

## Video Wall 4K/60 HDMI & USB over IP Transmitter/Receiver with PoE



### Ultra High-quality 4K/60 HDMI Video Wall

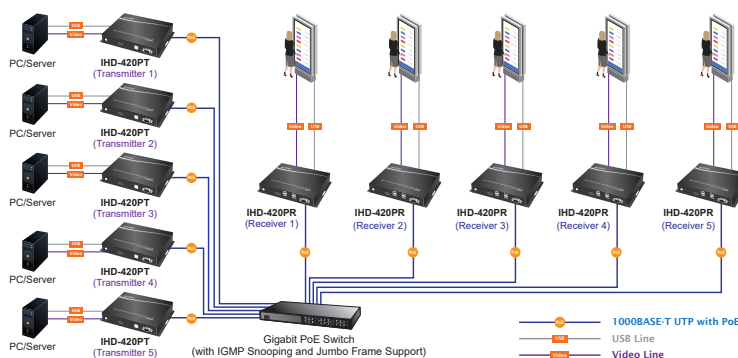
PLANET IHD-420 HDMI/USB Extender Video Wall over IP with PoE delivers a great 4K video distribution solution with refreshing **60 frames per second**, waking an efficient and effective advertising deployment. The IHD-420 series is the combination of the transmitter, IHD-420PT, and the receiver, IHD-420PR. They can be used as an audio, video and IR extender over IP, and applied to point to point, point to multi-point, multi-point to multi-point and eye-catching video walls of up to 16 by 8 displays.

### IR Extension for Controlling Video Source

The IHD-420 series is a perfect solution for audio and video signal extension via the Gigabit LAN. Designed with IR transmitter and receiver interface, it allows users to control the video source at the terminal destination. The IHD-420 series features **bi-directional IR extension and RS232 pass-through** which allow users to cascade the system enabling them to extend the transmission distance without signal loss or delay.

They come with USB interfaces, which support basic KVM applications, such as touch screens, keyboards and mice, enabling users to achieve KVM PC control easily. Besides, with PoE function, there is no additional power supply needed, and the IHD-420 series thus reduces the complexity of cable installation.

### HDMI and USB Extending across IP to Multiple Interactive Displays



### HDMI Network

- 4K ultra high-quality video transmitter with refreshing 60 frames per second
- Supports IR extension for controlling video source
- Supports RS232 bi-directional remote extension
- Assigns video sources to any monitor of the video wall system
- The selectable 64-channel DIP switch is easily applied for multi-casting group matching
- 1-to-1, 1-to-many and multi-casting broadcasting architectures allow to add more displays without increasing LAN bandwidth loading

### Video Output Characteristics

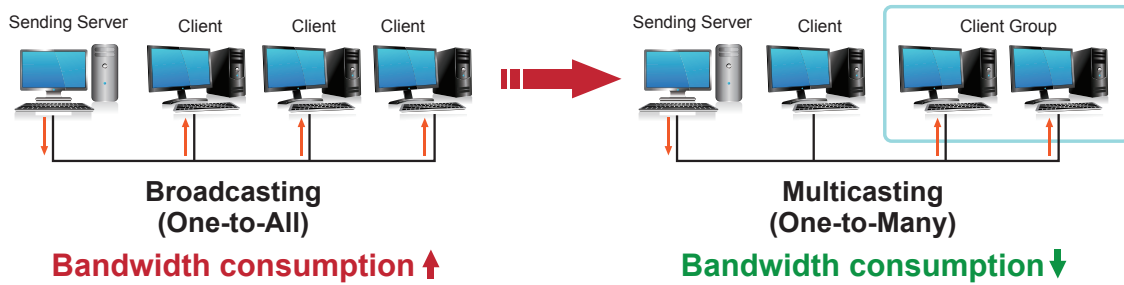
- Supports 1080p or 4K (3840 x 2160) HDMI resolution
- HDCP compliant and blu-ray ready
- Compatible with common screen resolutions from XGA, SXGA, UXGA, WSXGA and Full HD to the latest 4K system
- Output video rotation
- Supports HDMI with 2-ch. uncompressed audio or external audio in and out

### Easy Installation and Management

- Supports USB for KVM PC control
- IEEE 802.3af/at PoE+ function supported; no additional power supply needed
- Supports 802.1X function
- Automatic EDID (Extended Display Identification Data) configuration
- Friendly Web UI for ease of use
- Supports multi-casting group with Gigabit Ethernet Managed Switch (IGMP snooping and Jumbo Frame functions required)

**Exclusive Video Transmission by IGMP Snooping Technology**

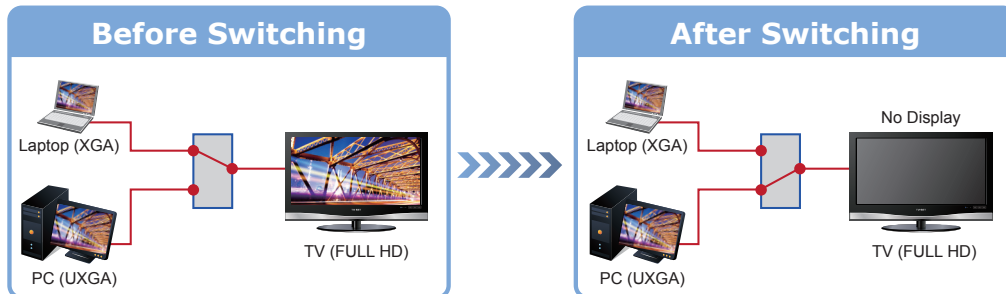
One IHD-420PT at the local site can drive multiple IHD-420PRs at remote sites without adding extra load to the network. Integrated with a Gigabit PoE switch that includes IGMP snooping functions, the IHD-420 series allows for selectable channels, enabling simultaneous transmission of video and audio. IGMP snooping is a crucial component of IP multicast, serving as a communication protocol for hosts and adjacent routers on IP networks to establish multicast group memberships. This functionality is ideal for one-to-many and many-to-many networking applications, such as online streaming and gaming, facilitating exclusive transmission and more efficient resource utilization.



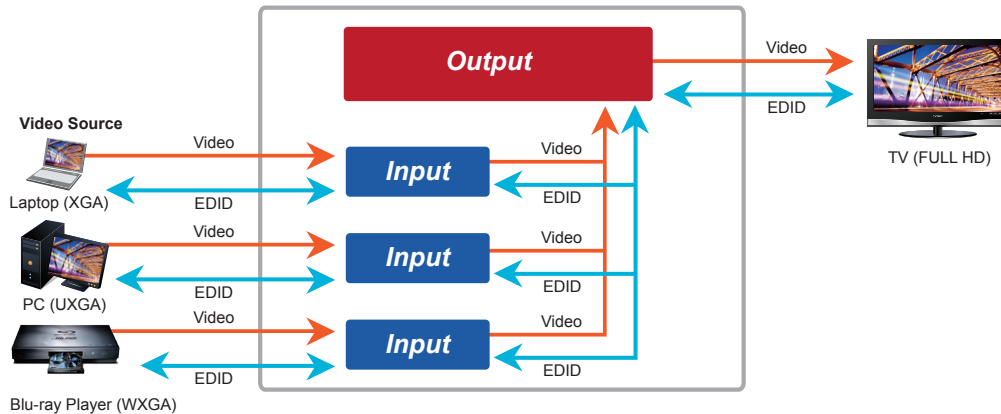
**Extended Display Identification Data (EDID) Support**

The IHD-420 series adopts Automatic EDID (Extended Display Identification Data) Copy function to make smooth video distribution over different types of display units. EDID is greatly important as it contains information about resources' manufacturer names, serial numbers, product types, maximum image sizes, color characteristics, factory pre-set timings, frequency range limits, etc. In some cases, display problems may occur due to incorrect EDID communication between the display monitor and the transmitting unit or inappropriate EDID data programmed by display manufacturers. Therefore, with Automatic EDID Copy function, the IHD-420 series allows the system to copy EDID information from EDID compliant displays and assures accurate display performance.

**Without Extended Display Identification Data**



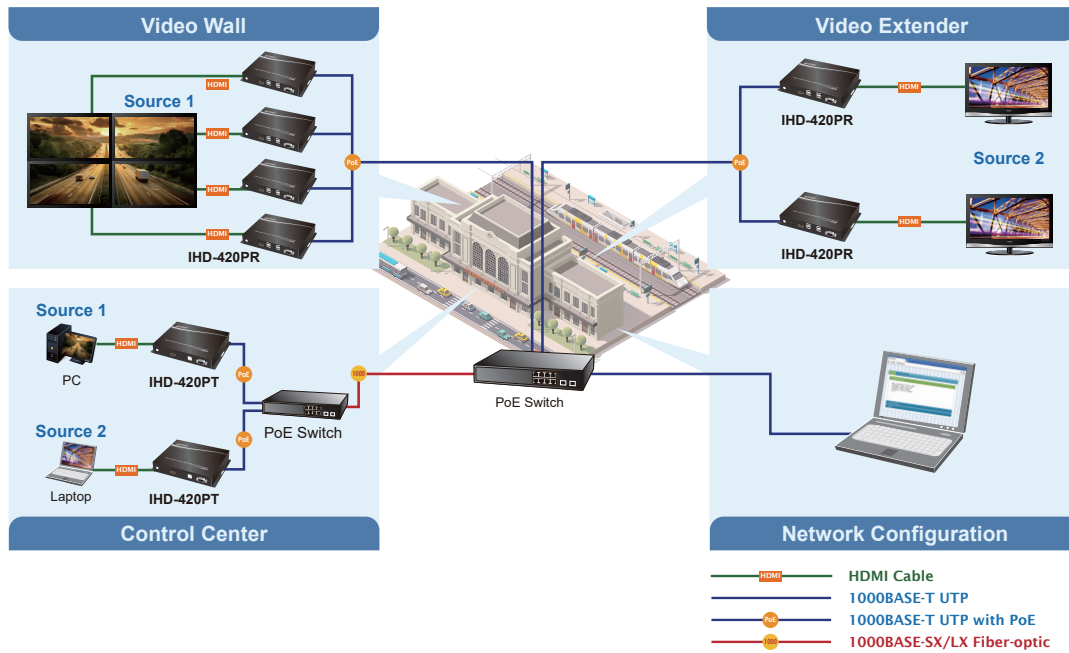
**Supports Extended Display Identification Data**



**Video Channel Setting Matches Well through Network Configuration**

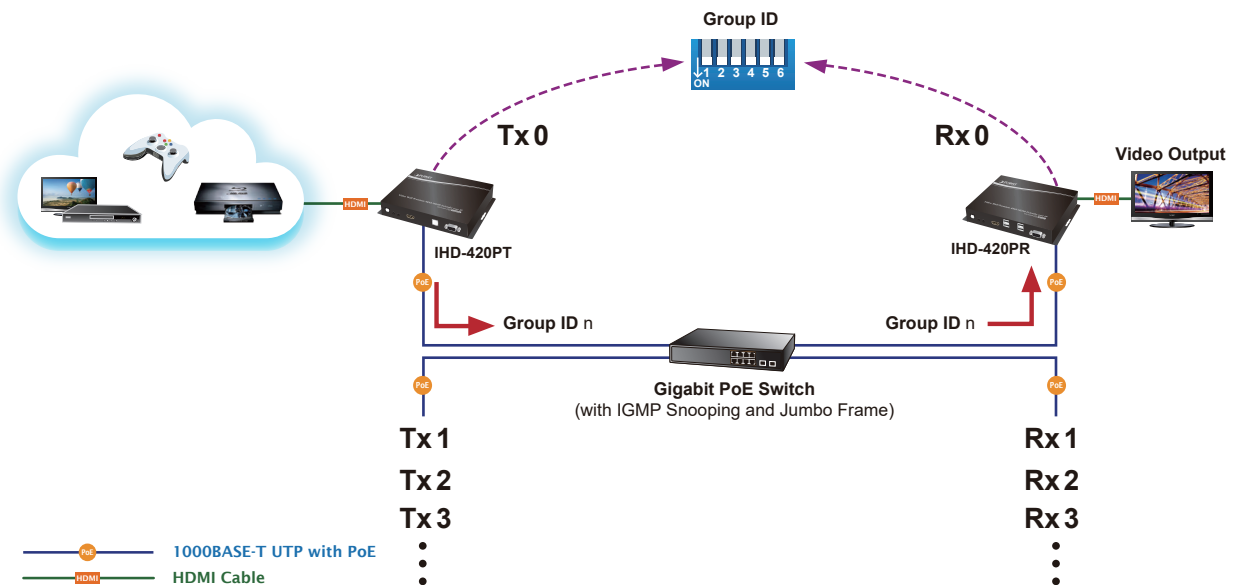
The IHD-420 series allows a network configuration via a central computer over the same LAN within a certain distance. By fully leveraging the Gigabit Ethernet switches with 802.1Q VLAN function, multi-casting can be performed to allow more video sources/senders in the network and be remotely managed. Adjusting and matching video channel setting is simple with the DIP switch on both the IHD-420PT and IHD-420PR. The video distribution is easily deployed through Plug and Play.

## Network Configuration



**Efficient Control via Selectable 64-Channel DIP Switch**

Where there is more than one transmitter in the video extend system, the DIP switch in the IHD-420PT and IHD-420PR facilitates distinguishing the pair of the transmitter and receiver units in the same channel. It further enables the broadcasting system to perform multiple video extend systems simultaneously through matching of the IHD-420PT and IHD-420PR.



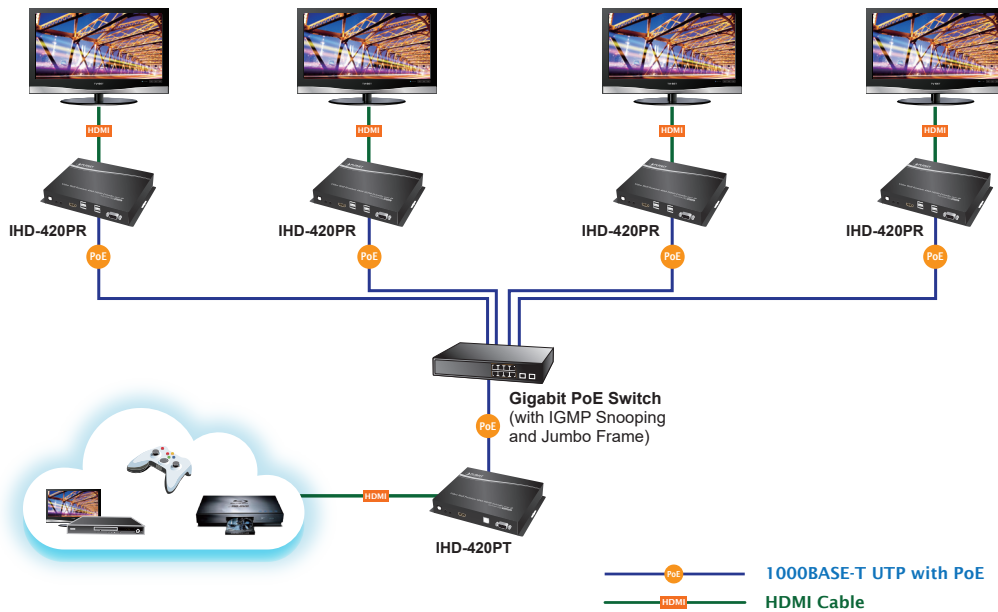
## Applications

PLANET IHD-420PT and IHD-420PR work as a pair to facilitate the management tool and HDMI display over IP Ethernet with PoE.

### Video Extender

The IHD-420PT and IHD-420PR are able to send the same video signal to multi-monitors in different locations at the same time. It helps to quickly extend the image and commercial to the public efficiently in such places as expos, food courts, boardrooms, and any public areas.

## Video Extender: One to Many

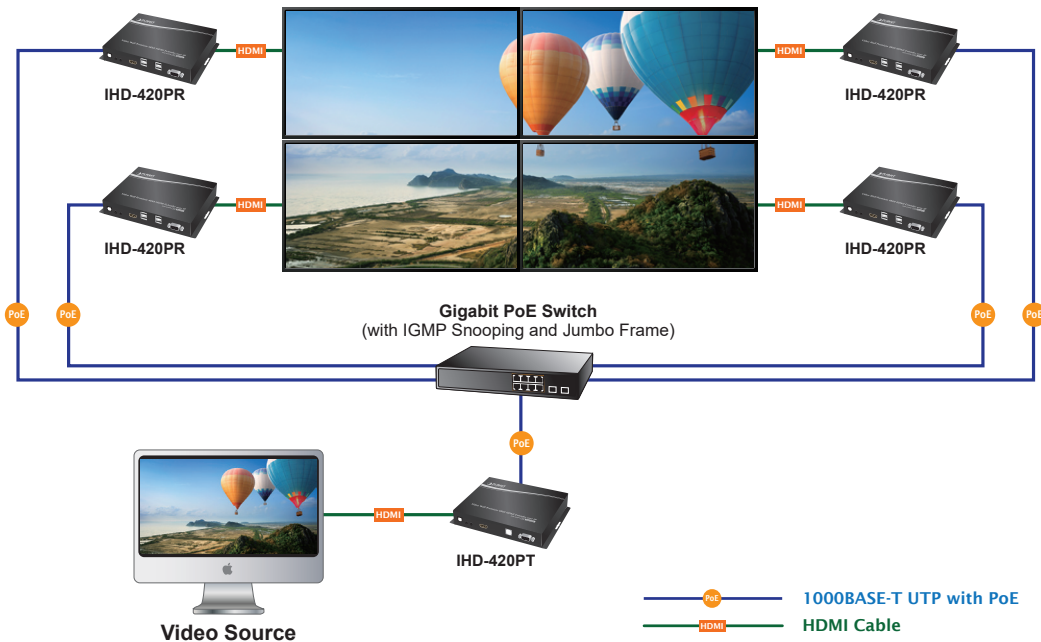


### Video Wall

To bring the image and picture in larger size over video wall, the IHD-420PT and IHD-420PR are the ideal solution to distributing one specified image, picture, or video to multiple screens which are usually applicable for sports, department stores, movie theaters, etc.

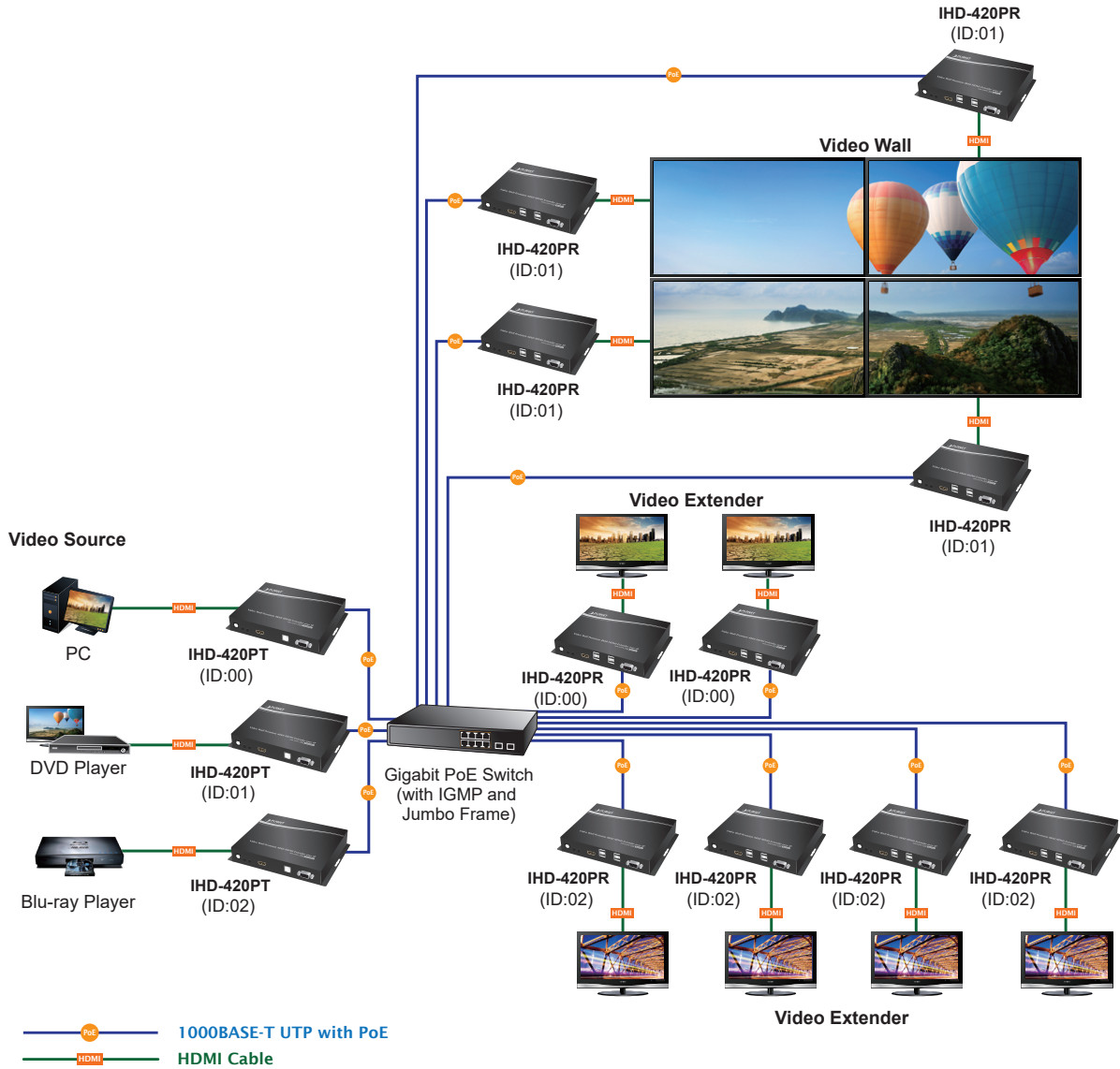
## Video Wall

Max. 8x16 Monitors



*Ideal Solution for Wide Variety of Commercial Installation Environments*

The IHD-420 series supports 100m over single cat5e/6 cable at point to point, as well as point to many and many to many over Gigabit Ethernet switch. With so many practical features, the IHD-420 series is ideal for live presentations, public broadcasting, education training, boardrooms, etc.



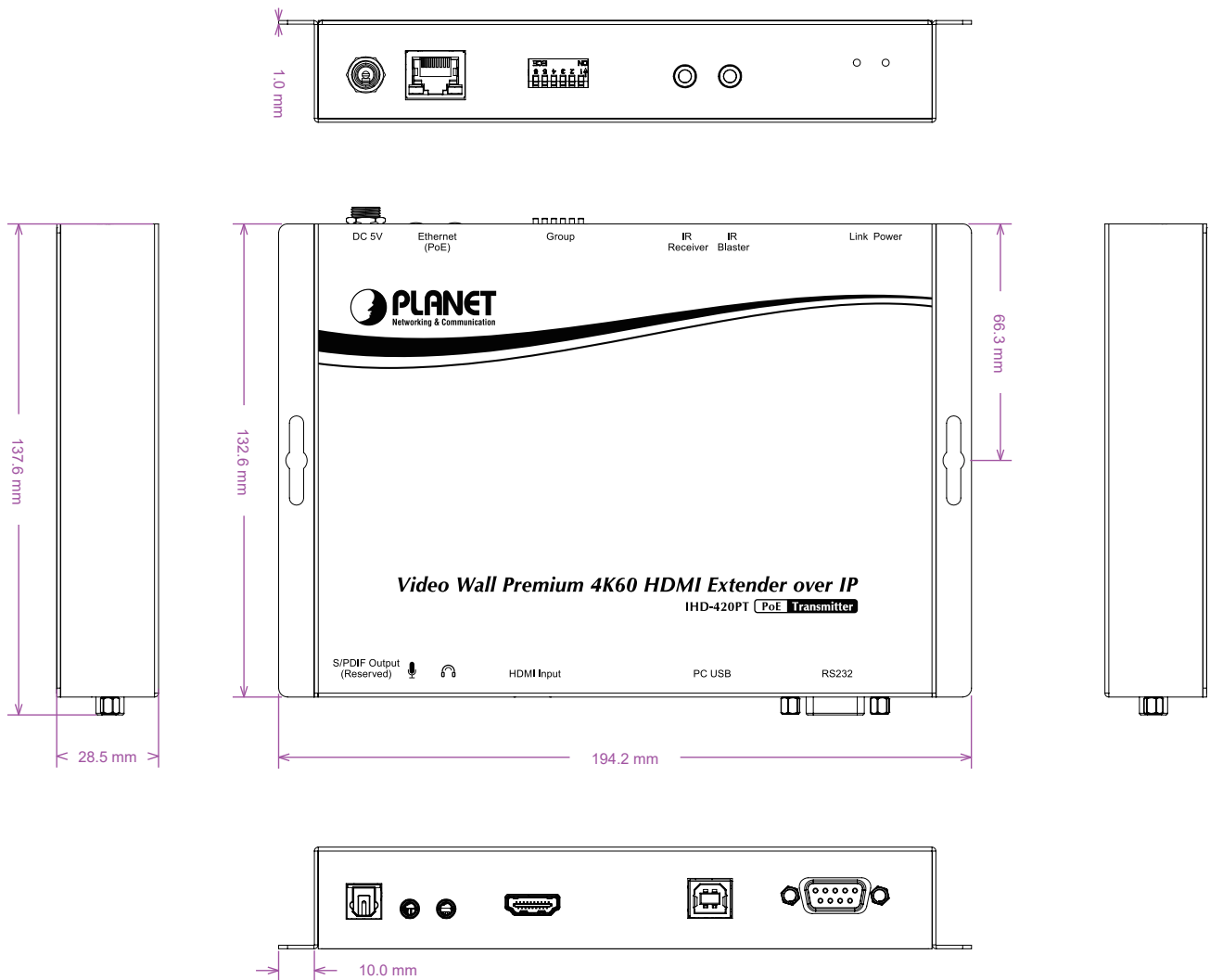
## Product Specifications

Model	IHD-420PT	IHD-420PR
<b>Hardware Specifications</b>		
Role	Transmitter Connecting to HDMI video source device	Receiver Connecting to HDMI Display device
Network Interface	RJ45 port (10/100/1000BASE-T Ethernet) x 1	
Serial Interface	DB-9 female connector for RS232	
LED	Power LED x 1 Link LED x 1	
Video In Interface	HDMI A Type female connector x 1	N/A
Video Out Interface	N/A	HDMI A Type female connector x 1
External Audio In Interface	3.5mm jack x 1	
External Audio Out Interface	3.5mm jack x 1	
IR	3.5mm jack for IR blaster/receiver cable	
RS-232	Yes, you need to adjust the DIP switch at the bottom of both devices to the "1" position. Setting it to "ON" activates the debug mode.	
Channel Switching	DIP (64 channels)	
USB	USB 2.0 type B x 1 (For PC/server)	USB 1.1 type A x 2 USB 2.0 type A x 2 (For mouse/keyboard)
S/PDIF Input	Reserved	
Power Supply	IEEE 802.3af/at PoE+ 5V DC, 2A	
CASE	Metal	
Power Consumption	7W (Max.)	
ESD Protection	15KV for air-gap discharge 8KV for contact discharge	
Dimensions (W x D x H)	194 x 133 x 29 mm	
Weight	645 g	
<b>Video and Audio</b>		
Maximum Video Wall	8 x 16 (row x column)	
HDMI Video In Resolution	4K (3840x2160) @ 60/50 Hz 4K (3840x2160) @ 30/25/24 Hz 1080p @ 60/50 Hz XGA, SXGA, UXGA, WSXGA	N/A
HDMI Video Out Resolution	N/A	4K (3840x2160) @ 60/50 Hz 4K (3840x2160) @ 30/25/24 Hz 1080p @ 60/50 Hz XGA, SXGA, UXGA, WSXGA
HDMI Video Out Rotation	0 degrees/90 degrees/180 degrees/270 degrees	
Compression	Visual lossless compression	
Audio	HDMI: 2-ch uncompressed audio	
<b>General</b>		
Management Interfaces	Web management	
System Expandability (max.)	64 groups	
Resolution Identification	EDID (Extended Display Identification Data)	
Security	HDCP compliant (2.2)	
Media Stream Bandwidth	Approximately 500Mbps@ 4K 60Hz	
Maximum Distance (between unit and PoE switch)	100 meters (330 feet) over CAT5e/6 cable	
<b>Standards Conformance</b>		
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab 1000BASE-T IEEE 802.3af/at PoE+	
HDMI Interface Compliance	HDMI 2.0a	
Protocol	TCP, UDP, RTSP, RTP, DHCP, IGMP Snooping, Multicast, IPv4, 802.1X	
Cabling	Cat5e/6 UTP cable	

Environment Specifications	
Operating	Temperature: 0~55 degrees C Relative Humidity: 5~90% (non-condensing)
Storage	Temperature: -10~60 degrees C Relative Humidity: 5~90% (non-condensing)
Emission	FCC, CE
Standard Accessories	
Packet Contents	<ul style="list-style-type: none"> <li>■ Media Extender x 1</li> <li>■ Quick Installation Guide Sheet x 1</li> <li>■ Screws x 2</li> <li>■ IR Blaster/Receiver Cable x 1</li> </ul>

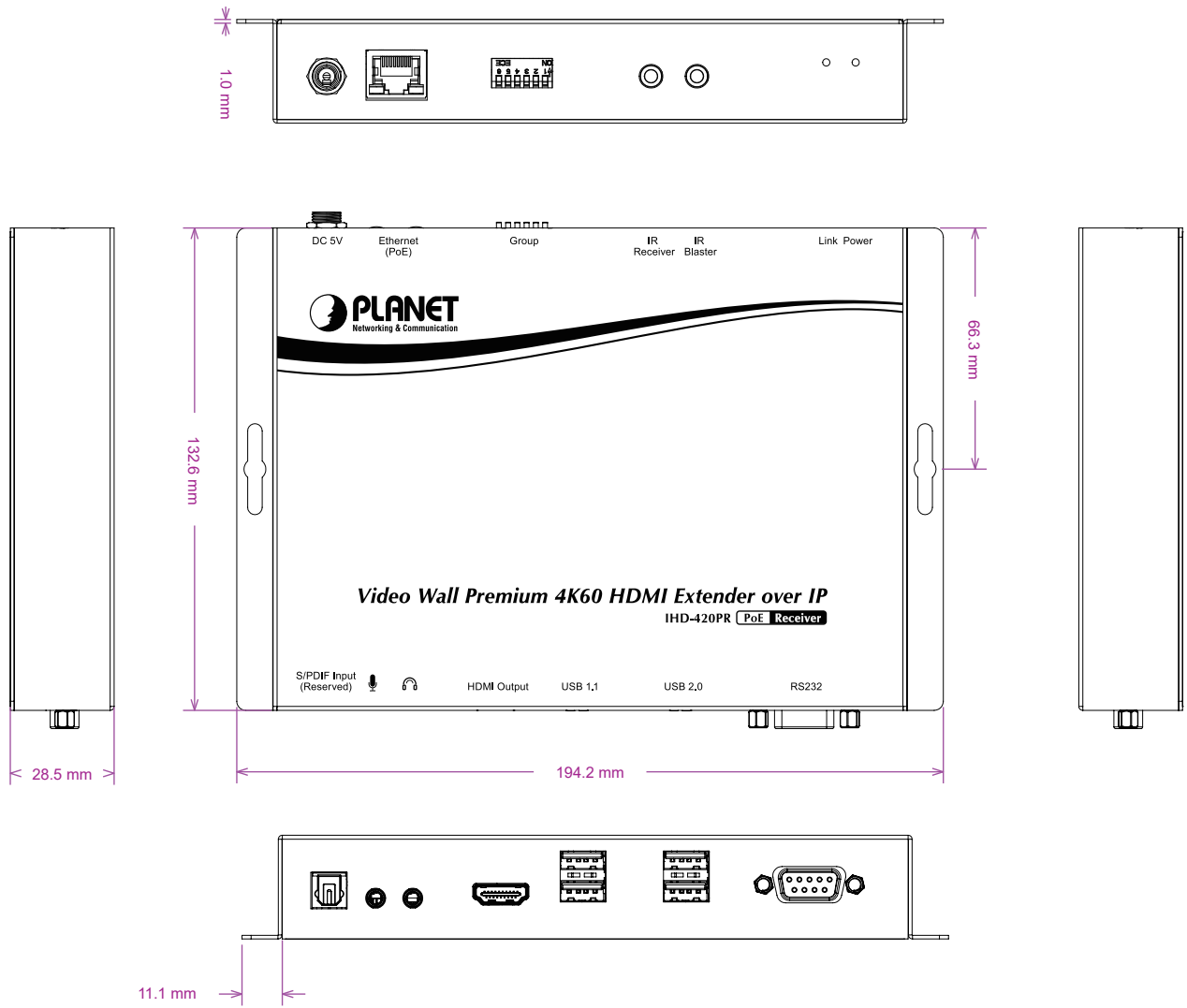
## Dimensions

### ■ IHD-420PT



Dimensions (W x D x H): 194.2 x 132.6 x 28.5 mm

■ IHD-420PR



Dimensions (W x D x H): 194.2 x 132.6 x 28.5 mm

## Ordering Information

IHD-420PT	Video Wall 4K/60 HDMI & USB over IP Transmitter with PoE
IHD-420PR	Video Wall 4K/60 HDMI & USB over IP Receiver with PoE

## Related Product

IHD-410PT	Video Wall Ultra 4K HDMI/USB Extender Transmitter over IP with PoE
IHD-410PR	Video Wall Ultra 4K HDMI/USB Extender Receiver over IP with PoE
IHD-210PT	High Definition HDMI Extender Transmitter over IP with PoE
IHD-210PR	High Definition HDMI Extender Receiver over IP with PoE
GS-4210-24UP4X	24-Port 10/100/1000T 802.3bt PoE + 4-Port 10G SFP+ Managed Ethernet Switch
AVS-4210-24HP4X	8-Port 10/100/1000T 802.3bt PoE + 16-Port 10/100/1000T 802.3at PoE + 4-Port 10G SFP+ Managed AV Switch
GS-4210-48P4S	48-Port 10/100/1000T 802.3at PoE + 4-Port 100/1000BASE-X SFP Managed Switch

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### IHD-420PT/IHD-420PR