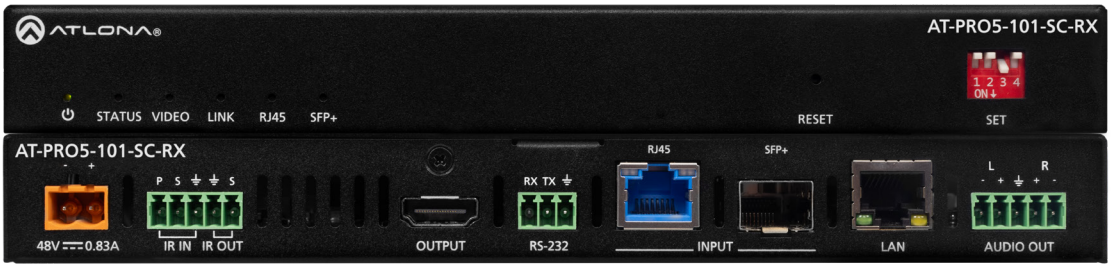
# 4K HDR SDVoE Receiver with Scaler for PRO5 Matrix Switcher




## Introduction

The Atlona **AT-PRO5-101-SC-RX** is an AV extension receiver with integrated video processing, featuring SDVoE® 10GbE connectivity for receiving ultra-high definition video and audio from the AT-PRO5-MX810 matrix switcher. Part of the PRO5 Series, the PRO5-101-SC-RX is HDCP 2.3 compliant, and supports 4K/60 4:4:4 and HDR at HDMI® data rates up to 18 Gbps. It features an RJ45 port, and an SFP+ cage for copper or fiber optic connectivity to receive video, embedded audio, Gigabit Ethernet, and RS-232 and IR control signals from the matrix switcher. The RJ45 port allows extension up to 330 feet (100 meters) over CAT6a UTP cable, along with PoE for powering the PRO5-101-SC-RX, while the SFP+ cage can be used with a compatible fiber optic module to extend from 38 meters up to 10 kilometers over fiber optic cable. This receiver features high-performance video processing which includes 4K video upscaling and downscaling with frame rate conversion, and video wall processing for 2x2, 1x3, and 2x4 display arrays. The PRO5-101-SC-RX SDVoE scaling receiver, together with the PRO5-MX810 HDMI to SDVoE matrix switcher, is ideal for a wide range of commercial applications requiring multi-zone AV distribution with long-distance signal extension.

## Applications

- **Multi-zone AV distribution**
  A PRO5 Series system, with the PRO5-MX810 and eight PRO5-101-SC-RX receivers gives it ample capacity to serve displays in remote locations. This is applicable to a wide variety of environments such as lecture halls, active classrooms, large conference rooms, boardrooms, divisible rooms, retail, hospitality, and houses of worship.
- **AV signal extension**
  The PRO5-101-SC-RX offers standard 10 Gigabit Ethernet connectivity with a choice of CAT 6a UTP cabling, or the use of a compatible SFP+ module to extend signals over singlemode or multimode fiber. Fiber optic cabling can be an appealing option to cover very long distances, and whenever there is the availability of dark (unused) fiber in a facility's cable plant.
- **Video Walls**
  Corporate lobbies, student centers, hospitality, and retail establishments such as sports bars are great locations for a video wall, with PRO5-101-SC-RX receivers providing the essential processing for the display array.

## Key Features

**SDVoE® receiver for video, audio, Gigabit Ethernet, and bidirectional IR and RS-232 control signals**

- Receive AV, control, and Ethernet from the AT-PRO5-MX810 matrix switcher using SDVoE technology.
- Ideal for commercial applications requiring multi-zone AV distribution with long-distance signal extension.

**High-performance, SDVoE-based, point-to-point AV extension**

- Leverage 10GbE connectivity for ultra-high definition video and audio delivery between source and destination devices.
- Full-bandwidth distribution without the cost of a 10GbE network.

**SDVoE extension input with copper or fiber optic connectivity(1)**

- RJ45 port allows extension up to 330 feet (100 meters) over CAT6a UTP cable.
- SFP+ cage can be used with compatible fiber optic transceiver module(2) to extend from 38 meters up to 10 kilometers over fiber optic cable.
- System design and integration versatility for distributing signals over 10 Gigabit Ethernet copper or fiber optic cables.

**4K/UHD capability @ 60 Hz with 4:4:4 chroma sampling, plus support for HDR formats**

- Ideal for 4K/UHD and HDR-capable sources and displays.
- Compatible with HDR10, HDR10+, Dolby® Vision™, and HLG (Hybrid Log-Gamma).

**HDCP 2.3 compliant**

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

**Remotely powered by AT-PRO5-MX810 matrix switcher, or locally powered**

- When receiving AV signals over the RJ45 port, industry standard IEEE 802.3af PoE is supplied by the PRO5-MX810. Also can be locally powered with included Atlona AT-PS-48083-C power supply.
- Allows convenient receiver installation at a display or projector without the need for local AC power.(3)

**High performance 4K upscaling and downscaling**

- Ensure professional-quality image presentations with video processing optimization settings. Selectable frame rate and color space conversion available. Available pass-through mode (scaler bypass mode) for 1:1 image output.
- Ideal for presentation applications where content is to be viewed on a variety of 4K displays and projectors at HD or other resolutions.

**Aspect ratio control**

- The aspect ratio of the video can be adjusted to a desired presentation viewing format.
- Video processing settings available to fill the display with content, or preserve the original aspect ratio.

**Advanced motion-adaptive deinterlacing for 1080i input signals**

- Optimizes presentation of 1080i source content such as television broadcasting.
- Frame conversion for 1080 interlacing and de-interlacing.

## Key Features (continued)

**Video wall processing**

- Processing for video walls in 2x2, 1x3, and 2x4 configurations.
- 10 presets available for saving and recalling video wall configurations.

**Audio de-embedding**

- De-embeds two channel LPCM audio to a balanced, analog output.

**Multi-channel audio compliant**

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

**EDID management**

- Manages EDID communications between source, switcher, and displays; allows integrators to force a source to transmit preferred video resolution and audio format.
- Ensures desired audio formats and video resolutions are provided to the AV system.

**HDCP 2.3 management**

- Automatically reports HDCP compliance status to the source based on the sink device. HDCP compliance can be disengaged through Velocity Device Manager, API, or the web GUI. Supports HDCP 2.3 down-conversion to HDCP 1.4 when images are downscaled from 4K to HD resolution.
- Allows non-protected material from PCs to pass to non-compliant displays, streaming devices, and teleconference systems; protected content is not transmitted. Displays a green splash screen as visual confirmation that protected content is being blocked from transmission to a non-compliant display.

**Intuitive GUI-based configuration using integrated web server (from the PRO5-MX810 matrix switcher)**

- Offers menu-based configuration of network settings, scaling and video wall settings, EDID and HDCP management, audio settings, and more.
- Allows fast configuration of internal product settings and troubleshooting from a mobile device or PC in the field.

**TCP/IP control**

- Flexible control options for compatibility with the Atlona Velocity™ control system, as well as other third-party control systems. Receiver can be controlled and managed from the PRO5-MX810 matrix switcher, or locally (when Ethernet pass-through is disengaged).
- Reduces integration time and costs.

**Easy to configure and manage with Velocity Device Manager**

- Centralized, network-based configuration and management of Atlona IP-controllable products and systems. Receiver can be managed from the PRO5-MX810 matrix switcher, or locally (when Ethernet pass-through is disengaged).
- Manage configuration and firmware updates for AV devices spanning a facility, building, organization, or enterprise. Available as a part of Velocity control systems or as a free virtual machine software download.

## Key Features (continued)

**Field-updatable firmware**

- Device can be updated in the field via the web GUI or Velocity Device Manager from the PRO5-MX810.

**Front panel power and signal status LEDs**

- LED indicators provide power, device and video signal status, and SDVoE extension link status information.
- Provides local, convenient setup and troubleshooting when network access is not available.

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

- Easy installation into confined spaces behind displays and above projectors.

**Included accessories**

- Surface mounting hardware and external universal power supply.

## Specifications

| Video | | |
|---|---|---|
| Signal | Input – SDVoE (RJ45, SFP+)<br>Output – HDMI | |
| Copy Protection | HDCP 1.4 / 2.2 / 2.3 | |
| Pixel Clock | 600 MHz | |
| UHD/HD/SD | 4096x2160 @ 60/50/30/25/24 Hz<br>3840×2160 @ 60/50/30/25/24 Hz<br>1920x1080p @ 60/59.9/50/30/29.97/25/24/23.98 Hz<br>1920x1080i @ 30/29.97/25 Hz<br>1280x720p @ 60/59.94/50 Hz | 720x576p @ 50 Hz<br>720x576i @ 25 Hz<br>640x480p @ 60/59.96 Hz<br>640x480i @ 30 Hz |
| VESA | 2560×1600<br>2048×1536<br>1920×1200<br>1680×1050<br>1600×1200<br>1440×900<br>1400×1050<br>1366×768 | 1360×768<br>1280×1024<br>1280×800<br>1152×864<br>1024×768<br>800×600<br>640×480 |
| Scaler (HDMI Output) | IN | OUT |
| | 4K@24 Hz<br>4K@30 Hz<br>4K@60 Hz | 1080p@24 Hz<br>1080p@30 Hz<br>1080p@60 Hz |
| Scaler Pass-Through (HDMI Output) | 4K @ 60 Hz | 4K @ 60 Hz |
| Color Space | YUV, RGB | |
| Chroma Subsampling | 4:4:4, 4:2:2, 4:2:0 | |
| Color Depth | 8-bit, 10-bit, 12-bit | |
| HDR[3] | HDR10, Hybrid-Log Gamma (HLG), and Dolby® Vision™ @ up to 60 Hz | |

| Audio | | | |
|---|---|---|---|
| HDMI Pass-Through Formats | LPCM 2.0<br>LPCM 5.1<br>LPCM 7.1 | Dolby® Digital<br>Dolby Digital Plus™<br>Dolby TrueHD<br>Dolby Atmos® | DTS® Digital Surround™<br>DTS-HD Master Audio™<br>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 | | |
| Type | Balanced Audio | | |

| Ethernet | |
|---|---|
| Port | 1 x RJ45 |
| Speeds | 10/100/1000 Mbps |
| Addressing | DHCP, Static, APIPA |

| RS-232 | |
|---|---|
| Port | 1 x 3-pin captive screw, TX, RX, GND |
| Use | Pass-through from AT-PRO5-MX810 |
| Baud Rates | 2400, 4800, 9600, 19200, 38400, 57600, 115200 |
| Data Flow | Bidirectional |

| CEC | |
|---|---|
| Ports | 1 x HDMI OUT, Type A, 19-pin female |
| Triggering | IP, RS-232, and built-in web server |

| Resolution / Distance | 4K/UHD - Feet / Meters | | 1080p - Feet / Meters | |
|---|---|---|---|---|
| HDMI IN/OUT | 15 | 5 | 30 | 10 |
| CAT6a/7 | 330 | 100 | 330 | 100 |
| **Resolution / Distance** | **4K/UHD - Miles / Kilometers** | | **1080p - Miles / Kilometers** | |
| SFP+ | 6.2 | 10 | 6.2 | 10 |

| Buttons and Indicators | |
|---|---|
| **Buttons**:<br>RESET | 1 x momentary, recessed |
| **Indicators**:<br>PWR, STATUS, VIDEO, LINK, RJ45, SFP+ | 6 x LED, green |
| DIP switches | 1 x 4 DIP, 2-pole, piano |

| Connectors | |
|---|---|
| OUTPUT | 1 x HDMI, Type A, 19-pin female |
| INPUT | 1 x RJ45<br>1 x SFP+ cage, female |
| RS-232 | 1 x 3-pin captive screw |
| LAN | 1 x RJ45, 1000Base-T |
| AUDIO OUT | 1 x 5-pin captive screw, balanced / unbalanced, 2-channel |
| IR IN / IR OUT | 1 x 5-pin captive screw |
| 48V / 0.83A | 1 x 2-pin captive screw |

| 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 | |
| Maximum Operating Altitude | 2000 meters | |

| Power | |
|---|---|
| Consumption (idle) | 8.2 W |
| Consumption (maximum) | 10.14 W |
| Consumption (operating) | 10.14 W |
| BTU/h (idle) | 27.96 |
| BTU/h (maximum) | 34.58 |
| BTU/h (operating) | 34.58 |
| External Power Supply (optional) | AT-PS-48083-C |

| Dimensions (H x W x D) | Inches | Millimeters |
|---|---|---|
| Unit (1U) | 0.98 x 8.46 x 5.51 | 25 x 215 x 140 |
| Power Supply | 1.38 x 4.45 x 1.93 | 35 x 113 x 49 |

| Weight | Pounds | Kilograms |
|---|---|---|
| Device | 2.76 | 1.23 |

| Certification | | |
|---|---|---|
| Device | CE, FCC, RoHS | |
| Power Supply | CE, FCC, RoHS, CCC, CB | |

| Compliance | | |
|---|---|---|
| NDAA-889 | Yes | |
| TAA | No | |

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

## Footnotes

(1) Signals can be transported over copper or fiber, but not both simultaneously.
(2) Fiber optic module for SFP+ cage is a separate purchase.
(3) Local powering will be required when SFP+ is used to extend AV signals over fiber.

## Certified Compatible SFP+ Receivers

| Manufacturer | Product |
|---|---|
| Atlona | AT-SFP-PLUS-10GE-SR |
| FS | FS SFP+ 10GB 850nm LC |
| Ubiquiti | UACC-OM-MM-10G-D-2 |
| Proline | EW3D0000710-PRO |
| StarTech | 455883B21ST |

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