



# TRICOLOR PRODUCTS BROCHURE

PROFESSIONAL VIDEO & AUDIO DISPLAY CONTROL SOLUTION PROVIDER



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# Video Wall Controller

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Creative Video Wall Controller  
Modular Design Video Wall Controller  
Distributed Video Wall Controller  
Video Splitter

# Smartkake Series Creative Video Wall Controller



SmartKake-V2

## Product Description

The Smartkake series is a high-performance signal multi creative video wall controller developed by Tricolor, a world class multi-display processor developer. The system supports single HDMI 4K signal input and flexible displays on 4 output monitors through 4 FHD outputs. It can show any part cut from the original input image, rotate each output independently at any degree, supports horizontal and vertical display integration and supports multiple cascades to enable single signal sources to be delivered to more output channels.

## Features

- Supports 360° rotation at any degree for each output signal
- Support for automatic detection of input signals
- Supports customizable output resolution for each channel
- Support input channel EDID update configuration
- Support automatic protection of power-off devices
- Support for unlimited cascading between devices
- Support 3.5mm analog audio out

## Product Model

Model	Name
SmartKake-V2-UH	Creative video wall controller

## Specifications

Video Input	Interface Type	HDMI TYPY A
	Signal format	HDMI1.4
	Input resolution	3840x2160@30hz, and backward compatible
	Audio input	Support for embedded audio input
Video Output	Interface Type	HDMI TYPY A
	Signal format	HDMI 1.3
	Output resolution	1920x1200@60hz, and backward compatible
	Audio output	3.5mm independent audio output
Image Processing	Image rotation	360° rotation at any angle
	Border compensation	Support
	Overlay generation	Support
Control	TCP/IP	
Size	208x45x200mm	
Weight	2.4kg (5.29lb)	
Powered By	12V/DC, 3.3A	

# Hades Series Video Wall Controller



## ► Product Description

Hades Series is a controller platform that has pure hardware architecture, high performance video image processing system without software operation, realizing multi image display function. The Hades series controllers combine high-definition video signal acquisition, real-time high-resolution digital image processing and high-end image processing such as 3D high-order digital filtering to provide powerful signal processing capabilities. This product uses a high-capacity high-speed FPGA array and CrossPoint digital multi-bus data routing as well as a switching processing mechanism to fundamentally guarantee full real-time processing and data consistency for all input sources. This is all achieved with no delay, no discretization and no frame loss which will give you the the perfect image.

## ► Features

- Hot Swappable I/O Cards
- Seamless switching, no black field interval when switching signals
- Redundant power backup
- Input port EDID editing
- Support Multiple Layout and Auto Loop
- High resolution background
- Character overlay function on input signal channels
- Input signal preview function
- Multiple video wall management
- Multiplier line processing
- Multi-image display
- Arbitrary scaling, overlay and roaming of the screen
- Image zoom in & out
- Signal cropping function
- Screen anomaly correction functionality
- Support ipad control

## ► Specifications

### Chassis size

Scale	Card slot configuration	Size	Power consumption
Mobius-H3-2U	Input 2 slots, output 2 slots	482(W)x88(H)x380(D)mm	< 200W
Mobius-H3-4U	Input 4 slots, output 4 slots	482(W)x175(H)x380(D)mm	< 300W
Mobius-H3-8U	Input 8 slots, output 9 slots	482(W)x352(H)x380(D)mm	< 500W
Mobius-H3-14U	Input 16 slots, output 18 slots	482(W)x620(H)x380(D)mm	< 800W
Mobius-H3-20U	Input 32 slots, output 18 slots	482(W)x880(H)x380(D)mm	< 1000W
Mobius-H3-28U	Input 32 slots, output 36 slots	482(W)x1240(H)x380(D)mm	< 1200W

## Video Wall Processor

### Chassis Size

Scale	Card slot configuration	Size	Power consumption
Mobius-H5-4U	Input 6 slots, output 2 slots	482(W)x175(H)x380(D)mm	< 300W
Mobius-H5-8U	Input 13 slots, output 4.5 slots	482(W)x352(H)x380(D)mm	< 500W
Mobius-H5-14U	Input 24 slots, output 9 slots	482(W)x620(H)x380(D)mm	< 800W
Mobius-H5-22U	Input 32 slots, output 18 slots	482(W)x934(H)x380(D)mm	< 1100W

### Chassis Size

Scale	Card slot configuration	Size	Power consumption
Mobius-V5-4U	Input 6 slots, output 2 slots	482(W)x175(H)x380(D)mm	< 300W
Mobius-V5-8U	Input 13 slots, output 4.5 slots	482(W)x352(H)x380(D)mm	< 500W
Mobius-V5-14U	Input 24 slots, output 9 slots	482(W)x620(H)x380(D)mm	< 800W
Mobius-V5-22U	Input 32 slots, output 18 slots	482(W)x934(H)x380(D)mm	< 1100W

## ► Slot Cards Type

### Input Interface

\*Only selected Model support this type of slot card

DVI	DVI input card, support HDCP, support EDID online editing, maximum support resolution 1920*1200@60Hz
VGA	VGA input card, support EDID online editing, maximum support resolution 1920*1200@60Hz
CVBS	CVBS standard definition input card, support fixed PAL or NTSC system, support brightness, contrast, grayscale, saturation adjustment
	CVBS HD input card, PAL/NTSC system adaptive, support 3D comb filtering and 3D deinterlacing, support brightness, contrast, grayscale, saturation adjustment
HDBaseT	HDBaseT input card, the maximum input resolution is 1920*1200@60Hz, and it can be used with the equipment to transmit signals 70 or 100 meters through Category 6 twisted pair.
HDMI	HDMI 1.3 input card, support HDMI1.3, support HDCP, support EDID online editing, maximum support resolution 1920*1200@60Hz HDMI 1.4 input card, meet HDMI 1.4 standard, input support 3840*2400@30, 3840*2160@30, 2560*1600@60 and below resolution, support EDID customization
	SDI input card, support SD/HD SDI signal, compatible with 3G SDI signal, with SDI signal loop out, support maximum resolution 1920x1080
SDI	YPbPr input card, maximum support resolution 1920*1200@60Hz
YPbPr	Optical fiber input card, maximum input resolution 1920*1200@60Hz, used with optical transceivers, can achieve 10KM transmission of input signals
Fiber	Dual-Link DVI signal input card, 330MHz clock, support 4K signal input, input resolution typical value 3840x2400@30Hz
Dual-Link DVI	Or 2560x1600@60Hz, support EDID online editing, input signal is not lost frame processing at all
DisplayPort	DisplayPort input card, support DP 1.1 standard, input resolution is usually 3840x2400@30 or 2560x1600@60, support EDID online editing, support input signal without frame loss processing
IP	*IP decoding card, each card supports decoding 4 channels 1920x1080p@60, 8 channels 1920x1080p@30, 16 channels 1280x720p@30, or 36 channels D1 signals, supporting mainstream security platform access

### Output Interface

\*Only selected Model support this type of slot card

DVI	DVI output card, support DVI-I signal output, maximum output resolution 1920*1200@60Hz, can output VGA signal through adapter
HDMI	HDMI 1.3 output card, maximum output resolution 1920*1200@60Hz *HDMI
	1.4 Output card, the maximum output resolution is 3840*2160@30Hz, which can be output by two channels: 3840x2160@50Hz
HDBaseT	HDBaseT output card, the maximum output resolution is 1920*1200@60Hz, and it can be used with the equipment to transmit the output signal 70 or 100 meters through Category 6 twisted pair.
Fiber	Optical fiber output card, the maximum output resolution is 1920*1200@60Hz, and it can be used with the equipment to transmit the output signal to 10KM through single-mode fiber.
SDI	SDI output card, support SDI/HD-SDI, support SDI signal output, SDI signal backup, maximum output resolution 1920*1080@60Hz
CVBS	CVBS output card, support PAL/NTSC system settings, support resolution 720x480i@30 frames, 720x576i@25 frames
YPbPr	YPbPr output card, support resolution 1920x1080i@30, 1920x1080i@25, 1280x720p@60, 720x480i@30, 720x576i@25
Dual-Link DVI	*Dual-Link DVI output card, single port maximum output resolution 3840*2160@30Hz

# Apollo Pro-V4 Series Video Wall Controller

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## ► Product Description

The Tricolor Apollo Pro-V4 professional controller now support 4K @ 60Hz ultra-high definition video signal acquisition and transmission. The video image resolution can be up to 4:4:4 chroma sampling in the RGB gamut. It is a Multi-function controller that adopts a pure hardware FPGA system architecture and modular design. It not only has a reliable and efficient history of providing high quality hardware architecture but also supports various interfaces and business Models for flexible and personalized combinations. The configuration of mixed slot can facilitate the system design, transformation and expansion. The hardware also supports preview and mirroring functions, multi-group display, multi-user control management, built-in scrolling text. The OSD mouse direct control mode allows the user has more functionality over the traditional management mode. The screen annotation function has brought the convenience of device management to a new level. Designed for the application needs of intelligent full-featured control command centers, ApolloPro-V4 is suitable for industries and applications such as energy and power, judicial prisons, smart cities, government services, water conservancy and hydrology, meteorological earthquakes, corporate management, metallurgical steel, banking finance, national defense security, Public security transportation, exhibition display, production scheduling, radio and television, education and scientific research. Focusing on video wall control but not only viseo wall control, is a new solution for modern control centers.

## ► Features

- Digital bus routing structure, the system's signals are exclusive to their own dedicated data channels for non-blocking full cross data transmission
- Full hardware FPGA architecture, built-in core computing mechanism, excellent image processing performance
- Supports 4K @ 60 ultra high definition video signal acquisition and transmission, video image resolution can reach all 4:4:4 chroma sampling in RGB gamut. Provides high quality image reproduction and image detail for video playback
- Board-type hot-swappable structure, high chassis integration and highly reliable equipment;
- Input and output board mixing function
- Each signal dynamically sets a point-to-point dedicated line data channel. Each signal has its own dedicated channel for transmission, which can switch between signals in a nanosecond with no black field interval.
- With RRTA (Resolution Real-Time Full Compatibility) technology, a single processor can simultaneously control multiple sets of large screens with different resolutions. Can support LED, LCD, projection lamps and multiple display units at the same time
- Supports single cards up to 16 windows. Supports zooming, roaming, seamless switching of real-time sources, arbitrary overlay of windows, etc.
- Supports the the collection and output to a large screen; supports 60Hz local video echo and network echo
- Signal character overlay function, you can set multiple display areas, font sizes, colors, and superimpose images.
- Support for 1000 sets of scene saves and automatic polling
- Supports EDID management and HDCP function
- User-defined output resolution
- Audio and video integrated switching
- Codec transmission of IP signals such as H.264 / AVC and H.265 / HEVC
- Support for multi-type client control, not only for the PC version client but also mobile version terminal. Supports multiple different types of devices for operation and control and support keyboard, TCP/IP, RS232 control, etc.
- The large screen group supports mouse and keyboard signals, and can directly use the mouse arrow to perform a series of operations on the window and screen group plan on the entire large screen group.
- Supports the direct control function of the signal source which is known as the RealControl function. The processor can use the OSD mouse to access the signal source to open the window on the large screen thereby directly controlling the PC signal source by using an external mouse.
- Input and output signal preview and echo
- Displays subtitles on a large screen. Subtitles can be displayed statically or dynamically.
- Emergency loss of power protection, state storage memory
- Power redundancy backup
- Monitoring alarm
- Multi-user and user rights management
- Front panel touch screen for matrix switching and pre-planning control, user-friendly operation

## ► Specifications

### Chassis Size

Scale	Card slot configuration	Size	Power consumption
Ap-V4-2U	A total of 4 card slots, 1-2 (a total of 2) card slots are input card slots,	440 (W)X385(D)X89(H)mm	<250W
Ap-V4-4U	3-4 (2 in total) card slots are mixed card slots	440 (W)X385(D)X175(H)mm	<450W
Ap-V4-10U	A total of 8 card slots, 1-3 (a total of 3) card slots are input card slots,	440 (W)X430(D)X442(H)mm	<800W
Ap-V4-16U	4-8 (a total of 5) card slots are mixed card slots	440 (W)X430(D)X709(H)mm	<1600W
Ap-V4-24U	A total of 19 card slots, 1-9 (a total of 9) card slots are input card slots, 10-19 (a total of 10) card slots are mixed card slots	440 (W)X430(D)X1067(H)mm	<2200W

## ► Slot Card Type

### Input Interface

DVI	DVI audio and video input card, support DVI and analog 3.5mm audio signal input, support HDCP, maximum support resolution 1920*1200@60Hz;
	Dual-link DVI audio and video signal input card, support Dual-link DVI video and analog 3.5mm audio signal input, 330MHz clock, support 4K signal input, input resolution typical value 3840x2400@30Hz or 2560x1600@60Hz, input signal is not lost Frame processing
HDMI	HDMI 1.3 audio and video input card, support HDMI video and embedded audio signal input, support HDMI 1.3, support HDCP, maximum support resolution 1920*1200@60Hz
	HDMI 1.4 audio and video input card, support HDMI video and embedded audio signal input, meet HDMI 1.4 standard, input support 3840*2400@30, 3840*2160@30, 2560*1600@60 and below resolution
	HDMI 2.0 audio and video input card, support HDMI 2.0 and embedded audio signal input, support HDMI2.0 standard, support 4K signal input, input resolution typical value 3840x2160@60Hz
DisplayPort	DisplayPort 1.1 audio and video input card, support DisplayPort and embedded audio signal input, support DP 1.1 standard, support 4K signal input, input resolution typical value 3840x2400@30Hz or 2560x1600@60Hz
	DisplayPort 1.2 audio and video input card, support DisplayPort and embedded audio signal input, support DP 1.2 standard, support 4K signal input, input resolution typical value 3840x2160@60Hz
VGA	VGA audio and video input card, support VGA and analog 3.5mm audio signal input, maximum support resolution 1920*1200@60Hz
YPbPr	YPbPr audio and video input card, support YPbPr and analog 3.5mm audio signal input, maximum support resolution 1920*1080@60Hz
SDI	SDI input card, support SD/HD SDI signal, compatible with 3G SDI signal, support SDI video and embedded audio signal input, support maximum resolution 1920x1080p@60
CVBS	CVBS audio and video input card, support CVBS and analog 3.5mm audio signal input, PAL/NTSC system adaptive, support 3D comb filtering and 3D deinterlacing, support brightness, contrast, grayscale, saturation adjustment
HDBaseT	HDBaseT 2K audio and video input card, support twisted pair video and audio signal input, maximum input resolution 1920*1200@60Hz, and used with certified equipment, can transmit signals 100 meters through 6 types of twisted pair
	HDBaseT 4K audio and video input card, support twisted pair video and audio signal input, maximum input resolution 4K@30Hz and backward compatible with typical resolution such as 1080p, and used with certified equipment, can be passed through 6 types of twisted pair Signal transmission 100 meters
Fiber	10G optical fiber audio and video 2K input card, support single-core LC optical signal input, maximum input resolution 1920x1080p@60Hz, and certified equipment. The transmission distance is single mode 10Km.
	10G optical fiber audio and video 4K input card, support single-core LC optical signal input, maximum input resolution 4K@30Hz, and certified equipment. The transmission distance is single mode 10Km.
KVM Fiber	10G optical fiber audio and video 2K KVM input card, support single-core LC optical signal input, maximum input resolution 1920x1080p@60Hz, support transmission of mouse and keyboard signals, and certified equipment. The transmission distance is single mode 10Km.
	10G optical fiber audio and video 4K KVM input card, support single-core LC optical signal input, input support 3840*2400@30, 3840*2160@30, 2560*1600@60 and below resolution, support for transmitting mouse and keyboard signals, and used with certified devices. The transmission distance is single mode 10Km.
IP	H.264/AVC streaming media decoding card, support H.264 streaming media decoding, support decoding 1920x1080p@60 signal and backward compatible
	H.265/HEVC 2K streaming media decoding card, support H.264/H.265 streaming media decoding, support decoding 1920x1080p@60 signal and backward compatible
	H.265/HEVC 4K streaming media decoding card, support H.264/H.265 streaming media decoding, support decoding 3840x2160@30 signal and backward compatible

### Output Interface

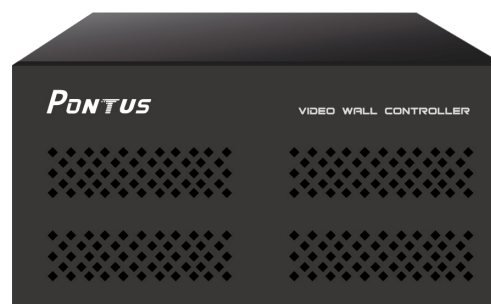
DVI	DVI audio and video mosaic output card, support DVI-I and 4-channel analog 3.5mm audio signal output, maximum output resolution 1920*1200@60Hz, can output VGA signal through adapter
HDMI	HDMI 1.3 audio and video mosaic output card, support HDMI video and embedded audio signal output, support HDMI 1.3, maximum support resolution 1920*1200@60Hz
	HDMI 1.4 audio and video splicing output card, support HDMI video and embedded audio signal output, meet HDMI 1.4 standard, output support 3840*2400@30, 3840*2160@30, 2560*1600@60 and below resolution
Fiber	10G optical fiber audio and video 2K splicing output card, support single-core LC optical signal output, maximum output resolution 1920x1080p@60Hz, and certified equipment. The transmission distance is single mode 10Km.
	10G optical fiber audio and video 4K splicing output card, support single-core LC optical signal output, maximum output resolution 4K@30Hz, and certified equipment. The transmission distance is single mode 10Km.

## Pontus Serives Video Wall Controller

### ► Product Description

Pontus video wall controller is a new high-performance video image processing workstation with pure hardware architecture and free of operating, which can display multiple dynamic images on multiple screens and realize the function of multi-window splicing. The processing mechanism of large capacity, high-speed FPGA and CrossPoint switch, ensure real-time processing of all input signals and data consistency. At the same time, it has high stability and fast start-up speed and supports 365 x 24 hours of uninterrupted and stable operation.

Pontus video wall controllers are available in 1.5U, 3U and 5U models. The card is designed with card-in-card structure and can be flexibly configured according to requirements. It support the video wall display of 32 large screens. Support DVI signal, HDMI signal format input and output, compatible with various common resolutions, it can realize custom unconventional resolution, with a single output resolution of 1920 x 1200 @ 60Hz.



**Pontus**

### ► Specifications

#### Input Card

HDMI Input Card		DVI Input Card	
Standard	HDMI 1.3	Standard	DVI-D digital T.M.D.S. signal in DVI 1.0
Resolution	Up to 1920 x 1200	Resolution	Up to 1920 x 1200
Color Depth	32bits / pixel	Color Depth	32bits / pixel
HDCP	Yes	Customised EDID	Yes
Customised EDID	Yes	Signal Level	T.M.D.S. 2.9V ~ 3.3V
Data Rate	4.95 Gbps	Data Rate	4.95 Gbps
Physical Port	HDMI Type A	Physical Port	24+5 pins / DVI-I

#### Output Card

HDMI Output Card		DVI Output Card	
Resolution	Up to 1920 x 1200	Standard	DVI-D digital T.M.D.S. signal in DVI 1.0
Standard	HDMI 1.3	Resolution	Up to 1920 x 1200
Color Depth	32bits / pixel	Color Depth	32bits / pixel
Transmission Distance	15 m	Transmission Distance	15 m
Data Rate	Yes	Data Rate	4.95 Gbps
Physical Port	4.95 Gbps	Physical Port	24+5 pins / DVI-I

#### Chassis Size

Size	Dimension (mm)	Power	Card Slots
1.5U	440(W)x 320(D)x 66(H)	100-240VAC, 50-60Hz, < 100W	2 Input Slots, 2 Output Slots
3U	440(W)x 320(D)x 130.5(H)	100-240VAC, 50-60Hz, < 200W	4 Input Slots, 4 Output Slots
5U	440(W)x 320(D)x 219.4(H)	100-240VAC, 50-60Hz, < 550W	8 Input Slots, 8 Output Slots

# NYX-MV5 Series Dual Engine Distributed System



NYX-MV5-EN



NYX-MV5-DN

## ► Product Description

NYX dual engine distributed series is the latest distributed solution provided by Tricolor Technology for the needs of networked and IP-based users. Using the unique video network transmission technology of Tricolor, it provides users with the ultimate audio and video experience without delay all while maintaining high-definition quality. The NYX dual engine distributed system integrates audio and video long-distance transmissions, matrix switching, KVM agent management and large scale video wall splicing management. It is widely used in joint command, airport air traffic control and conference communication with sophisticated visual management software. It is particularly suited to applications such as information sharing between buildings.

## ► Features

- 4K@30Hz 4:4:4 Ultra HD video loss-less transmission, output display perfect restore original image quality
- Ultra-low delay transmission, transmission delay  $\leq 35\text{ms}$ , fast and smooth signal switching, no black field, no flash screen
- A single video source supports simultaneous requests by multiple users, requesting  $\geq 1000$  channels
- Massive IP video access, compatible with H.264/AVC standard format network stream decoding
- Supports the docking display of multiple network streaming devices and third-party security platforms
- Support large scale video wall functions, which can realize large-screen video stitching, multi-view, roaming, windowing, picture-in-picture, etc
- Supports full-screen sync function for perfect simultaneous display of large-scale splicing screens and fast-changing images
- Support multiple scene save and retrieve
- Functions, save scene layout to the system for seamless switchin
- Support signal source character custom overlay, freely superimpose text information on the source screen
- Supports high-definition scrolling caption display, subtitle size, position, content, direction of motion and speed can be adjusted freely
- Support HD basemap function, large screen group can display large resolution background image without using third party equipment
- Source preview function, the control software can preview the source screen in real time
- Detailed authority division control to support multi-user grouping and hierarchical decentralization control;
- Any node dropped does not affect the overall system operation
- Front panel IP address display for quick device positioning
- Support device firmware online upgrade function
- Support 7x24 hours of continuous work capability

## ► Specifications

Input Node			*Only selected type of Model support fiber interface
Resolution	1080P@60	4K@30	
Interface Type	DVI, HDMI, SDI	HDMI	
Video Loop	DVI, HDMI, SDI	HDMI	
Audio Input	Support	Support	
Audio Loop Out	Support	Support	
Reverse Audio Output	Support	Support	
Network Interface	RJ45 interface x2	RJ45 interface x4	
Fiber Interface*	SFP+ 1Gbps	SFP+ 10Gbps	
KVM Control	Support	Support	
USB Transparent Transmission	Support	Support	
Remote Switch	Support	Support	
LCD Panel	Support	Support	
Equipment Size	210mm x 166mm x 43mm(8.17in x 6.53in x 1.69in)		
Equipment Weight	Single node: 1Kg (2.2 lb.)		
Heat Dissipation Method	Passive cooling		
Operating Temperature	0° C~40° C		
Storage Temperature	-10° C~60° C		
Equipment Power	Less than 25W		
Storage Environment	Non-corrosive and solvent gas, no dust, no strong magnetic field interference		
POE power Supply	Support	Support	
Cabinet Installation	Dedicated installation tray for standard cabinet		

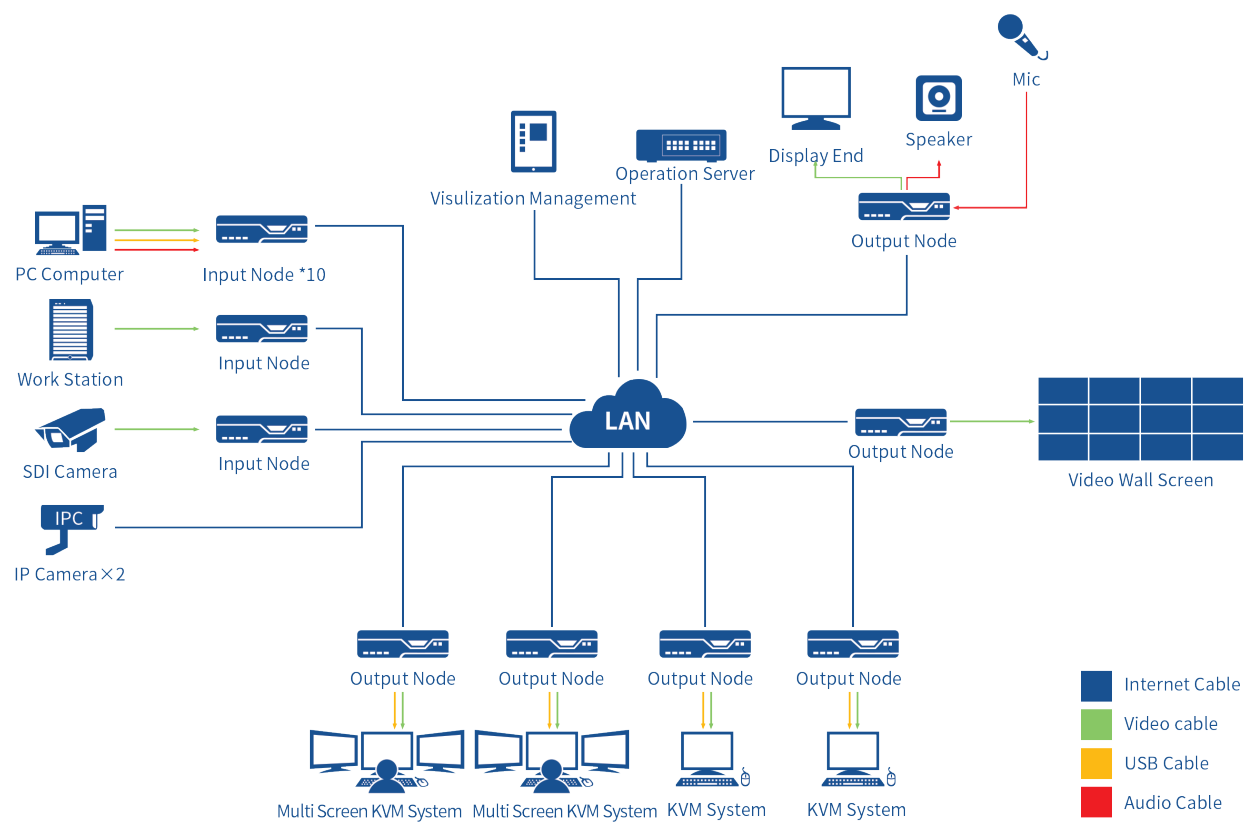
Output Node			*Only selected type of Model support fiber interface
Resolution	1080P@60	4K@30	
Interface Type	HDMI	HDMI	
Audio Output	Support	Support	
Reverse Audio Input	Not Supported	Not Supported	
Network Interface	RJ45 Interface x4	RJ45 Interface x4	
Fiber Interface*	SFP+ 10Gbps	SFP+ 10Gbps	
KVM Control	Not Supported	Not Supported	
USB Transparent Transmission	Not Supported	Not Supported	
Remote Switch	Not Supported	Not Supported	
LCD Panel	Support	Support	
Equipment Size	210mm x 166mm x 43mm (8.17in x 6.53in x 1.69in)		
Equipment Weight	Single node: 1Kg (2.2 lb.)		
Heat Dissipation Method	Passive cooling		
Operating Temperature	0° C~40° C		
Storage Temperature	-10° C~60° C		
Equipment Power	Less than 25W		
Storage Environment	Non-corrosive and solvent gas, no dust, no strong magnetic field interference		
POE power Supply	Support	Support	
Cabinet Installation	Dedicated installation tray for standard cabinet		

## ► Product Model

Input Node			*Optical Network Node Contains fiber Connection and Optical Network Backup
Name	Network node model	Optical Network Node	
NYX zero delay DVI input node	NYX-MV5-EN-D	NYX-MV5-ENF-D	
NYX zero delay HDMI1.3 input node	NYX-MV5-EN-H	NYX-MV5-ENF-H	
NYX zero delay SDI input node	NYX-MV5-EN-S	NYX-MV5-ENF-S	
NYX zero delay HDMI1.4 input node	NYX-MV5-EN-UH	NYX-MV5-ENF-UH	

Output Node			*Optical Network Node Contains fiber Connection and Optical Network Backup
Name	Network node model	Optical Network Node	
NYX zero delay HDMI1.3 output node	NYX-MV5-DN-H	NYX-MV5-DNF-H	
NYX zero delay HDMI1.4 output node	NYX-MV5-DN-UH	NYX-MV5-DNF-UH	

## ► System Diagram



# TMV Video Splitter

## ► Product Description

This product is a high performance 2 by 1 Multi-Viewer. It supports two High definition input source display on one screen. As a Multi-Viewer, it can display on one screen in 4 modes.



## ► Features

- Compliant with HDMI 1.3a,HDCP 1.2;
- Supports multiplexed HDMI 2-input and 1-output and 4 display modes;
- Supports up to 1080p High Definition resolution;
- Support scaler up, scaler down function;
- Support multi output resolution;
- Support digital audio format LPCM/AC3/DTS



TMV-H

## ► Specifications

Video Bandwidth	225MHz[6.75Gbps]
Input Ports	2 × HDMI (Female type)
Output Ports	1 × HDMI (Female type),
Audio output	PCM2, 5.1, 7.1CH, Dolby 5.1, DTS5.1
Input Resolution	480i60Hz, 480p60Hz, 576i50Hz, 576p50Hz, 720p50/60Hz, 1080i50/60Hz, 1080p24/30/50/60Hz, 800x600@60, 1024x768@60, 1280x720@60, 1920x1080@60;
Output Resolution	1080p, 720p, 1080i,1024x768,1360x768
ESD Protection	Human Body model: ±8 kV (air-gap discharge) ±4 kV (contact discharge)
Power Supply	5V/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	70 mm (W) ×140mm (D) ×25 mm (H)
Weight	300g
Chassis Material	Metal
Operating Temperature	0 ° C~40 ° C/ 32 ° F~104 ° F
Storage Temperature	— 20 ° C ~ 60 ° C/ — 4 ° F ~140 ° F
Relative Humidity	20~90 % RH (non-condensing)
Power Consumption (Max)	10W

## ► Product Type

Product Module	Product Description
TMV series 2 screen splitter	2 screen splitter, 1080P@60Hz
TMV series 4 screen splitter	4 screen splitter, 1080P@60Hz
TMV series 4 screen splitter	4 screen splitter, 1080P@60Hz, multi display mode
TMV series 9 screen splitter	9 screen splitter,1080P@60Hz, Multi display mode
TMV series 16 screen splitter	16 screen splitter, 1080P@60hz, Multi display mode
TMV series 4 screen splitter	4 screen splitter, 2160@30Hz

# TMV Video Splitter

## ► Product Description

TMV-UH can distribute one video/image source into 4 split display screen. Support 4 HDMI input with 1080P and one HDMI output, one VGA output for backup. Each input signal support analog audio output. Supports five modes displayed on screen. Output resolution can be adjusted and the maximum is up to 1920×1080@60Hz. The product can be controlled via the front panel button and remote control panel.



TMV-UH

## ► Features

- Compliant with HDMI 1.4, HDCP 1.4
- Automatic identification of input resolution
- (480i~1080P60,800x600~1920x1080)
- Output resolution can be selected by on-panel button and remote control panel, the maximum resolution is up to 1080P@60Hz (1920x1080P@60Hz, 1280x720P@60Hz)
- Audio supports LPCM 2CH
- Supports 2 split screen/4 split screen

## ► Specifications

Technical Info	
HDMI Interface	HDMI 1.4
HDCP Protocol	HDCP 1.4
Video Bandwidth	4.95Gbps
Video Resolutions	the maximum is up to 1920×1080P@60Hz
Color Depth	8-bit
Color Space	RGB, YCbCr 4:4:4, YCbCr 4:2:2
Analog Audio Formats	LPCM2.0 44.1KHz 48KHz
ESD Protection	User-touchable voltage: ± 8kV (Air-gap discharge) ± 4kV (Contact discharge)
Interface	
Inputs ports	4x HDMI Type A [19-pin female] 1x SEVICER [Micro USB, Update port]
Outputs ports	1x HDMI Type A [19-pin female] 1x VGA [VGA-D] 1x Audio [3.5mm Stereo Mini-jack]
General Info	
Device Cover	Metal Enclosure
Color	Black
Dimensions	185mm (W)×111.8mm (D)×21mm (H)
Weight	500g
Power Supply	Input: AC100~240V 50/60Hz, Output: DC12V/1A (US/EU standards, CE/FCC/UL certified)
Power Consumption	5.28W (max)
Operating Temperature	0° C ~ 40° C / 32° F ~ 104° F
Storage Temperature	-20° C ~ 60° C / -4° F ~ 140° F
Relative Humidity	20~90% RH (non-condensing)

# Matrix Switcher

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Modular Design Hybrid Matrix

Matrix Switcher

Presentation Matrix Switcher

Matrix Distributor

HDMI Matrix Switcher

# Titans Series Hybrid Matrix Switcher



## ► Product Description

The Titans series plug-in hybrid matrix is a high-performance signal switcher that is combined with an all-digital hardware design concept. It uses high-capacity high-speed FPGA array and digital bus routing in a switching technology architecture to realize mixed input and output of signal and analog signals. It is a high-quality hybrid interface matrix with a rich type of interface, powerful performance, high-definition image stitching capabilities, cross-screen imaging, full-screen modes and seamless switching. Widely used in large-screen display engineering, on-screen teaching, security monitoring, command and control center places and other applications. Each input signal sample of the Titans series plug-in hybrid matrix has a user memory which can switch the input signal automatically. As long as the signal of the sampling adjustment has been input, the device will automatically configure the memory parameters without additional adjustment. Also the image capture function is compatible with all input cards which allows for an image to be partially enlarged and for zoomed in sections of images to be displayed on the entire terminal. This function can be widely used in security industry. Character stacking is possible for all input channels to allow the customer to analyse the source of the displayed signal in real time.

## ► Features

- Digital bus routing structure, the system's signals are exclusive to their own dedicated data channels to in order to avoid accidentally channel blocking and cross data transmission
- Board-type hot-swappable structure, high chassis integration and highly reliable
- Multiple sets of scene saves and automatic polling
- Automatic detection of input signals
- Customizable output resolution for each channel
- Automatic protection in case of emergency power loss
- Keyboard, TCP/IP, RS232 control support
- Switch between signals without delay, no black field
- Supports input signal text overlays
- Image cutting
- Support for joint control matrix and large screen switching

## ► Specifications

### Chassis Size

Scale	Card slot configuration	Size	Power consumption
Titans-500-2U	Input 2 slots, output 2 slots	482(W)x88(H)x380(D)mm	< 200W
Titans-500-4U	Input 4 slots, output 4 slots	482(W)x175(H)x380(D)mm	< 300W
Titans-500-8U	Input 8 slots, output 9 slots	482(W)x352(H)x380(D)mm	< 500W
Titans-500-14U	Input 16 slots, output 18 slots	482(W)x620(H)x380(D)mm	< 800W
Titans-500-28U	Input 32 slots, output 36 slots	482(W)x1240(H)x380(D)mm	< 1000W
Titans-1000-2U	Input 2 slots, output 2 slots	482(W)x88(H)x380(D)mm	< 200W
Titans-1000-4U	Input 4 slots, output 4 slots	482(W)x175(H)x380(D)mm	< 300W
Titans-1000-8U	Input 8 slots, output 9 slots	482(W)x352(H)x380(D)mm	< 500W
Titans-1000-14U	Input 16 slots, output 18 slots	482(W)x620(H)x380(D)mm	< 800W
Titans-1000-28U	Input 32 slots, output 36 slots	482(W)x1240(H)x380(D)mm	< 1000W

## ► Card Type

### Input Interface

DVI	DVI input card, support HDCP, support EDID online editing, maximum support resolution 1920*1200@60Hz
VGA	VGA input card, support EDID online editing, maximum support resolution 1920*1200@60Hz
CVBS	CVBS standard definition input card, support fixed PAL or NTSC system, support brightness, contrast, grayscale, saturation adjustment
	CVBS HD input card, PAL/NTSC system adaptive, support 3D comb filtering and 3D deinterlacing, support brightness, contrast, grayscale, saturation adjustment
HDBaseT	HDBaseT input card, the maximum input resolution is 1920*1200@60Hz, and it can be used with the equipment to transmit signals 70 or 100 meters through Category 6 twisted pair.
HDMI	HDMI input card, support HDMI1.3, support HDCP, support EDID online editing, maximum support resolution 1920*1200@60Hz
SDI	SDI input card, support SD/HD SDI signal, compatible with 3G SDI signal, with SDI signal loop out, support maximum resolution 1920x1080
YPbPr	YPbPr input card, maximum support resolution 1920*1200@60Hz
Fiber	Optical fiber input card, maximum input resolution 1920*1200@60Hz, used with optical transceivers, can achieve 10KM transmission of input signals

### Output Interface

DVI	DVI output card, support DVI-I signal output, maximum output resolution 1920*1200@60Hz, can output VGA signal through adapter
HDMI	HDMI output card, maximum output resolution 1920*1200@60Hz
HDBaseT	HDBaseT output card, the maximum output resolution is 1920*1200@60Hz, and it can be used with the equipment to transmit the output signal 70 or 100 meters through Category 6 twisted pair.
Fiber	Optical fiber output card, the maximum output resolution is 1920*1200@60Hz, and it can be used with the equipment to transmit the output signal to 10KM through single-mode fiber.
SDI	SDI output card, support SDI/HD-SDI, support SDI signal output, SDI signal backup, maximum output resolution 1920*1080@60Hz
CVBS	CVBS output card, support PAL/NTSC system settings, support resolution 720x480i@30 frames, 720x576i@25 frames
YPbPr	YPbPr output card, support resolution 1920x1080i@30, 1920x1080i@25, 1280x720p@60, 720x480i@30, 720x576i@25

# Cronos™ Series Multi Function Matrix Switcher



## ► Product Description

The Cronos series multi-function integrated signal Controllers have support for 4K @ 60 ultra-high definition video signal acquisition and transmission. The video resolution can reach all 4:4:4 chroma sampling in the RGB color spectrum. The signal processor truly is a high performance integrated signal processing platform. The pure hardware FPGA system architecture and modular design concept are extended to ensure the system is stable and efficient while supporting flexible and personalized combinations of various interfaces and service Models. The advanced system architecture and algorithms give the Cronos higher processing power as well as handling a maximum input and output scale of 320×320.

The Cronos series multi-function integrated signal processor has matrix switching, large screen splicing controls, KVM system management, flexible configuration which provides a subversive upgrade of integrated control as well as other functions. With all this functionality, the Cronos series effectively reduces the amount of equipment required as well as the complexity of the system.

## ► Features

- Digital bus routing structure, the system's signals are exclusive to their own dedicated data channels to in order to avoid accidentally channel blocking and cross data transmission
- Full hardware FPGA architecture, built-in core computing mechanism, excellent image processing performance
- Supports 4K @ 60 ultra high definition video signal acquisition and transmission, video image resolution can reach all 4:4:4 chroma sampling in RGB gamut. Provides high quality image reproduction and image detail for video playback
- Board-type hot-swap structure, high chassis integration, high device stability, maximum expandable capacity to 320 input signals, 320 output signals.
- Input and output board mixing function
- Each signal dynamically sets a point-to-point dedicated line data channel. Each signal has its own dedicated channel for transmission, which can switch in a nanosecond with no black field interval.
- Integrated video and audio switching
- Supports signal character overlay functions, you can set multiple display areas, font sizes, colors, and superimpose images.
- Support for 1000 sets of scene saves and automatic polling
- EDID management and HDCP functionality
- User-defined output resolution
- Supports codec transmissions of IP signals such as H.264 / AVC and H.265 / HEVC
- Multi-type client control, not only with the PC version client but also a mobile version terminal. Supports multiple different types of devices for operation and control and supports keyboard, TCP/IP, RS232 control and other control methods.
- With RRTA (Resolution Real-Time Full Compatibility) technology, a single processor can simultaneously control four large groups of different resolutions. Can support LED, LCD, projection lamp multiple display units at the same time
- Supports single cards with up to 8 windows. Also supports zooming, roaming, seamless switching of real-time sources, arbitrary overlay of windows, etc.
- Supports the collection and output display of the overall content output to the large screen; supports 60Hz local video echo and network echo

- The large screen group supports mouse and keyboard signals and can use the mouse arrow to perform a series of functions on the window and extend the screen group plan over the entire group of large screens.
- Supports the direct control function of the signal source which is known as the RealControl function. The processor can use the OSD mouse to access the signal source to open the window on the large screen, thereby directly controlling the PC corresponding to the signal source by using an external mouse.
- Input and output signal preview and echo
- Displays subtitles on the output large screen as a whole. Subtitles can be displayed statically or dynamically.
- Input and output signal preview and echo
- Emergency power loss prevention, state storage memory
- Power redundancy backup support
- Monitoring alarms
- Support for multi-user and user rights management
- Front panel touch screen which can control matrix switching and pre-planning recall for user operation
- Computer agent management which enables remote KVM control of computing, etc.
- Supports audio transmissions between KVM terminals
- Supports agent user rights management which can group host terminals and users and assign different access levels through grouping. At the same time, it supports push functions, which can push local agent signals to other display terminals and can also pull other display signals.
- Support for USB device transparent transmissions, U disk, U-Key, camera, touch screen and other USB peripheral data transmission, pure hardware non-IP architecture and guaranteed USB data transmission process security
- Full English visual operation interface, users can quickly preview the status of the signal source to be switched before switching the signal source; effectively improve the management's interaction between the agents and the large screen.
- Intelligent rights interaction management system to achieve fast operation control of signal sources between different users

## ► Specifications

### Chassis Size

Scale	Card slot configuration	Size	Power consumption
Cronos-2U	4 full-featured card slots	440 (W)X385(D)X89(H)mm	<250W
Cronos-4U	8 full-featured card slots	440 (W)X385(D)X175(H)mm	<300W
Cronos-10U	17 full-featured card slots	440 (W)X430(D)X442(H)mm	<460W
Cronos-16U	36 full-featured card slots	440 (W)X430(D)X709(H)mm	<800W
Cronos-28U	40 input card slots, 40 output card slots	440 (W)X430(D)X1242(H)mm	<1600W
Cronos-320	80 input card slots, 80 output card slots	940 (W)X450(D)X1350(H)mm	<3500W

## ► Card Type

### Input Interface

DVI	DVI audio and video input card, support DVI and analog 3.5mm audio signal input, support HDCP, maximum support resolution 1920*1200@60Hz;
	Dual-link DVI audio and video signal input card, support Dual-link DVI video and analog 3.5mm audio signal input, 330MHz clock, support 4K signal input, input resolution typical value 3840x2400@30Hz or 2560x1600@60Hz, input signal is not lost Frame processing
HDMI	HDMI 1.3 audio and video input card, support HDMI video and embedded audio signal input, support HDMI1.3, support HDCP, maximum support resolution 1920*1200@60Hz
	HDMI 1.4 audio and video input card, support HDMI video and embedded audio signal input, meet HDMI 1.4 standard, input support 3840*2400@30, 3840*2160@30, 2560*1600@60 and below resolution
	HDMI 2.0 audio and video input card, support HDMI 2.0 and embedded audio signal input, support HDMI2.0 standard, support 4K signal input, input resolution typical value 3840x2160@60Hz
DisplayPort	DisplayPort 1.1 audio and video input card, support DisplayPort and embedded audio signal input, support DP 1.1 standard, support 4K signal input, input resolution typical value 3840x2400@30Hz or 2560x1600@60Hz
	DisplayPort1.2 audio and video input card, support DisplayPort and embedded audio signal input, support DP 1.2 standard, support 4K signal input, input resolution typical value 3840x2160@60Hz
VGA	VGA audio and video input card, support VGA and analog 3.5mm audio signal input, maximum support resolution 1920*1200@60Hz
YPbPr	YPbPr audio and video input card, support YPbPr and analog 3.5mm audio signal input, maximum support resolution 1920*1080@60Hz
SDI	SDI input card, support SD/HD SDI signal, compatible with 3G SDI signal, support SDI video and embedded audio signal input, support maximum resolution 1920x1080p@60
CVBS	CVBS audio and video input card, support CVBS and analog 3.5mm audio signal input, PAL/NTSC system adaptive, support 3D comb filtering and 3D deinterlacing, support brightness, contrast, grayscale, saturation adjustment
HDBaseT	HDBaseT 2K audio and video input card, support twisted pair video and audio signal input, maximum input resolution 1920*1200@60Hz, and used with certified equipment, can transmit signals 100 meters through 6 types of twisted pair
	HDBaseT 4K audio and video input card, support twisted pair video and audio signal input, maximum input resolution 4K@30Hz and backward compatible with typical resolution such as 1080p, and used with certified equipment, can be passed through 6 types of twisted pair Signal transmission 100 meters
Fiber	10G optical fiber audio and video 2K input card, support single-core LC optical signal input, maximum input resolution 1920x1080p@60Hz, and certified equipment. The transmission distance is single mode 10Km.
	10G optical fiber audio and video 4K input card, support single-core LC optical signal input, maximum input resolution 4K@30Hz, and certified equipment. The transmission distance is single mode 10Km.
KVM Fiber	10G optical fiber audio and video 2K KVM input card, support single-core LC optical signal input, maximum input resolution 1920x1080p@60Hz, support transmission of mouse and keyboard signals, and certified equipment. The transmission distance is single mode 10Km.
	10G optical fiber audio and video 4K KVM input card, support single-core LC optical signal input, input support 3840*2400@30, 3840*2160@30, 2560*1600@60 and below resolution, support transmission mouse and keyboard signal, and after Certified equipment is used together. The transmission distance is single mode 10Km.
IP	H.264/AVC streaming media decoding card, support H.264 streaming media decoding, support decoding 1920x1080p@60 signal and backward compatible
	H.265/HEVC 2K streaming media decoding card, support H.264/H.265 streaming media decoding, support decoding 1920x1080p@60 signal and backward compatible
	H.265/HEVC 4K streaming media decoding card, support H.264/H.265 streaming media decoding, support decoding 3840x2160@30 signal and backward compatible

## Matrix Switcher

### Output Interface

Matrix function output	
DVI	DVI audio and video output card, support DVI-I and 4-channel analog 3.5mm audio signal output, maximum output resolution 1920*1200@60Hz, can output VGA signal through adapter
	Dual-link DVI audio and video output card, support Dual-link DVI video and analog 3.5mm audio signal output, maximum output resolution 3840*2160@30Hz
HDMI	HDMI 1.3 audio and video output card, support HDMI video and embedded audio signal output, support HDMI 1.3, maximum support resolution 1920*1200@60Hz
	HDMI 1.4 audio and video output card, support HDMI video and embedded audio signal output, meet HDMI 1.4 standard, output support 3840*2400@30, 3840*2160@30, 2560*1600@60 and below resolution
	HDMI 2.0 audio and video output card, support HDMI 2.0 and embedded audio signal output, support HDMI2.0 standard, support 4K signal output, output resolution typical value 3840x2160@60Hz
DisplayPort	DisplayPort 1.1 audio and video output card, support DisplayPort and embedded audio signal output, support DP 1.1 standard, support 4K signal output, output resolution typical value 3840x2400@30Hz or 2560x1600@60Hz
	DisplayPort1.2 audio and video output card, support DisplayPort and embedded audio signal output, support DP 1.2 standard, support 4K signal output, output resolution typical value 3840x2160@60Hz
YPbPr	YPbPr audio and video output card, support YPbPr and analog 3.5mm audio signal output, maximum support resolution 1920*1080@60Hz
SDI	SDI output card, support SD/HD SDI signal, compatible with 3G SDI signal, support SDI video and embedded audio signal output, support maximum resolution 1920x1080p@60
CVBS	CVBS audio and video output card, support CVBS and analog 3.5mm audio signal output
HDBaseT	HDBaseT 2K audio and video output card, support twisted pair video and audio signal output, maximum output resolution 1920*1200@60Hz, and used with certified equipment, can transmit signals 100 meters through 6 types of twisted pair
	HDBaseT 4K audio and video output card, support for twisted pair video and audio signal output, maximum output resolution 4K@30Hz and backward compatible with typical resolutions such as 1080p, and used with certified equipment, can be passed through Category 6 twisted pair Signal transmission 100 meters
Fiber	10G optical fiber audio and video 2K output card, support single-core LC optical signal output, maximum output resolution 1920x1080p@60Hz, and certified equipment. The transmission distance is single mode 10Km.
	10G optical fiber audio and video 4K output card, support single-core LC optical signal output, maximum output resolution 4K@30Hz, and certified equipment. The transmission distance is single mode 10Km.
KVM Fiber	10G optical fiber audio and video 2K KVM output card, support single-core LC optical signal output, maximum output resolution 1920x1080p@60Hz, support for transmission of mouse and keyboard signals, and certified equipment. The transmission distance is single mode 10Km.
	10G optical fiber audio and video 4K KVM output card, support single-core LC optical signal output, output support 3840*2400@30, 3840*2160@30, 2560*1600@60 and below resolution, support for transmission of mouse and keyboard signals, and Certified equipment is used together. The transmission distance is single mode 10Km.
IP	H.264/AVC streaming media decoding card, support H.264 streaming media decoding, support decoding 1920x1080p@60 signal and backward compatible

Splicing function output	
DVI	DVI audio and video mosaic output card, support DVI-I and 4-channel analog 3.5mm audio signal output, maximum output resolution 1920*1200@60Hz, can output VGA signal through adapter
HDMI	HDMI 1.3 audio and video mosaic output card, support HDMI video and embedded audio signal output, support HDMI 1.3, maximum support resolution 1920*1200@60Hz
	HDMI 1.4 audio and video splicing output card, support HDMI video and embedded audio signal output, meet HDMI 1.4 standard, output support 3840*2400@30, 3840*2160@30, 2560*1600@60 and below resolution
	HDMI 2.0 audio and video splicing output card, support HDMI 2.0 and embedded audio signal output, support HDMI2.0 standard, support 4K signal output, output resolution typical value 3840x2160@60Hz
HDBaseT	HDBaseT 2K audio and video splicing output card, support twisted pair video and audio signal output, maximum output resolution 1920*1200@60Hz, and used with certified equipment, can transmit signals 100 meters through 6 types of twisted pair
DisplayPort	DisplayPort 1.1 audio and video mosaic output card, support DisplayPort and embedded audio signal output, support DP 1.1 standard, support 4K signal output, output resolution typical value 3840x2400@30Hz or 2560x1600@60Hz
	DisplayPort1.2 audio and video splicing output card, support DisplayPort and embedded audio signal output, support DP 1.2 standard, support 4K signal output, output resolution typical value 3840x2160@60Hz

# TMX Series Matrix Switcher

## ► Product Description

TMX-H is a high-performance matrix switcher with seamless switching, mixed 4\*4 output and input matrix switch function. The input and output port support digital video signals and analog video signal with variety of formats. At the same time, it has infrared matrix function, analog video signal input with embedded audio function. user-friendly interface allows user to realize the remote control via the front panel button,RS-232 and TCP/IP control.



TMX-H

## ► Features

- Interface support HDMI1.3, HDCP1.3 and DVI1.0
- Input video format supports HDMI, VGA and C-video
- Supports input resolutions: HDMI 480i to 1080p : VGA:1920 x 1080P @ 60Hz, 1360 x 768P@60Hz, 1280 x 1024P@60Hz, 1024 x 768P@60Hz, 1280 x 720P@60Hz,1280 x 768P@60Hz, 800 x 600@60Hz, 640 x 480P@60Hz
- Audio formats: supports PAL, NTSC3.58, NTSC4.43, SECAM, PAL/M, PAL/N standard TV formats
- Supports output resolutions :1920x1080P@60Hz
- Supports seamless switching
- The RS-232 interface supports the firmware update
- Supports RS-232, remote control and TCP/IP Control
- Supports smart EDID management
- VGA input support picture positioning adjustment
- Software backup in case of power-off

## ► Product Type

Product Module	Product Description
TMX series 4*4 matrix switcher	4 input and 4 output, resolution 2K@60 backward compatible

## ► Specifications

Technical Info	
Input Ports	4*HDMI, 4*VGA, 4*RCA, 1*RS-232, 1*RJ-45(Control)
Output Ports	4*HDMI
Input Resolutions Support	Up to 1920x1080P@60Hz
Output Resolutions Support	Up to 1920x1080P@60Hz
Control Method	IR , RS-232 , TCP/TP , Buttons
ESD Protection	User-touchable voltage: ± 8kV (Air discharge) ± 4kV (Contact discharge)
Power Supply	12 V/2.5 A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	440mm (W) × 200mm (D) × 44.5mm (H)
Weight	2380g
Chassis Material	Metal
Devices Cover Color	Black
Operating Temperature	0 °C~40 °C/32 °F~104 °F
Sorage Temperature	— 20 °C~60 °C/ — 4 °F~140 °F
Relative Humidity	20~90 % RH (non-condensing)
Power Consumption	13.5 W(Max)/1.2W(Standby)

## TMX Series Matrix Switcher



TMX-XHA



TMX-XHA



TMX-XH

### ► Product Description

TMX series products varies depending on the numbers of interface. TMX-XHA has the function of seperated audio and video transmission. TMX-XH HDMI 4x4 matrix switcher features four HDMI inputs and four HDMI outputs. It is a HDMI routing matrix. It supports the transmission of video (resolutions up to 2160p@60Hz Ultra HD 4:4:4) and supports high resolution digital audio formats such as LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio. It works with Blue-Ray players, Set-Top boxes, Home Theater PCs, and game consoles. Any source is accessible at all times by any display by selecting it via the supplied IR Remote Control, RS-232, TCP/IP or the selection buttons on the front panel. This device supports all HDMI 3D formats.

### ► Features

- Support HDMI2.0, HDCP2.2/HDCP1.4
- Support video format up to 4k2k@60Hz with 24bit RGB/YCbCr 4:4:4/YCbCr 4:2:2, and up to 4k2k@60Hz with 12bit YCBCR 4:2:0
- Support color space conversions among RGB, YCbCr4:4:4, YCbCr4:2:2 and xvYCC video formats
- Support all HDMI 3D formats up to 2160p@30
- Support high resolution VESA mode video format up to QSXGA@60Hz
- HDMI embedded audio support the format such as PCM up to 192kHz, compressed audio (IEC 61937), DSD, DST, DTS and HBR
- Support simultaneous HDMI Coax and L/R audio outputs
- Support smart EDID management
- Support RS-232, remote control, on-panel control and TCP/IP Control

### ► Specifications

Technical Info	
Video Bandwidth	594MHz [18Gbps]
Video Resolutions	480i, 576i, 480p, 576p, 720p, 1080i, 1080p24/30/50/60, 2160p24/25/30/50/60;
Input Ports	4×HDMI, 1×IR Receiver, 1×RS-232, 1xRJ-45(Control)
Output Ports	4×HDMI, 4×Toslink, 4×L/R
HDMI Interface	Type-A 19 pin female
RJ-45 Interface	WE/SS 8P8C
3.5mm Interface	IR Receiver
ESD Protection	User-touchable voltage: ± 8kV (Air-gap discharge) ± 4kV (Contact discharge)
Power Supply	12V/2.5A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	440 mm (W)×200 mm (D)×45 mm (H)
Weight	1820g
Chassis Material	Metal
Devices Cover Color	Black
Operating Temperature	0 °C~40 °C/32 °F~104 °F
Storage Temperature	— 20 °C~60 °C/ — 4 °F~140 °F
Relative Humidity	20~90 % RH (non-condensing)
Power Consumption	30 W(max)/0.5w(Standby)

### ► Product Type

Product Module	Product Description
TMX series 4*4 matrix switcher	4 input an 4 output, resolution 4K@60 backward compatible
TMX series 8*8 matrix switcher	8 input and 8 output, resolution 4K@60 backward compatible

# TMX Series Matrix Switcher



TMX-UHARC



TMX-UHA

## Product Description

TMX-UH 16\*16 HDMI Matrix Switcher is the compact and powerful product. It can be switched from any 16 HDMI HD signal input to any 16 HDMI HD display output. It supports maximum resolution up to 4K60Hz YUV 4:2:0. The input and the output support HDCP 2.2 protocol. Smart EDID can be selected an edited by Upper Computer Software and Web GUI. The product can be controlled by on-panel button, IR remote control, RS-232, LAN, Upper Computer Software and Web GUI.

## Features

- Support HDMI 2.0b (4K60Hz YUV 4:2:0), HDCP 2.2 / HDCP 1.4 and DVI 1.0
- Supports resolution up to 4K2K@50/60Hz (YUV 4:2:0) for all HDMI ports
- Supports pass-through audio up to LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS HD Master Audio
- Supports smart EDID management
- Supports on-panel button, IR remote control, RS-232, LAN, Upper Computer Software and Web GUI control
- Software backup in case of voltage drop
- 1U chassis design with metal enclosure

## Product Type

Product Module	Product Description
TMX series 16*16 matrix switcher	16 input and 16 output, resolution 4K@30 backward compatible

## Specifications

Technical Info	
HDMI Interface	HDMI 2.0b
HDCP Protocol	HDCP 2.2 and HDCP 1.4
Video Bandwidth	10.2Gbps
Video Resolution	4K2K@50/60Hz YUV4:2:0, 4K2K@30Hz YCbCr / YUV 4:4:4, 1080p@60Hz YCbCr4:4:4 / 4:2:2
Color Depth	8/10/12-bit (1080P60Hz, YCbCr4:4:4) 8-bit (4K60Hz, YUV 4:2:0)
Color Space	YCbCr 4:4:4 / 4:2:2, YUV4:2:0
HDMI Audio Formats	LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS HD Master Audio
ESD Protection	User-touchable voltage: ± 8kV (Air-gap discharge) ± 4kV (Contact discharge)
Interface	
Inputs	16x HDMI Type A [19-pin female] 1x LAN [RJ45, Control] 1x RS-232 [9-pin D-sub, Control]
Outputs	16x HDMI Type A [19-pin female] 1x OLED display screen
General Info	
Device Cover	Metal Enclosure
Color	Black
Dimensions	440mm (W) × 303mm (D) × 44.5mm (H)
Weight	4.2kg
Dimensions	125mm [W] x 72mm [D] x 16mm [H]
Weight	Transmitter: 225g, Receiver: 219g
Power Supply	100~240V AC 50/60Hz
Power Consumption	31.3W
Operating Temperature	0° C ~ 40° C / 32° F ~ 104° F
Storage Temperature	-20° C ~ 60° C / -4° F ~ 140° F
Relative Humidity	20~90% RH (non-condensing)

# TCO-XHN70 Presentation Matrix Switcher

## ► Product Description

TCO-XHN70 4K@60 presentation switcher supports 5 inputs including 3 HDMI ports, 1 VGA(YPbPr / CVBS) and 1 DisplayPort, scaling to HDMI and HDBaseT outputs. The audio processor offers auto-mixer and auto-gain control to mix or reduce background audio in order to enhance major audio source. The system could be controlled and configured easily via Telnet, Web GUI, IR remote and RS-232. This switcher is a powerful solution for presentation purpose in classroom and conference room.

## ► Features

- Support HDMI 2.0b, HDCP 2.2 protocol
- Support 3xHDMI, 1 x VGA( YPbPr /CVBS), 1xDisplayPort, 1xMIC In, 4x unbalanced audio input
- HDMI and HDBaseT (70M) outputs (Mirrored)
- HDMI/DP video resolutions up to 4K2K@60Hz(4:4:4), 4K2K@30Hz, 1080p@120Hz
- VGA resolutions up to 1920x1200@60Hz
- Output resolutions up to 4K2K@30Hz
- Support automatic and manual switching modes
- Supports EDID management
- Supports pass-through of PCM 2CH
- Touch Panel button, WebGUI, IR remote, Desk Plate and RS-232 control

## ► Specifications

Technical Info	
HDMI Interface	HDMI 2.0b
DP Compliance	DisplayPort 1.2a
HDCP Protocol	HDCP 2.2 and HDCP 1.4
Video Input Resolutions	HDMI/DisplayPort: up to 4K2K@50/60Hz(4:4:4) CVBS: PAL/NTSC3.58/NTSC4.43/SECAM/PAL M/PAL N YPbPr: 480i to 1080p VGA: 640x480/60 to 1920x1200/60
HDMI/HDBT Output Resolutions	4K2K/30, 4K2K/25, 1920x1080p60, 1920x1080p50, 1280x720p/60, 1280x720p/50, 1024x768/60, 1280x800/60, 1360x768/60, 1400x1050/60, 1680x1050/60, 1920x1200/60
Audio Formats	LPCM 2.0CH
ESD Protection	User-touchable voltage: ± 8kV (Air-gap discharge) ± 4kV (Contact discharge)



TCO-PS0501-XHN70

## ► Specifications

Interface	
Input ports	3x HDMI Type A [19-pin female] 1x Display Port [female] 1x VGA [female] 1x MIC input [3-pin phoenix port] 5x Stereo inputs [3-pin phoenix port]
Output ports	1x HDMI Output Type A [19-pin female] 1x HDBaseT Out [RJ45] 1x Stereo Output [3-pin phoenix port]
Control interfaces	1x IR in [3.5mm mini jack] 1x IR out [3.5mm mini jack] 1x CONTACT IN [6-pin phoenix port] 1x RS-232 [3-pin phoenix port] 1x Web GUI [RJ45] 1x USB Type A [5-pin female]
General Info	
Device Cover	Metal
Color	Black
Dimensions	150mm [W] x 220mm [D] x 44mm [H]
Weight	1250g
Power Supply	DC 24V/1A Adaptor (US/EU standards, CE/FCC/UL certified)
Power Consumption	9W [Main unit] 18W [Main unit + HDBaseT Receiver]
Operation Temperature	32 - 104° F / 0 - 40° C
Storage temperature	-4 - 140° F / -20 - 60° C
Relative Humidity	20 - 90% RH (no condensation)

# TSP-XH-Matrix Distributor

## ► Product Description

TSP-XH HDMI 18Gbps Splitter is an advanced solution for splitting a single HDMI input signal to 2/4/8 HDMI output. It provides high performance audio and video output through HDMI cables up to 4Kx2K@60Hz 4:4:4 and it is capable of receiving and transmitting up to 18Gbps of bandwidth with no data loss. TSP-XH70 and TSP-XHA are available, please check with sales manager for product details (The latest features guarantee you a reliable and high quality HDMI distribution.) .



TSP-XH

## ► Features

- Support HDMI 2.0b, HDCP 2.2
- Supports video format up to 4Kx2K@60Hz with 8 bit RGB/YCBCR 4:4:4/YCBCR 4:2:2
- Support 3D frame sequential video format up to 1080p@60
- Supports 3D frame sequential video format up to 4Kx2K@30Hz
- Supports high resolution VESA mode video format up to QXGA@60Hz
- Supports LPCM 7.1CH, Dolby HD, and DTS-HD Master Audio
- Supports smart EDID control
- Compact design for an easy and flexible installation

## ► Product Type

Product Module	Product Description
TSP-XH-0102	1 input and 2 output extender, 4K@60Hz backward compatible
TSP-XH-0104	1 input and 4 output extender, 4K@60Hz backward compatible
TSP-XH-0108	1 input and 8 output extender, 4K@60Hz backward compatible
TSP-XHA-0102	1 input and 2 output extender, 4K@60Hz backward compatible, support separated audio and video
TSP-XHA-0104	1 input and 4 output extender, 4K@60Hz backward compatible, support separated audio and video

## ► Specifications

Technical Info	
Video Bandwidth	600MHz/18Gbps
Input Ports	1×HDMI Type-A [19-pin female]
Output Ports	2 / 4 / 8×HDMI Type-A[19-pin female]
Video Resolutions	480i ~1080p50/60, 4Kx2K@24/30, 4k2k@60Hz
ESD Protection	Touchable — ±8kV (air-gap discharge) & ±4kV (contact discharge)
Power Supply	5V/1A DC (US/EU standards, CE/FCC/UL certified)
Power Supply	12 V/2.5 A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	56mm (W) × 100mm (D) × 16mm (H) 63mm (W) × 163mm (D) × 16mm (H) 243mm (W) × 102mm (D) × 16mm (H)
Weight	165g / 260g / 572g
Chassis Material	Metal
Devices Cover Color	Black
Operation Temperature	32 - 104° F / 0 - 40° C
Storage Temperature	-4 - 140° F / -20 - 60° C
Relative Humidity	20~90 % RH (non-condensing)
Power Consumption	2W

## TSP-H-Matrix Distributor

### ► Product Description

TSP-H Splitter is a product for splitting and extending your HDMI signal over long distances to multi-type and multi-brand display. TSP-H is designed to convert the HDMI signal and transmit by Internet cable. It supports resolutions up to 1080p@60Hz, and support smart EDID management.



TSP-H

### ► Features

- Support HDMI1.3, HDCP 1.2 and DVI 1.0.
- Full HD support: 1080p@60Hz@24 bit/pixels.
- Supports LPCM 7.1CH, Dolby TrueHD, and DTS-HD Master Audio.
- Support TMDS clock frequencies up to 148.5MHz.
- Use single UTP LAN cable (CAT5E/6) instead of HDMI cable to achieve long distances transmission.
- UTP cable termination is aligned with the standard of IEEE-568B.
- Supports EDID selection function, 16 types of EDID are embedded.

### ► Product Type

Product Module	Product Description
TSP-H-0104C50	1 input and 4 output, 50 meters IP extender
TSP-H-0108C50	1 input and 8 output, 50 meters IP extender

### ► Specifications

Technical Info	
Maximum Pixel Clock	165 MHz
Supports video resolutions up to	1080p@60Hz
ESD Protection	User-touchable voltage: ± 8kV (Air-gap discharge) ± 4kV (Contact discharge)
Power Supply	DC 12V 2.5A
HDMI Splitter	
Input Ports	HDMI, Mini USB
Output Ports	HDMI, RJ45, IR out
Receiver	
Input Ports	RJ45, IR in
Output Ports	HDMI
Mechanical	
Dimensions (mm)	295x83x17 (H) / 210x83x17mm
Weight	HDMI Splitter: 720g / 415g Receiver: 131g
Operating Temperature	0° C ~ 40° C / 32° F ~ 104° F
Storage Temperature	-20° C ~ 60° C / -4° F ~ 140° F
Relative Humidity	20~90% RH (Non-condensing)
Power Consumption (Max)	15W

# TSP-UH-Matrix Distributor

## ► Product Description

TSP UH is a high-performance splitter with 1 input and 16 output. It supports 4Kx2K input signal and 16 HDMI output. The product supports smart EDID, which can force a certain resolution by modifying EDID.



TSP-UH

## ► Features

- Split 1 HDMI input signal to 16 HDMI display screen
- Defined resolution supports up to 4K\*2K@30Hz@8bit(YCbCr4:4:4) ; 4K\*2K@60Hz@8bit(YCbCr4:2:0)
- Support digital audio format, DTS-HD / Dolby-TrueHD / LPCM7.1 / AC3 / DTS / DSD
- Support EDID election function

## ► Product Type

Product Module	Product Description
TSP-UH-0116	1 input and 16 output distributor, 4K@30 backward compatible

## ► Specifications

Technical Info	
HDMI	HDMI 1.4a
HDCP protocol	HDCP 1.4
Video Bandwidth	297MHz[10.2Gbps]
Video Resolutions	480i@60Hz,480p@60Hz,576i@50Hz,576p@50Hz, 720p@50/60Hz,1080i@50/60Hz,1080p@24/30/50/60 Hz, 4K@30Hz@8bit(YCbCr4:4:4), 4K@60Hz@8bit(YCbCr4:2:0);
Color Space	RGB, YCbCr 4:4:4, YCbCr 4:2:2
Color Depth	10-bit, 12-bit
HDMI Audio Formats (Pass-through)	LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital, Dolby True HD , DTS-HD Master Audio, Dolby Atmos, DTS:X
ESD Protection	User-touchable voltage: ± 8kV (Air-gap discharge) ± 4kV (Contact discharge)
Interface	
Inputs	1x HDMI Type A [19-pin female]
Outputs	16x HDMI Type A [19-pin female]
General Info	
Housing	Metal Enclosure
Color	Black
Dimensions	115 mm [W]x mm [D]x mm [H]
Weight	1000g
Power Supply	Input: AC100 - 240V 50/60Hz Output: DC 12V/2.5A (US/EU standards, CE/FCC/UL certified)
Power Consumption	30W (Max)
Operation Temperature	32 - 104° F / 0 - 40° C
Storage temperature	-4 - 140° F / -20 - 60° C
Relative Humidity	20 - 90% RH (no condensation)

# TSW-UH-HDMI Switcher

## ► Product Description

TSW-UH high-resolution HDMI switcher supports all 3D TV formats in addition to all HDTV formats up to 4Kx2K. Furthermore, the user-friendly remote controller enable uses to complete signal selection.



TSW-UH

## ► Features

- Support HDMI 2.0, HDCP2.2 and DVI 1.0;
- Support video format up to 4k2k@ 30 Hz with 24bit RGB/ YcbCR; 4:4:4/YCBCR; 4:2:2 and up to 4k2k@60 Hz with 12bit YCBCR 4:2:0;
- Support 3D frame sequential video format up to 1080 p@ 60;
- Support high resolution VESA mode video format up to QSXGA@ 60 Hz;
- Supports LPCM 7.1CH, Dolby TrueHD, and DTS-HD Master Audio;
- Supports auto switch function;
- IR and Panel controls Audio Return Channel (ARC)

## ► Specifications

Video Bandwidth	300 MHz/10.2 Gbps
Input Ports	HDMI
Output Ports	1x HDMI
Output Resolution	480i 1080p50/60, 4Kx2 K@24/30, 4k2k@60 Hz with 12bit YCBCR 4:2:0, VGA UXGA
ESD Protection	User-touchable voltage: ± 8kV (Air-gap discharge) ± 4kV (Contact discharge)
Power Supply	5 V/1ADC
Dimensions	64 mm (W) x 155mm (D) x 17 mm (H)
Weight	180 g
Chassis Material	Metal
Chassis Color	Black
Operating Temperature	0 ° C 40 ° C / 32 ° F 104 ° F
Storage Temperature	-20 ° C 60 ° C / -4 ° F 140 ° F
Relative Humidity	20 90 % RH (non-condensing)
Power Consumption	2W

## ► Product Type

Product Module	Product Description
TSW-UH-0301	3 input 1 output switcher,support 4K@30 Hz backward compatible
TSW-UH-0501	5 input 1 output switcher,support 4K@30 Hz backward compatible

# Signal Extender

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Fiber Extender

HDBaseT Extender

IP De/Encoder

TEX Series Wireless Extender

## Multicon-M5 Fiber Optical Transmitter



**Multicon-M5-DF2**



**Multicon-M5-EF2**

### ► Product Description

The Multicon-M5 Series Fiber Optic Transmitter allows high-resolution video, audio and RS-232 control signals to be transmitted using a single set of fiber optic cables over distances of up to 10 kilometers. Designed for reliable transmission of high-resolution images, Tricolor zero-compression, all-digital technology provides perfect pixel-to-point transmissions of audio and video images with resolutions of up to 1920x1200 @ 60 Hz while also supporting embedded audio and analog audio integrated transmission. Selected models also support the transmission of signals through the H.264 / H.265 codec while transmitting over optical fiber which allows for an optical network backup.

### ► Features

#### Transceiver

- Supports video signal input with resolutions up to 1920 x 1200@ 60 Hz along with backwards compatibility with other resolutions all while supporting video signal loop-through output
- TRS (3.5 mm) audio signals captured and transmitted simultaneously with video while supporting audio loopback
- Optical signal output, LC interface, maximum transmission distance 10 km
- RS232 serial port, IR signal transparent transmission to the Receiver
- Reverse output of audio signals relayed from the receiver
- Selected models support signal dual-optical backup output for dual-optical backup of signals
- Selected models support network coding, configuration and online management, signals through H.264/ H.265 encoding output and provide network signal backup
- Selected models support network coding, online configuration and
- Management, dual-optical backup signal output and output through H.264 / H.265 encoding to achieve optical network signal backup
- Supports modifications to the EDID mode of the video input interface
- Device firmware upgrades are available via Mini-USB port

#### Receiver

- Supports video signal output with resolutions up to 1920 x 1200
- @ 60 Hz along with backwards compatibility with other resolutions
- TRS (3.5 mm) audio signal output simultaneously with video
- Optical signal input, LC interface, maximum transmission distance 10 km
- RS232 serial port, IR signals can be transmitted to the sender
- Reverse output of audio signals transmission from the sender
- Selected models support dual optical backup signal input, supporting intelligent switching of fiber optic signals
- Selected models support network decoding, online configuration and management, network H.264/ H.265 coded signal input and automatic fiber input signal switching
- Selected models support network decoding, online configuration and Management, signal dual optical backup input, and network H.264 / H.265 coded signal input, automatic switching with optical input signal
- Selected models support ports that can manually switch the input signal of the receiver
- Device firmware upgrades are available via Mini-USB port

## ► Specifications

Transceiver			*Specifications are slightly different between different Model
Video Input	Video input interface	HDMI / DVI / SDI x 1 *	
	Maximum resolution	1920 x 1200 @ 60 Hz	
	Analog audio input	3.5 mm Audio	
Video Loop	Video loop	HDMI / DVI / SDI x 1 *	
Optical Signal	Optical interface	LC Type	
	Fiber type	Single mode/multimode fiber	
	Transmission distances	10 km *	
Network Decoding	Network Interface	RJ45	
	Network transmission protocol	RTSP	
	Decoding resolution	1920 x 1200 @ 60 Hz	
Special Function	Reverse audio input	3.5 mm Audio/Embedded audio	
	IR transparent transmission	Support	
	RS232 transparent transmission	Support	
Others	Power supply	12 V 3 A, DC	
	Operating temperature	0°C ~ 40°C	
	Storage temperature	-10°C ~ 60°C	
	Storage environment	Non-corrosive and solvent gas, no dust, no strong magnetic field interference	

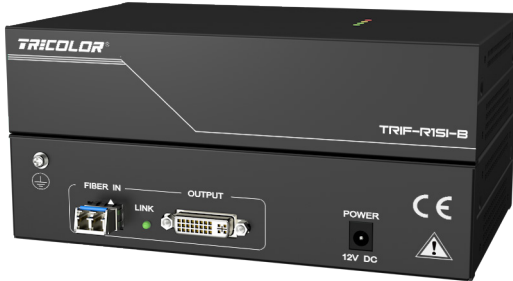
Receiver			*Specifications are slightly different between different Model
Video Output	Video input interface	HDMI / DVI / SDI x 1 *	
	Maximum resolution	1920 x 1200 @ 60 Hz	
	Analog audio input	3.5 mm Audio	
Optical Signal	Optical interface	LC Type	
	Fiber type	Single mode/multimode fiber	
	Transmission distance	10 km *	
Network Decoding	Network Interface	RJ45 x 1	
	Network transmission protocol	RTSP	
	Decoding resolution	1920 x 1200 @ 60 Hz	
Special Function	Reverse audio input	3.5 mm Audio	
	IR transparent transmission	Support	
	RS232 transparent transmission	Support	
Others	power supply	12 V 3 A, DC	
	Operating temperature	0°C ~ 40°C	
	storage temperature	-10°C ~ 60°C	
	Storage environment	Non-corrosive and solvent gas, no dust, no strong magnetic field interference	

## ► Product Model

Transceiver		
Model	Name	
Multicon-M5-EF-D	DVI single fiber optical transceiver	
Multicon-M5-EF2-D	DVI dual fiber optical transceiver	
Multicon-M5-ENF-D	DVI fiber optical network backup fiber optical transceiver	
Multicon-M5-ENF2-D	DVI dual fiber optical single network backup optical transceiver	
Multicon-M5-EF-H	HDMI_1.3 single optical transceiver	
Multicon-M5-EF2-H	HDMI_1.3 dual optical transceiver	
Multicon-M5-ENF-H	HDMI_1.3 optical network backup optical transceiver	
Multicon-M5-ENF2-H	HDMI_1.3 dual optical single network backup optical transceiver	
Multicon-M5-EF-S	3G_SDI single optical transceiver	
Multicon-M5-EF2-S	3G_SDI dual optical transceiver	
Multicon-M5-ENF-S	3G_SDI optical network backup optical transceiver	
Multicon-M5-ENF2-S	3G_SDI dual optical single network backup optical transceiver	

Receiver		
Model	Name	
Multicon-M5-DF-D	DVI single fiber optical transceiver	
Multicon-M5-DF2-D	DVI dual optical transceiver	
Multicon-M5-DNF-D	DVI optical network backup optical transceiver	
Multicon-M5-DNF2-D	DVI dual optical single network backup optical transceiver	
Multicon-M5-DF-H	HDMI_1.3 single optical transceiver	
Multicon-M5-DF2-H	HDMI_1.3 dual optical transceiver	
Multicon-M5-DNF-H	HDMI_1.3 optical network backup optical transceiver	
Multicon-M5-DNF2-H	HDMI_1.3 dual optical single network backup optical transceiver	
Multicon-M5-DF-S	3G_SDI single optical transceiver	
Multicon-M5-DF2-S	3G_SDI dual optical transceiver	
Multicon-M5-DNF-S	3G_SDI optical network backup optical transceiver	
Multicon-M5-DNF2-S	3G_SDI dual optical single network backup optical transceiver	

## TriF Series Fiber Optical Transmitter



**TriF-R1S**



**TriF-T1S**

### ► Product Description

The TriF Series Fiber Optic Transmitters are designed to solve engineering problems. It transmits high-definition video signals over a standard single fiber, with a transmission distance of up to 10 kilometers. This fiber optical transceiver has a single 2.5G transmission rate and supports up to 1920x1200@60Hz RGB resolution. The pass-through loop at the sender is used for local computer monitoring. The receiver reads the output in DVI-I (DVI-D and VGA) format. The LEDs on the transmitter and receiver display the status of the power, video, and optical signals. The entire system operates at 1310 nm (single mode) wavelength with a link loss tolerance of 7 dB.

### ► Features

- Support common resolutions: 800x600, 1024x768, 1152x864, 1280x720, 1280x768, 1280x800, 1280x960, 1280x1024, 1360x768, 1366x768, 1400x1050, 1440x900, 1600x900, 1600x1200,
- 1920x1080, 1920x1200, automatic format detection, maximum clock frequency 170MHz
- The maximum resolution input is 1920x1200@60Hz
- Support signal status indicator display
- Support button to set horizontal position, vertical position and sampling phase
- Support 10BitA/D sampling
- Support 2.5 Gbps signal transmission rate
- Transmission distance up to 10Km

### ► Product Model

Model	Name
TriF-T1SD-B	DVI single mode single core optical transceiver transmitter
TriF-R1SI-B	DVI single mode single core optical transceiver receiver
TriF-T1SG-B	VGA single mode single core optical transceiver
TriF-R1SI-B	VGA single mode single core optical transceiver receiver

### ► Specifications

Interface Type	VGA/HDMI/DVI	
Loop Through Interface	VGA/HDMI/DVI	
Input Resolution	1920x1200@60Hz, and backward compatible	
Wavelength	1310nm	
Matched Fiber Type	9/125um SMF	
Transmission Distances	10km	
Audio Output	3.5mm independent audio output	
Image Processing	10BitA/D sampling support	support
	2.5 Gbps signal transmission rate	support
	Button settings support	support
Using Environment	0° C~40° C	
Size	120mm × 110mm × 45mm	
Weight	0.5kg	
Power	12V DC, 30W	

# TriF-L Fiber-Optic Cable

## ►Product Description

The TriF-L series cable is a fiber optic transmission cable for 4K audio and video signals. The cable supports 4K@60Hz (4:4:4) Ultra HD signal transmissions all while being plug and play without a need of an external power supply or signal amplifier. It can transmit a 4K signal to 300 meters.

## ► Features

- HDMI A-type standard connector
- Compliant with the latest HDMI 2.0 specifications
- Maximum bandwidth of 18Gbps (single channel 6Gbps)
- Supports up to 4K@60Hz (4:4:4)
- Supports HDCP v2.2, EDID, CEC
- Transmits high frequency signals over optical fiber without electromagnetic interference
- MPO separate pure fiber structure for a lightweight design
- Support three type of interface : DVI, DP, HDMI



## ► Product Model

Model	Name
TriF-L-XH-10	4K@60Hz HDMI 10m pure optical transmission line
TriF-L-XH-15	4K@60Hz HDMI 15m pure optical transmission line
TriF-L-XH-20	4K@60Hz HDMI 20m pure optical transmission line
TriF-L-XH-25	4K@60Hz HDMI 25m pure optical transmission line
TriF-L-XH-30	4K@60Hz HDMI 30m pure optical transmission line
TriF-L-XH-40	4K@60Hz HDMI 40m pure optical transmission line
TriF-L-XH-50	4K@60Hz HDMI 50m pure optical transmission line
TriF-L-XH-60	4K@60Hz HDMI 60m pure optical transmission line
TriF-L-XH-100	4K@60Hz HDMI 100m pure optical transmission line
TriF-L-XH-150	4K@60Hz HDMI 150m pure optical transmission line
TriF-L-XH-200	4K@60Hz HDMI 200m pure optical transmission line
TriF-L-XH-300	4K@60Hz HDMI 300m pure optical transmission line

# TriF-eX Fiber Transmitter

## Product Description

TriF-eX series fiber optic transmitter is a high-performance signal extender newly developed by Tricolor Technology. It is designed to overcome the transmission distance limitations of traditional copper DVI cable. LC fiber is used to transmit RGB and data clock signals at high resolutions. In the case of 2560×1440@60Hz, the single-mode fiber can be extended to reach a distance of 20 kilometers and the multimode fiber can be extended to reach a distance of 300M.

This product has EDID reading and writing functionality, which can read and write the EDID storage content on the display from the DVI transmitting Model. This is so it can adapt to different resolution display systems while being more convenient and reliable.



TriF-eX-1s

## Features

- Single mode fiber transmission distance of 20 kilometers, multimode fiber transmission distance of 300M
- Supports 2560x1400 @ 60Hz resolution and is backward compatible
- Support input channel EDID update configuration
- Support automatic protection of power-off equipment
- Support hot swap
- High transfer rate: 10.2Gb / s
- Led status Indicator: convenient for connection check and error disagnose

## Specifications

Video Input	Interface Type	DVI signal	
	Signal Format	DVI-D 18+1 needle	
	Input Resolution	2560X1440@60Hz, and backward compatible	
	Transmission Rate	10Gbps	
Video Output	Interface Type	Optical signal	
	Signal Format	LC	
	Output Resolution	2560X1440@60Hz, and backward compatible	
	Transmission Rate	10Gbps	
Image Processing	EDID update		Suport
	Hot swap		Suport
	Automatic protection of power-off equipment		Suport
Control	Network TCP/IP		TCP/IP
Use Environment	0° C~70° C		
Size	64mm x 42mm x16mm		
Transmission distance	Single mode fiber 20 km, multimode fiber 300M		
Powered by	DC +5V		

## Product Model

Model	Name
TriF-eX-4MT	TriFeX-4M fiber optic transmitter sender
TriF-eX-4MR	TriFeX-4M fiber optic transmitter receiver

# HDBT Series Transmitter

## Product Description

The HDBT Series are a set of transmitters and receivers that provide a cost-effective way to extend digital signals. It supports video signals up to 4K resolution, including 1080P/60 dark and 3D video. HDBaseT technology enables the reliable transmission of digital signals and supports up to 12-bit color depth, CEC pass-through and embedded HD anti-loss audio formats. Additionally, it maintains continuous EDID and HDCP DDC communication between the signal source and display, ensuring optimum compatibility and stable signal transmission between devices. To improve the ease of installation, the HDBT Series Transmitter and Receiver are both portable and can be concealed behind a desk or a small display. The HDBT series transmitter can be connected to the power supply on either the transmitter or receiver and will remotely power the other end.



HDBT Series

## Features

- Supported HDBaseT Lite technology
- Support for 480P to 4K/2k and support for 3D video
- Customizable output resolution for each channel
- Input channel EDID update configuration
- Automatic protection in the event of power disruption
- Bidirectional IR and RS232 control functions
- Support POC two way power supply, either transceiver and receiver can be connected to power

## Product Model

Model	Name
HDBT-HDMI104-Tx	HDMI twisted pair transmitter transmitter
HDBT-HDMI104-Rx	HDMI twisted pair transmitter receiver

## Specifications

Resolution Range	Highest data rate	10.2Gbps (3.4Gbps per color)
	Interface Protocol	HDMI1.4
	Color depth	2560x1600@60Hz or 4K (4096x2160@30Hz, backward compatible)
	HDCP	Support
	Cable requirements	Solid wire 24AWG or better
	Support audio format	PCM 2CH, LPCM 5.1, LPCM 7.1, Dolby Digital, DTS 5.1, Dolby Digital Plus, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos
	Support bit rate	24-bit
	HDBaseT Lite technology	Support
	EDID update	Support
Control	3D video	Support
	Control	Network / infrared / serial port
	Use Environment	0° C to 50° C
	Size	120x76x18 (mm)
	Power Consumption	10W
Powered by		External 24V 0.75A

## Kloud-M5 Series Distributed Codec



**Kloud-M5-EN**



**Kloud-M5-DN**

### ► Product Description

Kloud-M5 series products are professional high-definition network distributed codec products developed by Tricolor Technology Co Ltd. The Kloud-M5 series features the latest H.265 high-performance video compression algorithm with low bandwidth consumption, low transmission delays, high definition picture, high picture fidelity and high stability.

### ► Features

#### Input Node

- Support 4K@30Hz ultra high definition video network transmission, and backward compatible with other resolutions. Also supports video signal loop-through output
- Supports TRS (3.5 mm) audio signals to be captured and transmitted simultaneously with video, while supporting audio loopback
- Support TRS (3.5mm) reverse audio output
- Support remote KVM mouse, keyboard control
- Compatible with H.265/HEVC and H.264/AVC encoding free choice
- Support for encoding rate custom adjustment
- Support transmission screen color brightness adjustment
- Support multiple sets of signal source character custom overlay
- Support web page online configuration and management functions
- Support device firmware system online upgrade
- Support front panel IP address display

#### Output Node

- Support 4K@30Hz ultra high definition video network transmission, and backward compatible with other resolutions
- Support TRS (3.5 mm) audio signal output simultaneously with video signal output
- Support TRS (3.5mm) reverse audio capture function
- Support remote KVM mouse, keyboard control
- Compatible with H.265/HEVC and H.264/AVC automatic decoding
- Support 1/4/9/16 multi-screen split display function
- Support decoded pre-set function, scene retrieval
- Support decoded signal source :signal source and preview overlook function
- Support web page online configuration and management functions
- Support device firmware system online upgrade
- Support front panel IP address display

## ► Specifications

### Input Node

Resolution	1080P@60	4K@30
Interface Type	DVI, SDI, HDMI	HDMI
Video Loop	DVI, SDI, HDMI	HDMI
Audio Input	Support	Support
Audio Loop Out	Support	Support
Audio Output	Support	Support
Network Interface	RJ45 interface x1	RJ45 interface x1
KVM Control	Stand by	Stand by
LCD	Stand by	Stand by
Control Method	Network, IR, serial port	Network, IR, serial port
Equipment Size	210mm x 166mm x 43mm (8.17in x 6.53in x 1.69in)	
Equipment Weight	Single node: 1Kg (2.2 lb.)	
Heat Dissipation Method	Passive cooling	
Operating Temperature	0° C~40° C	
Storage Temperature	-10° C~60° C	
Device Power Consumption	Less than 25W	
Storage Environment	Non-corrosive and solvent gas, no dust, no strong magnetic field interference	
POE PowerSupply	Support some models	Support some models
Cabinet Installation	Dedicated installation tray for standard cabinet	

### Output Node

Resolution	1080P@60	4K@30
Interface Type	DVI, HDMI	HDMI
Audio Output	Support	Support
Network Interface	RJ45 interface x1	RJ45 interface x1
KVM Control	Support	Support
LCD	Support	Support
Control Method	Network, IR, serial port	Network, IR, serial port
Equipment Size	210mm x 166mm x 43mm (8.17in x 6.53in x 1.69in)	
Equipment Weight	Single node: 1Kg (2.2 lb.)	
Heat Dissipation Method	Passive cooling	
Operating Temperature	0° C~40° C	
Storage Temperature	-10° C~60° C	
Device Power Consumption	Less than 25W	
Storage Environment	Non-corrosive and solvent gas, no dust, no strong Magnetic field interference	
POE Power Supply	Support Selected Model	Support Selected Model
Cabinet Installation	Dedicated installation tray for standard cabinet	

## ► Product Model

### Input Node

Name	Standard Model	POE Type
Distributed 2K DVI input node	Kloud-M5-EN-D	Kloud-M5-EN-D-POE
Distributed 2K HDMI input node	Kloud-M5-EN-H	Kloud-M5-EN-H-POE
Distributed 2K SDI input node	Kloud-M5-EN-S	Kloud-M5-EN-S-POE
Distributed 4K HDMI input node	Kloud-M5-EN-UH	Kloud-M5-EN-UH-POE

### Output Node

Name	Standard Model	POE Type
Distributed 2K DVI input node	Kloud-M5-DN-D	Kloud-M5-DN-D-POE
Distributed 2K HDMI input node	Kloud-M5-DN-H	Kloud-M5-DN-H-POE
Distributed 4K HDMI input node	Kloud-M5-DN-UH	Kloud-M5-DN-UH-POE

## NYX-M5 Series Dual Engine Distributed Codec



**NYX-MV5-EN**



**NYX-M5-DN**

### ► Product Description

NYX dual engine distributed series is the latest distributed product provided by Tricolor Technology for the needs of networked and IP-based users. Utilizing the unique video network transmission technology of Tricolor, it provides users with ultra-low latency and high-definition image quality for extreme audio and video experience. NYX dual engine distributed network node provides users with the ultimate audio and video long-distance transmission service. With perfect visual management software, it is widely used in joint operations, airport air traffic control, conference communication, information sharing between buildings and other scenarios.

### ► Features

#### Input Node

- Supports 4K @ 30Hz 4:4:4 ultra high definition video screen lossless transmission, perfect restore original image quality
- Video transmission delay  $\leq 35\text{ms}$ , fast and smooth signal switching, no black field, anti-glare system.
- A single video source can support simultaneous requests by multiple users, requesting  $\geq 1000$  channel sources
- Audio and video transmissions with a choice of independent transmission;
- Source preview function, the control software can preview the source on screen in real time
- Support custom overlay of signal source character, freely superimpose text over the video displayed on the source screen
- Any node drop does not affect the overall system operation
- With front panel IP address display for fast device positioning
- Device firmware automatic updates from the cloud
- Support 24/7 continuous operation

#### Output Node

- 4K@30Hz 4:4:4 Ultra-HD video loss-less transmission, perfect restoration of original image quality
- Video transmission delay  $\leq 35\text{ms}$ , fast and smooth signal switching, no black field, anti-glare system
- Support audio and video integrated switching and independent switching of audio and video
- Massive IP video access, compatible with HEVC and H.264/AVC standard format network stream decoding
- Supports the docking display of multiple network streaming devices and third-party security platforms
- Any node dropped does not affect the overall system operation
- Front panel IP address display for quick device positioning
- Device firmware automatic updates from the cloud
- Support 24/7 continuous operation

## ► Specifications

Input Node			*Only Selected Model Support Fiber Interface
Resolution	1080P@60	4K@30	
Interface Type	DVI、HDMI、SDI	HDMI	
Video Loop	DVI、HDMI、SDI	HDMI	
Audio Input	Support	Support	
Audio Loop Out	Support	Support	
Reverse Audio Output	Support	Support	
Network Interface	RJ45 interface x2	RJ45 interface x4	
Fiber Interface*	SFP+ 1Gbps	SFP+ 10Gbps	
KVM Control	Support	Support	
USB Transparent Transmission	Support	Support	
Remote Switch	Support	Support	
LCD Panel	Support	Support	
Equipment Size	210mm x 166mm x 43mm (8.17in x 6.53in x 1.69in)		
Equipment Weight	Single node: 1Kg (2.2 lb.)		
Heat Dissipation Method	Passive cooling		
Operating Temperature	0° C~40° C		
Storage Temperature	-10° C~60° C		
equipment power	Less than 25W		
Storage environment	Non-corrosive and solvent gas, no dust, no strong magnetic field interference		
POE power supply	Support	Support	
Cabinet installation	Dedicated installation tray for standard cabinet		

Output Node			*Only Selected Model Support Fiber Interface
Resolution	1080P@60	4K@30	
Interface Type	DVI、HDMI、SDI	HDMI	
Audio Output	Support	Support	
Reverse Audio Input	Not Supported	Not Supported	
Network Interface	RJ45 Interfacex2	RJ45 Interfacex4	
Fiber Interface*	SFP+ 1Gbps	SFP+ 10Gbps	
KVM Control	Not Supported	Not Supported	
USB Transparent Transmission	Not Supported	Not Supported	
Remote Switch	Not Supported	Not Supported	
LCD Panel	Support	Support	
Equipment Size	210mm x 166mm x 43mm (8.17in x 6.53in x 1.69in)		
Equipment Weight	Single node: 1Kg (2.2 lb.)		
Heat Dissipation Method	Passive cooling		
Operating Temperature	0° C~40° C		
Storage Temperature	-10° C~60° C		
Equipment Power	Less than 25W		
Storage Environment	Non-corrosive and solvent gas, no dust, no strong magnetic field interference		
POE Power Supply	Support	Support	
Cabinet Installation	Dedicated installation tray for standard cabinet		

## ► Product Model

Input Node			*Optical fiber node contains fiber connection and optical network backup
Name	Network node model	Optical network node model	
NYX no-delay DVI input node	NYX-MV5-EN-D	NYX-MV5-ENF-D	
NYX no delay HDMI1.3 input node	NYX-MV5-EN-H	NYX-MV5-ENF-H	
NYX no-delay SDI input node	NYX-MV5-EN-S	NYX-MV5-ENF-S	
NYX no delay HDMI1.4 input node	NYX-MV5-EN-UH	NYX-MV5-ENF-UH	

Output Node			*Optical fiber node contains fiber connection and optical network backup
Name	Network node model	Optical network node model	
NYX no-delay DVI output node	NYX-M5-DN-D	NYX-M5-DNF-D	
NYX no delay HDMI1.3 output node	NYX-M5-DN-H	NYX-M5-DNF-H	
NYX no-delay SDI output node	NYX-M5-DN-S	NYX-M5-DNF-S	
NYX no delay HDMI1.4 output node	NYX-M5-DN-UH	NYX-M5-DNF-UH	

## TEX Series Wireless Long Range Extender

### ► Product Description

The HDMI over wireless kit extends high-definition video and audio to any HDTV displays up to 50 meters away. It supports up to 4 displays to show one source content synchronously and resolutions up to 1080p.

The extender transmits the vivid real time video and audio signals with very low latency, allowing user to view the content in other rooms of the house, such as bedroom, living room, or kitchen. It also allows user to control source device from display side via source device's remote controller.



TEX-W01-UH

### ► Specifications

#### Product Specs

Technical Info	
HDMI Compliance	HDMI 1.4b
HDCP Compliance	HDCP 1.4
Video Bandwidth	4.95 Gbps
Video Resolutions	up to 1080P@50/60Hz
Color Space	RGB, YCbCr 4:4:4, YCbCr 4:2:2
Color Depth	8-bit
HDMI Audio Formats	LPCM 2CH
Wireless Standard	802.11a/b/g/n
Modulation Method	BPSK/QPSK/16-QAM/64-QAM
Wireless Band	2.4GHz, 5GHz ISM Band
Operation Range	Up to 50 meters in open space
IR Frequency	20KHz - 60KHz
ESD Protection	Human body model — ±8kV (air-gap discharge) & ±4kV (contact discharge)
Interface Info	
Transmitter	Inputs: 1x HDMI Type A [19-pin female] Outputs: 1x HDMI Type A [19-pin female], 1x USB [Mini USB Type B] 1x IR Out [3.5mm Stereo Mini-jack]
Receiver	Inputs: 2x USB [USB Type A], 1x IR In [3.5mm Stereo Mini-jack] Outputs: 1x HDMI Type A [19-pin female]
Devices Info	
Housing	Aluminum Enclosure
Color	Black
Dimensions	142mm [W] x 80mm [D] x 19mm [H]
Weight	TX: 270g RX: 260g
Power Supply	Input: AC100 - 240V 50/60Hz Output: DC 5V/2A (US/EU standards, CE/FCC/UL certified)
Power Consumption	3W(Max)
Operation Temperature	32 - 104° F / 0 - 40° C
Storage Temperature	-4 - 140° F / -20 - 60° C
Relative Humidity	20 - 90% RH (no condensation)

### ► Features

- Supports 4K @ 30Hz 4:4:4 ultra high definition video screen lossless transmission, perfect restore original image quality
- Video transmission delay  $\leq 35\text{ms}$ , fast and smooth signal switching, no black field, anti-glare system.
- A single video source can support simultaneous requests by multiple users, requesting  $\geq 1000$  channel sources
- Audio and video transmissions with a choice of independent transmission;
- Source preview function, the control software can preview the source on screen in real time
- Support custom overlay of signal source character, freely superimpose text over the video displayed on the source screen
- Any node drop does not affect the overall system operation
- Device redundancy backup, which can automatically switch to the backup device or backup link for output display after the primary device or link fails.
- With front panel IP address display for fast device positioning
- Device firmware automatic updates from the cloud
- Support 24/7 continuous operation

# TEX Series Wireless Long Range Extender

## Product Description

The HDMI 4K over wireless 60G extender can transmit an 4K content without any compression and latency to an HDMI display up to 30 meters. It also supports 3D, CEC and 7.1-channels of High Bit Rate (HBR) lossless digital audio such as Dolby True HD, DTS-HD Master Audio. The Wireless HD is specifically designed to transmit high definition video & audio within.



TEX-W02-UH

## Features

- HDMI 1.4b, HDCP 2.2 compliant
- Up to 4K@30Hz, 1080P@60Hz
- Up to 7.1 channels HD audio
- Uncompressed 4K Video & Audio
- Near zero latency
- Wireless extension up to 30 meters
- Simply plug-and-play for easy connection
- Supports CEC

## Specifications

Technical Info	
Frequency Band Range	60 GHz
Input resolution (Transmitter)	Up to 4K@30Hz
Output resolution (Receiver)	Up to 4K@30Hz
Input Ports(Transmitter)	1x HDMI (Female type)
Output Ports(Receiver)	1x HDMI (Female type)
USB Connector (Transmitter/ Receiver)	Micro USB
ESD Protection	±8kV (Air-gap discharge), ±4kV (Contact discharge)
Power Supply	5V/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	90mm(W)×56mm(D)×17mm(H)
Weight	Transmitter:154g, Receiver: 155g
Chassis Material	Plastic
Silkscreen Color	Black
Operating Temperature	0° C ~ 40° C / 32° F ~ 104° F
Storage Temperature	-20° C ~ 60° C / -4° F ~ 140° F
Relative Humidity	20~90% RH (non-condensing)
Power Consumption	Transmitter: 3W , Receiver: 3W

## TEX Series Wireless Long Range Extender

### ► Product Description

The HDMI over wireless kit extends high-definition video and audio to any HDTV displays up to 50 meters away. It supports up to 4 displays to show one source content synchronously and resolutions up to 1080p.

The extender transmits the vivid real time video and audio signals with very low latency, allowing user to view the content in other rooms of the house, such as bedroom, living room, or kitchen. It also allows user to control source device from display side via source device's remote controller.



TEX-W03-UH

### ► Specifications

Technical Info	
HDMI Compliance	HDMI 1.4b
HDCP Compliance	HDCP 1.4
Video Bandwidth	4.95Gbps
Video Resolution	480i~1080p, the maximum up to 1920x1200@60Hz
Color Space	RGB/YCbCr 4:4:4, YCbCr 4:2:2
Color Depth	8-bit
HDMI Audio Formats	LPCM 2.0CH 32KHz/44.1KHz/48KHz
ESD Protection	Human body model — ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Interface Info	
Transmitter	Inputs: 1x HDMI Type A [19-pin female] Outputs: 1x IR OUT [3.5mm Stereo Mini-jack] 1x WiFi OUT [WiFi antenna]
Receiver	Inputs: 1x IR IN [3.5mm Stereo Mini-jack] 1x WiFi IN [WiFi antenna] Outputs: 1x HDMI Type A [19-pin female]
Devices Info	
Housing	Metal Enclosure
Color	Black
Dimensions	Metal Enclosure
Color	Black
Dimensions	125mm [W] x 72mm [D] x 16mm [H]
Weight	Transmitter: 225g, Receiver: 219g
Power Supply	Input: AC100 - 240V 50/60Hz, Output: DC 5V/1A (US/EU standards, CE/FCC/UL certified)
Power Consumption	Transmitter: 4.2W, Receiver: 2.7W
Operating Temperature	32 - 104° F / 0 - 40° C
Storage Temperature	-4 - 140° F / -20 - 60° C

### ► Features

- HDMI 1.4b, HDCP 1.4 and DVI 1.0 compliant
- Supports video resolutions including 480i~1080p, the maximum resolution up to 1920x1200@60Hz
- Transmission distance:
- One-to-one and one-to-four connect distance the furthest up to 164ft/50m (An open environment without Wi-Fi interference.)
- Audio up to LPCM 2.0CH 32KHz/44.1KHz/48KHz
- Supports H.264 high performance codec, adopting high bit rate mode
- Supports one-way IR control
- End-to-end delays under 150Ms

# Digital KVM Solution

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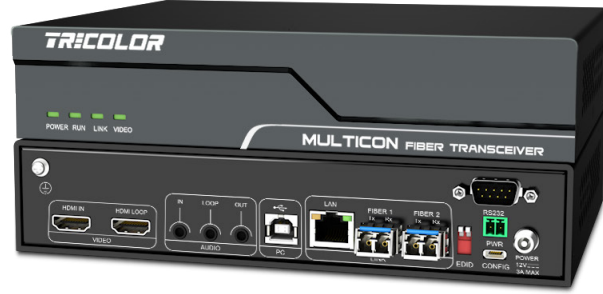
Fiber Optic Multi-person KVM System

Distributed IP Based KVM

## Multicon Multi-user Fiber KVM Solution



**Multicon-V5-DNF2**



**Multicon-V5-ENF2**

### ► Product Description

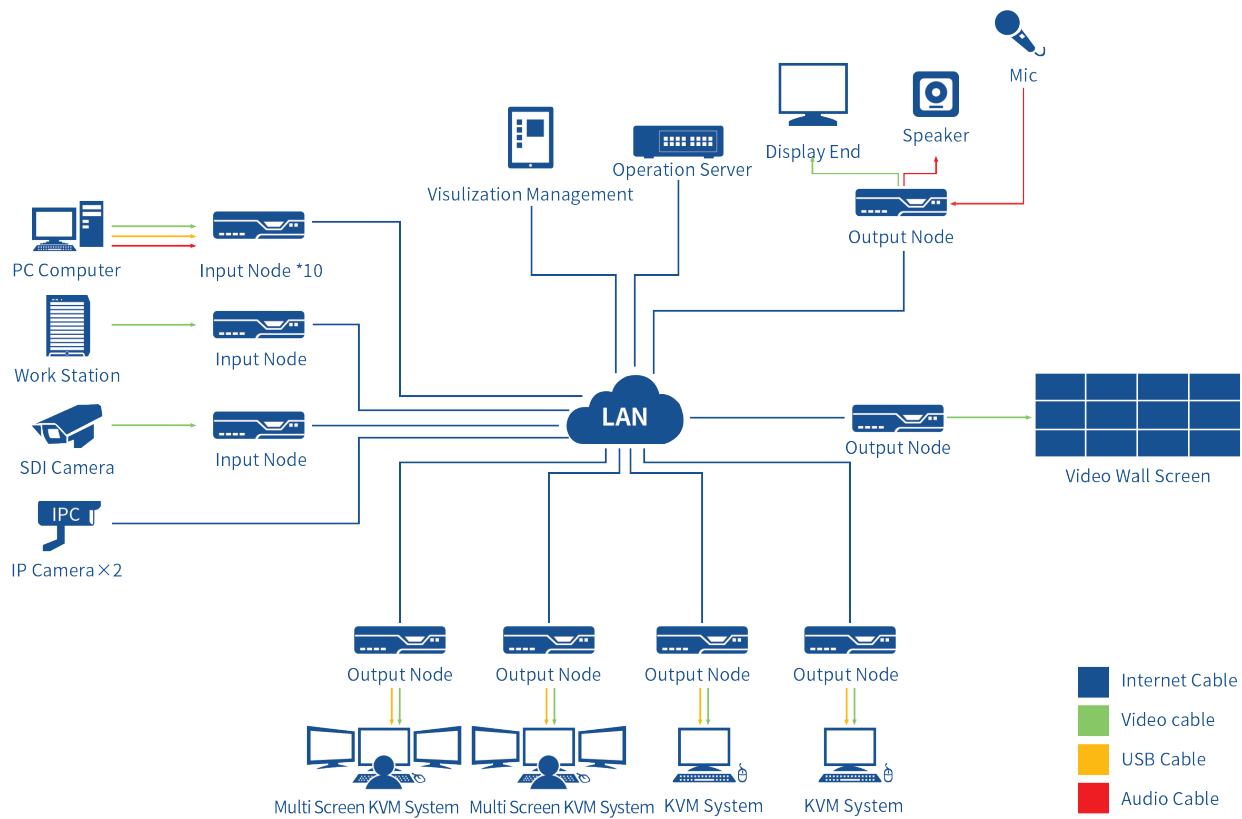
The Multicon fiber optic multi-user management system supports ultra-high-definition video signal acquisition and transmissions. The system supports an image that can reach all 4:4:4 chroma sampling in RGB gamut, which allows for high-quality image restoration and image details enhancement. Applicable for a wide range signal type, the KVM matrixs, the KVM (Keyboard Video Mouse) matrix is extended to enable visual agent management, which brings subversive upgrades to traditional matrix and KVM systems.

The KVM function is used to realize the separation of human and machine. The server or computer is uniformly deployed in the operation room, and physically separated from the operators to leave an unmanned machinery space alone. It can save space, keep the operators from heating elements of the machine, make the server easy to manage and ensure data security.

### ► Features

- KVM matrix function with KVM fiber card, KVM transmitter and KVM receiver
- Support one set of mouse and keyboard with multiple displays to access multiple hosts at the same time, the mouse can control the host switch by sliding across the screen
- The KVM receiving terminal can use the shortcut keys to retrieve the OSD menu and switch the signal source displayed on the current KVM receiver display.
- Audio transmission between KVM terminals
- User rights management, grouping host terminals and users, and accessing different privilege levels through grouping. At the same time, it supports push function, which can push local agent signals to other display terminals and can also pull other display signals to local
- USB device transparent transmission, USB device such as USB flash drive, U-Key, camera, touch screen, etc, can connect the USB device to control signal source in operation seat without any special processing
- Pure hardware non-IP architecture to ensure USB data transmission process security
- Full english Version operation interface, users can quickly preview the status of the signal source to be switched before switching the signal source. At the same time, combined with intelligent permission interaction management system, realize fast operation control of signal source between different users.
- Visualized OSD interface can effectively improve the data management interactions between agents and large screens
- OSD interface to switch on and off the computer

## ► System Diagram



## ► Specifications

Chassis size			
Scale	Card slot configuration	Size	Power consumption
2U	4 full-featured card slots	440 (W)X385(D)X89(H)mm	<250W
4U	8 full-featured card slots	440 (W)X385(D)X175(H)mm	<300W
10U	17 full-featured card slots	440 (W)X430(D)X442(H)mm	<460W
16U	36 full-featured card slots	440 (W)X430(D)X709(H)mm	<800W
28U	40 input card slots, 40 output card slots	440 (W)X430(D)X1242(H)mm	<1600W
32U	80 input card slots, 80 output card slots	940 (W)X450(D)X1350(H)mm	<3500W

## Transceiver

Video Input	Video input interface	HDMI / DVI x 1
	Maximum resolution	1920 x 1200 @ 60 Hz
	Analog audio input	3.5 mm audio
Video Loop	Video loop	HDMI / DVI x 1
Optical Signal	Optical interface	LC type
	Fiber type	Single mode/multimode fiber
	Transmission distance	10 km
Network Decoding	Network Interface	RJ45
	Network transmission protocol	RTSP
	Decoding resolution	1920 x 1200 @ 60 Hz
Additional function	Reverse audio output	3.5 mm audio / inline audio
	USB data transfer	USB Type-B x 1
	Computer switch	Stand by
	RS232 transparent transmission	Stand by
Other	Power supply	12 V 3 A, DC
	Operating temperature	0° C ~ 40° C
	Storage temperature	-10° C ~ 60° C
	Storage environment	Non-corrosive and solvent gas, no dust, no strong magnetic field interference

## Receiver

Video Output	Video input Interface	HDMI / DVI x 1
	Maximum Resolution	1920 x 1200 @ 60 Hz
	Analog audio Input	3.5 mm audio
Optical Signal	Optical Interface	LC type
	Fiber Type	Single mode/multimode fiber
	Transmission Distance	10 km
Network Decoding	Network Interface	RJ45 x 1
	Network Transmission Protocol	RTSP
	Decoding Resolution	1920 x 1200 @ 60 Hz
Additional Function	Reverse audio Input	3.5 mm audio
	Keyboard and Mouse Control	USB Type-A x 2
	USB 2.0	USB Type-A x 4
	Computer Switch	stand by
	RS232 transparent Transmission	stand by
Other	Power Supply	12 V 3 A, DC
	Operating Temperature	0° C ~ 40° C
	Storage Temperature	-10° C ~ 60° C
	Storage Environment	Non-corrosive and solvent gas, no dust, no strong magnetic field interference

## ► Product Model

### Transceiver

Model	Name
Multicon-V5-ENF-D	DVI optical network backup KVM optical transceiver
Multicon-V5-ENF2-D	DVI dual optical single network backup KVM optical transceiver
Multicon-V5-ENF-H	HDMI_1.3 optical network backup KVM optical transceiver
Multicon-V5-ENF2-H	HDMI_1.3 dual optical single network backup KVM optical transceiver

### Receiver

Model	Name
Multicon-V5-DNF-D	DVI optical network backup KVM optical transceiver user end
Multicon-V5-DNF2-D	DVI dual optical single network backup KVM optical transceiver user end
Multicon-V5-DNF-H	HDMI_1.3 optical network backup KVM optical transceiver user end
Multicon-V5-DNF2-H	HDMI_1.3 dual optical single network backup KVM optical transceiver user end

# NYX-V5 IP-based KVM Solution



NYX-MV5-EN



NYX-V5-DN

## ► Product Description

The NYX-V5 IP-based KVM Solution is the latest distributed solution provided by Tricolor for the needs of networked and IP-based users. Using the unique video network transmission technology of Tricolor, it provides users with the ultimate audio and video experience without delay while maintaining high-definition quality. The NYX dual engine distributed system integrates audio and video long-distance transmissions, matrix switching, KVM agent management and large-screen splicing management. It is widely used in joint command, airport air traffic control and conference communication with sophisticated visual management software as well as various scenarios such as information sharing between buildings.

## ► Features

- 4K@30Hz 4:4:4 Ultra HD video loss-less transmission, output display perfect restore original image quality
- Video transmission delay  $\leq 35\text{ms}$ , fast and smooth signal switching, no black field, no glare.
- A single video source supports simultaneous requests by multiple users, requesting  $\geq 1000$  channels
- Massive IP video access, compatible with HEVC and H.264/AVC standard format network stream decoding
- Docking display of multiple network streaming devices and third-party security platforms
- Equipped with a remote KVM function, which can control the remote source host through the seat mouse keyboard
- Mouse cross-screen function, the mouse can quickly slide between multiple display devices for one-person multi-machine management
- Has an OSD menu that allows local agent operators to switch local signals via the OSD menu generated by the client
- Quickly push the signal source to other display units through the OSD menu for agent management and collaboration
- USB pass-through function for USB peripherals such as USB flash drive, Ukey, CA authentication, mobile hard disk, and mobile optical drive
- Multi-scene saving and recall functions, save scene layout to the system's memory for fast and seamless switching
- Support signal source character custom overlay, freely superimpose text information on the source screen
- Source preview function, the control software can preview the source screen in real time
- Detailed authority division control to support multi-user grouping and hierarchical decentralization control
- Any node dropped does not affect the overall system operation
- Front panel IP address display for quick device positioning
- Device firmware upgrade function
- Support 24/7 continuous work capability

## ► Specifications

Input Node			*Optical Network Node contains the fiber optical connection and optical network backup function		
Resolution	1080P@60	4K@30			
Interface Type	DVI, HDMI, SDI	HDMI			
Video Loop	DVI, HDMI, SDI	HDMI			
AudioInput	Support	Support			
AudioLoop Out	Support	Support			
Reverse Audio Output	Support	Support			
Network Interface	RJ45 interface x2	RJ45 interface x4			
Fiber Interface*	SFP+ 1Gbps	SFP+ 10Gbps			
KVM Control	Support	Support			
USB transparent transmission	Support	Support			
Remote Switch	Support	Support			
LCD Panel	Support	Support			
Equipment Size	210mm x 166mm x 43mm (8.17in x 6.53in x 1.69in)				
Equipment Weight	Single node: 1Kg (2.2 lb.)				
Heat Dissipation Method	Passive cooling				
Operating Temperature	0° C~40° C				
Storage Temperature	-10° C~60° C				
Equipment Power	Less than 25W				
Storage Environment	Non-corrosive and solvent gas, no dust, no strong magnetic field interference				
POE power Supply	Support	Support			
Cabinet Installation	Dedicated installation tray for standard cabinet				

Output Node			*Optical Network Node contains the fiber optical connection and optical network backup function		
Resolution	1080P@60	4K@30			
Interface Type	DVI, HDMI	HDMI			
Audio Output	Support	Support			
Reverse Audio Input	Support	Support			
Network Interface	RJ45 interface x2	RJ45 interface x4			
Fiber Interface*	SFP+ 1Gbps	SFP+ 10Gbps			
KVM Control	Support	Support			
USB Transparent Transmission	Support	Support			
Remote Switch	Support	Support			
LCD Panel	Support	Support			
Equipment Size	210mm x 166mm x 43mm (8.17in x 6.53in x 1.69in)				
Equipment Seight	Single node: 1Kg (2.2 lb.)				
Heat Dissipation Method	Passive cooling				
Operating Temperature	0° C~40° C				
Storage Temperature	-10° C~60° C				
Equipment Power	Less than 25W				
Storage Environment	Non-corrosive and solvent gas, no dust, no strong magnetic field interference				
POE power Supply	Support	Support			
Cabinet Installation	Dedicated installation tray for standard cabinet				

## ► Product Model

Input Node			*Optical network contains fiber optical interface and optical network backup function		
Name	Network node model	Optical Network Node Type			
NYX zero delay DVI input node	NYX-MV5-EN-D	NYX-MV5-ENF-D			
NYX zero delay HDMI1.3 input node	NYX-MV5-EN-H	NYX-MV5-ENF-H			
NYX zero delay SDI input node	NYX-MV5-EN-S	NYX-MV5-ENF-S			
NYX zero delay HDMI1.4 input node	NYX-MV5-EN-UH	NYX-MV5-ENF-UH			

Output Node			*Optical network contains fiber optical interface and optical network backup function		
Name	Network node model	Optical Network Node Type			
NYX zero delay DVI KVM output node	NYX-V5-DN-D	NYX-V5-DNF-D			
NYX zero delay HDMI1.3 KVM output node	NYX-V5-DN-H	NYX-V5-DNF-H			
NYX zero delay HDMI1.4 KVM output node	NYX-V5-DN-UH	NYX-V5-DNF-UH			

# Signal Transmission Socket

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Desktop Socket

HDBaseT Wall-plate Transmitter

## TS Series DesktopSocket

### ► Introduction

TS series information box, designed and manufactured for high-end products for government, public security, transportation, military, communications, education, finance, medical and other industries and enterprises. Adopt HDBaseT technology to solve the problem of long-distance transmission of high-definition signals, and use the double-line technology to uniformly output digital high-definition signals, saving costs and reducing fault points. At the same time provide a variety of specifications, pop-up, clamshell, electric flip, to meet the needs of the majority of users.



**TS-HD601**

### ► Product Description

The TS-HD601 closable junction box is a slide-type junction box for desktop installation with high-definition conversion and longdistance transmission. The VGA, audio and HDMI signals connected to the upper end can pass through a single CAT5, 5e and 6 type network cable. Output high-definition video signals, audio signals, transmission distance 70-100M, convenient installation and wiring;

The TS-HD601 uses all-digital zero-compression technology to achieve perfect transmission of video images from pixel to pixel and audio. Supports up to 4K signals; supports HDCP decoding (optional), can be connected to Blu-ray player, with high reliability and excellent high-resolution image performance.

### ► Features

- Output high-definition video signals, audio signals and transmission distances of 100M through a single CAT5, 5e and 6 network cable;
- Support 4K HD signal;
- Input support: VGA video, audio, HDMI;
- Support HDBaseT protocol;
- Can be used with the TRICOLOR matrix
- Support USB charging function.

## ► Product Description

The TS-HD501 closable junction box is a pop-up junction box for desktop installation with high-definition conversion and longdistance transmission. The VGA, audio and HDMI signals connected to the upper end can pass through a single CAT5, 5e and 6 type network cable. Output high-definition video signal, audio signal, transmission distance of 100M, convenient installation and wiring;

The TS-HD501 uses all-digital zero-compression technology to achieve perfect transmission of video images from point to point and audio. Supports up to 4K signals; supports HDCP decoding (optional), can be connected to Blu-ray player, with high reliability and excellent high-resolution image performance.



**TS-HD501**

## ► Features

- 1. Output high-definition video signals, audio signals and transmission distances of 70- 100M through a single CAT5, 5e and 6 network cable;
- 2. Support 4K HD signal;
- 3. Input support: VGA video, audio, HDMI;
- 4. Support HDBaseT protocol;
- 5. Can be used with the TRICOLOR matrix
- 6. Support USB charging function.

## ► Product Description

The TS-HD100U cloakable junction box is a desktop-mounted hoisting junction box with high-definition conversion and longdistance transmission. The VGA audio and HDMI signals connected to the upper end can output HD video through a single CAT5, 5e and 6 network cable. Signal, audio signal, transmission distance of 100M, convenient installation and wiring;

The use of all-digital zero compression technology enables the perfect transmission of video images from point to point and audio. Supports up to 4K signals; supports HDCP decoding (optional), can be connected to Blu-ray player, with high reliability and excellent high-resolution image performance.



**TS-HD100U**

## ► Features

- Output high-definition video signals, audio signals and transmission distances of 100M through a single CAT5, 5e and 6 network cable;
- Support 4K HD signal;
- Input support: VGA video, audio, HDMI;
- Support HDBaseT protocol;
- Can be used with the TRICOLOR matrix
- Support USB charging function.

### ► Product Description

The TS-601 Casing Junction Box is a slide-type junction box with HD conversion suitable for desktop installation. It uses highperformance professional conversion chip to convert VGA+AUDIO, HDMI and signals into HD format HDMI signal output, VGA. Support resolution 640 \* 480 to 1920 \* 1080P or 1920 \* 1200, the user can select the switching signal through the buttons on the panel.

The TS-601 closable junction box provides a clean, compact and simple connection solution. The slide-type structure design picks up the inner panel when in use, and the inner panel can slide down into the track, and various cables and interfaces are displayed.



**TS-601**

### ► Features

- Adopting a lid-down (slider) structure design;
- The top panel can be selected from black sandblasting, silver sandblasting, or custom colors for customers;
- Support VGA+AUDIO, HDMI signal input, HDMI signal output, with button selection switching function;
- Adopt high-bandwidth chip, high-performance image conversion and signal long-distance transmission distortion compensation technology;
- Using digital synchronous recognition processing technology, the image output is more stable and reliable;
- Full-chip SMD process, unique ESD electrostatic protection technology;
- Support signal timing reforming, perfect display of 1920×1080P HD images;
- Support Blu-ray embedded audio
- Support USB charging function

## ► Product Description

The TS-501 cloakable junction box is a pop-up junction box with high-definition conversion suitable for desktop installation. It uses high-performance professional conversion chip to convert VGA +AUDIO, HDMI, and signal into HD format HDMI signal output, VGA. Support resolution 640 \* 480 to 1920 \* 1080p or 1920 \* 1200, the user can select the switching signal through the buttons on the panel.

The closable junction box provides a clean, compact and simple connection solution. When using, just press the top of the junction box to release the mechanical lock, the junction box is smoothly opened by the pneumatic device, and the hidden power, network, telephone, video, audio and other interfaces are displayed at 45°. After use, tap the top of the junction box, the mechanical lock is closed, the various interfaces are hidden, and the hidden junction box is flush with the table.



**TS-501**

## ► Features

- Adopting a lid-down (slider) structure design;
- The top panel can be selected from black sandblasting, silver sandblasting, or custom colors for customers;
- Support VGA+AUDIO, HDMI signal input, HDMI signal output, with button selection switching function;
- Adopt high-bandwidth chip, high-performance image conversion and signal long-distance transmission distortion compensation technology;
- Using digital synchronous recognition processing technology, the image output is more stable and reliable;
- Full-chip SMD process, unique ESD electrostatic protection technology;
- Support signal timing reforming, perfect display of 1920 × 1080P HD images;
- Support Blu-ray embedded audio
- Support USB charging function

# Signal Converter

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TCV Series Signal Converter

# TCV Series Signal Converter



TCV-UH-aH



TCV-DA-H

## Product Description

TCV series products are our audio visual equipments which support the convert function from different signal source to multi type of outcome. These are part of Tricolor's product extend the function for a broader application. Please check below list for more information.

## Specifications

Model Type	Product Description
TCV-DA-H	HDMI convert to DVI+audio
TCV-HDCP-XH	HDMI 18Gbps audio extractor
TCV-H-HS	SCART +HDMI convert to HDMI
TCV-H-Milti	HDMI convert to VGA
TCV-HW-H	HDMI convert to HDMI +AV
TCV-H-WH	AV + HDMI convert to HDMI
TCV-R-UH	4K*2K HDMI convert to VGA
TCV-UHA-UH	HDMI1.4 convert to HDMI/audio
TCV-UH-H	HDMI convert to HDMI 4K
TCV-UH-R	VGA convert to HDMI 4K
TCV-UH-W	AV convert to HDMI 4K
TCV-W-H	HDMI convert to CVBS, support NTSC. PAL format
TCV-W-UH	4K*2K HDMI convert to AV
TCV-ARCHDCP-XH	HDMI 18Gbps audio extractor
TCV-UH-ALL	All convert to HDMI



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