

## Video Wall Ultra 4K HDMI/USB Extender over IP with PoE



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

PLANET IHD-410 HDMI/Video Wall over IP with PoE delivers a great 4K video distribution solution such as bringing an efficient and effective advertising deployment. The IHD-410 series is the combination of the transmitter, IHD-410PT, and the receiver, IHD-410PR. 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-410 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-410 series features bi-directional IR extension and RS232 pass-through which allows the user to cascade the system enabling them to extend the transmission distance without signal loss or delay. It also supports VGA Local Output function for checking video source conveniently.

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-410 series thus reduces the complexity of cable installation.

### HDMI Network

- 4K ultra high-quality video transmitter
- 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 16-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
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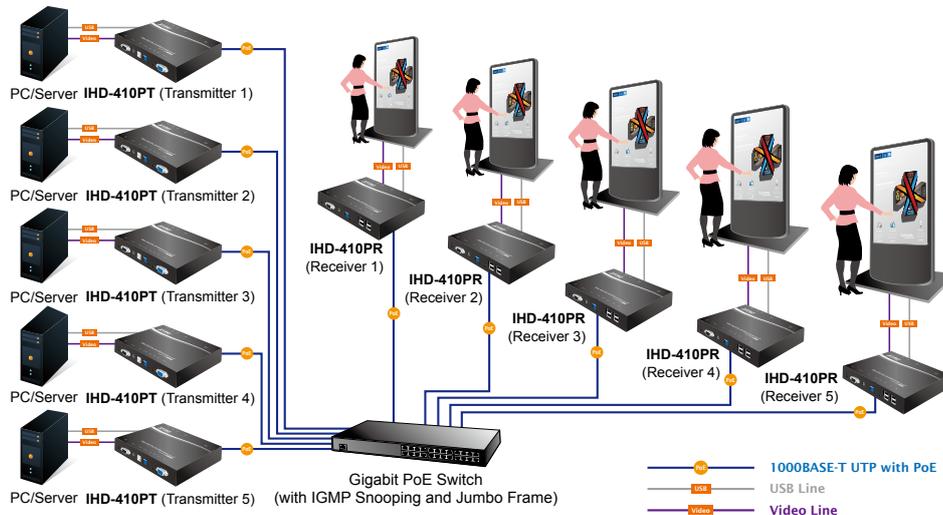
### Video Output Characteristics

- Supports 1080p or 4K (3840 x 2160) HDMI resolution
- HDCP compliant and blu-ray ready
- Supports VGA local output
- 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

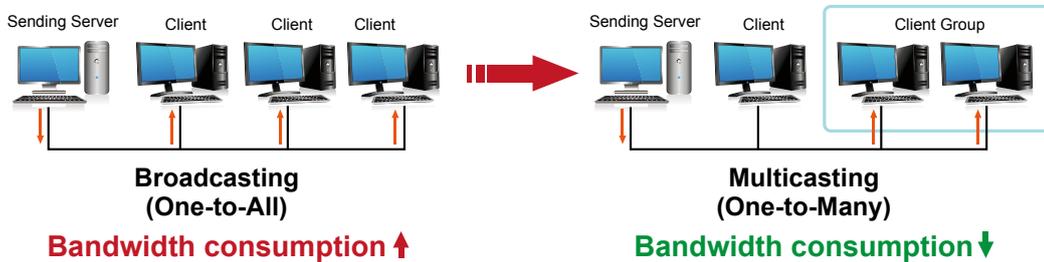
- Supports USB for KVM PC control
- IEEE 802.3af/at PoE+ function supported; no additional power supply needed
- Automatic EDID (Extended Display Identification Data) configuration
- Friendly Web UI for ease of use
- Supports multi-casting group with Gigabit Ethernet Managed Switch (IGMP snooping and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

### Multiple HDMI and USB over IP Interaction Application



#### Exclusive Video Transmission by IGMP Snooping Technology

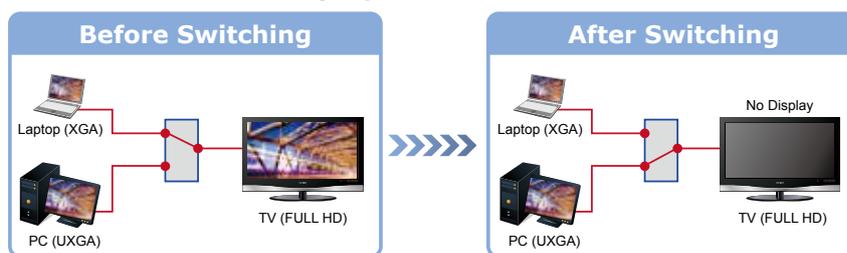
One IHD-410PT in local site can drive multiple IHD-410PRs in remote sites without consuming extra network loading. Integrated with Gigabit PoE switch built-in with IGMP snooping functions, there are 16 channels selectable via the IHD-410 series, so video and audio can be transmitted simultaneously. IGMP snooping is an integral part of IP multicast and a communications protocol used by hosts and adjacent routers on IP networks to establish multicast group memberships. IGMP snooping can be used for one-to-many/many-to-many networking applications such as online streaming video and gaming, and allows exclusive transmission and more efficient use of resources.



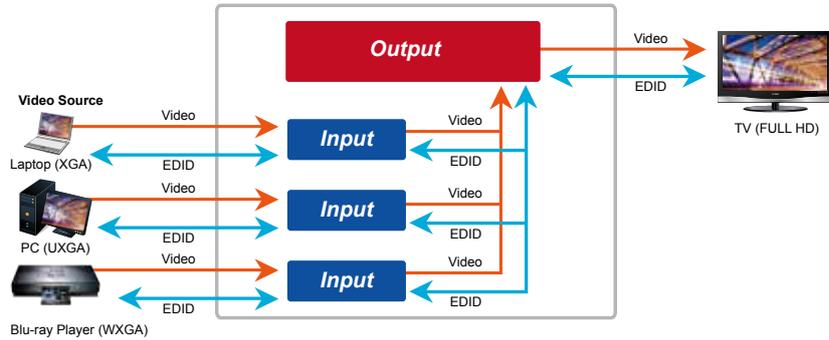
#### Extended Display Identification Data (EDID) Support

The IHD-410 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-410 series allows the system to copy EDID information from EDID compliant displays and assures accurate display performance.

#### Without Extended Display Identification Data



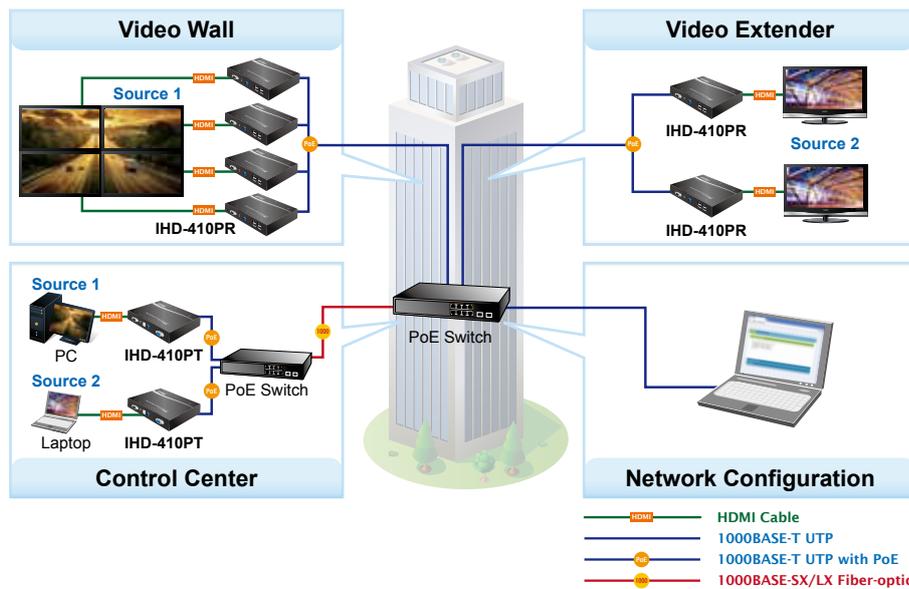
**Supports Extended Display Identification Data**



*Video Channel Setting Matches Well through Network Configuration*

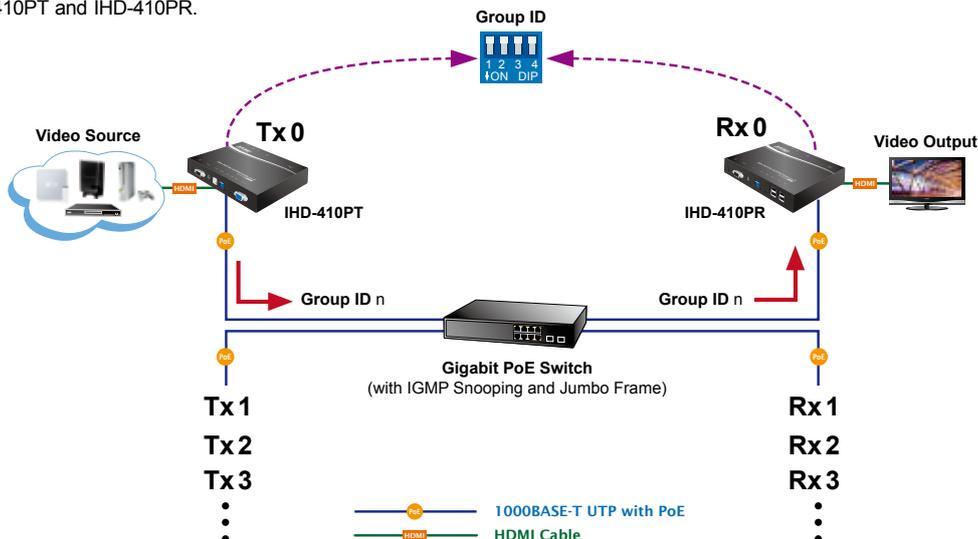
The IHD-410 series network can be configured by a central computer over the same LAN within a certain distance. Fully leveraging the Gigabit Ethernet switches with 802.1Q VLAN function, multi-casting can be performed to allow more video sources/senders in the network and be remotely managed. Just adjust and match video channel setting with the simple DIP switch in both the IHD-410PT and IHD-410PR. The video distribution is easily deployed through Plug and Play.

**Network Configuration**



*Efficient Control via Selectable 16-Channel DIP Switch*

Where there is more than one transmitter in the video extend system, the DIP switch in the IHD-410PT and IHD-410PR 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-410PT and IHD-410PR.



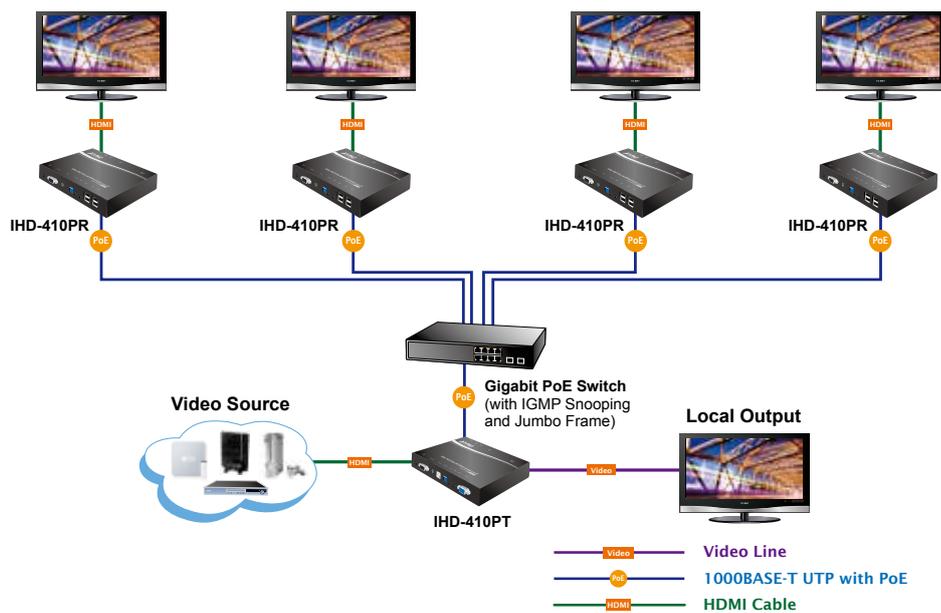
## Applications

PLANET IHD-410PT and IHD-410PR work as a pair to facilitate the management tool and HDMI display over IP Ethernet with PoE.

### Video Extender

The IHD-410PT and IHD-410PR 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.

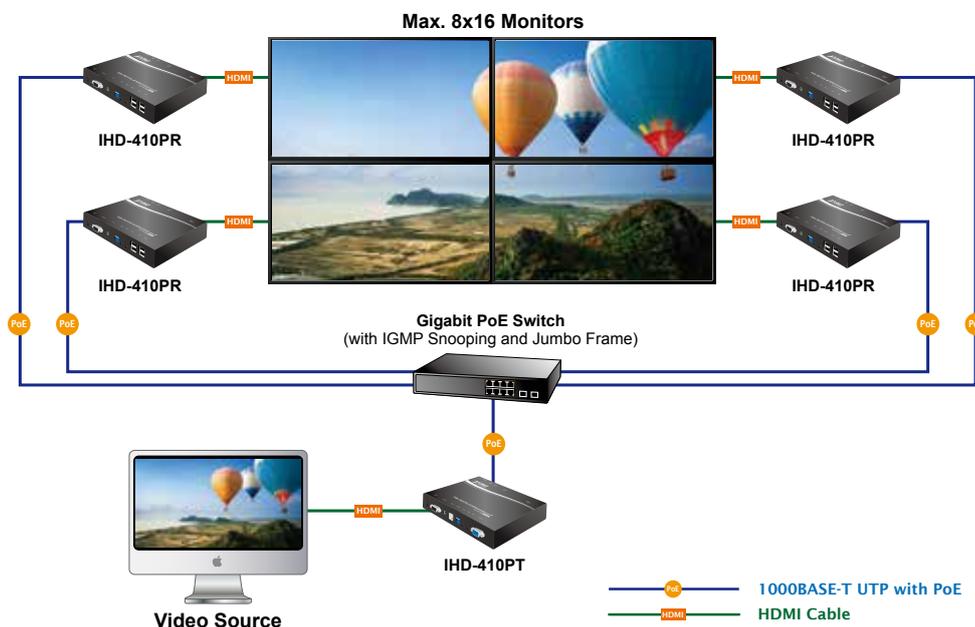
### Video Extender: One to Many



### Video Wall

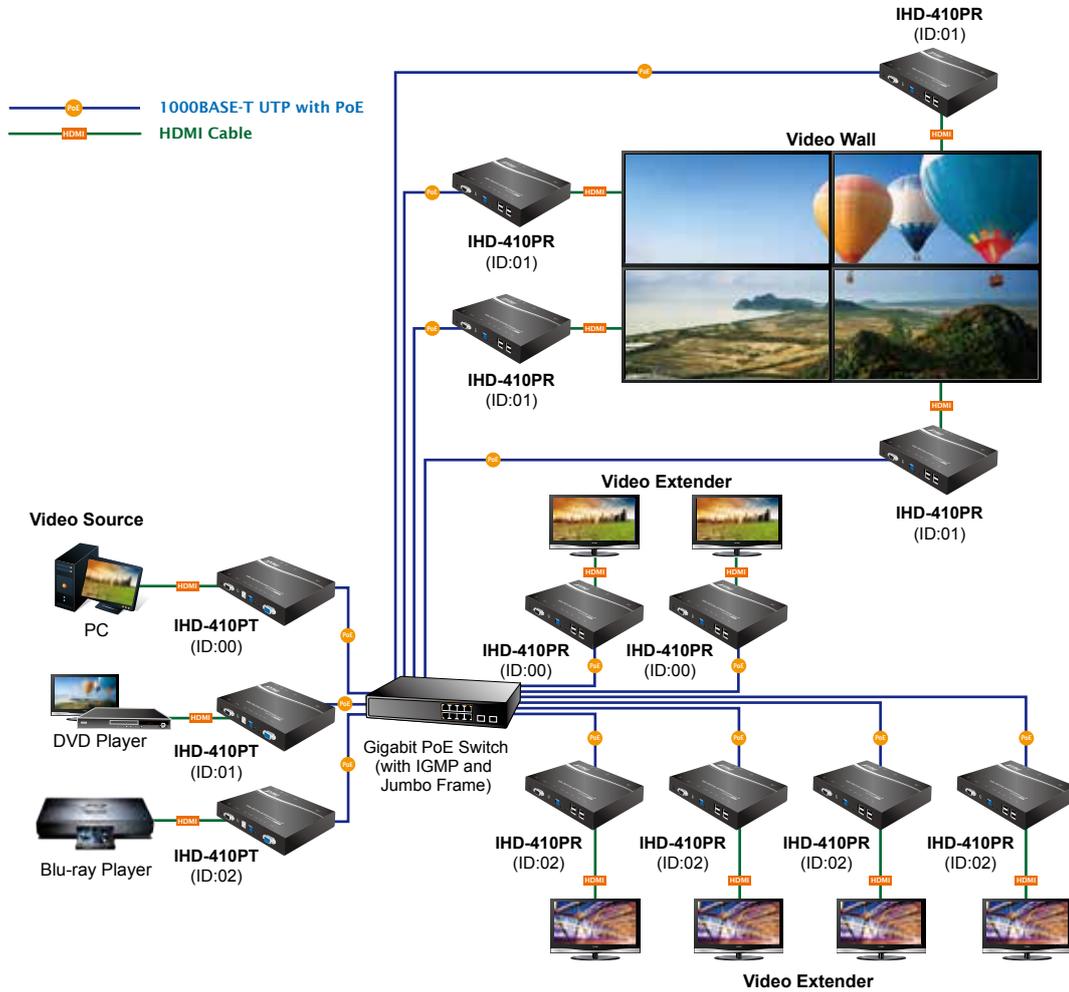
To bring the image and picture in larger size over video wall, the IHD-410PT and IHD-410PR are the ideal solution to distributing one specified image, picture, or video to multiple screens which are usually applicable for sports, department stores, movie theaters, etc.

## Video Wall



*Ideal Solution for Wide Variety of Commercial Installation Environments*

The IHD-410 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-410 series is ideal for live presentations, public broadcasting, education training, boardrooms, etc.



## Specifications

Model	IHD-410PT	IHD-410PR
<b>Hardware Specifications</b>		
Network Interface	RJ45 port (10/100/1000BASE-T Ethernet) x 1	
Serial Interface	DB-9 female connector for RS232 x 1RS232	
LED	ACT LED x 1 Link LED x 1	
Buttons	Reset button x 1 G/V mode button x 1	
Video In Interface	HDMI A Type female connector x 1	N/A
Video Out Interface	VGA DB-15 female connector x 1	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 emitter cable	3.5mm jack for IR receiver cable
Channel Switching	DIP (16 channels)	
USB	USB 2.0 type B x 1 (For PC/server)	USB 2.0 type A x 4 (For mouse/keyboard)
Power Supply	IEEE 802.3af/at PoE+ 12V DC, 2A	
Power Consumption	3W (Min.) 14W (Max.)	
Dimensions (W x D x H)	194 x 114 x 28 mm	
Weight	620 g	
<b>Video and Audio</b>		
Maximum Video Wall	8 x 16 (row x column)	
HDMI Video In Resolution	4K (3840x2160) @ 30/24 Hz 1080p @ 60/50 Hz 1080p @ 30/25 Hz 1080i @ 60/50 Hz 720p @ 60/50 Hz 480p @ 60/50 Hz 480i @ 60/50 Hz	N/A
HDMI Video Out Resolution	N/A	4K (3840x2160) @ 30/24 Hz 1080p @ 30/25 Hz 1080i @ 60/50 Hz 720p @ 60/50 Hz 480p @ 60/50 Hz 480i @ 60/50 Hz
VGA Video Out Resolution	1080p @ 30/25 Hz 1080i @ 60/50 Hz 720p @ 60/50 Hz 480p @ 60/50 Hz 480i @ 60/50 Hz	N/A
HDMI Video Out Rotation	0 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.)	16 groups	
Resolution Identification	EDID (Extended Display Identification Data)	
Security	HDCP compliant	
Media Stream Bandwidth	Approximately 275Mbps@ 4K 30Hz	
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 1.4a	
Protocol	TCP, UDP, RTSP, RTP, DHCP, IGMP Snooping, Multicast, IPv4	
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	Media Extender x 1 Quick Installation Guide x 1 Mounting Bracket x 2 Screws x 4 IR Emitter Cable x 1	Media Extender x 1 Quick Installation Guide x 1 Mounting Bracket x 2 Screws x 4 IR Receiver Cable x 1

\*\* Product specifications are subject to change without notice.

## Ordering Information

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

## Related Products

IHD-210PT	High Definition HDMI Extender Transmitter over IP with PoE
IHD-210PR	High Definition HDMI Extender Receiver over IP with PoE
NVR-3685	H.265 36-Ch Network Video Recorder with 8-Bay Hard Disks
GS-4210-16P4C	16-Port 10/100/1000T 802.3at PoE + 4-Port Gigabit TP/SFP Combo Managed Switch/220W
GS-5220-8P2T2S	L2+ 8-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T + 2-Port 100/1000X SFP Managed Switch
GS-4210-24P4C / GS-4210-24PL4C	24-Port 10/100/1000T 802.3at PoE + 4-Port Gigabit TP/SFP Combo Managed Switch