

## User Manual

### AC-FRESCO-DA116

A full 4K60 4:4:4 (Up to 18GBPS)

Distribution Amplifier with advanced EDID management



## Introduction

The AC-FRESCO-DA116 is a part of the first true 18Gbps Distribution Amplifier Family. This is an ideal product on all applications where stable distribution is key. This distribution amplifier can be cascaded for extended distances and additional outputs.

Full 18Gbps and HDR support ensures military grade stability even at the highest of bandwidths. Install the distribution amplifier with confidence in your next bar, restaurant, digital signage, commercial or residential install and see the difference.

Key benefits of using AC-FRESCO-DA116:

- 1) **18Gbps Support (4K60 4:4:4):** This Distribution Amplifier offers the highest available bandwidth to ensure maximum stability in distributed HDMI systems, even at higher resolutions. With the added bandwidth you can comfortably use all of the latest 4K sources without worrying about headroom. With these DA's you are already prepared for all 4K formats and future 8K formats.
- 2) **Cascading:** The AC-FRESCO-DA116 was designed for cascading. There will be no trouble in cascading this unit for several "hops". There is even a built in "cascade mode" that can be enabled for plug and play compatibility.
- 3) **Full HDR Support:** One often overlooked feature to include is the ability to maintain the integrity of HDR. We are 100% compatible with HDR and will repeat the signal in its full integrity.
- 4) **EDID Management:** Advanced EDID management is on board so you can select from 16 different setting, including Cascade Mode, auto and "from display". All of this enhances your ability to get the right signal throughout the system and ensures communication with any 3rd party device. The AC-FRESCO-DA116 has dual rotary EDID controls for 144 EDID combinations.
- 5) **Ultra Low-Profile Design:** The minimalist design makes the device even more versatile. Designed to fit in any nook or cranny, you don't need to worry about finding space for the DA allowing you to focus on other elements of the job.

# Contents

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Introduction,, .....2

Product Overview .....4

Features .....4

Package Contents.....6

Connections and Operations .....6

Specifications .....7

Panel Descriptions .....8

EDID Settings.....9-10

RS232Commands.....11

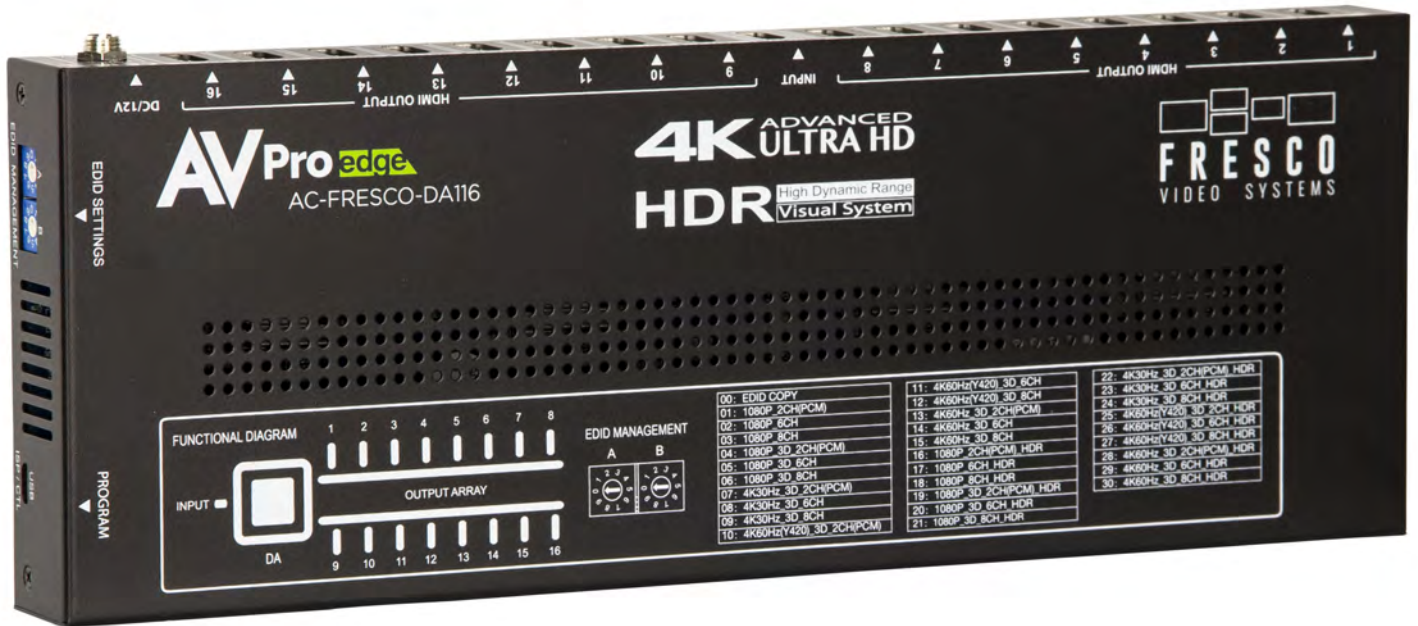
Maintenance.....12

Support / Warranty.....13

Troubleshooting.....14

# Full 4K 60 (4:4:4) HDMI Splitter & Distribution Amplifier

## ■ Product Overview ( Model Number: AC-FRESCO-DA116)





## ■ Features



- Easy to Use: Install in seconds, no need for setting.
- Distribution: One HDMI input, four identical HDMI outputs.
- Supports up to 18GBPS with resolutions of 4K60(YUV444), 4K30, 1080p, 1080i, 720p and other standard Video formats, PAL and NTSC.
- Customer can configure EDID function to enable the best compatibility.
- Supports HDCP2.2
- HDMI 2.0(a) w/ HDR.
- Mounting ears are included for easy fixation on wall, furniture or ceiling.



**Notice** AVProEdge reserves the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.


 **Warning**

**To reduce the risk of fire, electric shock or product damage:**

	<p><b>1.</b> Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.</p>		<p><b>6.</b> Clean this apparatus only with dry cloth.</p>
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	<p><b>2.</b> Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.</p>		<p><b>7.</b> Unplug this apparatus during lightning storms or when unused for long periods of time.</p>
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	<p><b>3.</b> To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.</p>		<p><b>8.</b> Protect the power cord from being walked on or pinched particularly at plugs.</p>
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	<p><b>4.</b> Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.</p>		<p><b>9.</b> Only use attachments / accessories specified by the manufacturer.</p>
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## ■ Package Contents

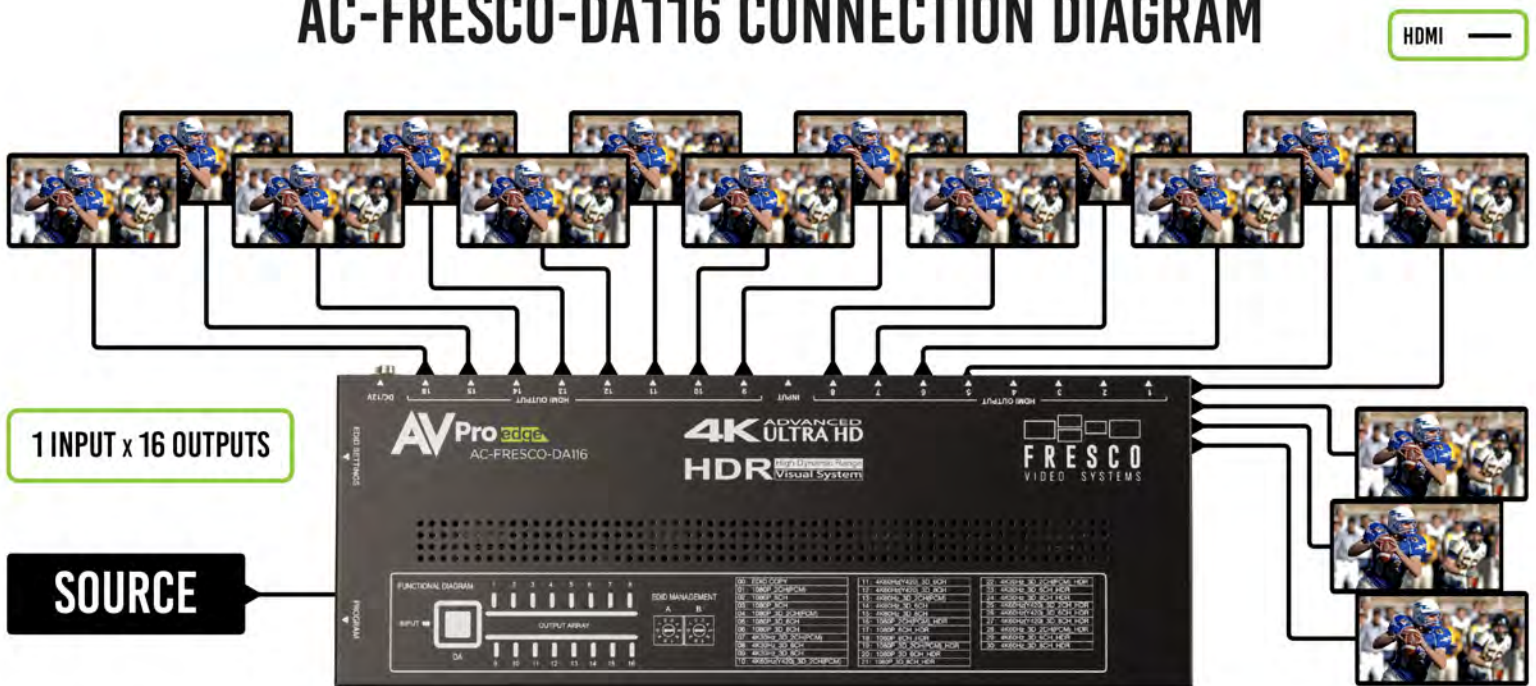
- ① Main unit. P/N: AC-FRESCO-DA116
- ② 12VDC 5A Power Supply.
- ③ Mounting Ears

## ■ Connections and Operations

- 1) Connect the HDMI input source into AC-FRESCO-DA116
- 2) Connect the HDMI output equipment (Displays) into AC-FRESCO-DA116
- 3) Insert the DC side of 12V power supply into AC-FRESCO-DA116 and then connect the AC side of the Power supply into the wall outlet.
- 4) Plugging in the unit automatically powers up the device.

■ **NOTE:** Insert / Extract cables gently.

## AC-FRESCO-DA116 CONNECTION DIAGRAM



## ■ Specifications

<b>VIDEO:</b>	
VIDEO RESOLUTIONS	UP TO 4K 60HZ 4:4:4
VESA RESOLUTIONS	UP TO DCI 4K (4096X2160) 5K (UP TO 5120X3200)
HDR FORMATS/RESOLUTIONS	420, 422, 444 (10 AND 12 DEEP COLOR) HDR10, HDR10+, DOLBY VISION, HLG
COLOR SPACE	YUV (COMPONENT), RGB (CSC: REC. 601, REC. 709, BT2020, DCI, P3 D6500)
CHROMA SUBSAMPLING	4:4:4, 4:2:2, 4:2:0 SUPPORTED
DEEP COLOR	UP TO 16 BIT (1080P) UP TO 12 BIT (4K)
<b>AUDIO:</b>	
AUDIO FORMATS SUPPORTED HDMI	PCM 2.0 CH, LPCM 5.1 & 7.1, DOLBY DIGITAL, DTS 5.1, DOLBY DIGITAL PLUS, DOLBY TRUEHD, DTS-HD MASTER AUDIO, DTS-X, DOLBY ATMOS
<b>DISTANCE:</b>	
HDMI IN/OUT (4K60 4:4:4)	UP TO 50 FEET (USING BULLET TRAIN HDMI)
HDMI IN/OUT (W/ AOC CABLE) (4K60 4:4:4)	UP TO 130 FEET (USING BULLET TRAIN AOC)
<b>OTHER:</b>	
BANDWIDTH	18 GBPS
HDCP	HDCP 2.2 AND EARLIER
<b>PORTS:</b>	
HDMI	TYPE A
FIRMWARE	MICRO USB
<b>ENVIRONMENTAL:</b>	
OPERATING TEMPRATURE	23 TO 125°F (-5 TO 51°C)
STORAGE TEMPERATURE	-4 TO 140°F (-20 TO 60°C)
HUMIDITY RANGE	5-90% RH (NO CONDENSATION)
<b>POWER:</b>	
POWER CONSUMPTION (TOTAL)	30 WATTS MAX
POWER SUPPLY	INPUT: AC 100-240V ~ 50/60HZ OUTPUT: DC 12V 5A
<b>DIMENSIONS:</b>	
DIMENSIONS (UNIT ONLY LENGTH/WIDTH/HEIGHT)	MM: 109 X 298 X 30 INCH: 4.29 X 11.75 X 1.18
DIMENSIONS (PACKAGED LENGTH/WIDTH/HEIGHT) (KIT)	MM: 305 X 178 X 77 INCH: 12 X 7 X 3
WEIGHT (UNIT)	2 LBS (0.9 KG)
WEIGHT (PACKAGED)	3.2 LBS (1.45 KG)
<b>*SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE. MASS &amp; DIMENSIONS ARE APPROXIMATE</b>	

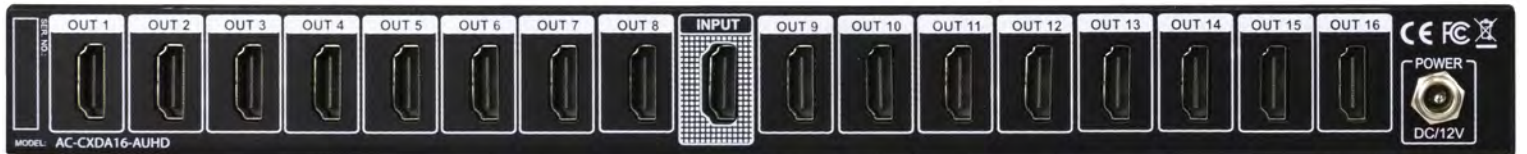
## Front Panel

- HDMI Input Port Activity Light (x1)
- HDMI Output Port Activity Light (x16)



## Back Panel

- Power input
- HDMI input (x1)
- HDMI outputs (x16)



## Device Top Cover



Device cover is labeled for Rotary Dials (EDID SETTINGS) and ISP mini USB port (PROGRAM) and for easy HDMI port recognition especially useful when Mounting Ears are used for fixation.

**NOTE:** Rotary Dial EDID setting index on next page.



## EDIDSettings:

The AC-FRESCO-DA116 uses a dual rotary style switch to house more EDID's and allow for future expansion. The dual rotary switches can be located on the side of the device, and each rotary is representative of a number in the desired setting, (Left Rotary=DIGIT ONE, Right Rotary=DIGIT TWO). The default mode is "00" which is both rotary switches pointed to "0", in this mode the device copies the EDID from the sink (display) plugged into OUTPUT 1. Custom EDID settings are below.



### EDID ROTARY Settings:

- |                              |                                  |
|------------------------------|----------------------------------|
| 00: EDID COPY (See NOTE 1)   | 16: 1080P_2CH(PCM)_HDR           |
| 01: 1080P_2CH(PCM)           | 17: 1080P_6CH_HDR                |
| 02: 1080P_6CH                | 18: 1080P_8CH_HDR                |
| 03: 1080P_8CH                | 19: 1080P_3D_2CH(PCM)_HDR        |
| 04: 1080P_3D_2CH(PCM)        | 20: 1080P_3D_6CH_HDR             |
| 05: 1080P_3D_6CH             | 21: 1080P_3D_8CH_HDR             |
| 06: 1080P_3D_8CH             | 22: 4K30Hz_3D_2CH(PCM)_HDR       |
| 07: 4K30Hz_3D_2CH(PCM)       | 23: 4K30Hz_3D_6CH_HDR            |
| 08: 4K30Hz_3D_6CH            | 24: 4K30Hz_3D_8CH_HDR            |
| 09: 4K30Hz_3D_8CH            | 25: 4K60Hz(Y420)_3D_2CH(PCM)_HDR |
| 10: 4K60Hz(Y420)_3D_2CH(PCM) | 26: 4K60Hz(Y420)_3D_6CH_HDR      |
| 11: 4K60Hz(Y420)_3D_6CH      | 27: 4K60Hz(Y420)_3D_8CH_HDR      |
| 12: 4K60Hz(Y420)_3D_8CH      | 28: 4K60Hz_3D_2CH(PCM)_HDR       |
| 13: 4K60Hz_3D_2CH(PCM)       | 29: 4K60Hz_3D_6CH_HDR            |
| 14: 4K60Hz_3D_6CH            | 30: 4K60Hz_3D_8CH_HDR            |
| 15: 4K60Hz_3D_8CH            |                                  |

## EDID Setting Cont.

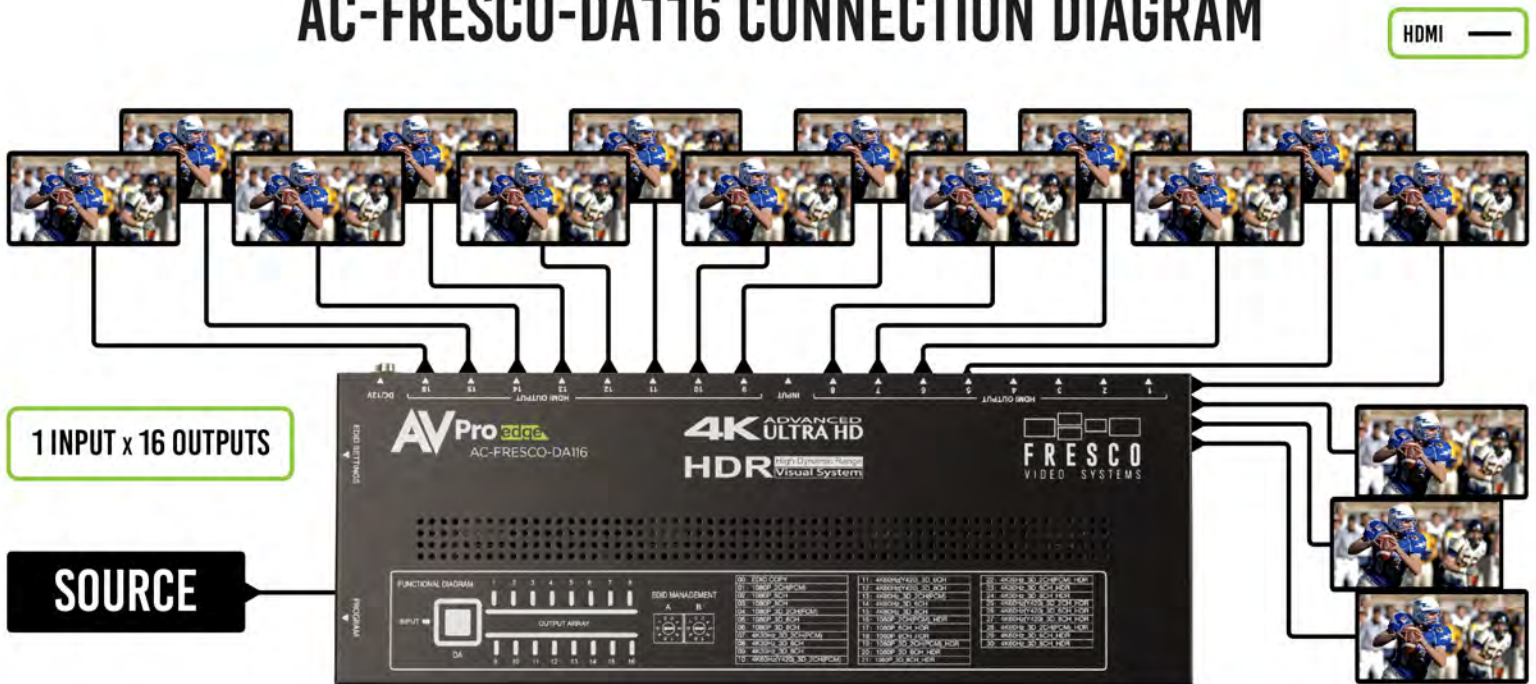
When Changing EDIDs, please follow the steps below

1. Start with power off
2. Set Rotary dials to desired positions
3. Power on the unit
4. Power on the source device and connect the HDMI input port.

**Note1:** EDID Copy mode: EDID will be copied from sink on OUTPUT 1. The AC-FRESCO-DA116 is set this way by default for maximum “Plug & Play” Compatibility. If you change sink (Display) plugged into OUTPUT 1, please follow the steps below if you wish to use the new sink’s EDID.

1. Start with power off
2. Set Rotary dials to both 0 (Zero)
3. Power on the unit
4. Power on the source device and connect the HDMI input port.

## AC-FRESCO-DA116 CONNECTION DIAGRAM



=		=
=	System Address = 00	=
=	Azz : All Commands start by Prefix System Address zz, if [01-99]	=
=	Example : A00 GET STA	=
=		=
=	H : Help	=
=	STA : Show Global System Status	=
=	SET RST : Reset to Factory Defaults	=
=	SET RBT : System Reset to Reboot	=
=	SET ADDR xx : Set System Address to xx {xx=[00-99]}(00=Single)}	=
=	GET ADDR : Get System Address	=
=	GET STA : Get System System Status	=
=	GET INx SIG STA : Get Input x Signal Status{x=[1]}	=
=		=
=	Output Setup Commands: (Note:output number(x)=HDMI(x),x=[1-16])	=
=	SET OUTx STREAM ON/OFF : SET OUTx STREAM ON/OFF{x=[0~16]}(0=ALL)	=
=	GET OUTx EDID DATA : Get Output x EDID DATA{x=[1~16]}	=
=	GET OUTx STREAM : Get Output x Stream ON/OFF Status{x=[0~16]}(0=ALL)}	=
=		=

## ▪ Maintenance

To ensure reliable operation of this product as well as protecting the safety of any person using or handling this device while powered, please observe the following instructions.

- Use the power supplies provided. If an alternate supply is required, check voltage, polarity and that it has sufficient power to supply the device it is connected to.
- Do not operate these products outside the specified temperature and humidity range given in the above specifications.
- Ensure there is adequate ventilation to allow this product to operate efficiently.
- Repair of the equipment should only be carried out by qualified professionals as these products contain sensitive components that may be damaged by any mistreatment.
- Only use this product in a dry environment. Do not allow any liquids or harmful chemicals to come into contact with these products.
- Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzene to clean this unit.

## ▪ Damage Requiring Service

- The DC power supply cord or AC adaptor has been damaged
- Objects or liquids have gotten into the unit
- The unit has been exposed to rain
- The unit does not operate normally or exhibits a marked change in performance
- The unit has been dropped or the housing damaged

The unit should be serviced by qualified service personnel if:

## ■ Support

Should you experience any problems while using this product, first, refer to the Troubleshooting section of this manual before contacting Technical Support. When calling, the following information should be provided:

- Product name and model number
- Product serial number
- Details of the issue and any conditions under which the issue is occurring

## ■ Warranty

If your product does not work properly because of a defect in materials or workmanship, AVProEdge (referred to as “the warrantor” ) will, for the length of the period indicated as below, (Parts/Labor (10) Years), which starts with the date of original purchase ( “Limited Warranty period” ), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor. During the “Labor” Limited Warranty period there will be no charge for labor. During the “Parts” warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers product purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

This warranty extends to products purchased directly from AVPro or an authorized dealer. AVPro is not liable to honor this warranty if the product has been used in any application other than that for which it was intended, has been subjected to misuse, accidental damage, modification or improper installation procedures, unauthorized repairs or is outside of the warranty period. Please direct any questions or issues you may have to your local dealer before contacting AVPro.

## Troubleshooting

- Verify Power - Front Panel Pg.8
  - Try power-cycling the device while all cables are connected
- Verify Connections - Front Panel Pg.8
  - If the lights are not showing a connection, try Hot Plugging the cable (remove and re-insert while powered up)
- Possible EDID issue. Default out of the box is EDID Copy from downstream device (HDMI Output 1). Try one of the Canned EDIDs built in - Pg.9 and 10
- 1080p signal working but not 4k - Verify all connected devices are 4k capable.
- Still having issues, contact us
  - Support Direct +1-605-977-3477
  - All inquiries +1-605-274-6055
  - Submit a support request ticket
    - <https://support.avproedge.com/hc/en-us/requests/new>

Thank you for choosing AVProEdge!

Please contact us with any questions. We are happy to be of service!



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