



## Introduction

The Atлона AT-UHD-PRO3-88M is a dual-distance 8x8 HDMI to HDBaseT™ matrix switcher for 4K/UHD @ 60Hz video signals with Power over Ethernet for receivers and analog audio breakout. The matrix provides flexible HDBaseT routing with both extended distance, 328 foot (100 meter) and long distance, 230 foot (70 meter) transmission over category cable with bidirectional extension of both RS-232 and IR Control. Two HDMI outputs are provided as mirrored outputs designed for routing HDMI-based audio to an AVR or as additional matrix outputs. The matrix switcher is HDCP 2.2 compliant and supports EDID communication. The matrix is control system-friendly and integrates with any TCP/IP, RS-232, or IR based control signals. Designed for multi-zone residential or commercial distribution applications, the AT-UHD-PRO3-88M features a 2U, rack-mountable enclosure with internal, international power supply.

The matrix switcher features advanced capabilities for AV signal distribution and a host of integrator-friendly features. The switcher supports 4K/UHD @ 60 Hz, 4:2:0, 8-bit video signals; offers 3D pass-through and meets HDCP 2.2 copy protection standards. Remote power for compatible Atлона UHD-EX Series HDBaseT receivers is provided using industry standard IEEE 802.3af PoE supplied by the switcher over HDBaseT links. Professional audio capabilities include analog audio de-embedding with volume, mute, and 5-band EQ for the first six output zones on line level, captive screw connectors. The matrix supports digital audio signals up to 192 kHz/24-bits. Flexible control capability is provided by the supplied IR remote, front panel control, GUI-based integrated web server as well as compatibility with TCP/IP, RS-232, or IR based control system.

## Key Features

### **Eight HDBaseT outputs with dual-distance transmission of A/V, control and power signals over a single category cable**

- Four extended distance, 328 foot (100 meter) outputs and three long distance, 230 foot (70 meter) outputs offer bidirectional extension of both RS-232 and IR control plus remote power.
- Ensures distance and value requirements are addressed to meet the needs of the installation and budget.

### **Two HDMI outputs with independently selectable mirror and matrix modes**

- Switchable HDMI output can mirror any HDBaseT output for routing HDMI-based audio signals to an AVR; in matrix mode, the HDMI output can become an additional matrix output.
- Provides output flexibility to facilitate a variety of output needs and destinations.

### **4K/UHD capability with HDCP 2.2 copy protection**

- Compatible with ultra-high definition PCs and other sources and displays and adheres to latest content protection specification.
- Future proofs AV systems in preparation for technology improvements, 4K/UHD streaming services and playback devices.

### **Power over Ethernet for remote-powered receivers**

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

### **Audio de-embedding**

- Stereo, line level audio breakout with volume, mute, and 5-band EQ on captive screw connectors for three output zones.
- Provides audio signal routing to sound system.

### **TCP/IP, RS-232, and IR control**

- Flexible control options compatible with all 3rd-party control systems .
- Reduces integration time and costs.

## Specifications

| Video              |  |  |
|--------------------|--|--|
| Signal Type        | Input - HDMI<br>Output - HDBaseT, HDMI   |  |
| HDCP               | HDCP 2.2   |  |
| Pixel Clock        | 300MHz   |  |
| UHD/HD/SD          | 4096x2160@60 <sup>(1)</sup> /50 <sup>(1)</sup> /30/25/24Hz<br>3840x2160@60 <sup>(1)</sup> /50 <sup>(1)</sup> /30/25/24Hz<br>1080p@60/59.9/50/30/29.97/25/<br>24/23.98Hz<br>1080i@30/29.97/25Hz | 720p@60/59.94/50Hz<br>576p@50Hz<br>576i@25Hz<br>480p@60/59.96Hz<br>480i@30Hz   |
| VESA               | 2560x1600<br>2048x1536<br>1920x1200<br>1680x1050<br>1600x1200<br>1440x900<br>1400x1050<br>1280x1024  | 1280x800<br>1366x768<br>1360x768<br>1152x864<br>1024x768<br>800x600<br>640x480 |
| 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<br>Pass-Through Formats | PCM 2.0<br>LPCM 5.1<br>LPCM 7.1                                | Dolby® Digital<br>Dolby Digital Plus™<br>Dolby TrueHD | DTS® Digital Surround™<br>DTS-HD Master Audio™ |
| Bit Depth                              | Up to 24 bits  |   |  |
| <b>Analog Audio</b>                    |  |   |  |
| Format                                 | Stereo 2-Channel   |   |  |
| Sample Rate                            | 32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz |   |  |

| Ethernet                |   |
|-------------------------|---|
| Port                    | 1 x RJ45  |
| Standards and Protocols | HTTPS, Telnet, mDNS   |
| Speeds                  | 10/100 Mbps   |
| Addressing              | DHCP, Static – selectable through rear panel, IP & RS-232 commands, and built-in web server |

| RS-232     |   |
|------------|---|
| Port       | 1 x 5-pin captive screw; TX, RX, GND                        |
| Use        | Device control and configuration                            |
| Baud Rates | 2400, 4800, 9600, 19200, 38400, 57600, 115200               |
| Data flow  | Bidirectional pass-through from control system over HDBaseT |

| IR              |  |
|-----------------|--|
| Port            | 6 x 4-pin captive screw, 1 x 5-pin captive screw; S, GND |
| Use             | Local input/output and zone control                      |
| Frequency Range | 30 kHz to 60 kHz   |

| CEC        |   |
|------------|---|
| Port       | HDMI, Type A, 19-pin female                 |
| Triggering | Through IP, RS-232, and built-in web server |

| Resolution / Distance | 4K/UHD - Feet / Meters |     | 1080p - Feet / Meters |     |
|-----------------------|------------------------|-----|-----------------------|-----|
| HDMI IN/OUT           | 15                     | 5   | 30                    | 10  |
| CAT5e/6 (Port 1-4)    | 230                    | 70  | 100                   | 330 |
| CAT5e/6 (Port 5-7, 9) | 115                    | 35  | 60                    | 197 |
| CAT6a/7 (Port 1-4)    | 100                    | 330 | 100                   | 330 |
| CAT6a/7 (Port 5-7, 9) | 70                     | 230 | 70                    | 230 |

| Buttons and Indicators             |                           |
|------------------------------------|---------------------------|
| <b>Buttons:</b><br>Menu and Number | 14 - momentary, tact-type |
| <b>Indicators:</b><br>Power        | 1 - LED, blue             |

| Connectors  |  |
|-------------|--|
| HDMI IN     | 8 - Type A, 19-pin female                                |
| HDBaseT OUT | 8 - RJ45, female   |
| HDMI OUT    | 2 - Type A, 19-pin female                                |
| FW          | 1 - Micro-A USB  |
| RS-232      | 1 - 3-pin captive screw (bidirectional)                  |
| IR IN       | 9 - 2-pin captive screw (bidirectional)                  |
| IR OUT      | 8 - 2-pin captive screw (bidirectional)                  |
| AUDIO OUT   | 6 - 4-pin captive screw, balanced / unbalanced 2-channel |
| RS-232      | 1 - 3-pin captive screw (bidirectional)                  |
| LAN         | 1 - RJ45, 100Base-T                                      |
| PWR         | 1 - Internal 100-240 VAC 50/60Hz, IEC female connector   |

| 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 | <b>Idle:</b> 100W<br><b>Full load:</b> 150W |
| Supply      | AC100 - 240 VAC, 50/60 Hz                   |

| Dimensions            | Inches               | Millimeters             |
|-----------------------|----------------------|-------------------------|
| H x W x D w/feet      | 3.90 x 17.31 x 11.88 | 99.02 x 439.74 x 301.63 |
| H x W x D w/rack ears | 3.49 x 19.00 x 11.88 | 88.63 x 482.60 x 301.63 |
| Rack Unit             | 1U                   |                         |

| Weight | Pounds | Kilograms |
|--------|--------|-----------|
| Device | 11.40  | 5.18      |

| Certification |                         |
|---------------|-------------------------|
| Device        | CE, FCC, RoHS, RCM, TUV |

## Accessories

| SKU                | Description   |
|--------------------|---|
| AT-LC-H2H-1M       | LinkConnect HDMI to HDMI 1 Meter Cable                                  |
| AT-LC-H2H-2M       | LinkConnect HDMI to HDMI 2 Meter Cable                                  |
| AT-LC-H2H-3M       | LinkConnect HDMI to HDMI 3 Meter Cable                                  |
| AT-UHD-EX-100CE-RX | 4K/UHD HDMI Over 100 M HDBaseT Receiver with Ethernet, Control, and PoE |
| AT-UHD-EX-70C-RX   | 4K/UHD HDMI Over HDBaseT Receiver with Control and PoE                  |

## Footnotes

(1) 4K/UHD @ 50/60Hz only supports 4:2:0 over HDBaseT.

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