 - mini-USB
PWR	1 - Euroblock, 5 mm pitch, 48 V DC

Temperature	Fahrenheit	Celsius
Operating	32 to 104	0 to 40
Storage	-4 to 140	-20 to 60
Humidity (RH)	20% to 90%, non-condensing	

Power		
Consumption	15W (varies per paired transmitter)	
Supply	Input: 100 - 240 V AC, 50/60 Hz Output: 48 V / 3.125A DC	

Dimensions (H x W x D)	Inches	Millimeters
Unit	1.18 x 4.8 x 4.92	30 x 122 x 125
Power Supply	1.42 x 1.81 x 4.41	36 x 46 x 112

Weight	Pounds	Kilograms
Device	0.67	0.31

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

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Introduction

The Atlona **AT-HDVS-150-TX** is a 3×1 switcher and HDBaseT transmitter with two HDMI inputs and a VGA input with audio. Video signals up to 1080p, plus embedded audio can be transmitted up to 230 feet (70 meters). The HDVS-150-TX is designed for use with the AT-HDVS-150-RX receiver and HD scaler, and can serve as the central component of a compact, automated AV system with the convenience of automatic input selection and display control. The switcher is remotely powered by the HDVS-150-RX through Power over Ethernet (PoE).

The HDVS-150-TX combines the benefits of auto-switching and integrated display control, and the advantages of HDBaseT signal transmission. It incorporates many popular integration convenience features while delivering excellent value for classrooms, huddle rooms, and meeting spaces.

Surface mounting brackets are provided with the HDVS-150-TX for easy under-table, furniture, or on-wall installation.

The Atlona **AT-HDVS-150-TX-PSK** is identical to the AT-HDVS-150-TX, with the addition of local powering capability and an external power supply. This makes it ideal for extending AV and control directly to a projector with an HDBaseT input. The AT-HDVS-150-TX can serve as the central component of a small, automated AV system through automatic input selection, and by sending RS-232 control commands to the display. With automatic display control capability, the AT-HDVS-150-TX can power the display on or off whenever a source is connected or disconnected from the unit.

Applications

- Education environments
- Corporate environments

Key Features

3×1 HDBaseT switcher

• Features two HDMI inputs plus a VGA input with audio.[1]

• Allows advanced HDMI display devices to be used with legacy VGA sources.

Designed for point-to-point extension to the AT-HDVS-150-RX HD scaling receiver

• Extends AV up to 230 feet (70 meters) @ 1080p or 1920×1200.

• Provides a cost-effective yet compact, automated AV system with the convenience of automatic input selection and display control.

Long distance HDMI extension

• Transmits AV up to 230 feet (70 meters) @ 1080p or 130 feet (40 meters) @ 4K/UHD[2] using CAT6a/7 cable

• Uses easy-to-integrate category cable for low-cost, reliable system installation

Remotely powered via PoE (Power over Ethernet)

• EIEEE 802.3af PoE Powered Device (PD).

• Power for transmitter is supplied by AT-HDVS-150-RX over HDBaseT.

Automatic input selection using hot plug detection

• Selects active input when sources are connected or if there is a change in source power status.

• Enables simplified, automatic system operation with no user intervention necessary.

Automatic display control (when connected to the HDVS-150-RX)

• Automatically changes display power state based on active or standby mode of the switcher (in conjunction with the HDVS-150-RX). Control signals to display are transmitted via RS-232.

• Eliminates the need for a complex control system.

Front panel input selection and on/off controls

• Overrides auto-switching when more than one active source is present.

• Simple manual operation allows presenter to maintain control of AV system.

Field-updatable firmware

• Rear panel USB port provides an easy means for device updates.

• Ensures long-term system return on investment.

Front panel power and input selection status LEDs

• LED indicators provide power and input selection status information.

• Provides easy setup and troubleshooting.

Included accessories

• User guide and surface mounting brackets.

• Power supply (**AT-HDVS-150-TX-PSK** only) - ideal for point-to-point installations with an HDBaseT-equipped projector.

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

Video		
Signal	HDMI	
Copy Protection	HDCP 1.4	
Pixel Clock	300 MHz	
UHD/HD/SD	4096x2160@60(3)/50/30/25/24Hz 3840×2160@60(3)/50/30/25/24Hz 1080p@60/59.9/50/30/29.97/25/ 24/23.98Hz 1080i@30/29.97/25Hz	720p@60/59.94/50Hz 576p@50Hz 576i@25Hz 480p@60/59.96Hz 480i@30Hz
VESA All resolutions are 60Hz	2560×1600 2048×1536 1920×1200 1680×1050 1600×1200 1440×900 1400×1050 1280×1024	1280×800 1366×768 1360×768 1152×864 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	

Audio	
HDMI	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

CEC			
Port	1 x HDMI, Type A, 19-pin female		
Triggering	RS-232		

Resolution / Distance	4K/UHD - Feet / Meters		1080p - Feet / Meters	
HDMI IN	15	5	30	10
CAT5e	115	35	200	60
CAT6/6a/7	130	40	230	70

Buttons and Indicators	
Buttons: DISPLAY ON/OFF, INPUT SELECT	2 x push buttons, momentary, tact-type
Indicators: PWR, HDMI 1, HDMI 2, VGA	4 x LED, green

Connectors	
HDMI IN	2 - Type A, 19-pin female
VGA IN	1 - 15-pin, VESA female
HDBaseT OUT	1 - RJ45
AUDIO IN	1 - 3.6 mm, stereo
DC 48V (PSK only)	1 - 2-pin, captive screw

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

Power	AT-HDVS-150-TX	AT-HDVS-150-TX-PSK
Consumption	18.7 W (when paired)	18.7 W (when paired)
Idle Consumption	N/A	22 W
Supply	N/A	Input: 100 - 240 V AC, 50/60 Hz Output: 48 V DC, 3.125 A
Safety	N/A	CE, FCC, cULus

Dimensions (H x W x D)	Inches	Millimeters
Unit	1.50 x 5.00 x 4.02	38 x 127 x 102
Power Supply (AT-PS-48083-D3)[4]	1.42 x 1.81 x 4.41	36 x 46 x 112

Weight	Pounds	Kilograms
Device	0.64	0.29

Certification	
Device	CE, RoHS, FCC

Footnotes

(1) Audio signals will not pass without an accompanying video signal.
(2) Allows 4K/UHD transmisstion when used with a compatible HDBaseT receiver.
(3) 4096×2160@50/60Hz & 3840×2160@50/60Hz supported @ chroma subsampling 4:2:0 8-bit only.
(4) Only included with AT-HDVS-150-TX-PSK.

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