



# 3G PROJECT PLANNING GUIDE

Revised 2019-04-04

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# Introduction

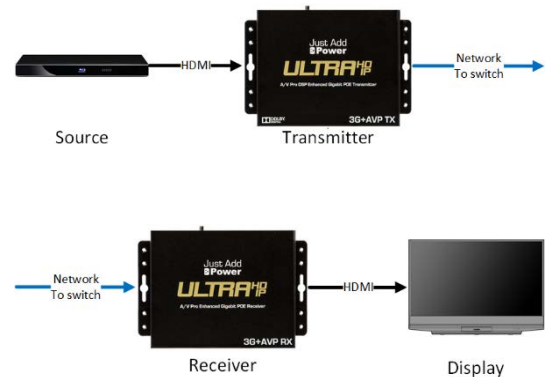
The Just Add Power HD over IP solution is an HDMI audio/video distribution system that uses the Local Area Network infrastructure. Just Add Power devices are network appliances, and conform to all networking protocols and standards for wiring and reliability. Therefore, audio and video is capable of traveling anywhere that data on the Local Area Network can travel.

The strengths of the Just Add Power HD/IP solution are in its versatility, quality, and feature-set. It is uniquely scalable for the job at hand, no matter how many sources and displays an installation may require. There is no limit of static 2x2, 4x4, 8x8 input/output ranges. 2x9? Sure! 1x13? Of course! 7x58? Easy! Content can be transmitted in UltraHD with 3G. As long as the source can be converted to HDMI or VGA the Just Add Power 3G solution can distribute it.

## How the Just Add Power Solution Works

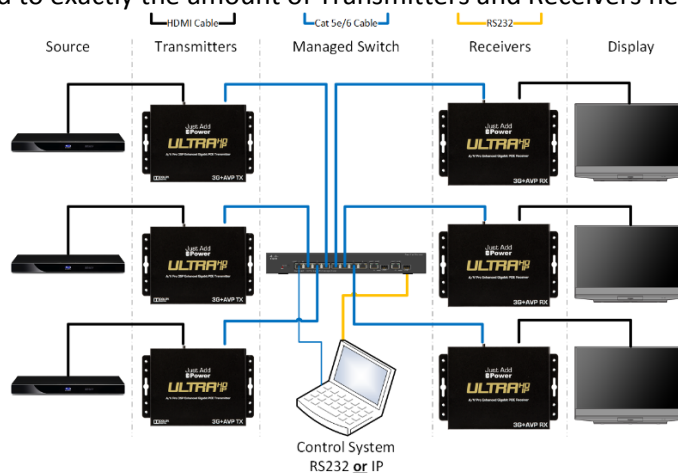
A Just Add Power system consists of two devices: an encoder and a decoder

- **Just Add Power Transmitter** – Connected to the source device via HDMI cable. The source device can be a Blu-Ray player, cable box, media server, DirecTV, or other device with an HDMI output. The Transmitter converts the HDMI signal into a network packet that is sent over Cat5e cables.
- **Just Add Power Receiver** – Connected to the display device via HDMI cable. The display device can be a TV, monitor, AV receiver, or other device with an HDMI input. The Receiver takes network packets received over Cat5e cables and converts them into an HDMI signal.



The center of a Just Add Power HDMI matrix is a managed gigabit Ethernet switch

- Think of the managed gigabit Ethernet switch as a **network-controlled matrix switcher** that just *happens* to be a network switch
- All Transmitters and Receivers connect via Ethernet cable to the managed gigabit Ethernet switch
- The switch is configured to exactly the amount of Transmitters and Receivers needed



To realize a Just Add Power 3G installation, the following pieces are needed

- 1 Receiver per display
- 1 Transmitter per source
- A managed gigabit Ethernet switch with **Jumbo Frame** support
- A Control System to manage HDMI switching

## HDMI 2.0 & HDCP 2.2

### HDMI 2.0 supported

- Input resolutions up to 4096x2160p @ 60Hz
- UltraHD resolutions not supported on 2GΩ/3G models







### HDCP 2.2 supported

- Watch 4K sources in native resolution with the latest copy-protection standard
- Watch 4K sources in 1080p on HDCP 1.x devices
  - 2GΩ/3G devices cannot scale 4K sources to 1080p
- Watch 1080p sources in 4K with built-in scaler on 3G Receivers
- HDCP 2.2 not supported on 2GΩ/3G models




























# Product Listing

## Receiver – Display Side

3G – 4K



Model	PoE	Description	Image
508POE		Gigabit POE Receiver	
509POE		Daisy-Chain Gigabit POE Receiver	
518AVP		A/V Pro Enhanced Gigabit POE Receiver	

## 3G Receiver Comparison

Feature	3G (508POE)	3G Daisy-Chain (509POE)	3G+AVP (518AVP)
4K & lower 0020 resolution support			
Instant-Seamless Switching			
Image Play – Push, Pull, Pop			
Integrated Video Scaler			
Video Wall with Rotation			
All audio including Dolby Atmos			
RS232, CEC, & IR* control			
On Screen Display API			
POE Out Gigabit Ethernet			
Stereo audio extraction with up to 170ms of audio delay			
USB over IP			

\*IR control requires use of the IRD – IR Dongle

## 2GΩ/3G - 1080p

Model	PoE	Description	Image
505POE	✓	1080p Gigabit POE Receiver (maximum input 1080p)	
515POE	✓	1080p Enhanced Gigabit POE Receiver (maximum input 1080p)	

## 2GΩ/3G Receiver Comparison











Feature	2GΩ/3G (505POE)	2GΩ/3G (515POE)
1080p & lower resolution support	✓	✓
Instant-Seamless Switching	✓	✓
Image Play – Push, Pull, Pop	✓	✓
Integrated Video Scaler	✓	✓
Video Wall with Rotation	✓	✓
All audio including Dolby Atmos	✓	✓
Stereo audio extraction with up to 170ms of audio delay		✓
RS232, CEC, & IR* control	✓	✓
On Screen Display API	✓	✓
USB over IP		✓

\*IR control requires use of the IRD – IR Dongle



## Transmitter – Source Side

### 3G – 4K

Model	PoE	Inputs	Description	Image
707POE	✓	1	High Fidelity Gigabit POE Transmitter	
709P2P		1	High Fidelity Point-to-Point Gigabit Transmitter	
717HIFI	✓	1	High Fidelity Enhanced Gigabit POE Transmitter	
718AVP	✓	1	A/V Pro DSP Enhanced Gigabit POE Transmitter	
717WP2	✓	1	2-gang Wallplate Gigabit POE Transmitter	
718WP4	✓	1	4-gang Wallplate Gigabit POE Transmitter	
747POE	✓	4	High Fidelity Rackmount POE Transmitter	
749AVP		3	A/V Pro DSP Enhanced Rackmount Transmitter	
759A		1	Tiling Transmitter Four videos on one screen	
767DSS	✓	1	Dante Sound System Gigabit POE Transmitter	

## 3G Transmitter Comparison

Feature	3G (707POE)	3G P2P (709P2P)	3G+AVP (718AVP)	3G+DSS (767DSS)
4K @ 60Hz resolution support	✓	✓	✓	✓
Instant-Seamless Switching	✓	✓	✓	✓
Image Pull – Video Preview	✓	✓	✓	✓
HDMI pass-through	(717HIFI)			✓
All audio including Dolby Atmos	✓	✓		
LPCM up to 8 channels	✓	✓		✓
5.1 Dolby Digital transformation to stereo			✓	
Mic-/Line-in ports			✓	
Stereo audio extraction with up to 170ms of audio delay			✓	
RS232, CEC, & IR* control	✓	✓	✓	✓
USB over IP			✓	
Dante & AES67				✓
40-watt POE Injector		✓		
Wallplate Option	(717WP2)		(718WP4)	
Rackmount Option	(747POE)		(749AVP)	

\*IR control requires use of the IRD – IR Dongle

## 2GΩ/3G – 1080p

Model	PoE	Inputs	Description	Image
705POE		1	Gigabit POE Transmitter	
715POE		1	Enhanced Gigabit POE Transmitter	
716VGA		1	VGA Gigabit POE Transmitter	
725POE		1	SDI Enhanced Gigabit POE Transmitter	
726TVI		1	TVI Enhanced Gigabit POE Transmitter	

## 2GΩ/3G Transmitter Comparison

Feature	2GΩ/3G (705POE)	2GΩ/3G+ (715POE)	VGA (716VGA)	SDI (725POE)	TVI (726TVI)
1080p & lower resolution support					
Instant-Seamless Switching					
Image Pull – Video Preview					
Input Format	HDMI	HDMI	VGA	SDI	TVI
HDMI pass-through					
All audio including Dolby Atmos					
Mic-/Line-in ports					
Stereo audio extraction with up to 170ms of audio delay					
RS232 & IR* control					
CEC over IP					
USB over IP					

\*IR control requires use of the IRD – IR Dongle

## Accessories

<h1>Accessories</h1>		
Model	Description	Image
<b>IRD</b>	<p>Convert the RS232 port into an IR blaster</p> <p>Compatible with 2G, 2GQ/3G &amp; 3G</p>	<p>The diagram illustrates the IRD accessory. On the left is a black rectangular device labeled 'Just Add Power ULTRA HP 3G+AVP RX'. A cable labeled 'RS232' connects it to a smaller black device on the right. This second device has a '5V USB Micro' port at the top and an 'IR Blaster' port at the bottom. An arrow points from the IR Blaster port to the right.</p>
<b>RS1U</b>	<p>Metal rack shelf fits up to 13 units</p> <p>Compatible with 2G, 2GQ/3G &amp; 3G</p>	<p>The image shows a black metal rack shelf. It has a long, narrow profile with a series of vertical slots along its length. The top edge of the shelf is angled upwards. The 'Just Add Power' logo and the model number '10M04S PPOV 3511' are printed on the top surface of the shelf. The shelf is shown from a perspective view, highlighting its depth and the spacing between the slots.</p>

## Ordering Information

Contact Just Add Power Worldwide to find a distributor

### Website

[www.justaddpower.com](http://www.justaddpower.com)

### Email

[sales@justaddpower.com](mailto:sales@justaddpower.com)

### Phone

**Toll Free:** +1-888-390-1750  
+1-800-615-0206 ext 1

**Main Office:** +1-727-517-4053 ext 1

**Fax:** +1-727-517-4054

# MorePlay™ Feature-Set

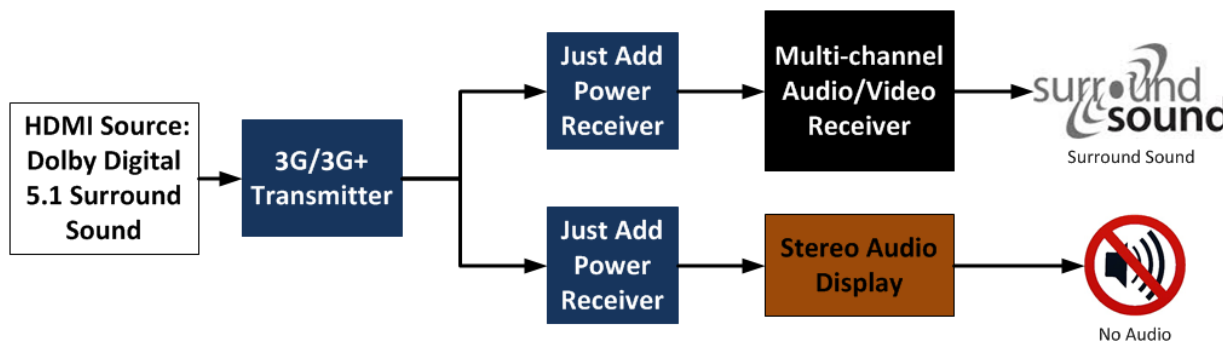
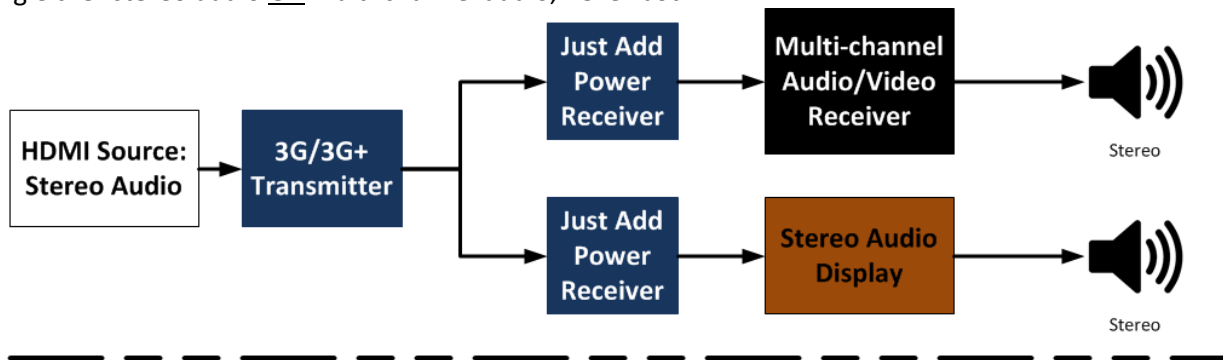
The Just Add Power 3G HDMI over IP system supports all these features on one CatX cable:

- Lossless 2160p UltraHD HDMI 2.0 with HDCP 2.2 supported
  - Instant-Seamless switching between any resolution HDMI source (2160, 1080, 720, 480, interlaced, progressive)
  - Mix/match legacy HD monitors with new UltraHD monitors – watch everything, everywhere
  - Improved Interlaced video format support – now lossless
  - Ultra low latency – better for live video end user experience vs AVB
- Seamless HDR support
- EDID Magic™ – take full control of EDID-management
- All audio formats supported – including lossless and Dolby ATMOS
  - Dolby Digital Sound Processor – capable of converting Dolby Digital 5.1 audio to Dolby Pro Logic II for stereo distribution
  - Line- and Mic-In ports on Transmitter – mixable with HDMI audio signal
  - Stereo Audio extractor with amplifier, ground loop isolator, and adjustable Audio Delay
- Enhanced Video Wall
  - Up to 16 rows and 16 columns
  - Rotate picture for portrait and flipped displays
- Endpoint Control
  - 2-way RS232 control
  - Built-in RS232 Null Modem
  - CEC control
  - IR control\*
- USB 2.0
- MorePlay
  - Image Push – upload a background image so you never have a black screen
  - Image Pull – capture a video screenshot on any network-accessible device
  - Image Pop – overlay a full color image/logo on top of the HDMI signal with alpha channel transparency
  - On-Screen Display
  - Gigabit Internet
- All 3D formats
- PoE preferred, but now safe to use with most DC power supplies – DC 4.7~23V
- Locking HDMI cables

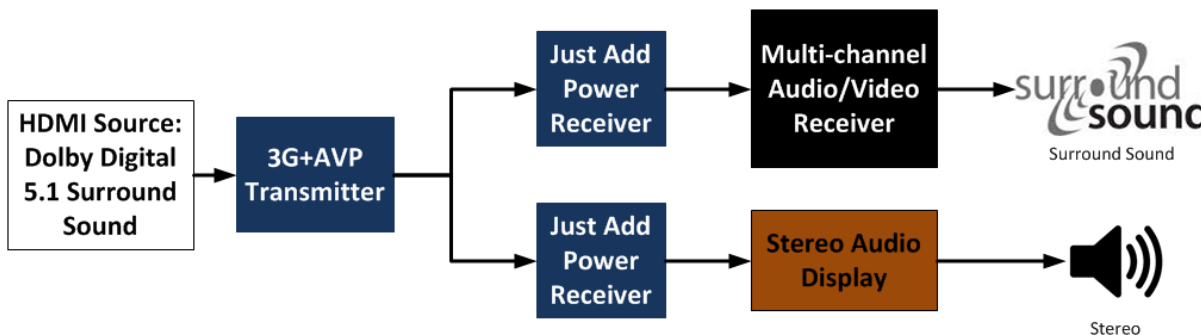
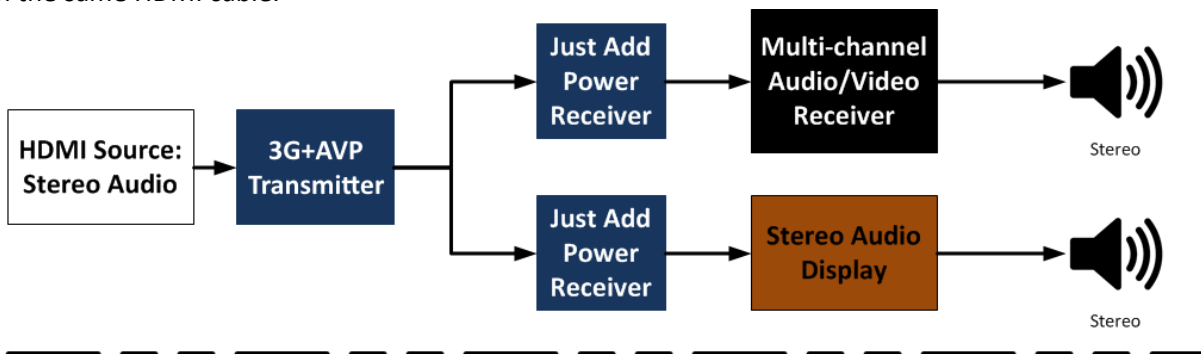
All Just Add Power 3G and 2GΩ/3G models are compatible with each other; mix-and-match in any combination!

# 3G+AVP Dolby Digital Sound Processor

HDMI is only capable of carrying **one** audio format at a time. In a distributed system, this means that each source is outputting either stereo audio **OR** multi-channel audio, never both.

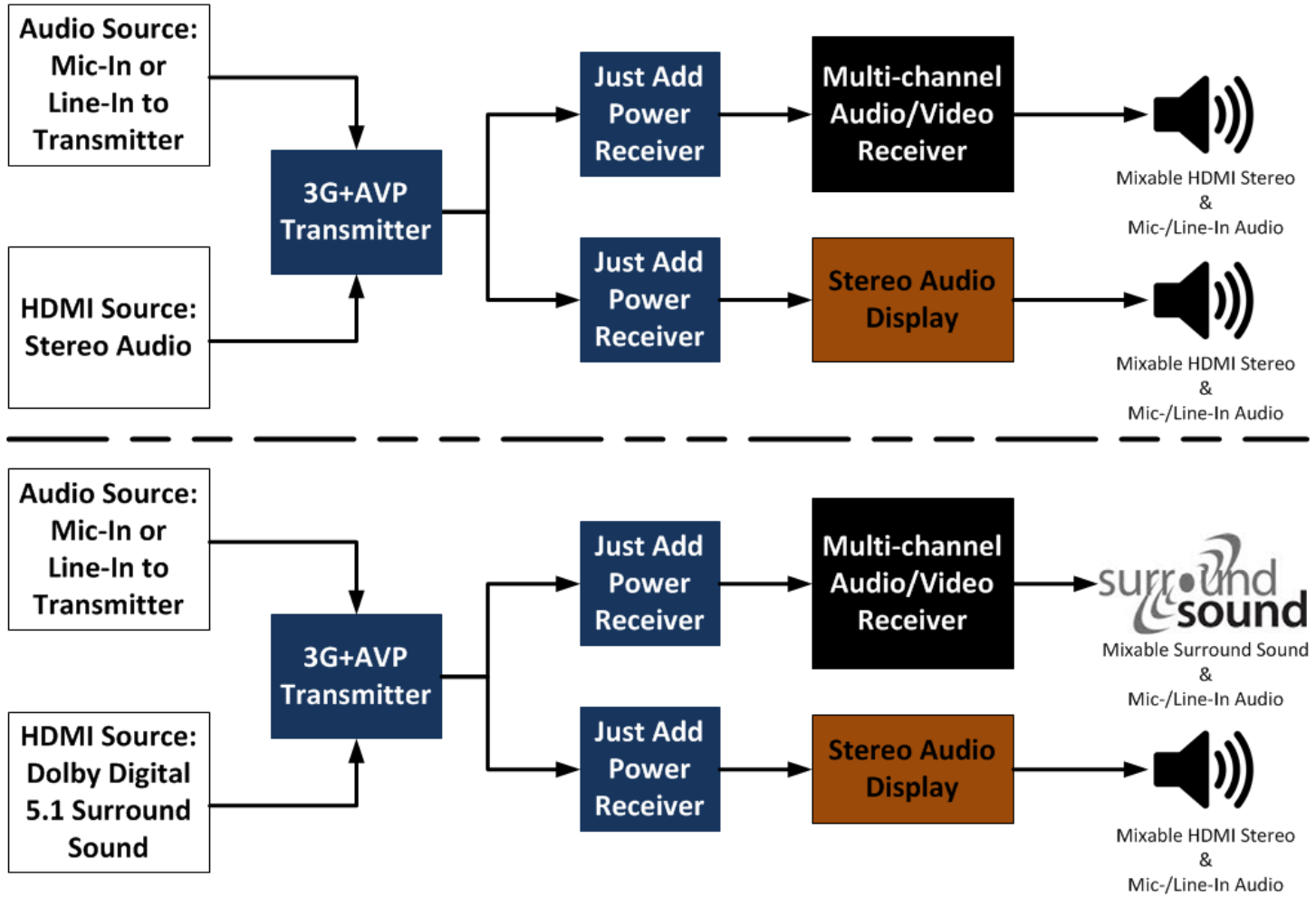


Just Add Power 3G+AVP Transmitter eliminates the hassle of distributing stereo and multi-channel with the inclusion of a Dolby Digital Sound Processor. This allows a source to output both stereo **AND** 5.1 Dolby Digital audio to an entire system on the same HDMI cable.



### 3G+AVP Mic-In and Line-In

The Just Add Power 3G+AVP Transmitter also has Mic-In and Line-In ports. Using the Digital Sound Processor, HDMI audio and Mic-/Line-In audio can be output to **ANY** Just Add Power Receiver in the installation.





# Build a System

A complete Just Add Power system will have the following pieces:

- One [Transmitter](#) for every source device
- One [Receiver](#) for every display device
- One [managed gigabit Ethernet switch](#) with Jumbo Frame support
- An IP-based [control system](#) to communicate with the Ethernet switch and Just Add Power devices

**Note:** Simpler systems may not require a managed switch or control system. See [Transmitters & Receivers](#) section for more information.

## Layer 2 vs Layer 3

### Layer 2

Layer 2 describes a basic matrix switching system controlled via RS232 or IP. A display has the ability to watch any source. Endpoint control is **NOT** accessible natively.

### Layer 3

All JADConfig systems are Layer 3.

Layer 3 describes a matrix switching system controlled via IP that also supports endpoint control of RS232 or CEC devices and console API features built into all Just Add Power devices. Console API features include video wall management, on-screen display, Image Pull™, and others.

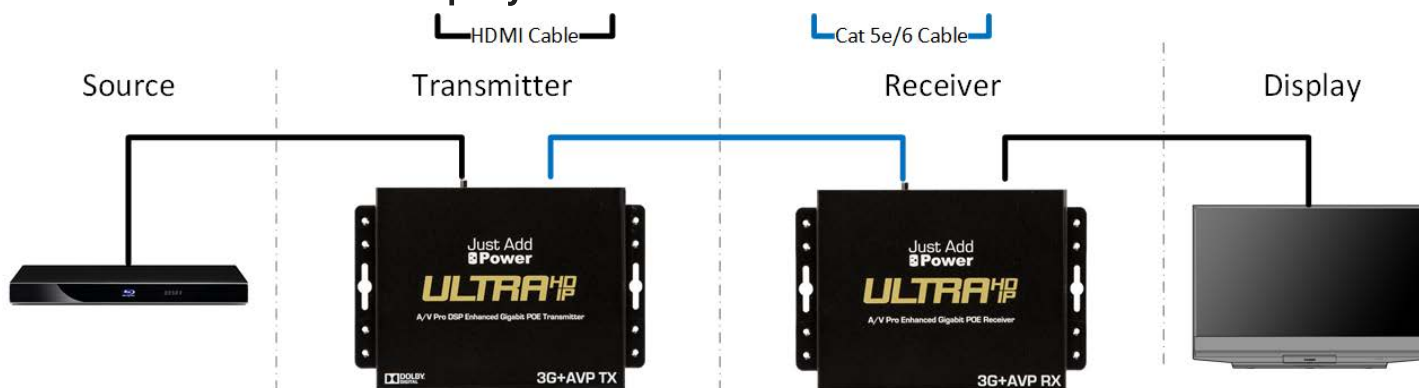
Feature	Layer 2	Layer 3
Matrix Switching		
RS232 control of endpoints	 Limited	
CEC control		
Video Wall management		
Logical USB enable/disable		
On-screen Display		
Image Pull – preview video from a source or display		
Image Push – upload a background image		
Gigabit Internet access on same CatX cable		

## Transmitters & Receivers

The number of Transmitters (inputs) and Receivers (outputs) determines the level of configuration needed for a system. Each example below has the full list of hardware needed for that type of system. Click the link to jump:

- [One Source to One Display](#)
- [One Source to Many Displays](#)
- [Many Sources to Many Displays](#)
- [Many Sources to Many Displays with Video Wall](#)

# One Source to One Display



## Components

- 1 source device
  - 1 Just Add Power Transmitter – ideal for the 709P2P
- 1 display device
  - 1 Just Add Power Receiver
- 2 HDMI cables
- 1 Cat 5e cable

Just Add Power devices on the **same firmware version** are plug-and-play. They need only to be connected together in order for video transmission to begin. In the simplest installation – one Transmitter sending to one Receiver – no switch is needed; the Receiver and Transmitter can be connected point-to-point with a single Cat 5e cable.

## Configuration

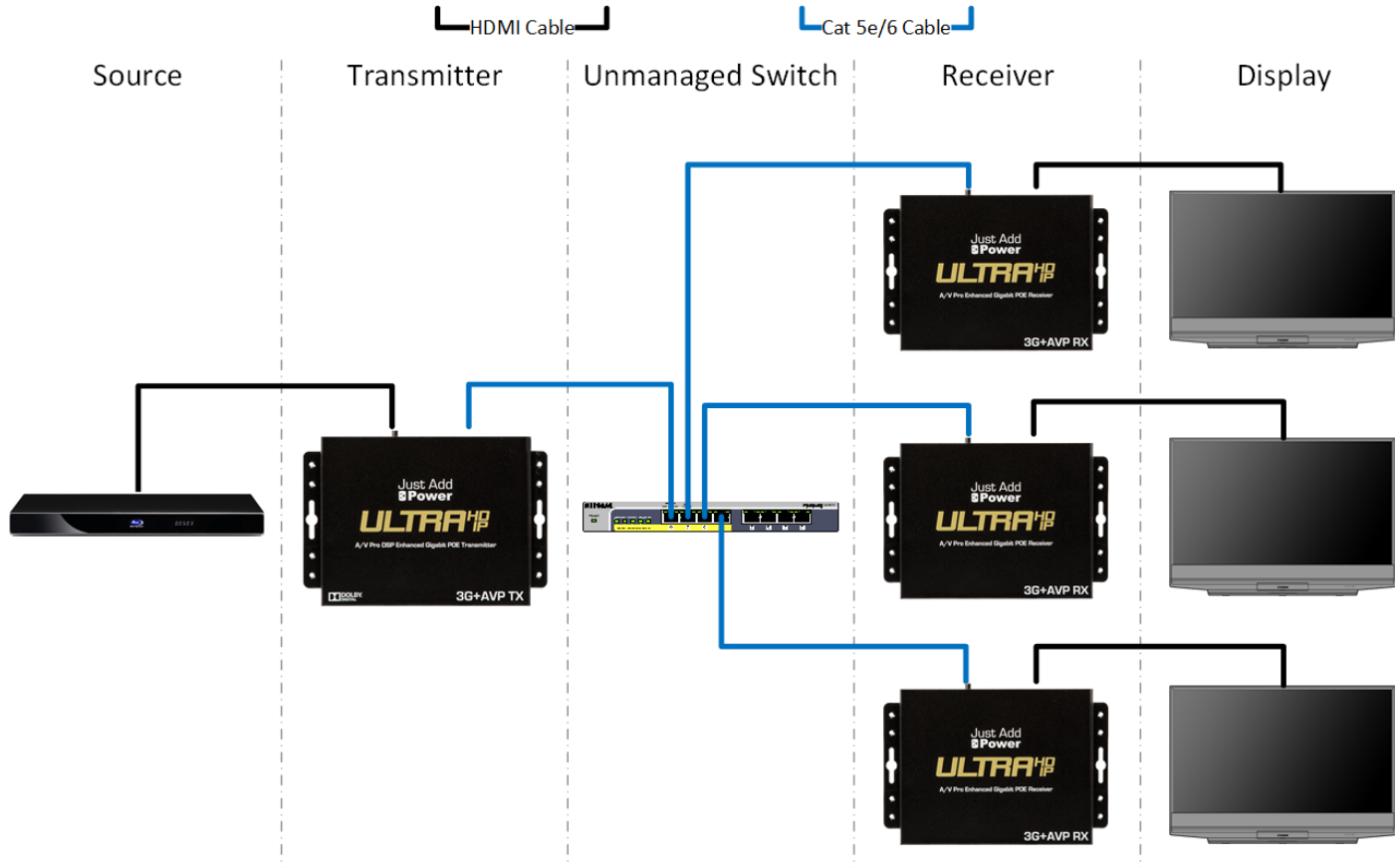
No configuration required.

One Just Add Power 3G Transmitter/Receiver pair can be connected:

- Point-to-point with a Cat5e cable
- Through a gigabit Ethernet switch
- Through an established network topology

When Just Add Power devices and other data share the same network switch, Just Add Power devices must be isolated from other data in a separate VLAN.

# One Source to Many Displays



## Components

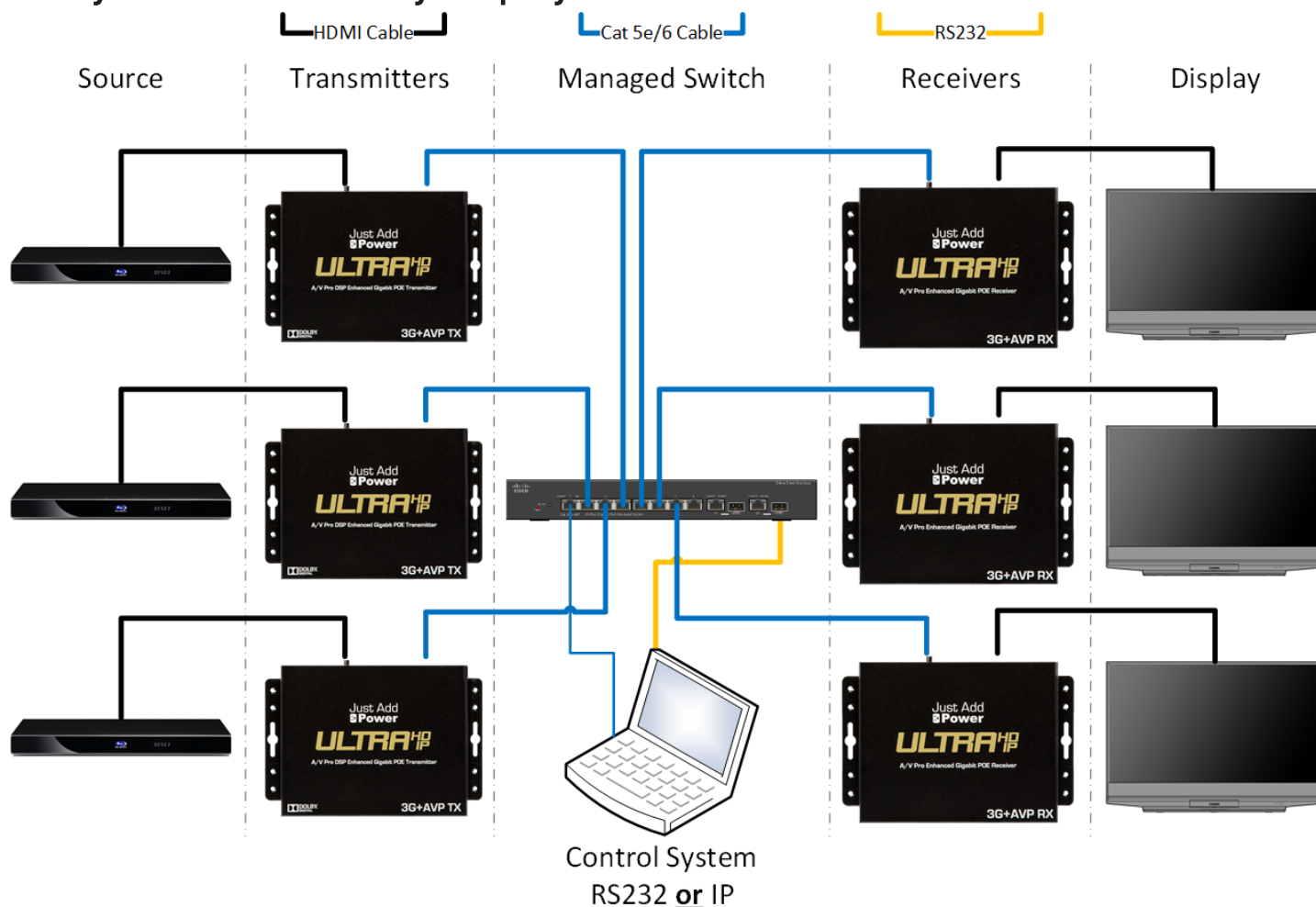
- 1 source device
  - 1 Just Add Power 3G Transmitter
- Multiple displays
  - 1 Just Add Power 3G Receiver per display
- 1 Unmanaged gigabit Ethernet switch or better
  - Switch must support Jumbo Frames
- 1 Cat 5e cable per Just Add Power 3G Transmitter and 3G Receiver
- 1 HDMI cable per Just Add Power 3G Transmitter and 3G Receiver

## Configuration

No configuration required if switch is dedicated to **ONLY** Just Add Power devices.

In a situation where there is already a network backbone in place, a **MANAGED** network switch is needed to separate Transmitter from regular network traffic. Otherwise, the Transmitter **WILL** prevent other network traffic from reaching its destination.

## Many Sources to Many Displays



### Components

- Multiple source devices
  - 1 Just Add Power 3G Transmitter per source device
- Multiple displays
  - 1 Just Add Power 3G Receiver per display
- Managed gigabit Ethernet switch
  - Switch must support Jumbo Frames
- One HDMI cable per Just Add Power 3G Transmitter and 3G Receiver
- One Cat 5e cable per Just Add Power 3G Transmitter and 3G Receiver
- RS232- or IP-based control system to communicate with the managed gigabit Ethernet switch
  - To use [Layer 3 Features](#) like Video Wall and RS232/CEC/IR control of displays, an IP-based control system is required

### Configuration

When multiple Transmitters are traveling over the same network, the managed gigabit Ethernet switch must be configured so that Receivers are only watching one Transmitter at a time. Configuration is mainly provided by JADConfig – a Windows program that will setup the switch and all Just Add Power devices. JADConfig and other options can be found in [Configuration](#).

## Managed Gigabit Ethernet Switch

The managed gigabit Ethernet switch is a **network-controlled matrix switcher** that *happens* to be a network switch.

The following Managed Ethernet switches have been tested and found to be compatible with the Just Add Power 3G HD over IP solution. They are fully supported by JADConfig and all Just add Power drivers.

Make	Model	Driver Supported	Layer 3 Capable	Stackable	Maximum Devices
<a href="#"><u>Luxul</u></a>	AMS-1208P	✓	✓		9
	AMS-1816P	✓	✓		17
	AMS-2600	✓	✓		25
	AMS-2616P	✓	✓		25
	AMS-2624P	✓	✓		25
	XMS-1208P	✓	✓		9
	XMS-2624P	✓	✓		25
	XMS-5248P	✓	✓		47
	AMS-4424P	✓	✓	✓	368
	XMS-7048P	✓	✓	✓	752
<a href="#"><u>Cisco</u></a>	SG300	✓	✓		51
	SG350	✓	✓		51
	SG500 & SG500X	✓	✓	✓	376
	SG550X	✓	✓	✓	376

This is not a complete list of switches that work with Just Add Power devices. Many switches that are not listed have been found by our dealers to work excellently. However, any switch not on this list will need custom configuration and drivers developed.

## Luxul

Model	Ports On	Stacking	POE Devices	Maximum Devices	POE
AMS-1208P	Rear		7	9	130 W
AMS-1816P	Rear		15	17	185 W
AMS-2600	Rear		0	25	N/A
AMS-2616P	Rear		16 (ports 9-24)	25	370 W
AMS-2624P	Rear		23	25	250 W
XMS-1208P	Front		7	9	130 W
XMS-2624P	Front		47	25	370 W
XMS-5248P	Front		23	49	740 W
AMS-4424P	Rear	✓	368	368	250 W
XMS-7048P	Front	✓	752	752	740 W

\*\*Specifications from [www.luxul.com](http://www.luxul.com) on 2019-02-03\*\*

## Choosing a Switch

Site-specific requirements must be considered when choosing the proper Luxul switch model:

- Front-facing or rear-facing ports – AMS models have rear-facing, XMS models have front-facing
- Total number of Just Add Power devices – one port per Just Add Power device
- PoE – all models have support for PoE, but not all models support 100% PoE devices

## Power over Ethernet

Power over Ethernet form factors are available on both Just Add Power Transmitters and Receivers.

- Just Add Power devices are **Class 3**, mid-power devices according to IEEE 802.3-2008 specifications. They will draw no more than **10 Watts** under normal operating circumstances.
- When planning an installation using Power over Ethernet, plan for **10W (Watts) per port** with a Just Add Power PoE device.

## Stacking

For a system with more than 47 devices, multiple switches must be used. The details of the project determine which type of switch, cabling, and SFP modules are needed.

Switch	Stacking Cable	Bandwidth	Max Distance
AMS-4424P or XMS-7048P	SFP Copper	10 Gigabit	0.5 m / 1.5 ft
	SFP Fiber	10 Gigabit	300 m / 1000 ft

## Stacking Modules

These 10-Gigabit copper and fiber modules are supported by Luxul.

Copper	Bandwidth	Description	Length
CAB-05SFP+	10 Gb	Copper, 0.5 meters	0.5 m/1.5 ft

Fiber	Bandwidth	Description	Max Distance
XSA-SFP+	10 Gb	850-nm wavelength Multi-mode fiber	300 m/1000 ft

## Cisco

Make	Model	Driver Supported	Layer 3 Capable	Stacking	Maximum Devices
Cisco	SG300	✓	✓		51
	SG350	✓	✓		51
	SG500 & SG500X	✓	✓	✓	376
	SG550X	✓	✓	✓	376

### Choosing a Switch

Site-specific requirements must be considered when choosing the proper Cisco switch model:

- total number of Just Add Power devices – one port per Just Add Power device
- total number of sources – when using Stacked switches, bandwidth is based on number of Transmitters
- PoE requirements of the Just Add Power PoE devices – each devices uses 10 Watts

### Power over Ethernet

Power over Ethernet form factors are available on both Just Add Power Transmitters and Receivers.

- Just Add Power devices are **Class 3**, mid-power devices according to IEEE 802.3-2008 specifications. They will draw no more than **10 Watts** under normal operating circumstances.
- When planning an installation using Power over Ethernet, plan for **10W (Watts) per port** with a Just Add Power PoE device.

### Stacking

For a system with more than 51 devices, multiple switches must be used. The details of the project determine which type of switch, cabling, and SFP modules are needed.

Switch	Stacking Cable	Bandwidth	Max Distance
SG500X/550X	SFP Copper	10 Gigabit	5 m / 16 ft
	SFP Fiber	10 Gigabit	10 km / 6 mi

### Stacking Modules

These copper and fiber modules are supported by the SG500X and SG550X switches.

Copper	Bandwidth	Description	Length
SFP-H10GB-CU1M	10 Gb / 5 Gb	Twinax cable, passive, 30 AWG	1 m / 3 ft
SFP-H10GB-CU3M	10 Gb / 5 Gb	Twinax cable, passive, 30 AWG	3 m / 10 ft
SFP-H10GB-CU5M	10 Gb / 5 Gb	Twinax cable, passive, 30 AWG	5 m / 16 ft

Fiber	Bandwidth	Description	Max Distance
SFP-10G-SR	5 Gb / 10 Gb	850-nm wavelength Multimode fiber	300 m / 1000 ft
SFP-10G-LR	5 Gb / 10 Gb	1310-nm wavelength Single-mode fiber	10 km / 6 mi
SFP-10G-LRM	5 Gb / 10Gb	1310-nm wavelength Single- or multimode fiber	300 m / 1000 ft

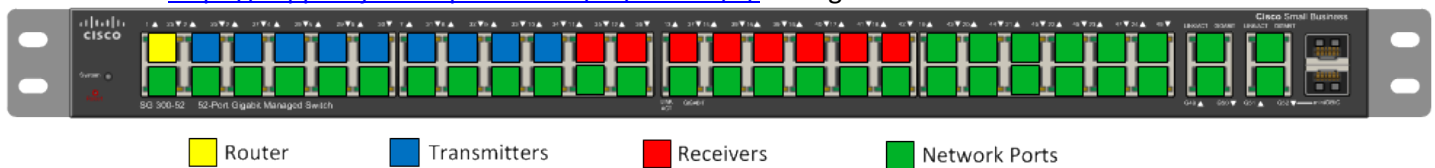


# Configuration

Just Add Drivers Configuration software – JADConfig – configures the switch and all attached Just Add Power devices and interfaces with licensed control system drivers.

## JADConfig

- Just Add Drivers Configuration software
  - Configures network switch
  - Configures Just Add Power devices in pre-defined IP ranges
  - Configures port 1 as LAN port for connection to the rest of network, Transmitters starting on port 2, and Receivers starting after Transmitters
  - Any unused ports at the end are placed on the LAN the same as port 1
- Works with all Cisco and Luxul switches listed above.
- Can be used with licensed control system drivers or custom control system drivers
- Go to <https://support.justaddpower.com/kb/section/3/> to begin



## Custom

Configuration of the network switch and Just Add Power devices can be done manually. Just Add Power has switch configuration guides for the following models of switches:

- Luxul single and stackable Layer 3 switches
- Cisco SG300
- Cisco SG350
- Cisco SG500/SG500X
- Cisco SG550X
- Cisco Catalyst 2960 and 2960S
- Cisco Catalyst 3750
- Dell PowerConnect 6200

## Control

In a multiple-Transmitter system, a control system performs matrix switching and endpoint control. While Just Add Power provides licensed drivers for some control systems, we are capable of working with any control system capable of RS232 or IP control.

### Licensed Control System Drivers

Drivers created and licensed by Just Add Power

- IP-based drivers
  - Switching drivers
  - Receiver and Transmitter control drivers – gives access to RS232, CEC, video wall, on-screen display, and other Just Add Power Layer 3 features
  - **ONLY** work with switches configured with JADConfig
  
- Just Add Power Licensed Control System Drivers
  - AMX
  - Control4
  - Crestron
  - RTI
  
- Request a license key at <https://support.justaddpower.com/new>. Enter the MAC Address of the control system processor (Serial Number for AMX) to receive a free license key
  
- Download drivers at <https://support.justaddpower.com/kb/section/32/>

### Other Control System Drivers

Drivers for other Control Systems are available on the support site at <https://support.justaddpower.com/kb/section/31/>

### Custom Control System Drivers

Just Add Power can provide the information needed to allow a dealer to write a custom control driver that works with **ANY** control system capable of sending IP or RS232 commands. Please contact us at [support.justaddpower.com](https://support.justaddpower.com) for more information.

# Certifications

- HDMI Certified
  - HDMI 2.0
- HDCP 2.2 Compliant
- FCC/CE/ROHS Compliance
- Dolby Digital Certification
  - Manufactured under license from Dolby Laboratories (Dolby and the double-D symbol are trademarks of Dolby Laboratories)

# Additional Network Considerations

- Requires Multicast to be enabled on the network and IGMP Snooping to be disabled
- Requires Jumbo Frames to be enabled
- The factory default IP address of each 3G device is in the 169.254.X.X range.
- Devices automatically assign themselves an IP address. There will never be 2 devices in an installation with the same IP address as long as they are set to do this.
  - Static IPs can be set if reliable access to devices is required (JADConfig does this automatically)
  - Devices do not have to match the current IP scheme (if added to an established network).
- Devices have an accessible web page that can be used to check firmware version, upgrade firmware, or apply commands to the devices.
- Transmitters send a maximum of 600 Mbps. A gigabit managed network switch is needed.
- A managed switch is needed because traffic from 3G Transmitters must be separated from each other, and from regular network traffic.
  - **Analogy:** Our devices are allowed to drive on the **road (switch)** but they are like crazy drivers that take up the entire road and run everyone else off of it if they get in the way. By creating separate **lanes (VLANs)** we keep our crazy driver in his own lane so that he doesn't run over all of the other cars.
- **WILL NOT** work over a routed network; only works within a Local Area Network (LAN)

# Appendix

**Planning Examples** – Unsure of which product is right for each endpoint location? These example connections will help

- [Source-side Examples](#) – Find the right Transmitter for any situation
- [Display-side Examples](#) – Find the right Receiver for any situation

[Dimensions](#) – Size and weight for each unit

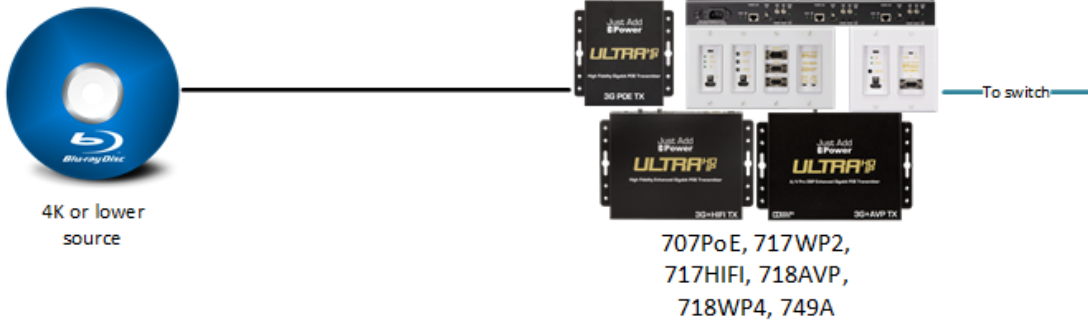
[Diagrams](#) – Schematics showing the dimensions and port connections of each unit

# Planning Examples

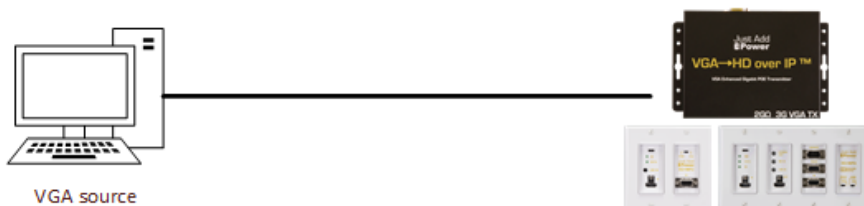
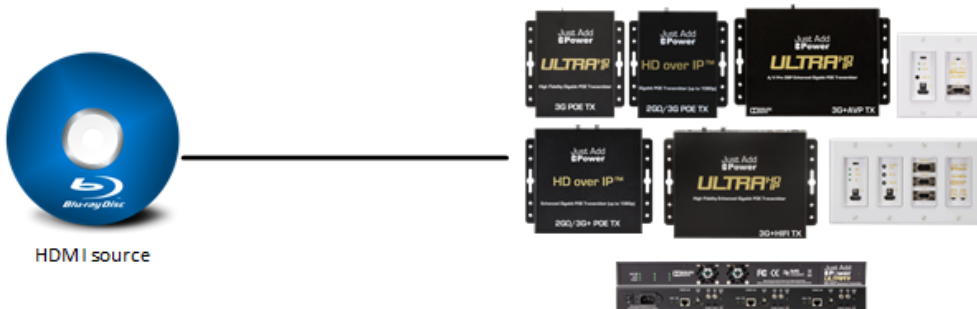
## Source-Side

# 3G Ultra HDIP

## Source-side Format

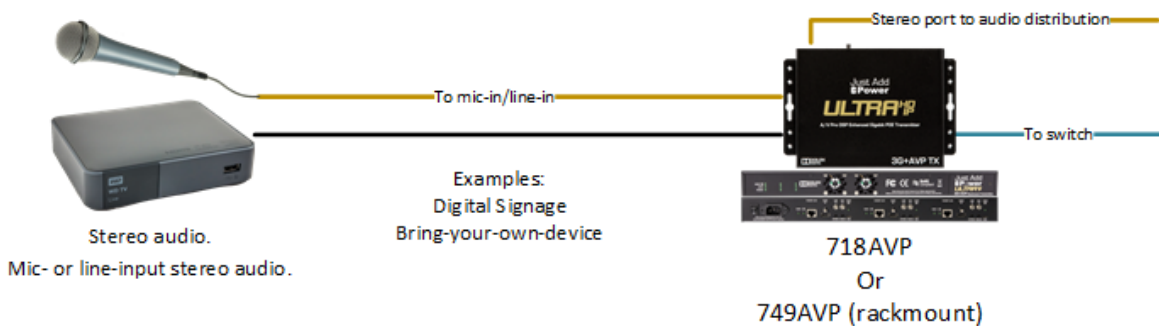
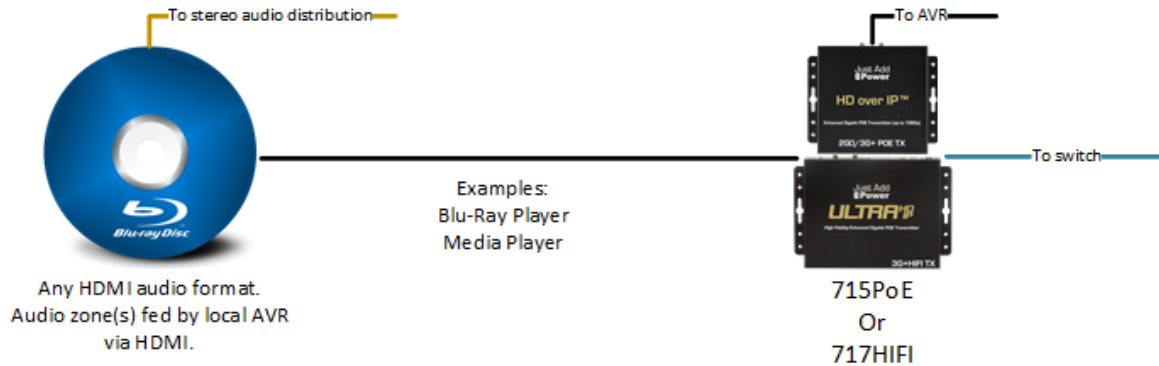
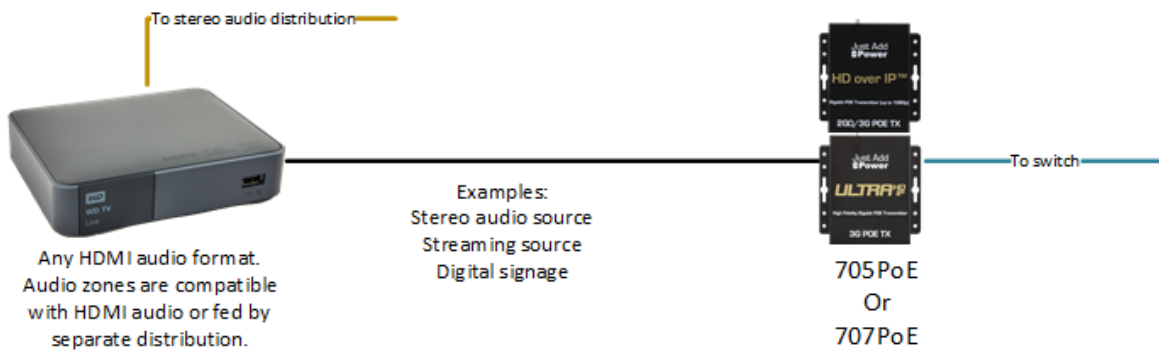
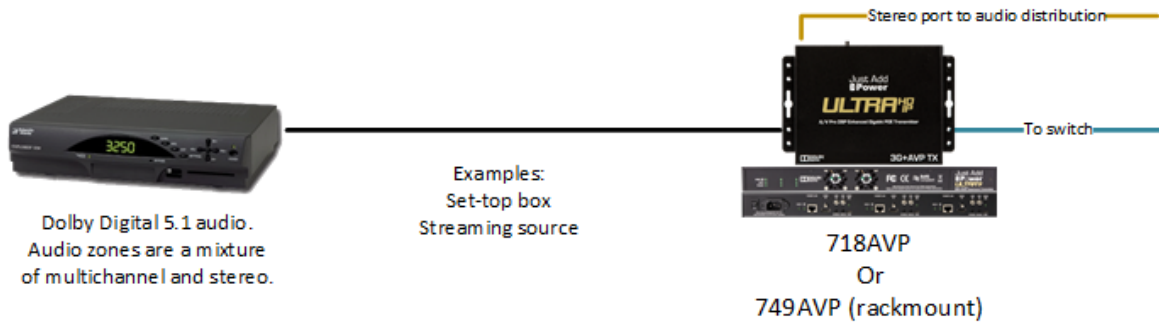


The resolution of the sources and displays is the most important factor when planning a 3G system.  
 2GQ/3G devices (705PoE,715PoE,716VGA) have a maximum input and output resolution of 1080p.  
 3G devices (707PoE,717WP2,717HIFI,718AVP,718WP4,749A) have a maximum input and output resolution of 4K.



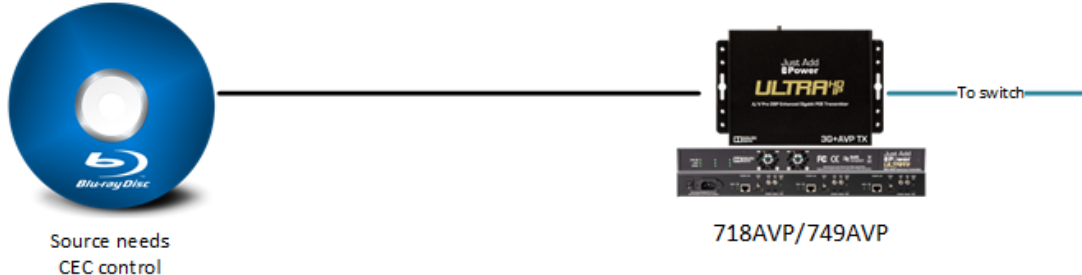
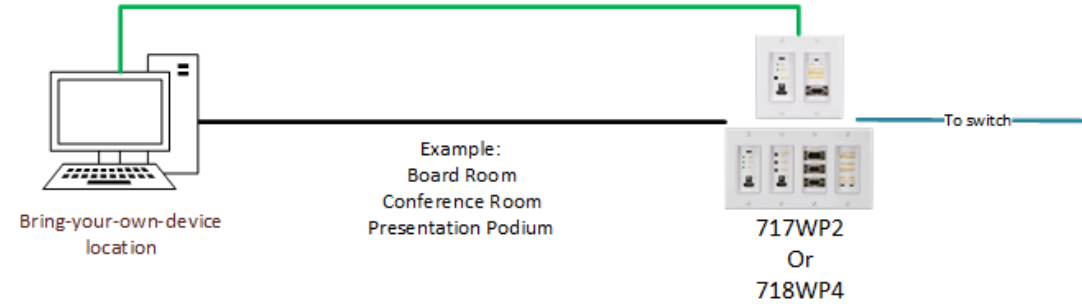
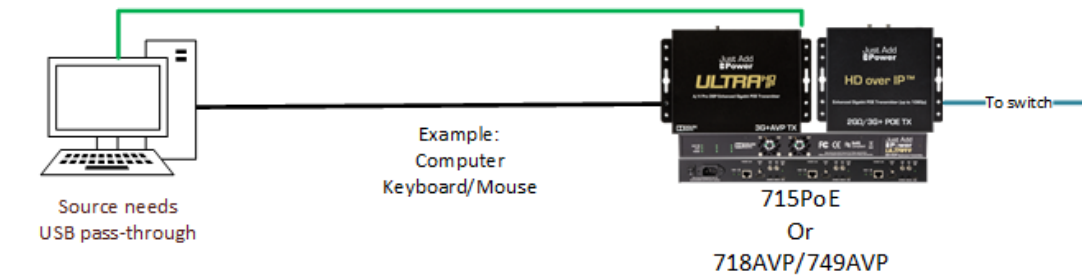
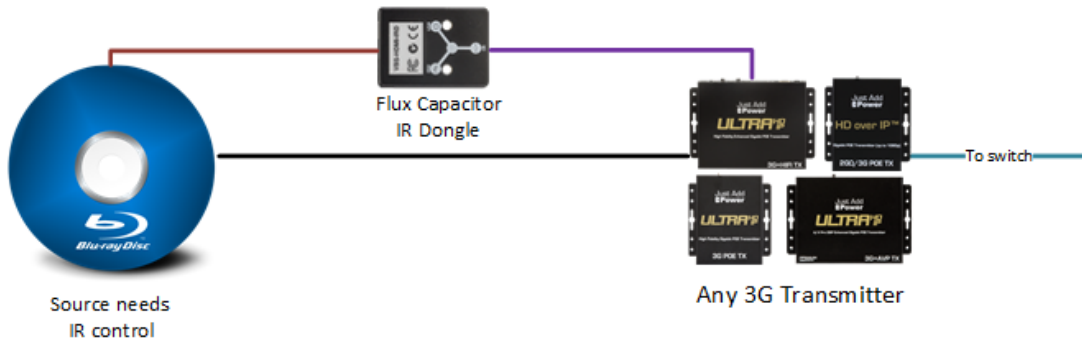
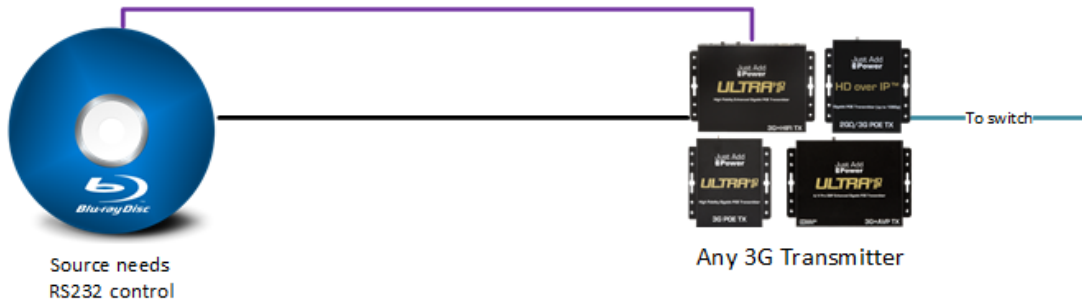
# 3G Ultra HDIP

## Source-side Audio



# 3G Ultra HDIP

## Source-side Control

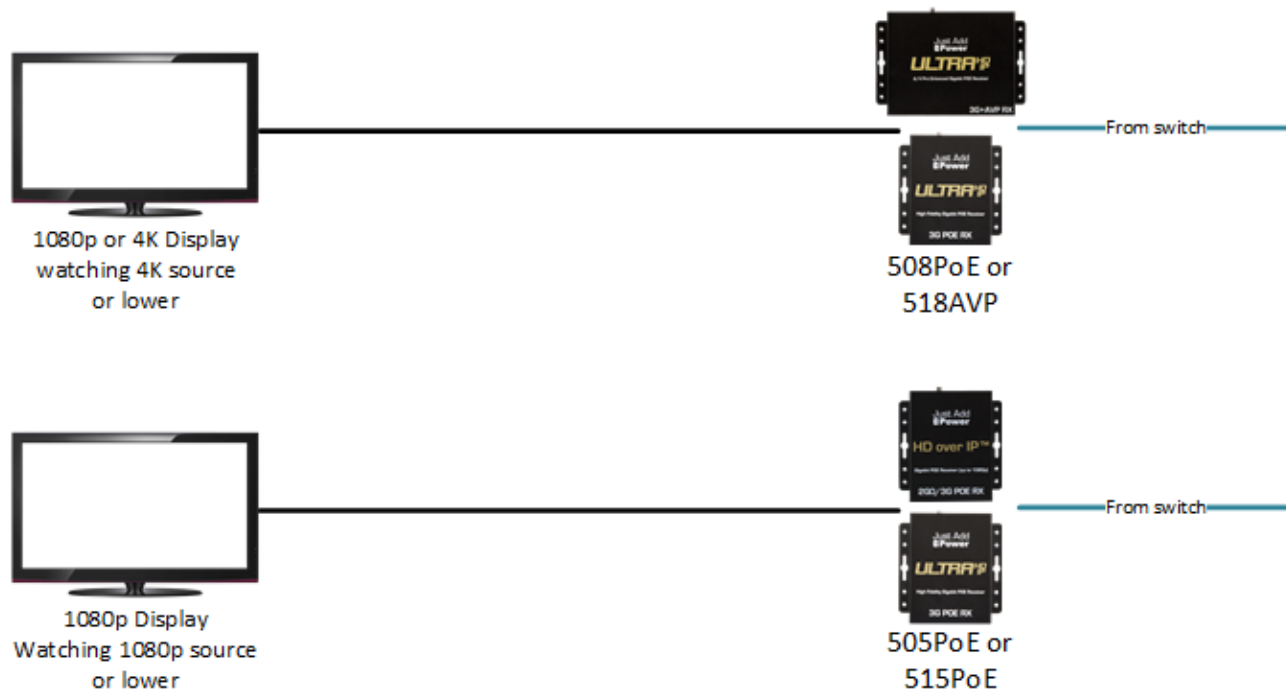




## Display-Side

# 3G Ultra HDIP

## Display-side Resolution



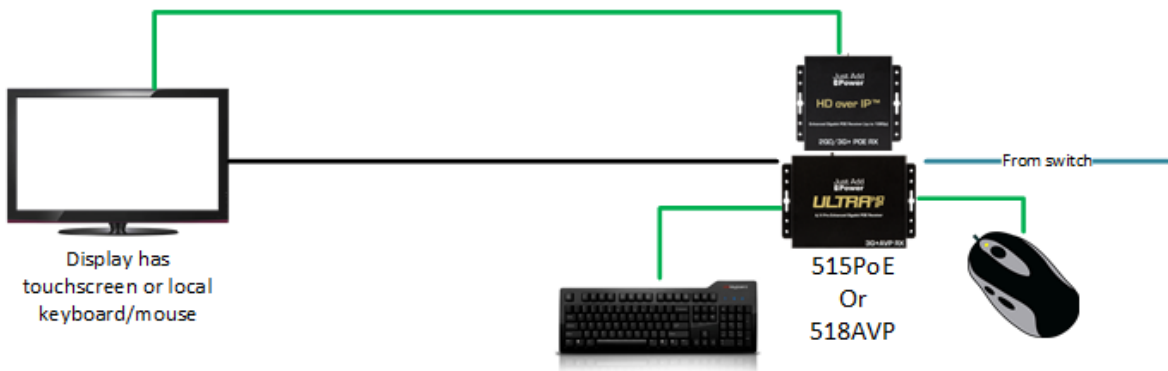
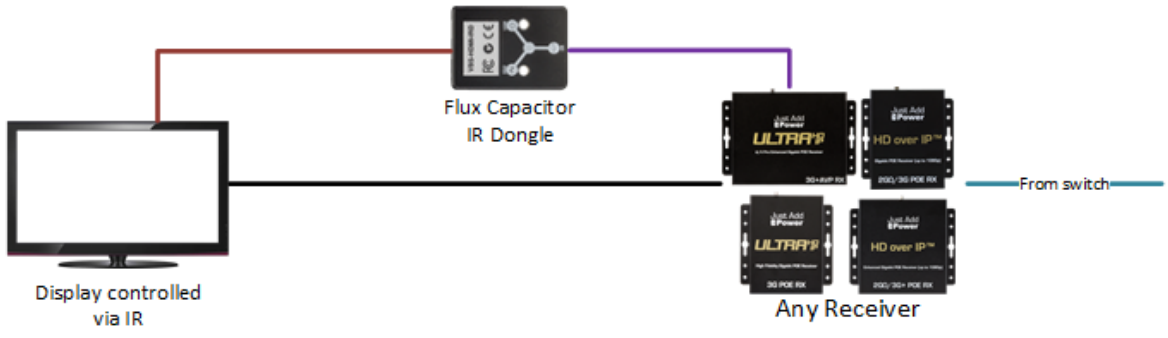
The resolution of the sources and displays is the most important factor when planning a 3G system.

2GQ/3G devices (505PoE & 515PoE) have a maximum input and output resolution of 1080p.

3G devices (508PoE & 518AVP) have a maximum input and output resolution of 4K.

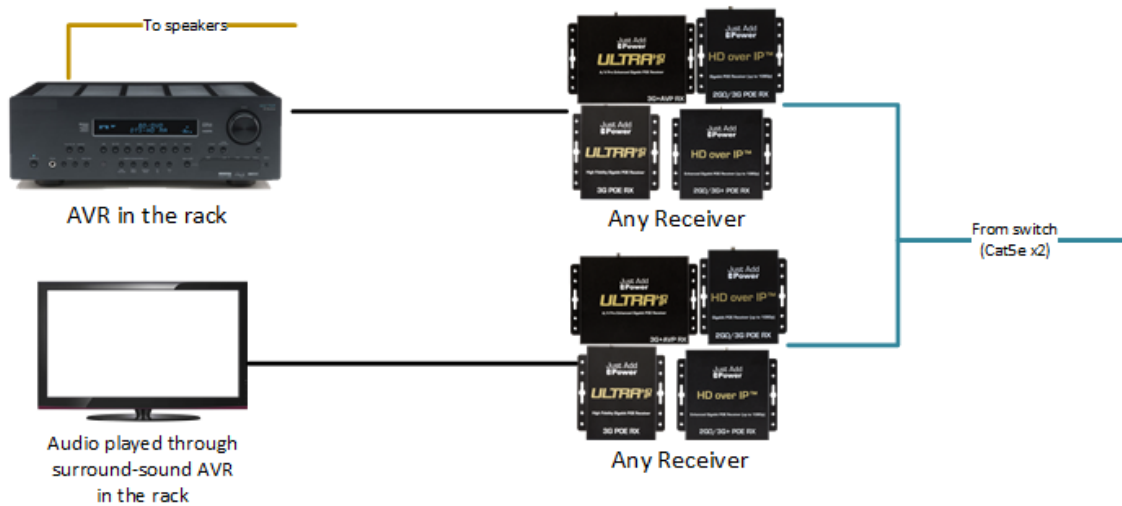
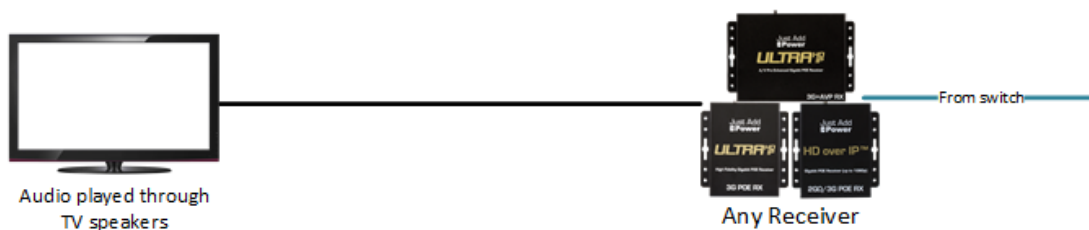
# 3G Ultra HDIP

## Display-side Control



# 3G Ultra HDIP

## Display-side Audio



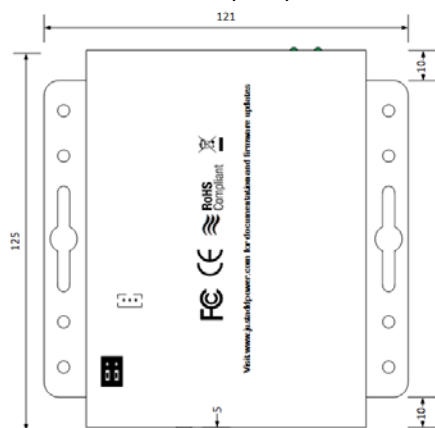
## Dimensions

Model	Name	Size (mm)
<b>505POE</b>	2GΩ/3G POE Receiver	121 x 125 x 30
<b>508POE</b>	3G POE Receiver	121 x 125 x 30
<b>509POE</b>	3G Daisy-Chain POE Receiver	123 x 161 x 30
<b>515POE</b>	2GΩ/3G+ POE Receiver	146 x 128 x 30
<b>518AVP</b>	3G+AVP POE Receiver	184 x 127 x 30
<b>705POE</b>	2GΩ/3G POE Transmitter	121 x 125 x 30
<b>707POE</b>	3G POE Transmitter	121 x 125 x 30
<b>709P2P</b>	3G Point-to-Point Transmitter	125 x 133 x 30
<b>715POE</b>	2GΩ/3G+ POE Transmitter	158 x 127 x 30
<b>716VGA</b>	2GΩ/3G VGA POE Transmitter	184 x 126 x 30
<b>717HIFI</b>	3G+HIFI POE Transmitter	184 x 126 x 30
<b>717WP2</b>	2-gang Wallplate POE Transmitter	92 x 108 x 79.5
<b>718AVP</b>	3G+AVP POE Transmitter	184 x 126 x 30
<b>718WP4</b>	4-gang Wallplate POE Transmitter	184 x 108 x 79.5
<b>725POE</b>	2GΩ/3G SDI POE Transmitter	158 x 125 x 30
<b>726TVI</b>	2GΩ/3G TVI POE Transmitter	159 x 124 x 30
<b>747POE</b>	3G 4-in-1 POE Rackmount Transmitter	429 x 250 x 44.5
<b>749AVP</b>	3G+AVP 3-in-1 Rackmount Transmitter	429 x 250 x 44.5
<b>759A</b>	3G+4+	429 x 250 x 44.5
<b>767DSS</b>	3G+ Dante Sound System POE Transmitter	184 x 152 x 30

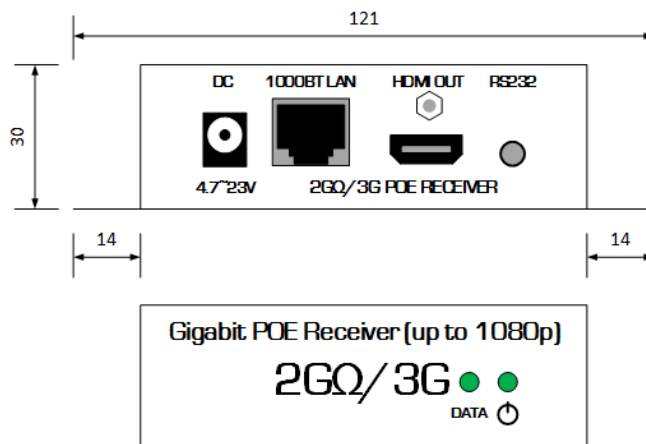
# Diagrams

## 505POE

All measurements in millimeters (mm)



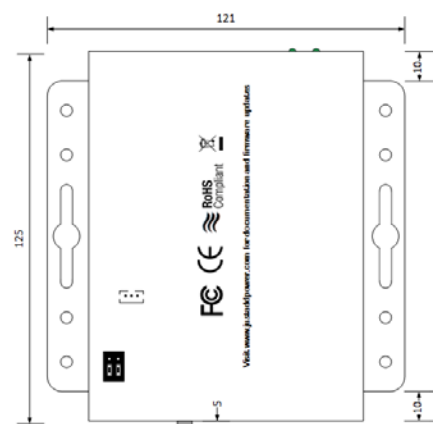
505POE Bottom



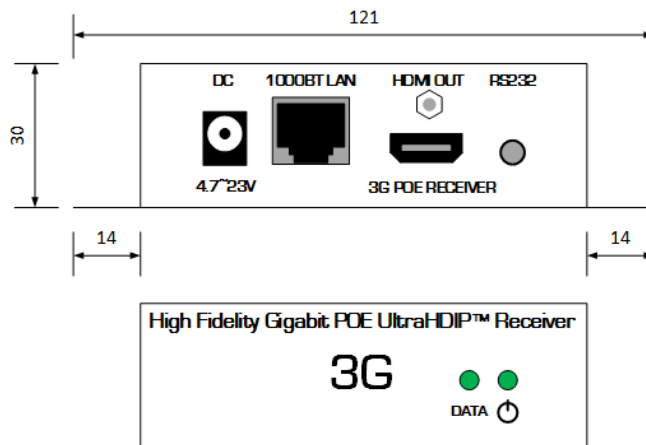
505POE Front/Back

## 508POE

All measurements in millimeters (mm)



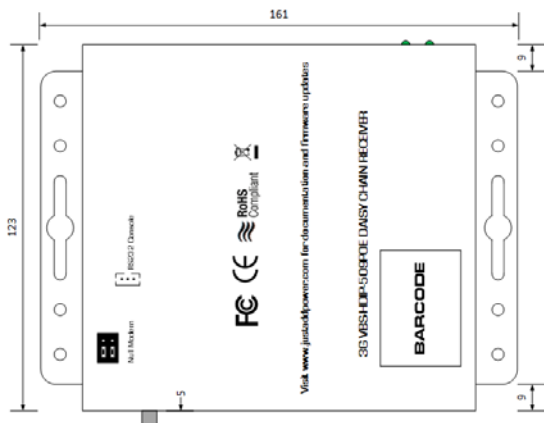
508POE Bottom



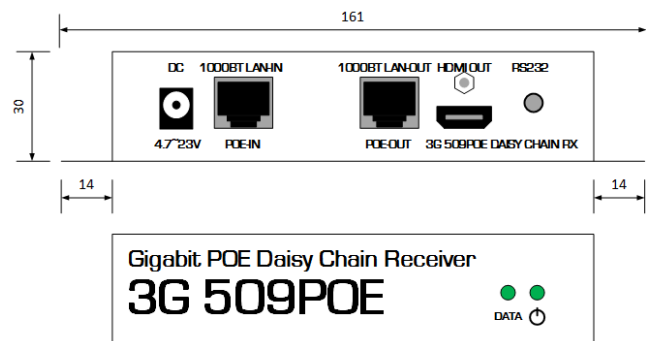
508POE Front/Back

## 509POE

All measurements in millimeters (mm)



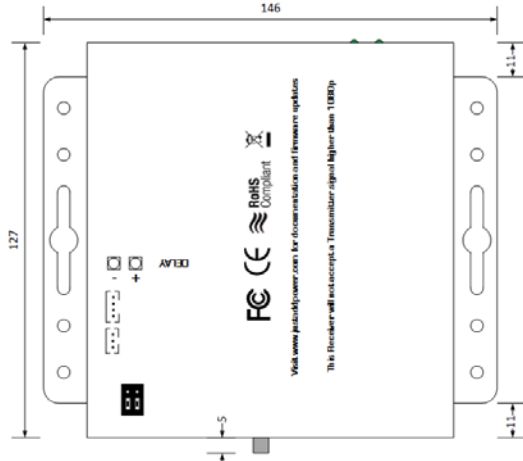
509POE Bottom



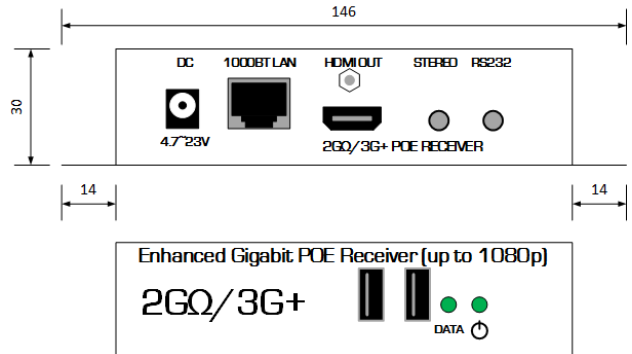
509POE Front/Back

### 515POE

All measurements in millimeters (mm)



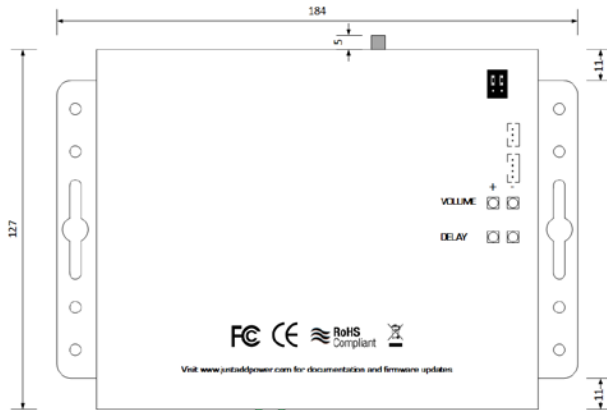
515POE Bottom



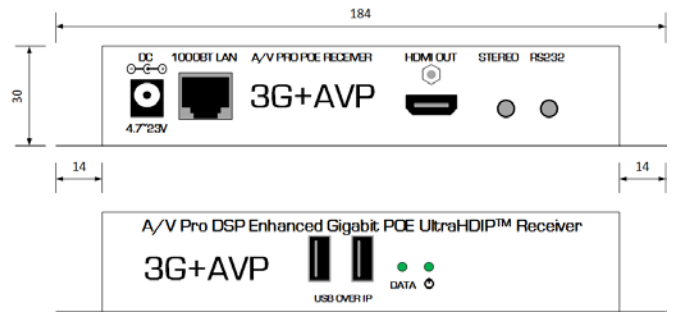
515POE Front/Back

### 518AVP

All measurements in millimeters (mm)



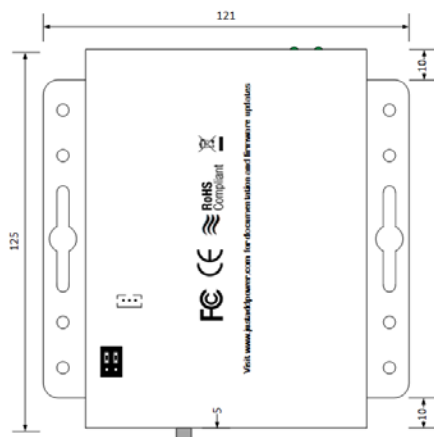
518AVP Bottom



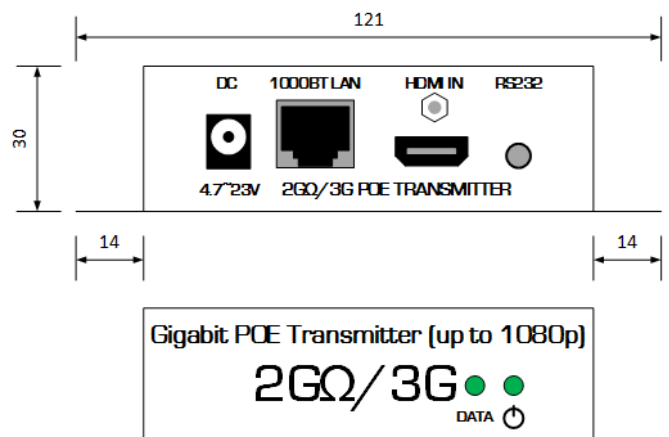
518AVP Front/Back

### 705POE

All measurements in millimeters (mm)



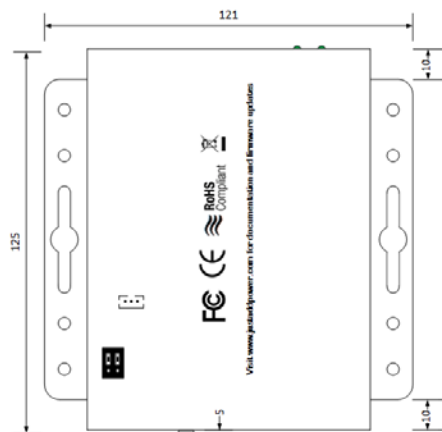
705POE Bottom



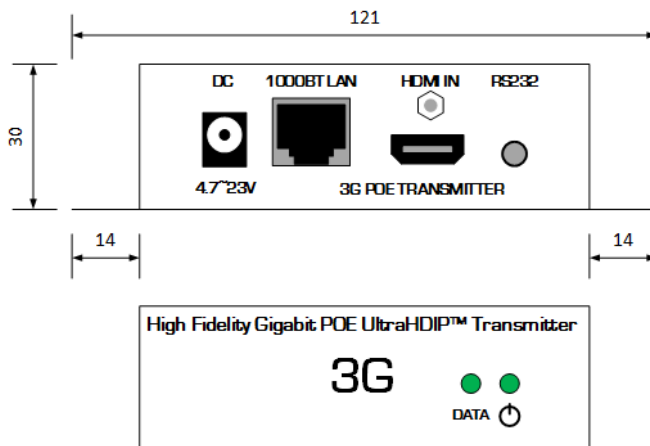
705POE Front/Back

### 707POE

All measurements in millimeters (mm)



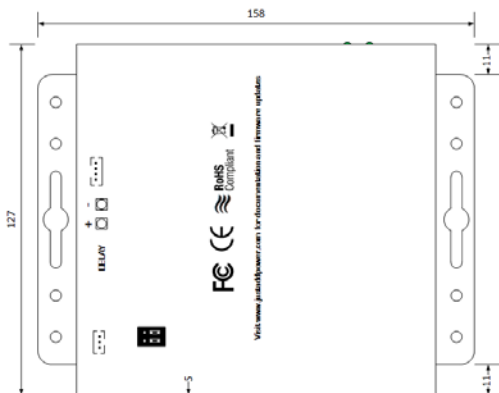
707POE Bottom



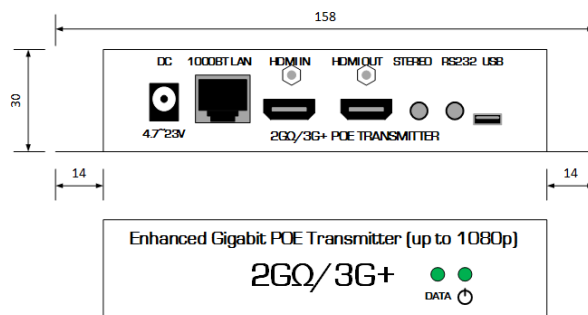
707POE Front/Back

### 715POE

All measurements in millimeters (mm)



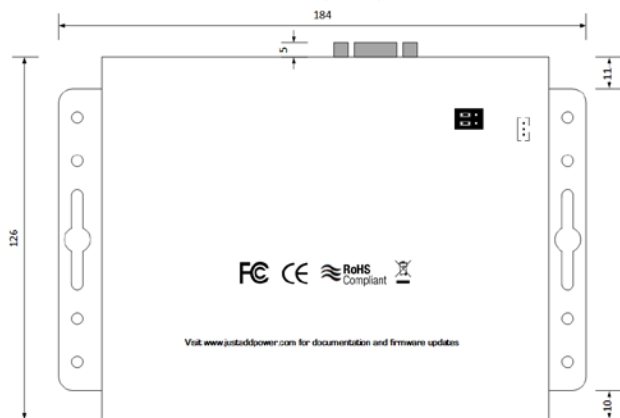
715POE Bottom



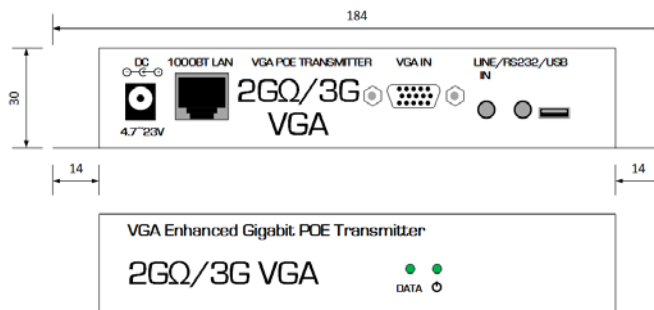
715POE Front/Back

### 716VGA

All measurements in millimeters (mm)



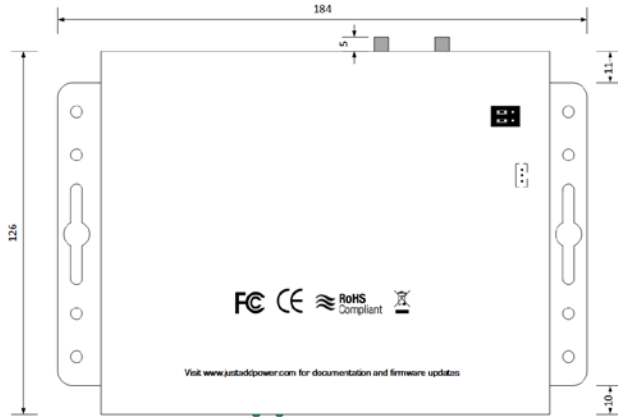
716VGA Bottom



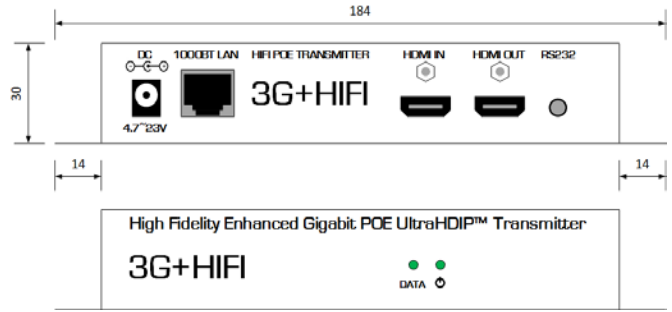
716VGA Front/Back

## 717HIFI

All measurements in millimeters (mm)



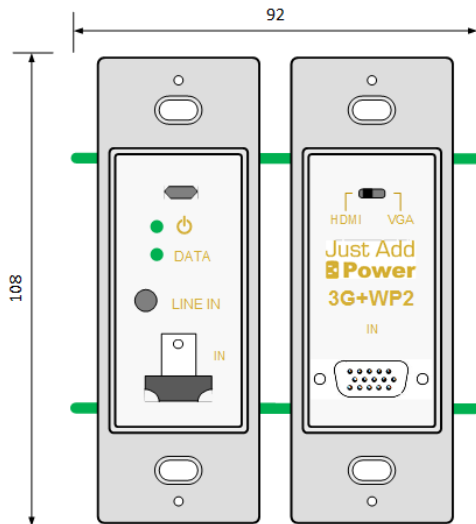
717HIFI Bottom



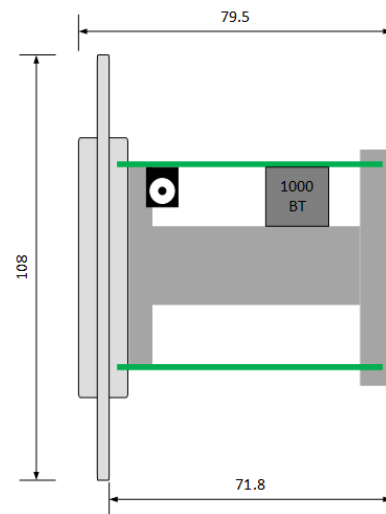
717HIFI Front/Back

## 717WP2

All measurements in millimeters (mm)



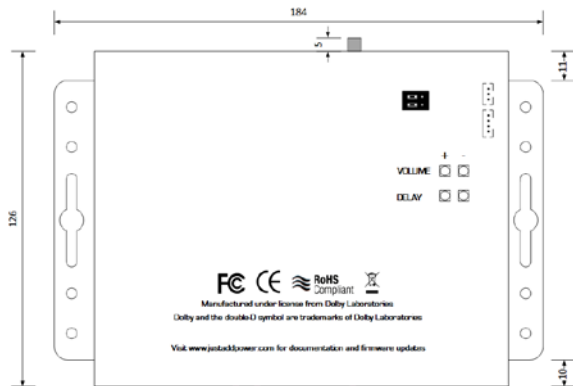
717WP2 Bottom



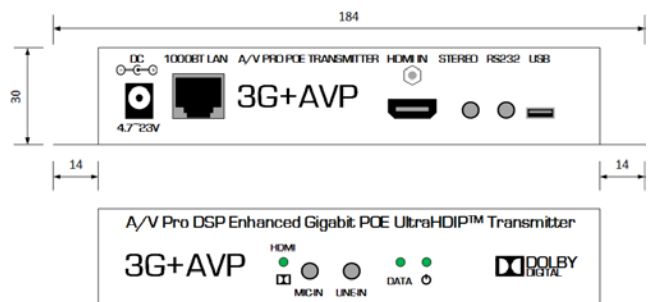
717WP2 Front/Back

## 718AVP

All measurements in millimeters (mm)



718AVP Bottom

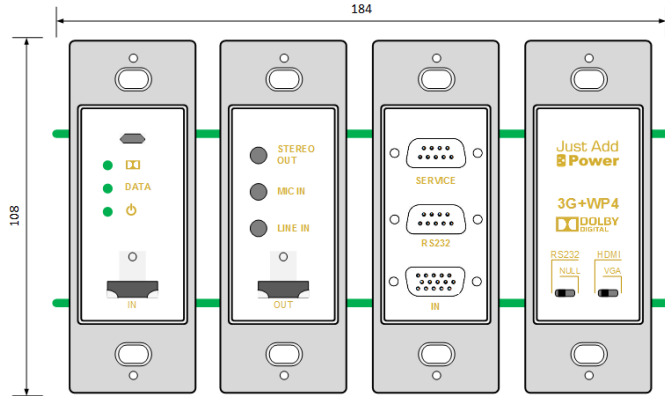


718AVP Front/Back

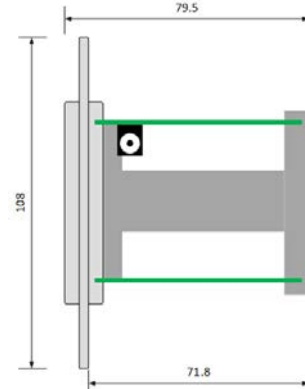


## 718WP4

All measurements in millimeters (mm)



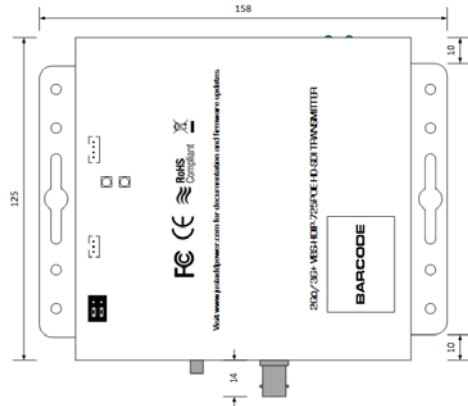
718WP4 Bottom



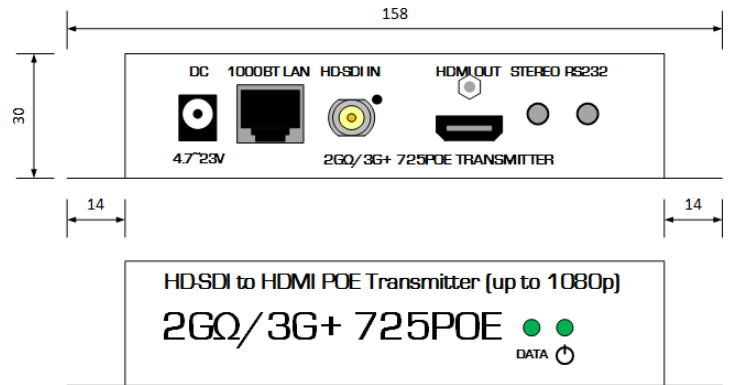
718WP4 Front/Back

## 725POE

All measurements in millimeters (mm)



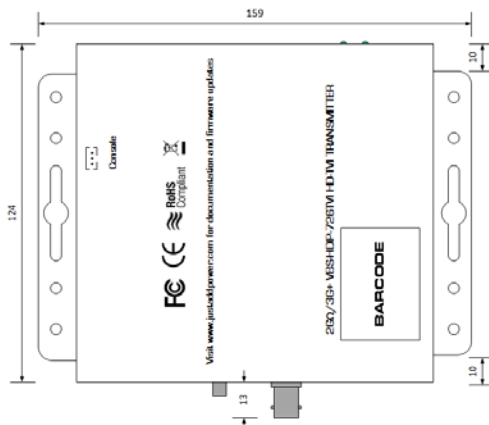
725POE Bottom



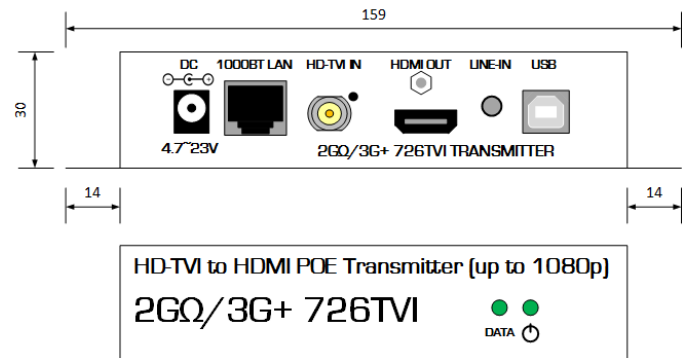
725POE Front/Back

## 726TVI

All measurements in millimeters (mm)



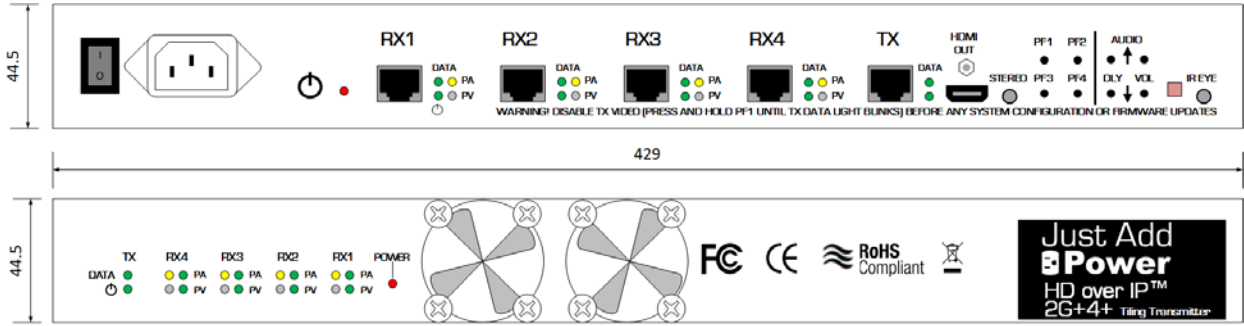
726TVI Bottom



726TVI Front/Back

## 759A

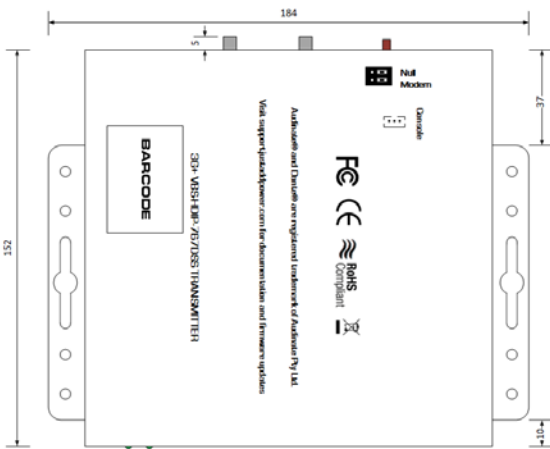
All measurements in millimeters (mm)



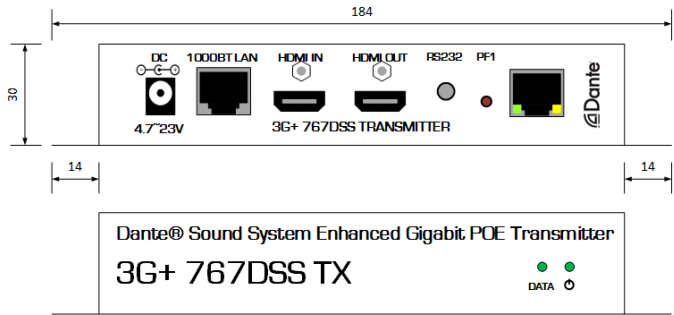
749AVP Front/Back

## 767DSS

All measurements in millimeters (mm)



767DSS Bottom



767DSS Front/Back