IDK AV

PRODUCT CATALOG

2022

About us

IDK Corporation is headquartered in Kanagawa Japan with sales, fulfillment and service operations in USA, Europe and Asia. For over 30 years, our market leadership in Japan has emerged from our commitment to exceptional product quality and by putting our customers first-always.

IDK delivers world-class, state-of-the-art ProAV solutions for use in corporate, educational, entertainment, healthcare, retail, and government applications.

IDK strives to contribute to a more efficient, prosperous, effective and enjoyable planet with the highest-quality ProAV products. Our signal management solutions portfolio includes native-signal digital multi-switchers, AV over IP, signal extenders and signal splitters. These products enable our customers to create, control, monitor and manage their audiovisual systems.

As your trusted ProAV solutions partner, IDK is also committed to our environment. The entire IDK organization supports our social responsibility policy and we are continually conducting activities based on the 3R's; Reduce, Reuse, and Recycle.

We are proud of the fact that all IDK products are designed, manufactured, tested and evaluated at our own facilities in JAPAN. The cost effectiveness and high degree of functionality of our "Japanese Quality Products" enables our enduring presence as the ProAV equipment leader; both in Japan and now, internationally.

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# IP-NINJAR 10GbE Base 4K@60 (4:4:4) AV over IP Solution

IP-NINJAR System

To meet growing global demand for 4K video, IDK has developed a state of the art AV System Solution:
IP-NINJAR is a game changing IP based, turnkey, high definition Audio/Video signal delivery solution. System Control, Signal Extension, Distribution, Seamless/KVM Switching, Videowall, and Multiviewing capabilities are fully integrated into the platform. Boasting full format agility, true 4K/60 4:4:4 HDR HDCP 2.2 capabilities, edge-to-edge zero frame delay and unparalleled stability, the IP-NINJAR leverages off-the-shelf 10Gb Ethernet infrastructure to replace traditional baseband AV architectures. With an elegantly simple architecture, unlimited I/O and footprint scalability and individual node-level monitoring, the IP-NINJAR unleashes valuable signal management advantages for Pro AV and IT.

IP-NINJAR Key Features

■Video/Audio:

- 4K@60 (4:4:4)/HDR and HDCP 1.4/2.2
- Multi format input support: HDMI/3G-SDI
- Zero frame latency with Standard Switching mode
- 2-frame latency at maximum with Fast & Scale Switching mode
- Digital/Analog audio breakaway switching and Audio De-/Embedding
- Point-to-Point extension, Videowall, and Multiview
- KVM switching using external USB extenders
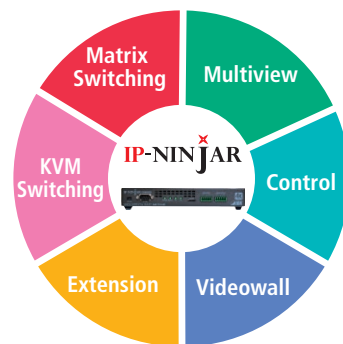
■Dante Network Audio Bridge:

IP-NINJAR uses proprietary codec to distribute audio, and it can route audio signals only in IP-NINJAR Network. NJR-AB08DAN provides ability to convert and bridge audio signals between Dante Audio and IP-NINJAR Audio.

■IP-NINJAR System Control from 3rd party external controller:

IP-NINJAR Management & Control Platform NJR-CTB takes care all controls for IP-NINJAR endpoint units. To control IP-NINJAR system from 3rd party external control device, all commands to control the system send to NJR-CTB using provided simple IDK command lines.
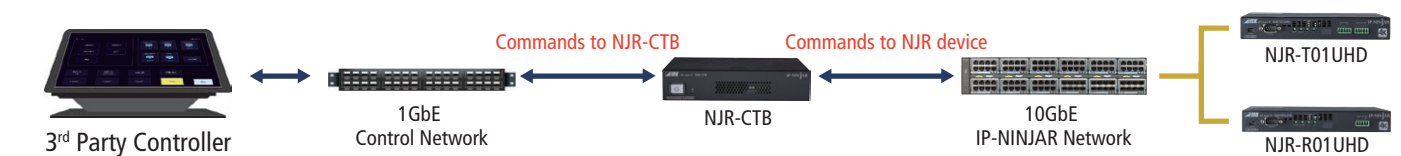
■Control Bridge:

Since IP-NINJAR endpoint units have RS-232C and LAN communication ports, by connecting IP-NINJAR Network and Control Network with proper network settings, you can control any devices which are connected to IP-NINJAR endpoint unit.
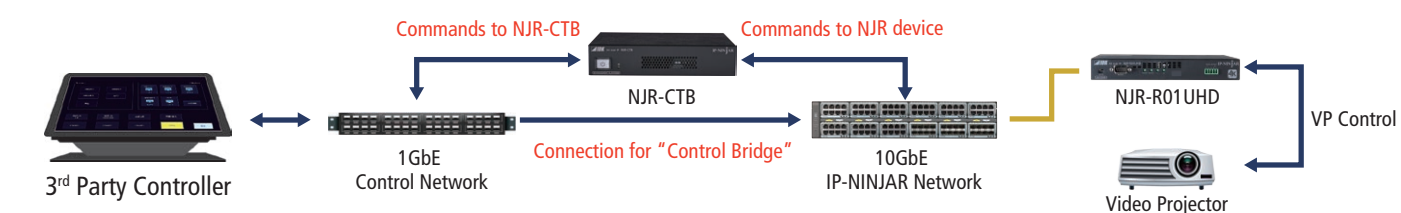
NJR-CTB - Management & Control Platform for IP-NINJAR

The NJR-CTB is an advanced management & control platform that opens up the possibility of your IP-NINJAR AV over IP system. The Web GUI helps customers to easily manage the system. The NJR-CTB enables to control IP-NINJAR system from 3rd party external controllers.
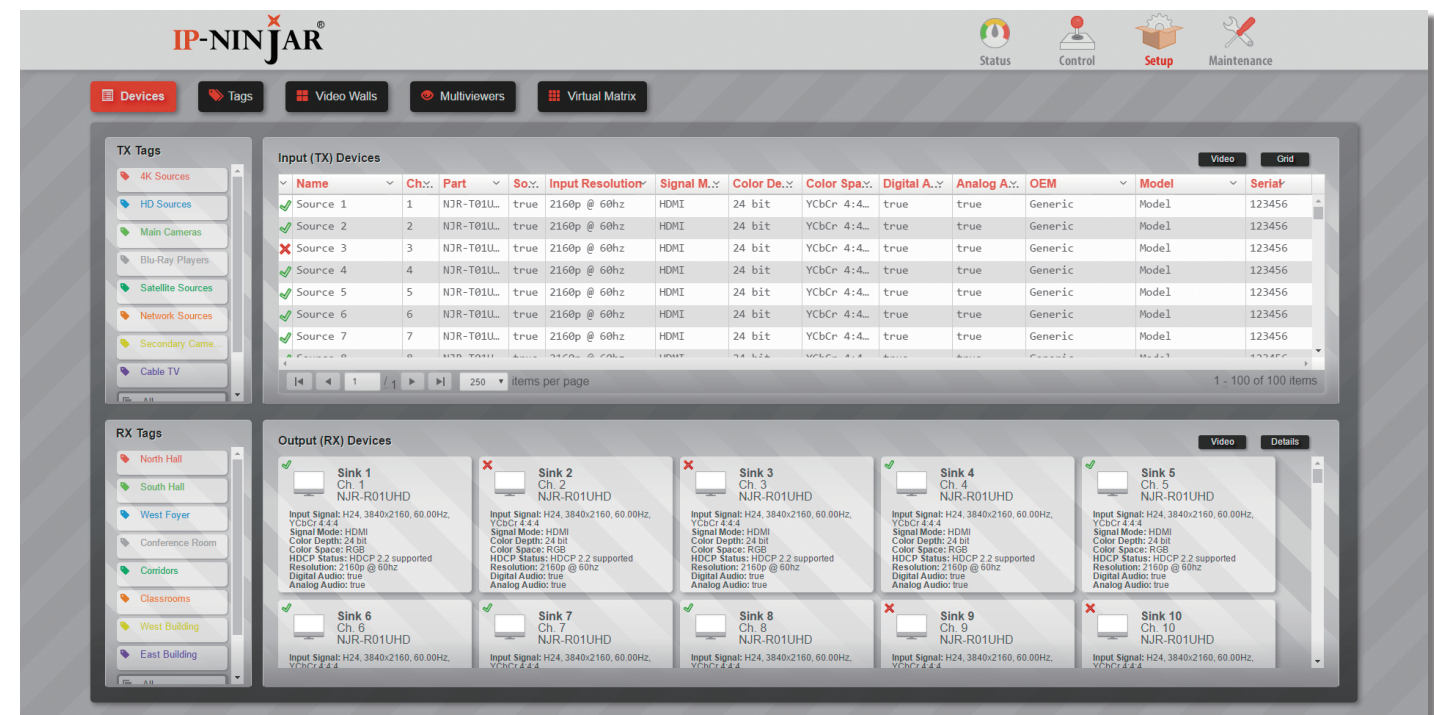
NJR-CTB - Key Features

■Status:

- Monitoring devices online/offline, video & audio signals info., HDCP status & stream type
- Alarm output using SNMP trap; Status alert sends to a system or registered email
- Remote support & trouble shooting

■Control:

- Controlling all IP-NINJAR units on the network; Centralizing control from 3rd party controller
- Breakaway switching for Video, Digital/Analog/Network Audio, USB, and RS-232C
- KVM switching by linking 3rd party USB network extender

■Setup:

- Set up each device settings/link 3rd party USB extender to device for KVM switching
- Videowall/Multiview configuration using preset patterns
- Virtual Matrix set up to create different level of accessibility in a system
- "Tag" function for filtering devices in a system

■Maintenance:

- User accounts & authorization management
- Get system log, back up, and restore the system

■Redundancy:

- Available for when connecting multiple NJR-CTB units in a system

■Security:

- HTTPS encrypted communication

HD Videowall

4K/8K Videowall

4K Multiview

Decoder

Decoder

Decoder

Decoder

Decoder

4-channel Decoder

4K Matrix & KVM Switching

Keyboard

Mouse

Source Devices

**10GbE Switch
IP-NINJAR Network**

Decoder

Decoder

4K PC

Encoder

PoE

4K UHD Blu-ray

Encoder

PoE

3G-SDI Camera

SDI Encoder

HD Matrix Switching

Blu-ray

4-channel Encoder

Control &
Management Platform

Dante Audio Bridge Interface

4-channel Decoder

PC

**1GbE Switch
Production Network**

Control System

Dante™ Network Audio

Web GUI

Speaker

Push button Controller

Controllers

Microphone

4K HDMI	Optical Fiber	
Cat6A	3G-SDI	
HDMI	RS-232C	
LAN	Audio	
USB		

3rd Party Touch Panel Controller

Control & Audio Processor

Mixer

Features · AV over IP · Digital Multi Switchers · Modular Matrix Switchers · Extenders · Distribution Amplifiers · Others · Controllers · Mounting Hardware · Standard Resolutions

4K@60 HDMI Encoder/Decoder (Optical model)/(CAT model) | **NJR-P01UF/NJR-P01UC** 4K ULTRA HD

The NJR-P01UC and NJR-P01UF are an AV over IP solution for high definition signal transmission via category cables/fiber optic cables. This 4K solution leverages 10Gb Ethernet switches and enables signal management of 4K@60 (4:4:4) signals with zero latency. RS-232C bidirectional communication and LAN transmission are also supported. The NJR-P01UC and NJR-P01UF can be used with other IP-NINJAR products.

NJR-P01UF-T / NJR-P01UC-T NJR-P01UF-T NJR-P01UC-T

NJR-P01UF-R / NJR-P01UC-R NJR-P01UF-R NJR-P01UC-R

Features

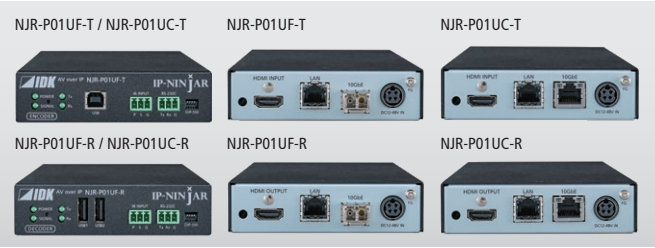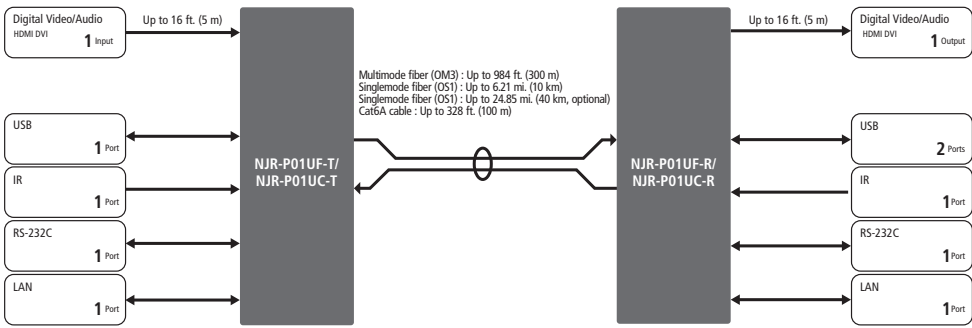| Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •HDR •Transmission distances Fiber optic cable (NJR-P01UF-T-MM/SM, NJR-P01UF-R-MM/SM) Multimode fiber (OM3) : Up to 984 ft. (300 m) Singlemode fiber (OS1) : Up to 6.21 mi. (10 km) (Up to 24.85 mi. (40 km, optional)) Category cable (NJR-P01UC-T, NJR-P01UC-R) Cat6A : Up to 328 ft. (100 m)
Communication	•Bidirectional RS-232C •LAN •USB HID class
Network	•10 Gb switch allows: extension, distribution, matrix switching, videowall, and multiview •Controllable through network using NJR-CTB •IP-NINJAR encoders and decoders can easily be added and replaced •Preset controls that are registered in the NJR-CTB can be executed using an IR cable (IR-P01-R) and recommended remote controller.
Others	•EDID emulation •DDC buffer •Connection Reset •AC adapter with locking mechanism •PoE power supplied (PD) (NJR-P01UC-T, NJR-P01UC-R)

Models

Model Number	Type
NJR-P01UF-T-MM/NJR-P01UF-R-MM	Multimode fiber
NJR-P01UF-T-SM/NJR-P01UF-R-SM	Singlemode fiber
NJR-P01UF-T-SM40/NJR-P01UF-R-SM40	Singlemode fiber
NJR-P01UC-T/NJR-P01UC-R	Category cable

Connection Diagram

Digital Video/Audio HDMI DVI **1** Input
Up to 16 ft. (5 m)

USB **1** Port
IR **1** Port
RS-232C **1** Port
LAN **1** Port

NJR-P01UF-T/ NJR-P01UC-T

Multimode fiber (OM3) : Up to 984 ft. (300 m) Singlemode fiber (OS1) : Up to 6.21 mi. (10 km) Singlemode fiber (OS1) : Up to 24.85 mi. (40 km, optional) Cat6A cable : Up to 328 ft. (100 m)

NJR-P01UF-R/ NJR-P01UC-R

Up to 16 ft. (5 m)
Digital Video/Audio HDMI DVI **1** Output

USB **2** Ports
IR **1** Port
RS-232C **1** Port
LAN **1** Port

4K@60 Wallplate HDMI Encoder (Optical model)/(CAT model) | **NJR-P01UFW-T/NJR-P01UCW-T** 4K ULTRA HD

The NJR-P01UFW-T and NJR-P01UCW-T are an AV over IP wallplate encoder for high definition signal transmission via category cables/fiber optic cables. This 4K solution leverages 10 Gb Ethernet switches and enables signal management of 4K@60 (4:4:4) signals with zero latency. The NJR-P01UCW-T and NJR-P01UFW-T features LAN/RS-232C bidirectional communication. The NJR-P01UCW-T can be powered from PoE-supported 10 GbE switch over a Category cable; this feature eliminates the need for AC adapter.
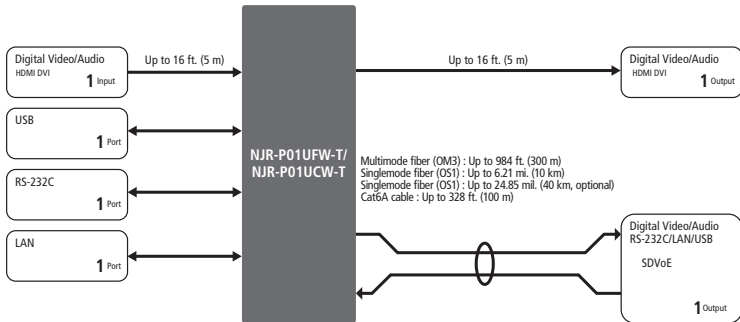Use this product with a combination of IP-NINJAR series products.

NJR-P01UFW-T NJR-P01UFW-T-B

NJR-P01UCW-T NJR-P01UCW-T-B

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •HDR •Transmission distances Fiber optic cable(NJR-P01UFW-T-MM/SM) Multimode fiber(OM3) : Up to 984 ft.(300 m) Singlemode fiber (OS1) : Up to 6.21 mi. (10 km) (Up to 24.85 mi. (40 km, optional)) Category cable (NJR-P01UCW-T) Cat6A : Up to 328 ft. (100 m)
Communication	•Bidirectional RS-232C •LAN •USB HID class
Network	•10 Gb switch allows: extension, distribution, matrix switching, videowall, and multiview •Controllable through network using NJR-CTB •IP-NINJAR encoders and decoders can easily be added and replaced
Others	•EDID emulation •DDC buffer •Connection Reset •PoE power supplied (PD) (NJR-P01UCW-T)

Models

Model Number	Type
NJR-P01UFW-T-MM	Multimode fiber
NJR-P01UFW-T-SM	Singlemode fiber
NJR-P01UFW-T-SM40	Singlemode fiber
NJR-P01UCW-T	Category cable

Connection Diagram

Digital Video/Audio HDMI DVI **1** Input
Up to 16 ft. (5 m)

USB **1** Port
RS-232C **1** Port
LAN **1** Port

NJR-P01UFW-T/ NJR-P01UCW-T

Multimode fiber (OM3) : Up to 984 ft. (300 m) Singlemode fiber (OS1) : Up to 6.21 mi. (10 km) Singlemode fiber (OS1) : Up to 24.85 mi. (40 km, optional) Cat6A cable : Up to 328 ft. (100 m)

Up to 16 ft. (5 m)
Digital Video/Audio HDMI DVI **1** Output

Digital Video/Audio RS-232C/LAN/USB SDVoE **1** Output

4K@60 HDMI Decoder, Rugged Chassis | **NJR-P01UFR-R** 4K ULTRA HD

The NJR-P01UFR-R is an AV over IP decoder for long-haul HDMI signal transmission via fiber optic cables. HDMI video signals can be transmitted at resolutions up to 4K@60 (4:4:4) and supports HDCP 2.2 encryption. LAN transmission is also supported.
The decoder incorporates robust Neutrik connectors and a ruggedized chassis to accommodate event/ staging market needs.
The NJR-P01UFR-R can be combined with other IP-NINJAR series products to create a versatile 10GbE AV over IP eco-system or used with a single IP-NINJAR encoder for point-to-point video extension.
The NJR-P01UFR-R cannot be combined with IDK's OPF or FDX series products.
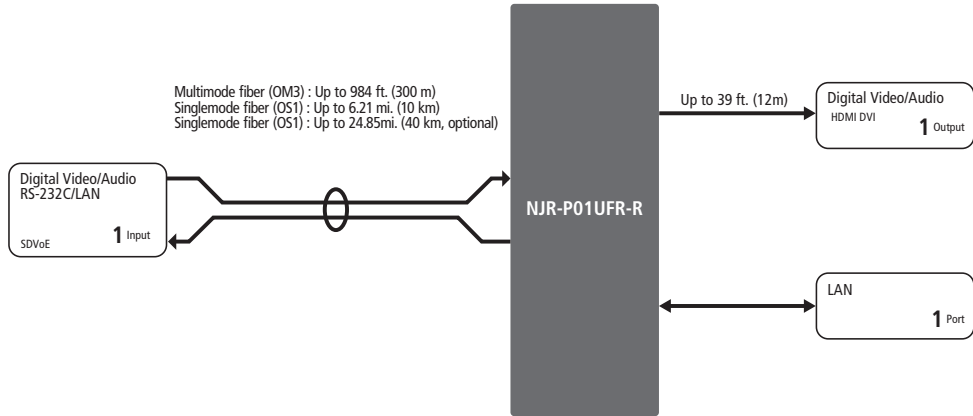
NJR-P01UFR-R

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •HDR •Transmission distances Multimode fiber (OM3) : Up to 984 ft. (300 m) Singlemode fiber (OS1) : Up to 6.21 mi. (10 km) (up to 24.85 mi. (40 km, optional))
Communication	•LAN
Network	•10 Gb switch allows; extension, distribution, matrix switching, videowall, and multiview •Controllable through network using NJR-CTB •IP-NINJAR encoders and decoders can easily be added and replaced
Others	•DDC buffer •Connection Reset •Neutrik's robust connector with locking mechanism and rugged and lightweight chassis •Fanless (No fan noise)

Models

Model Number	Fiber Type
NJR-P01UFR-R-MM	Multimode
NJR-P01UFR-R-SM	Singlemode
NJR-P01UFR-R-SM40	Singlemode

Connection Diagram

Multimode fiber (OM3) : Up to 984 ft. (300 m) Singlemode fiber (OS1) : Up to 6.21 mi. (10 km) Singlemode fiber (OS1) : Up to 24.85mi. (40 km, optional)

Digital Video/Audio RS-232C/LAN SDVoE **1** Input

NJR-P01UFR-R

Up to 39 ft. (12m)
Digital Video/Audio HDMI DVI **1** Output

LAN **1** Port

4K@60 HDMI Encoder/Decoder (Optical model)/(CAT model) | **NJR-01UHD/NJR-01UHD-CAT** 4K ULTRA HD

The NJR-01UHD is an AV over IP solution for high definition signal transmission via fiber optic cables. This 4K solution leverages 10 Gb Ethernet switches and enables signal management of 4K@60 (4:4:4) signals with zero latency. RS-232C bidirectional communication and LAN transmission are also supported.
The NJR-01UHD can be used with other IP-NINJAR products. Using an NJR-T01UHD with an NJR-R04HD enables 4K@60(4:4:4) signals to be displayed on four full HD sink devices. Conversely, using an NJR-T04HD with an NJR-R01UHD enables four full HD signals to be displayed on a sink device as 4K@60(4:4:4) signals.
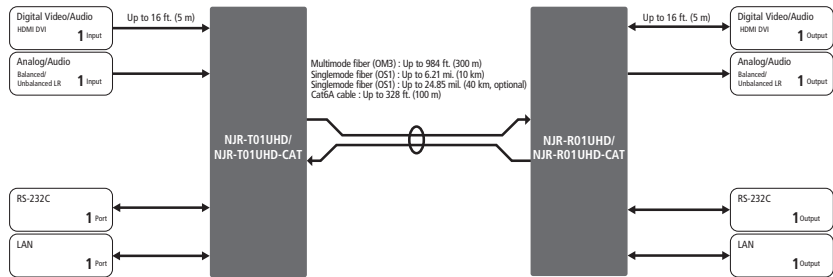
NJR-T01UHD NJR-R01UHD

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •HDR •Local monitor output •Transmission distances Fiber optic cable (NJR-T01UHD-MM/SM, NJR-R01UHD-MM/SM) Multimode fiber (OM3): Up to 984 ft. (300 m) Singlemode fiber (OS1): Up to 6.21 mi. (10 km), 24.85 mi. (40 km) (Optional) Category cable (NJR-T01UHD-CAT, NJR-R01UHD-CAT) Cat6A : Up to 328 ft. (100 m)
Audio	•De-embedding
Communication	•Bidirectional RS-232C •LAN
Network	•10 Gb switch allows: extension, distribution, matrix switching, videowall, and Multiview •Controllable through network using NJR-CTB •IP-NINJAR encoders and decoders can easily be added and replaced
Others	•EDID emulation •DDC buffer •Connection Reset •AC adapter with locking mechanism

Models

Model Number	Type
NJR-T01UHD-MM/NJR-R01UHD-MM	Multimode fiber
NJR-T01UHD-SM/NJR-R01UHD-SM	Singlemode fiber
NJR-T01UHD-SM40/NJR-R01UHD-SM40	Singlemode fiber
NJR-T01UHD-CAT/NJR-R01UHD-CAT	Category cable

Connection Diagram

Digital Video/Audio HDMI DVI **1** Input
Up to 16 ft. (5 m)

Analog/Audio Balanced/ Unbalanced L/R **1** Input

RS-232C **1** Port
LAN **1** Port

NJR-T01UHD/ NJR-T01UHD-CAT

Multimode fiber (OM3) : Up to 984 ft. (300 m) Singlemode fiber (OS1) : Up to 6.21 mi. (10 km) Singlemode fiber (OS1) : Up to 24.85 mi. (40 km, optional) Cat6A cable : Up to 328 ft. (100 m)

NJR-R01UHD/ NJR-R01UHD-CAT

Up to 16 ft. (5 m)
Digital Video/Audio HDMI DVI **1** Output

Analog/Audio Balanced/ Unbalanced L/R **1** Output

RS-232C **1** Output
LAN **1** Output

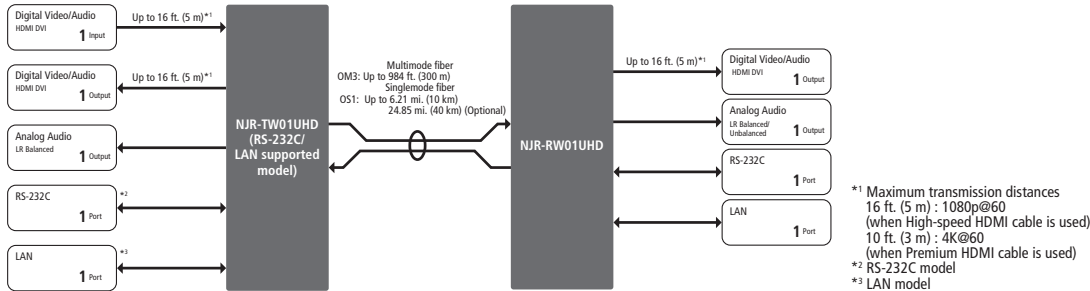## 4K@60 HDMI Encoder/Decoder, Rugged Chassis | NJR-W01UHD

4K ULTRA HD

The NJR-W01UHD is a point-to-point AV over IP solution for high definition signal extension via fiber optic cables. This IP-NINJAR model employs Neutrik's robust connector and rugged and lightweight chassis to accommodate event/staging market needs.

The NJR-W01UHD leverages 10 Gb Ethernet switches to control 4K@60 (4:4:4) signals with zero frame latency.

RS-232C bidirectional communication and LAN transmission are also supported.

Combined with the NJR-R04HD, 4K@60(4:4:4) signal that is sent from the NJR-TW01UHD can be divided into four 1080p@60 signals and be displayed on sink devices. When using the NJR-T04HD and the NJR-RW01UHD together, four ports' 1080p@60 signals that is sent from the NJR-T04HD can be displayed as 4K@60(4:4:4) signals on a sink device.

Please use this product with a combination of NJR-TW01UHD and NJR-RW01UHD or other IP-NINJAR products.

NJR-TW01UHD   NJR-RW01UHD

RS-232C model

LAN model

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •HDR •Local monitor output
	•Transmission distances
	  Multimode fiber (OM3): Up to 984 ft. (300 m)
	  Singlemode fiber (OS1) : Up to 6.21 mi. (10 km), 24.85 mi. (40 km, optional)

Audio	•De-embedding
Communication	•Bidirectional RS-232C for NJR-TW01UHD (RS-232C supported model) and NJR-RW01UHD •LAN for NJR-TW01UHD (LAN supported model) and NJR-RW01UHD
Network	•10 Gb switch allows: extension, distribution, matrix switching, videowall, and multiview •Controllable through network using NJR-CTB •IP-NINJAR encoders and decoders can easily be added and replaced
Others	•EDID emulation •DDC buffe •Connection Reset •Neutrik's robust connector with locking mechanism and rugged and lightweight chassis •Fanless (No fan noise)

Models

Model Number	Encoder Type	Fiber Type
NJR-TW01UHD-MM-LAN/NJR-RW01UHD-MM	LAN	Multimode
NJR-TW01UHD-MM-232/NJR-RW01UHD-MM	RS-232C	Multimode
NJR-TW01UHD-SM-LAN/NJR-RW01UHD-SM	LAN	Singlemode
NJR-TW01UHD-SM-232/NJR-RW01UHD-SM	RS-232C	Singlemode
NJR-TW01UHD-SM40-LAN/NJR-RW01UHD-SM40	LAN	Singlemode
NJR-TW01UHD-SM40-232/NJR-RW01UHD-SM40	RS-232C	Singlemode

Connection Diagram

*1 Maximum transmission distances
  16 ft. (5 m) : 1080p@60
  (when High-speed HDMI cable is used)
  10 ft. (3 m) : 4K@60
  (when Premium HDMI cable is used)
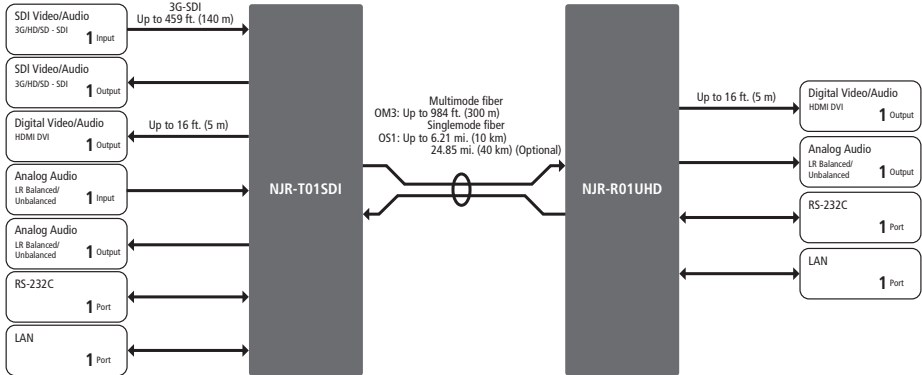*2 RS-232C model
*3 LAN model

3G/HD/SD-SDI Encoder | NJR-T01SDI

The NJR-T01SDI is a 3G/HD/SD-SDI input-capable encoder. It is designed to transport SDI input signals for local and long-haul transmission over fiber optic cables. The NJR-T01SDI converts SDI input signals into HDMI signals and enables SDI signal management within the IP-NINJAR system domain. The NJR-T01SDI features a local monitor output, enabling video recording and previewing, using an HDMI monitor. It also offers RS-232C bidirectional communication and 1G network transmission.

NJR-T01SDI

Features

Video	•Up to 1080p •3G/HD/SD-SDI input •Local monitor output
	•Transmission distances
	  Multimode fiber (OM3): Up to 984 ft. (300 m)
	  Singlemode fiber (OS1): Up to 6.21 mi. (10 km), 24.85 mi. (40 km) (Optional)
	  BELDEN 1694A (RG-6) : Up to 459 ft. (140 m), 3G-SDI

Audio	•De-embedding
Communication	•Bidirectional RS-232C •LAN
Network	•10 Gb switch allows: extension, distribution, matrix switching, videowall, and multiview •Controllable through network using NJR-CTB •IP-NINJAR encoders and decoders can easily be added and replaced
Others	•AC adapter with locking mechanism

Models

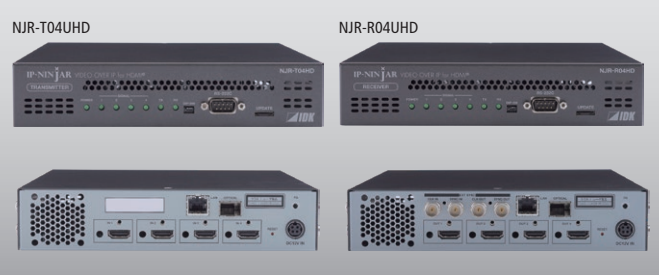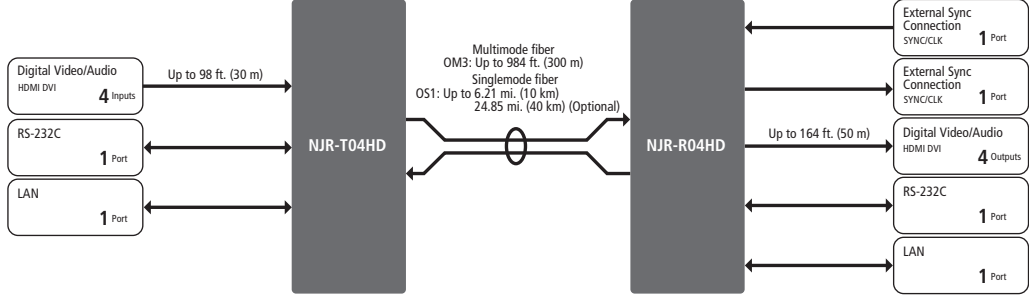| Model Number	Fiber Type
NJR-T01SDI-MM	Multimode
NJR-T01SDI-SM	Singlemode
NJR-T01SDI-SM40	Singlemode

Connection Diagram

4-channel HDMI Encoder/Decoder | NJR-04HD

The NJR-04HD is a 4-channel HDMI network encoder and decoder set having a built-in scan converter and scaler. It supports bidirectional RS-232C communication and LAN transmission.

The NJR-04UHD can be used with other IP-NINJAR products. Using an NJR-R04HD with an NJR-T01UHD enables 4K@60 signals to be displayed on four full HD sink devices. Conversely, using an NJR-R01UHD with an NJR-T04HD enables four full HD signals to be displayed on a sink device as 4K@60 signals.

NJR-T04UHD   NJR-R04UHD

Features

Video	•Up to 1080p/QWXGA (Reduced Blanking) •HDCP 1.4
	•Automatic input signal equalization
	  Input : Up to 98 ft. (30 m) (NJR-T04HD)
	  Output: Up to 164 ft. (50 m) (NJR-R04HD)
	•Motion adaptive interlaced/progressive conversion
	•Matrix switching •Output up to four sink devices from an NJR-R04HD
	•Scan conversion •Aspect ratio control
	•Transmission distances
	  Multimode fiber (OM3): Up to 984 ft. (300 m)
	  Singlemode fiber (OS1): Up to 6.21 mi. (10 km), 24.85 mi. (40 km) (Optional)

Audio	•Lip Sync (NJR-R04HD)
Communication	•Bidirectional RS-232C •LAN
Network	•10 Gb switch allows: extension, distribution, matrix switching, videowall, and multiview •Controllable through network using NJR-CTB •IP-NINJAR encoders and decoders can easily be added and replaced
Others	•EDID emulation •DDC buffer •Connection Reset •AC adapter with locking mechanism

Models

Model Number	Fiber Type
NJR-T04HD-MM	Multimode
NJR-R04HD-MM	Multimode
NJR-T04HD-SM	Singlemode
NJR-R04HD-SM	Singlemode
NJR-T04HD-SM40	Singlemode
NJR-R04HD-SM40	Singlemode

Connection Diagram

Dante Audio Bridge Interface | NJR-AB08DAN

The NJR-AB08DAN transcodes audio signal directly between the IP-NINJAR and Dante protocol environments. Audio signal transport is enabled from NJR encoders to Dante devices and from Dante device to NJR decoders.

The NJR-AB08DAN can receive up to four audio streams from IP-NINJAR encoders and output up to eight channels in Dante protocol. The bridge can also accept up to 8-channel audio from Dante sources, outputting IP-NINJAR protocol in up to four audio streams.

Audio can be set from the NJR-CTB (IP-NINJAR Management & Control Platform).

Please use this product with a combination of IP-NINJAR products.

NJR-AB08DAN

Features

Audio	•Transcoding audio signal between IP-NINJAR and Dante protocols
	•Receiving up to four (4) audio streams from IP-NINJAR encoders and
	  outputting as Dante protocol up to eight (8) channels
	•Receiving up to 8-channel Dante audio from Dante devices and outputting
	  as IP-NINJAR protocol up to four (4) audio streams
	•Dante audio can be embedded to HDMI signal at IP-NINJAR decoder
	•Dante audio can be de-embedded to analog audio signal at IP-NINJAR
	  decoder

Network	•Controllable through network using NJR-CTB
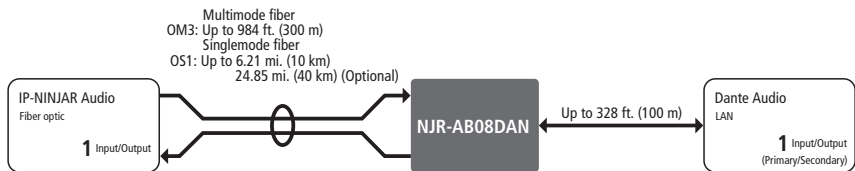
Models

Model Number	Fiber Type
NJR-AB08DAN-MM	Multimode
NJR-AB08DAN-SM	Singlemode
NJR-AB08DAN-SM40	Singlemode

Connection Diagram

The NJR-CTB is an advanced control box that expands the possibility for IP-NINJAR products. The NJR-CTB automatically recognizes IP-NINJAR units which are connected in a network, monitors status, configures videowall, multiview, and other settings.

Features

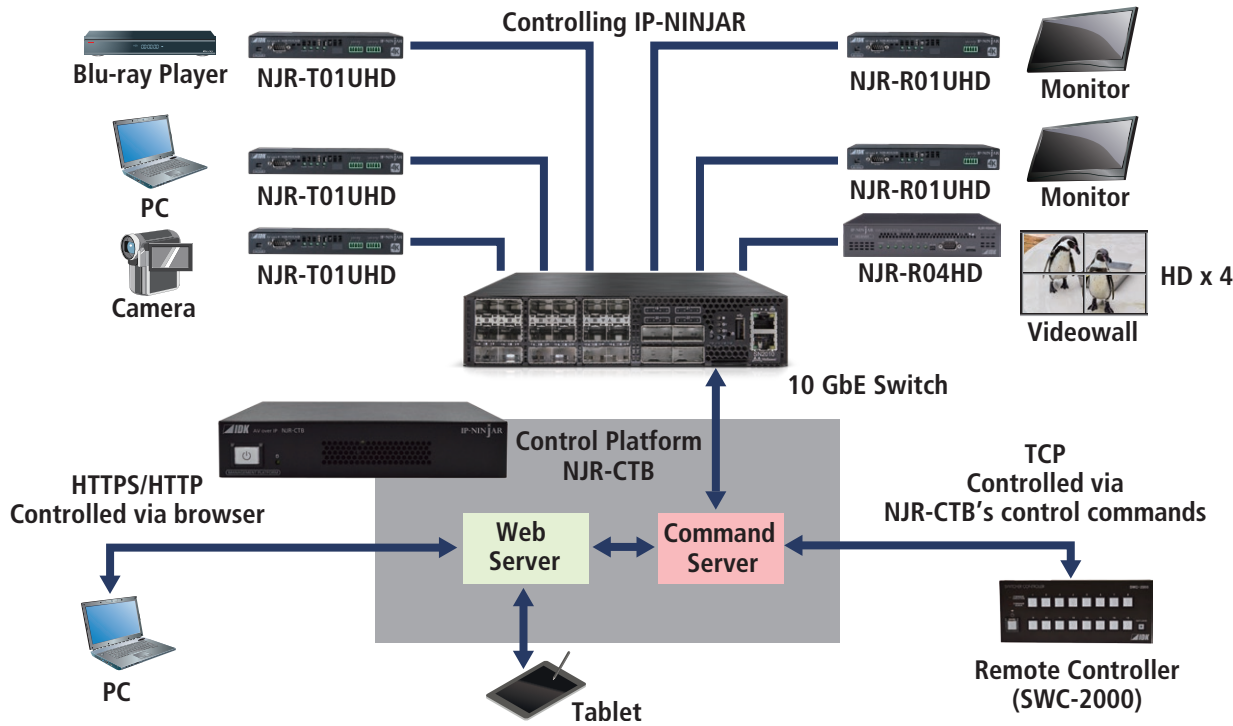|	
Management	•Recognizing IP-NINJAR products automatically and assigning channels •Naming units, tag registration, and virtual matrix for management •Videowall and Multiview can be configured readily
Control input	•WEB browser control - No need to install software •Controlled from external devices using control commands
Control output	•Sending control commands to external devices
Others	•AC adapter with locking mechanism

NJR-CTB

Application Example

Controlling IP-NINJAR

Blu-ray Player — NJR-T01UHD
PC — NJR-T01UHD
Camera — NJR-T01UHD

NJR-R01UHD — Monitor
NJR-R01UHD — Monitor
NJR-R04HD — HD x 4 / Videowall

10 GbE Switch

Control Platform NJR-CTB

HTTPS/HTTP Controlled via browser

Web Server ↔ Command Server

TCP Controlled via NJR-CTB's control commands

PC

Tablet

Remote Controller (SWC-2000)

Model	Video										
	Resolution			HDCP		HDBaseT			Automatic Switching	Motion Adaptive I/P Conversion	PinP
	1080p	4K@30	4K@60 (4:4:4)	1.4	2.2	Input	Output	PoH			
MSD-402	○	-	-	○	-	○	○	Input: - Output: -	○	-	○
MSD-S50	○	-	-	○	-	-	○	Output: -	○	○	○
MSD-S70	○	-	-	○	-	-	○	Output: -	○	○	○
MSD-701AMP	○	-	-	○	-	○	○	Input: ○ Output: -	○	○	○
MSD-6200	○	○	-	○	-	○	○	Input: ○ Output: -	○	○	○
MSD-V4U	○	○	○	○	○	-	-	-	○	○	○
MSD-V4UC	○	○	○	○	○	-	-	-	○	○	○
MSD-V4UT	○	○	○	○	○	-	○	Output: -	○	○	○
MSD-800UHD	○	○	○	○	○	○	○	Input: ○ Output: -	○	○	-
MSD-700UHD	○	○	○	○	○	-	○	Output: -	○	○	-

Model	Audio						Control				
	Signal			Power Amp.	DSP	Lip Sync	WebGUI	Control IN	Control Out	Contact Closure	HDBaseT LAN Through
	Unbalanced	Balanced	Dante					LAN RS-232C			
MSD-402	○	○	-	-	-	-	○	○	-	-	○
MSD-S50	○	-	-	-	-	○	○	○	○	○	○
MSD-S70	○	-	-	-	-	○	○	○	○	○	○
MSD-701AMP	○	○	-	○	○	○	○	○	○	○	○
MSD-6200	○	○	Input: - Output: ○	-	-	○	○	○	○	○	○
MSD-V4U	○	-	-	-	-	○	○	○	○	○	-
MSD-V4UC	○	-	-	-	-	○	○	○	○	○	-
MSD-V4UT	○	-	-	-	-	○	○	○	○	○	○
MSD-800UHD	○	○	-	-	-	○	○	○	○	○	○
MSD-700UHD	○	○	-	-	-	○	○	○	○	○	○

4K@60 Digital Multi Switcher with 4 Inputs and 1/2 Outputs, (SDVoE Output model)/(HDBaseT Output model) | MSD-V4 Series

4K ULTRA HD

The MSD-V4 series is a digital presentation switcher with built-in scalers and scan converters capable of sending and receiving UHD video resolutions.
With four (4) HDMI/DVI video inputs, the series can accept a wide variety of video formats. Input video signals are output to HDMI signals at up to 4K@60 (4:4:4). The MSD-V41UC/V42UC and MSD-V41UV/V42UV distribute signals to HDMI and either 10GbE (IP-NINJAR protocol) or HDBaseT simultaneously for extension up to 328 ft. (100 m), respectively.
The MSD-V4 series provides digital and analog audio inputs and outputs. Audio level of each input and output can be controlled individually. Also included is the Lip Sync function to adjusts the gap between video and audio.
The MSD-V4 series can be configured remotely using RS-232C or LAN.
External devices can be controlled via RS-232C, LAN, CEC, or contact closure by registering control commands. External control commands can be executed from front buttons, RS-232C, or LAN; they can be executed also when input channel is switched, or power status is changed to ON or standby.

MSD-V41U   MSD-V42U

MSD-V41UC   MSD-V42UC

MSD-V41UT   MSD-V42UT

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2
	•Scan conversion •Aspect ratio control
	•Seamless switching with one black frame
	•Each video output OFF •Anti-snow
	•Two video combinations: PinP and side-by-side •Overlay bitmap
	•Transmission distances
	  SDVoE : Up to 328 ft. (100 m) 4K@60 (4:4:4) over CAT6A cable
	  HDBaseT: Up to 328 ft. (100 m) 4K@60 (4:2:0) over CAT.5E HDC/CAT5e/
	       CAT6 STP cable

Audio	•A/D, D/A conversion •Volume adjustment (Input/Output) •embedding/de-dembedding •Audio Downmix •Lip Sync •Test tone
Control input	•RS-232C •LAN
Control output	•Control command output (e.g. controlling projectors) via RS-232C/LAN •PJLink •CEC (Control sink power) •Contact closure
Others	•EDID emulation •WEB browser control •Audio breakaway for independent audio and video switching •Automatic input channel switching •Crosspoint memory •Preset memory •Last memory •Pattern memory •Button security lockout •System check •Standby switch •Anti storm •Connection Reset •Security lock •Power standby
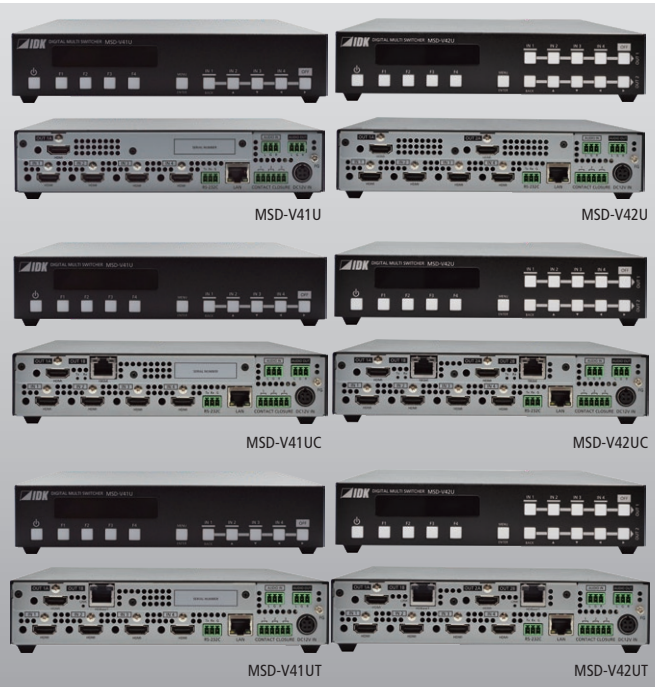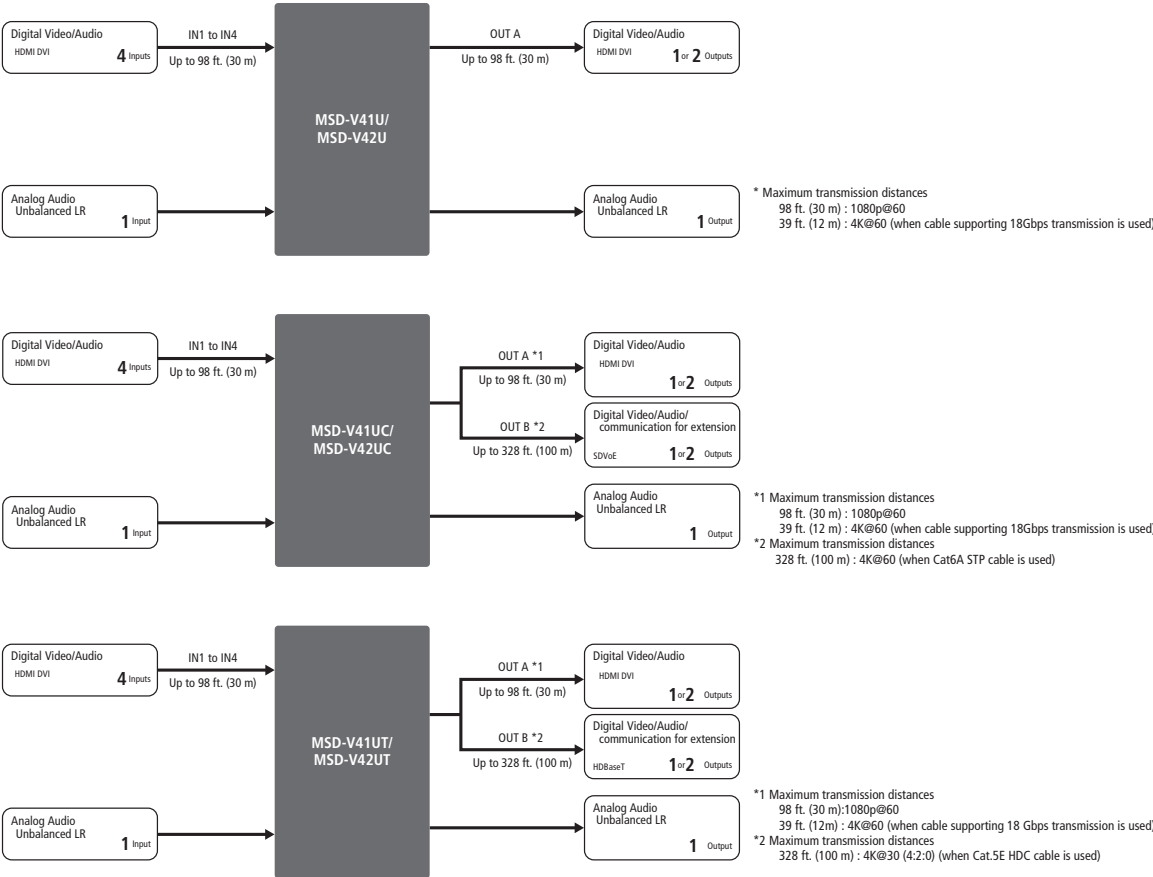
Models

Model Number	Digital input	HDMI output	SDVoE output	HDBaseT output
MSD-V41U	4	1	0	0
MSD-V42U	4	2	0	0
MSD-V41UC	4	1	1	0
MSD-V42UC	4	2	2	0
MSD-V41UT	4	1	0	1
MSD-V42UT	4	2	0	2

Connection Diagram

Digital Video/Audio
HDMI DVI **4** Inputs
IN1 to IN4
Up to 98 ft. (30 m)

MSD-V41U/
MSD-V42U

OUT A
Up to 98 ft. (30 m)
Digital Video/Audio
HDMI DVI **1** or **2** Outputs

Analog Audio
Unbalanced LR **1** Input

Analog Audio
Unbalanced LR **1** Output

* Maximum transmission distances
98 ft. (30 m) : 1080p@60
39 ft. (12 m) : 4K@60 (when cable supporting 18Gbps transmission is used)

Digital Video/Audio
HDMI DVI **4** Inputs
IN1 to IN4
Up to 98 ft. (30 m)

MSD-V41UC/
MSD-V42UC

OUT A *1
Up to 98 ft. (30 m)
Digital Video/Audio
HDMI DVI **1** or **2** Outputs

OUT B *2
Up to 328 ft. (100 m)
Digital Video/Audio/
communication for extension
SDVoE **1** or **2** Outputs

Analog Audio
Unbalanced LR **1** Input

Analog Audio
Unbalanced LR **1** Output

*1 Maximum transmission distances
98 ft. (30 m) : 1080p@60
39 ft. (12 m) : 4K@60 (when cable supporting 18Gbps transmission is used)
*2 Maximum transmission distances
328 ft. (100 m) : 4K@60 (when Cat6A STP cable is used)

Digital Video/Audio
HDMI DVI **4** Inputs
IN1 to IN4
Up to 98 ft. (30 m)

MSD-V41UT/
MSD-V42UT

OUT A *1
Up to 98 ft. (30 m)
Digital Video/Audio
HDMI DVI **1** or **2** Outputs

OUT B *2
Up to 328 ft. (100 m)
Digital Video/Audio/
communication for extension
HDBaseT **1** or **2** Outputs

Analog Audio
Unbalanced LR **1** Input

Analog Audio
Unbalanced LR **1** Output

*1 Maximum transmission distances
98 ft. (30 m):1080p@60
39 ft. (12m) : 4K@60 (when cable supporting 18 Gbps transmission is used)
*2 Maximum transmission distances
328 ft. (100 m) : 4K@30 (4:2:0) (when Cat.5E HDC cable is used)

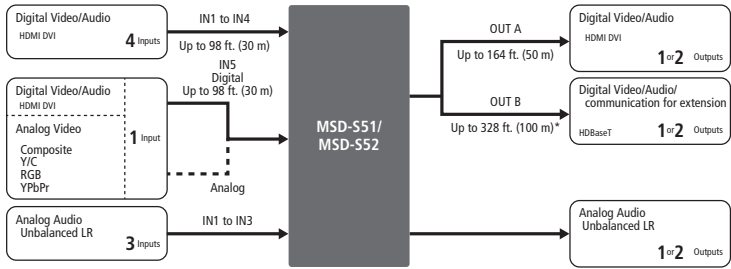# Digital Multi Switcher with 5 Inputs & 1/2 Outputs | MSD-S51/MSD-S52

The MSD-S51 and MSD-S52 are digital presentation switcher with five inputs and one/two outputs. For video, five digital and one analog inputs accept a wide variety of video formats including HDMI, DVI, Composite video, RGB, and YPbPr. Input video signals are output to HDBaseT and HDMI signals simultaneously at up to QWXGA or 1080p. Two selected input video signals can be displayed on a single screen in picture-in-picture or side-by-side layout. The overlay bitmap function is also supported.
The MSD-S51 and MSD-S52 include five digital and three analog audio inputs and outputs audio to both of digital and analog connectors. Audio level of each input/output can be set individually. The Lip Sync function adjusts the gap between video and audio.

MSD-S52

Features

Video	•Up to 1080p/QWXGA (Reduced Blanking) •Automatic signal equalization •Motion adaptive interlaced/progressive conversion •Scan conversion •Aspect ratio control •Seamless switching with one black frame •Analog/Digital conversion •Each video output OFF •Anti-snow •Two video combinations: PinP and side-by-side •Overlay bitmap •Up to 492 ft. (150 m) over Cat6 cable in Long reach mode*1
Audio	•Embedding/De-embedding •Volume adjustment (Input/Output) •Lip Sync •Audio Downmix •Sampling rate conversion
Control input	•RS-232C •LAN
Control output	•Control command output (e.g. controlling projectors) •PJLink •CEC (Control sink device power) •Contact closure
Others	•EDID emulation •WEB browser control •Automatic input channel switching •Audio breakaway for independent audio and video switching •Crosspoint memory •Preset memory •Last memory •Connection Reset •Button security lockout •System check •HDBaseT: RS-232C, LAN and CEC are supported •HDBaseT status display •Standby switch

Models

Model Number	Digital input	Universal input	HDMI output	HDBaseT output
MSD-S51	4	1	1	1
MSD-S52	4	1	2	2

*1 For long reach mode, video signals up to 1080p (24 bit) can be transmitted to 492 ft. (150 m) at maximum if using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission.

Connection Diagram

Digital Video/Audio
HDMI DVI **4** Inputs
IN1 to IN4
Up to 98 ft. (30 m)
IN5
Digital
Up to 98 ft. (30 m)

Digital Video/Audio
HDMI DVI
Analog Video
Composite
Y/C
RGB
YPbPr **1** Input

Analog

Analog Audio
Unbalanced LR **3** Inputs
IN1 to IN3

MSD-S51/
MSD-S52

OUT A
Up to 164 ft. (50 m)
Digital Video/Audio
HDMI DVI **1** or **2** Outputs

OUT B
Up to 328 ft. (100 m)*
Digital Video/Audio/
communication for extension
HDBaseT **1** or **2** Outputs

Analog Audio
Unbalanced LR **1** or **2** Outputs

*Maximum transmission distances
Up to 328 ft. (100 m) : QWXGA, 1080p
Up to 492 ft. (150 m) : 1080p (24 bit) in Long reach mode
For long reach mode, video signals up to 1080p (24 bit) can be transmitted to 492 ft. (150 m) at maximum
if using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission.

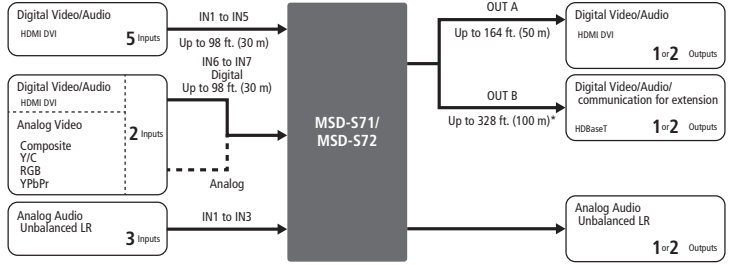# Digital Multi Switcher with 7 Inputs & 1/2 Outputs | MSD-S71/MSD-S72

The MSD-S71 and MSD-S72 are digital presentation switcher with seven inputs and one/two outputs.
For video, seven digital and two analog inputs accept a wide variety of video formats including HDMI, DVI, Composite video, RGB, and YPbPr. Input video signals are output to HDBaseT and HDMI signals simultaneously at up to QWXGA or 1080p. Two selected input video signals can be displayed on a single screen in picture-in-picture or side-by-side layout. The overlay bitmap function is also supported.
The MSD-S71 and MSD-S72 include seven digital and three analog audio inputs and outputs audio to both of digital and analog connectors. Audio level of each input/output can be set individually. The Lip Sync function adjusts the gap between video and audio.

MSD-S72

Features

Video	•Up to 1080p/QWXGA (Reduced Blanking) •Automatic signal equalization •Motion adaptive interlaced/progressive conversion •Scan conversion •Aspect ratio control •Seamless switching with one black frame •Analog/Digital conversion •Each video output OFF •Anti-snow •Two video combinations: PinP and side-by-side •Overlay bitmap •Up to 492 ft. (150 m) over Cat6 cable in Long reach mode*1
Audio	•Embedding/De-embedding •Volume adjustment (Input/Output) •Lip Sync •Audio Downmix •Sampling rate conversion
Control input	•RS-232C •LAN
Control output	•Control command output (e.g. controlling projectors) •PJLink •CEC (Control sink device power) •Contact closure
Others	•EDID emulation •WEB browser control •Automatic input channel switching •Audio breakaway for independent audio and video switching •Crosspoint memory •Preset memory •Last memory •Connection Reset •Button security lockout •System check •HDBaseT: RS-232C, LAN and CEC are supported •HDBaseT status display •Standby switch

Models

Model Number	Digital input	Universal input	HDMI output	HDBaseT output
MSD-S71	5	2	1	1
MSD-S72	5	2	2	2

*1 For long reach mode, video signals up to 1080p (24 bit) can be transmitted to 492 ft. (150 m) at maximum if using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission.

Connection Diagram

Digital Video/Audio
HDMI DVI **5** Inputs
IN1 to IN5
Up to 98 ft. (30 m)
IN6 to IN7
Digital
Up to 98 ft. (30 m)

Digital Video/Audio
HDMI DVI
Analog Video
Composite
Y/C
RGB
YPbPr **2** Inputs

Analog

Analog Audio
Unbalanced LR **3** Inputs
IN1 to IN3

MSD-S71/
MSD-S72

OUT A
Up to 164 ft. (50 m)
Digital Video/Audio
HDMI DVI **1** or **2** Outputs

OUT B
Up to 328 ft. (100 m)*
Digital Video/Audio/
communication for extension
HDBaseT **1** or **2** Outputs

Analog Audio
Unbalanced LR **1** or **2** Outputs

*Maximum transmission distances
Up to 328 ft. (100 m) : QWXGA, 1080p
Up to 492 ft. (150 m) : 1080p (24 bit) in Long reach mode
For long reach mode, video signals up to 1080p (24 bit) can be transmitted to 492 ft. (150 m) at maximum
if using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission.

Digital Multi Switcher with Integrated Audio Power Amplifier/7 Inputs & 1 Output | MSD-701AMP

The MSD-701AMP is a seven-input digital presentation switcher with built-in audio power amplifier.

The seven digital and two analog inputs accept a wide variety of video formats including HDMI, DVI, HDBaseT, Composite video, RGB, and YPbPr. Input video signals are converted to HDBaseT and HDMI signals at up to QWXGA or 1080p. Two selected input video signals can be displayed on a single screen in picture-in-picture or side-by-side layout.

Up to three audio can be mixed: one of seven digital audio, one of three analog audio, one mic, and one line. Audio is output to digital connectors, an analog connector, and two speakers. Enhanced audio features include compressing, limiter, and seven-band equalizer for mic input and tone controls for speaker output.

The MSD-701AMP can be configured remotely from RS-232C and LAN. External devices can be controlled via RS-232C, LAN, CEC, or contact closure by registering control commands.

Additionally, the MSD-701AMP includes key security lockout and button caps to prevent accidental or inappropriate changes.
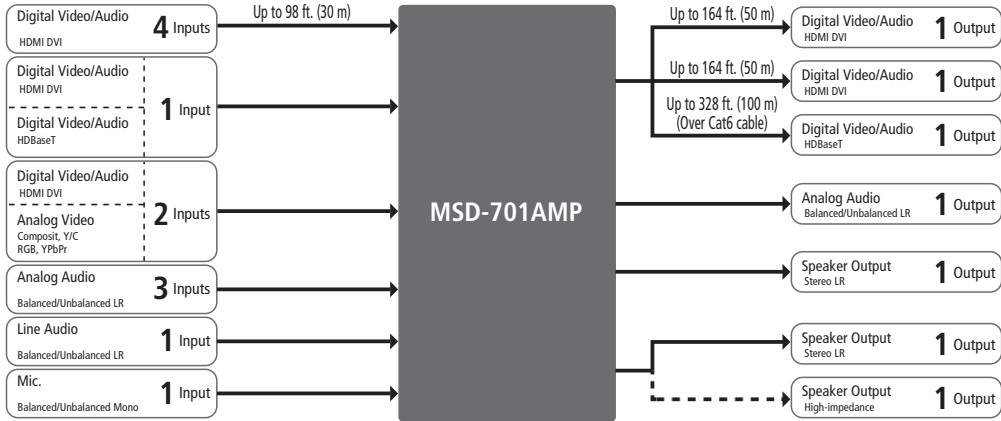
MSD-701AMP

Features

Video	•Up to 1080p/QWXGA (Reduced Blanking) •Aspect ratio control •Motion adaptive interlaced/progressive conversion •Two video combinations: Picture-in-picture and side-by-side •Scan conversion •Seamless switching with one black frame •Anti-snow •Analog/Digital conversion •Up to 492 ft. (150 m) over Cat6 cable in Long reach mode (1080p 60 Hz 24 bit or less)*
Audio	•Embedding/De-embedding •Volume adjustment (Input/Output) •Mic./Line level control •Source volume control •Lip Sync •Audio Downmix •Sampling rate conversion •Audio mixing •Compressor •Limiter •7-band equalizer •Tone control •Automatic feedback suppressor •High-impedance speaker output
Control input	•RS-232C •LAN •External button switch
Control output	•Control command output (e.g. controlling projectors) •PJLink •CEC (Control sink device power) •Contact closure •Power distribution unit control
Others	•PoH (HDBaseT input) •EDID emulation •WEB browser control •Automatic input channel switching •Audio breakaway for independent audio and video switching •Crosspoint memory •Preset memory •Last memory •Connection Reset •Button security lockout •System check •HDBaseT: RS-232C, LAN and CEC are supported •Standby switch

*If using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission

Connection Diagram

Digital Video/Audio HDMI DVI **4** Inputs	Up to 98 ft. (30 m)	Digital Video/Audio HDMI DVI **1** Output
Digital Video/Audio HDMI DVI **1** Input	Up to 164 ft. (50 m)	Digital Video/Audio HDMI DVI **1** Output
Digital Video/Audio HDBaseT	Up to 164 ft. (50 m)	Digital Video/Audio HDMI DVI **1** Output
Digital Video/Audio HDMI DVI / Analog Video Composit, Y/C RGB, YPbPr **2** Inputs	Up to 328 ft. (100 m) (Over Cat6 cable)	Digital Video/Audio HDBaseT **1** Output

MSD-701AMP

Analog Audio Balanced/Unbalanced LR **1** Output
Speaker Output Stereo LR **1** Output
Speaker Output Stereo LR **1** Output
Speaker Output High-impedance **1** Output

Analog Audio Balanced/Unbalanced LR **3** Inputs
Line Audio Balanced/Unbalanced LR **1** Input
Mic. Balanced/Unbalanced Mono **1** Input

4K Digital Multi Switcher with 8 Inputs & 3 to 8 Outputs | MSD-6200 Series

The MSD-6200 series is a high performance, digital presentation switcher with built-in scan converters.

The following input signal formats are supported: HDMI, DVI, composite video, S-video, analog RGB/HV, and analog YPbPr. All video signal inputs are converted to HDMI or HDBaseT signals and output at user definable resolution formats up to 4K@30.

For audio input and output, digital audio and analog audio formats are supported, and they are cross-routable. Audio levels of each input and output can be set individually.

With Dante (optional), up to 64 input audio channels (48 kHz) can be transmitted as DANTE format.

Features

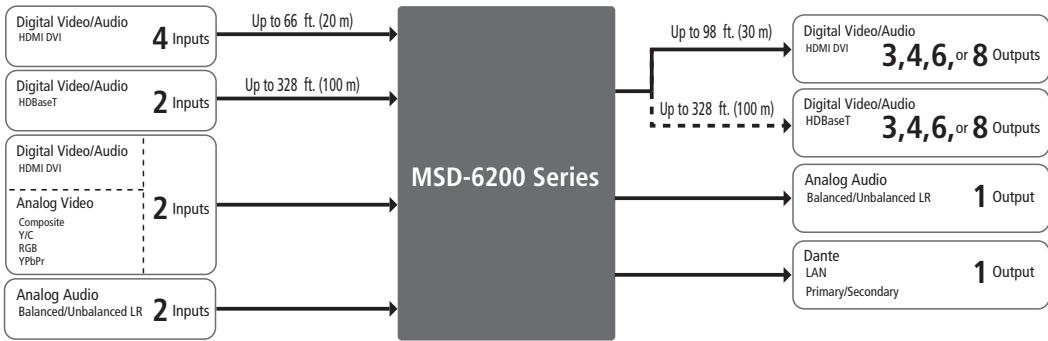| Video	•Up to 4K@30 •HDCP 1.4 •Automatic input signal equalization Input : Up to 98 ft. (30 m) (1080p@60), Up to 66 ft. (20 m) (4K@30) Output: Up to 131 ft. (40 m) (1080p@60), Up to 98 ft. (30 m) (4K@30) •Motion adaptive interlaced/progressive conversion •Scan conversion •Aspect ratio control •Horizontal flip (4K format is not supported) •Seamless switching with one black frame •Analog/Digital conversion •Anti-snow •Up to 492 ft. (150 m) over Cat6 cable at 1080p (24 bit) in Long reach mode*
Audio	•Embedding/De-embedding •Volume adjustment (Input/Output) •Lip Sync •Dante output (Optional) •Audio Downmix
Video combination (4K format is not supported)	•Simultaneous display of up to 4 input images on a screen •Window display priority setting •Window displaying/hiding
Control output	•RS-232C •LAN
Control output	•Control command output (e.g. controlling projectors) •PJLink •CEC (Control sink device power) •Contact closure
Others	•PoH (HDBaseT input) •EDID emulation •All functions and configuration settings accessible through browser •Automatic input channel switching •Audio breakaway for independent audio and video switching •Crosspoint memory •Preset memory •Last memory •Connection Reset •Button security lockout •HDBaseT: RS-232C, LAN, and CEC are supported •Standby switch

*If using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission

MSD-6208-DAN

Models

Model Number	4K UHD input	HDBaseT input	Digital input	Universal input	HDMI output	HDBaseT output
MSD-6203 / MSD-6203-DAN	1	2	3	2	3	3
MSD-6204 / MSD-6204-DAN	1	2	3	2	4	4
MSD-6206 / MSD-6206-DAN	1	2	3	2	6	6
MSD-6208 / MSD-6208-DAN	1	2	3	2	8	8

Connection Diagram

Digital Video/Audio HDMI DVI **4** Inputs	Up to 66 ft. (20 m)	Digital Video/Audio HDMI DVI **3,4,6,** or **8** Outputs
Digital Video/Audio HDBaseT **2** Inputs	Up to 328 ft. (100 m)	Digital Video/Audio HDBaseT **3,4,6,** or **8** Outputs
Digital Video/Audio HDMI DVI / Analog Video Composite Y/C RGB YPbPr **2** Inputs	Up to 98 ft. (30 m) / Up to 328 ft. (100 m)	MSD-6200 Series
Analog Audio Balanced/Unbalanced LR **2** Inputs		Analog Audio Balanced/Unbalanced LR **1** Output

Dante LAN Primary/Secondary **1** Output

4K@60 Digital Multi Switcher with 7 Inputs & 1/2 Outputs | MSD-701UHD/MSD-702UHD
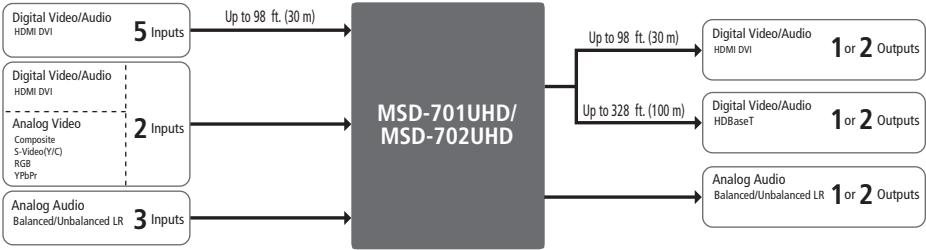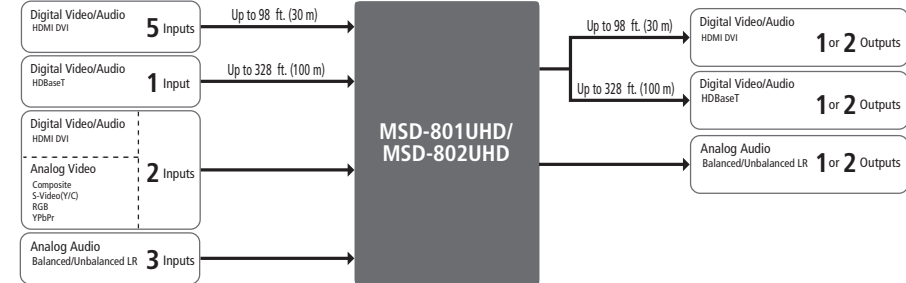
4K ULTRA HD

The MSD-701UHD and 702UHD are seven inputs and one/two outputs digital multi switcher with a scan converter. They are HDCP 2.2 compliant and support video resolutions up to 4K@60 (4:4:4).
The MSD-701UHD and 702UHD include seven inputs in total: two HDMI for up to 4K@60(4:4:4); three HDMI for up to 1080p; two DVI for up to 1080p and analog video.
Input signals are converted into up to 4K and distributed into HDMI and HDBaseT.

MSD-702UHD

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •Motion adaptive interlaced/progressive conversion •Scan conversion •Aspect ratio control •Seamless switching with one black frame •Analog/Digital conversion •Anti-snow •Up to 492 ft. (150 m) over Cat6 cable at 1080p (24 bit) in Long reach mode*
Audio	•A/D, D/A conversion •Volume adjustment (Input/Output) •Lip Sync
Control input	•RS-232C •LAN •Command control
Control output	•Control command output (e.g. controlling projectors) •PJLink •CEC (Control sink device power) •Contact closure
Others	•EDID emulation •All functions and configuration settings accessible through browser •Automatic input channel switching •Audio breakaway for independent audio and video switching •Crosspoint memory •Preset memory •Last memory •Connection Reset •Button security lockout •HDBaseT: RS-232C, LAN, and CEC are supported

*If using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission

Models

Model Number	4K UHD input	Digital input	Universal input	HDMI output	HDBaseT output
MSD-701UHD	2	3	2	1	1
MSD-702UHD	2	3	2	2	2

Connection Diagram

Digital Video/Audio HDMI DVI **5** Inputs — Up to 98 ft. (30 m) → MSD-701UHD/MSD-702UHD

Digital Video/Audio HDMI DVI

Analog Video Composite S-Video(Y/C) RGB YPbPr **2** Inputs

Analog Audio Balanced/Unbalanced LR **3** Inputs

Up to 98 ft. (30 m) → Digital Video/Audio HDMI DVI **1** or **2** Outputs

Up to 328 ft. (100 m) → Digital Video/Audio HDBaseT **1** or **2** Outputs

Analog Audio Balanced/Unbalanced LR **1** or **2** Outputs

4K@60 Digital Multi Switcher with 8 Inputs & 1/2 Outputs | MSD-801UHD/MSD-802UHD

4K ULTRA HD

The MSD-801UHD and 802UHD are eight inputs and one/two outputs digital multi switcher with a scan converter. They are HDCP 2.2 compliant and support video resolutions up to 4K@60 (4:4:4).
The MSD-801UHD and 802UHD include eight inputs in total: two HDMI + one HDBaseT for up to 4K@60(4:4:4); three HDMI for up to 1080p; two DVI for up to 1080p and analog video.
Input signals are converted into up to 4K and distributed into HDMI and HDBaseT.
The MSD-801UHD and 802UHD include HDBaseT input connector at the front panel to provide power to PoH-supported HDBaseT transmitter.

MSD-802UHD

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •Motion adaptive interlaced/ progressive conversion •Scan conversion •Aspect ratio control •Seamless switching with one black frame •Analog/Digital conversion •Anti-snow •Up to 492 ft. (150 m) over Cat6 cable at 1080p (24 bit) in Long reach mode*
Audio	•A/D, D/A conversion •Volume adjustment (Input/Output) •Lip Sync
Control input	•RS-232C •LAN •Command control
Control output	•Control command output (e.g. controlling projectors) •PJLink •CEC (Control sink device power) •Contact closure
Others	•PoH (HDBaseT input) •EDID emulation •All functions and configuration settings accessible through browser •Automatic input channel switching •Audio breakaway for independent audio and video switching •Crosspoint memory •Preset memory •Last memory •Connection Reset •Button security lockout •HDBaseT: RS-232C, LAN, and CEC are supported

*If using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission

Models

Model Number	4K UHD input	HDBaseT input	Digital input	Universal input	HDMI output	HDBaseT output
MSD-801UHD	2	1	3	2	1	1
MSD-802UHD	2	1	3	2	2	2

Connection Diagram

Digital Video/Audio HDMI DVI **5** Inputs — Up to 98 ft. (30 m) → MSD-801UHD/MSD-802UHD

Digital Video/Audio HDBaseT **1** Input — Up to 328 ft. (100 m)

Digital Video/Audio HDMI DVI

Analog Video Composite S-Video(Y/C) RGB YPbPr **2** Inputs

Analog Audio Balanced/Unbalanced LR **3** Inputs

Up to 98 ft. (30 m) → Digital Video/Audio HDMI DVI **1** or **2** Outputs

Up to 328 ft. (100 m) → Digital Video/Audio HDBaseT **1** or **2** Outputs

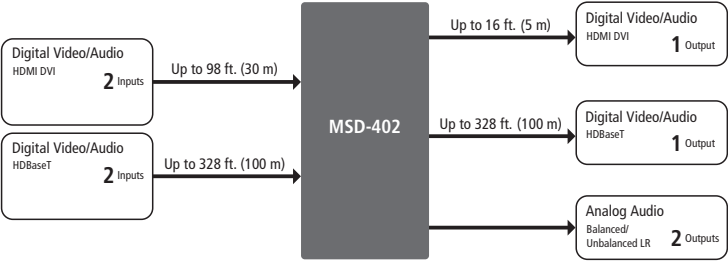Analog Audio Balanced/Unbalanced LR **1** or **2** Outputs

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Digital Multi Switcher with 4 Inputs & 2 Outputs | MSD-402

The MSD-402 is a high-performance digital multi switcher that provides four inputs and two outputs and has a built-in scan converter.
For video input, two HDBaseT and two HDMI/DVI are included. Input video signals are converted to HDMI/DVI or HDBaseT signals output at resolutions up to QWXGA or 1080p. Analog video signals can be input by using HDC-TH200 with the MSD, and the configuration enables remote input channel switching.
For audio input, four digital inputs are included. Selected audio signals are output to digital audio and analog audio. Audio levels of each input and output can be set individually.

MSD-402

Features

Video	•Up to QWXGA (Reduced Blanking) •HDCP 1.4 •Automatic input signal equalization Input: Up to 98 ft. (30 m) •Up to 328 ft. (100 m) over Cat6 cable •Scan conversion •Picture-in-picture •Aspect ratio control •Seamless switching with one black frame •Anti-snow
Audio	•De-embedding •Volume adjustment (Input/Output) •Audio Downmix
Control input	•RS-232C •LAN
Control output	•Switching remotely input channel via HDBaseT when using with HDC-TH200
Others	•EDID emulation •All functions and configuration settings accessible through browser •Automatic input channel switching •Crosspoint memory •Preset memory •Last memory •Connection Reset •Button security lockout •AC adapter with locking mechanism •HDBaseT: LAN and CEC are supported

Connection Diagram

Digital Video/Audio HDMI DVI **2** Inputs — Up to 98 ft. (30 m) → MSD-402

Digital Video/Audio HDBaseT **2** Inputs — Up to 328 ft. (100 m)

Up to 16 ft. (5 m) → Digital Video/Audio HDMI DVI **1** Output

Up to 328 ft. (100 m) → Digital Video/Audio HDBaseT **1** Output

Analog Audio Balanced/ Unbalanced LR **2** Outputs

Digital Multi Switchers / Features / AV over IP / Digital Multi Switchers / Modular Matrix Switchers / Extenders / Distribution Amplifiers / Others / Controllers / Mounting Hardware / Standard Resolutions

4K@60 Modular Matrix Switcher with 8 Inputs & 8 Outputs | **FDX-S08/FDX-S08U**

The FDX-S08 and FDX-S08U are HDCP-compliant modular digital matrix switchers that support resolutions up to 4K@30/4K@60(4:4:4). They provide up to eight inputs and eight outputs. Video and embedded audio can be switched simultaneously.
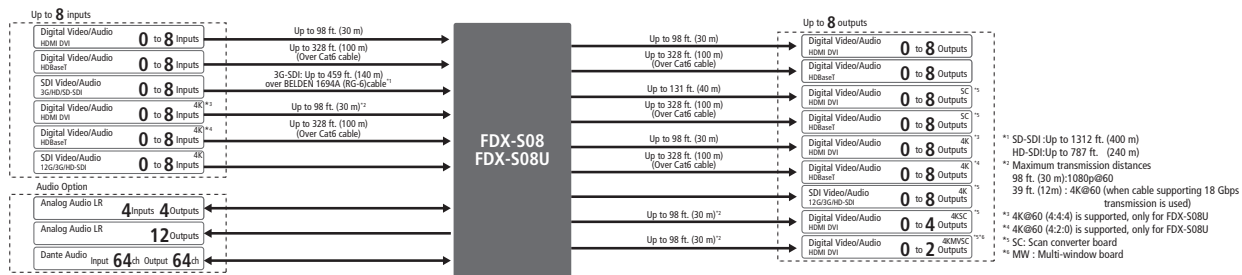The FDX-S08 and FDX-S08U feature RS-232C/LAN ports for remote control, redundant power supply, and system check that outputs an alarm in case an abnormality is detected in power supply voltage, fans, internal temperature, or board. The redundant power supply ensures constant availability and minimizes the chance of a failure even for mission-critical environments.

Features

Video	•Up to 4K@60 (4:4:4)*1 •HDCP 1.4/2.2*1 •3G/HD-SDI/SD-SDI input •Automatic signal equalization Output: Up to 131 ft. (40 m) (Digital scan converter output board) •Up to 984 ft. (300 m) over coaxial cable •Motion adaptive interlaced/progressive conversion •Aspect ratio control •Seamless switching with one black frame •Anti-snow •HDR (4K digital/4K HDBaseT I/O board)*2 •3D (4K digital/4K HDBaseT I/O board)*2 •x.v.Color (4K digital/4K HDBaseT I/O board)*2 •Scaling (Scan converter output board) •SDI Loop-through output connector •Videowall output (Scan converter output board) •Up to 492 ft. (150 m) over Cat6 cable at 1080p (24 bit) in Long reach mode*3
Audio	•Lip Sync (Scan converter output board) •Embedding •De-embedding •Dante I/O(audio board)
Control input	•RS-232C •LAN
Others	•EDID emulation •Slot boards, fan unit, and power unit can be replaced without removing from rack •Redundant power supply (Optional) •Alarm output (Monitoring power supply voltage, fans, internal temperature, and board status) •Preset memory •Last memory •Connection Reset •Button security lockout •LAN and RS-232C transmission (HDBaseT/4K HDBaseT I/O board and HDBaseT scan converter output board)*1 •System check •WEB browser control •Status notification •HDBaseT status display

Redundant power supply (optional) is included in the picture above.   FDX-S08U

*1 FDX-S08: Up to 4K@30, HDCP 1.4. LAN and RS-232C transmission (HDBaseT I/O board and HDBaseT scan converter output board) *2 FDX-S08U only *3 If using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission

Connection Diagram

4K@60 Modular Matrix Switcher with 16 Inputs & 16 Outputs | **FDX-S16/FDX-S16U**

The FDX-S16 and FDX-S16U are HDCP-compliant modular digital matrix switchers that support resolutions up to 4K@30/4K@60(4:4:4). They provide up to 16 inputs and 16 outputs. Video and embedded audio can be switched simultaneously.
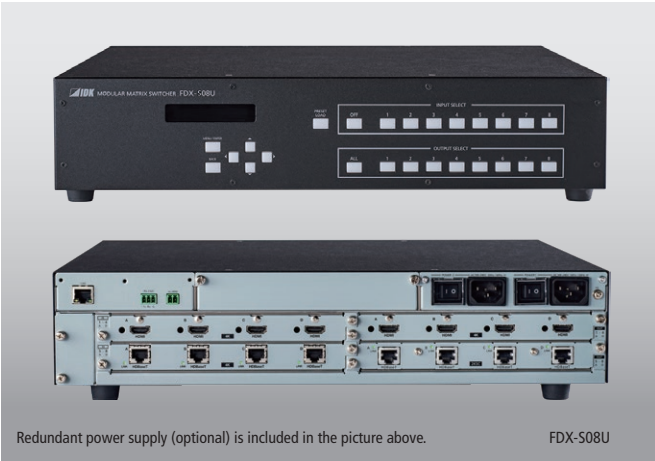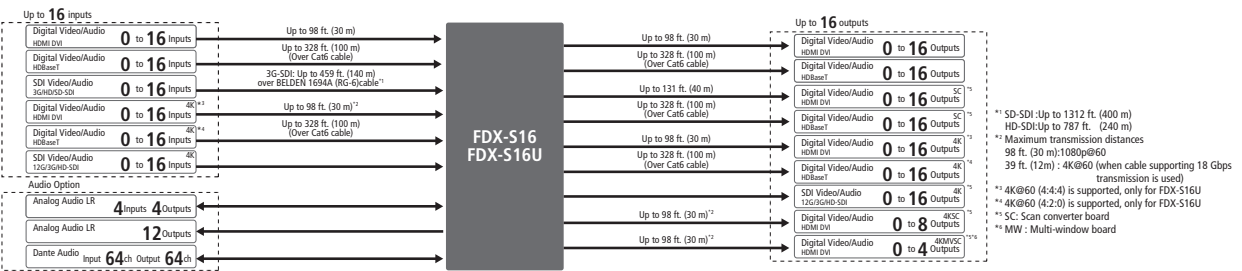The FDX-S16 and FDX-S16U feature RS-232C/LAN ports for remote control, redundant power supply, and system check that outputs an alarm in case an abnormality is detected in power supply voltage, fans, internal temperature, or board. The redundant power supply ensures constant availability and minimizes the chance of a failure even for mission-critical environments.

Features

Video	•Up to 4K@60 (4:4:4)*1 •HDCP 1.4/2.2*1 •3G/HD/SD-SDI input •Automatic input signal equalization Output: Up to 131 ft. (40 m) (Digital scan converter output board) •Up to 984 ft. (300 m) over coaxial cable •Motion adaptive interlaced/progressive conversion •Aspect ratio control •Seamless switching with one black frame •Anti-snow •HDR (4K digital/4K HDBaseT I/O board)*2 •3D (4K digital/4K HDBaseT I/O board)*2 •x.v.Color (4K digital/4K HDBaseT I/O board)*2 •Scaling (Scan converter output board) •SDI Loop-through output connector •Videowall output (Scan converter output board) •Up to 492 ft. (150 m) over Cat6 cable at 1080p (24 bit) in Long reach mode*3
Audio	•Lip Sync (Scan converter output board) •Embedding •De-embedding •Dante I/O(audio board)
Control input	•RS-232C •LAN
Others	•EDID emulation •Slot boards, fan unit, and power unit can be replaced without removing from rack •Redundant power supply (Optional) •Alarm output (Monitoring power supply voltage, fans, internal temperature, and board status) •Preset memory •Last memory •Connection Reset •Button security lockout •LAN and RS-232C transmission (HDBaseT/4K HDBaseT I/O board and HDBaseT scan converter output board)*1 •System check •WEB browser control •Status notification •HDBaseT status display

Redundant power supply (optional) is included in the picture above.   FDX-S16U

*1 FDX-S16: Up to 4K@30, HDCP 1.4. LAN and RS-232C transmission (HDBaseT I/O board and HDBaseT scan converter output board) *2 FDX-S16U only *3 If using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission

Connection Diagram

4K@60 Modular Matrix Switcher with 32 Inputs & 32 Outputs | **FDX-S32/FDX-S32U**

The FDX-S32 and FDX-S32U are HDCP-compliant modular digital matrix switchers that support resolutions up to 4K@30/4K@60(4:4:4). They provide up to 32 inputs and 32 outputs. Video and embedded audio can be switched simultaneously.
The FDX-S32 and FDX-S32U feature RS-232C/LAN ports for remote control, redundant power supply, and system check that outputs an alarm in case an abnormality is detected in power supply voltage, fans, internal temperature, or board. The redundant power supply ensures constant availability and minimizes the chance of a failure even for mission-critical environments.

Features

Video	•Up to 4K@60 (4:4:4)*1 •HDCP 1.4/2.2*1 •3G/HD/SD-SDI input •Automatic input signal equalization Output: Up to 131 ft. (40 m) (Digital scan converter output board) •Up to 984 ft. (300 m) over coaxial cable •Motion adaptive interlaced/progressive conversion •Aspect ratio control •Seamless switching with one black frame •Anti-snow •HDR (4K digital/4K HDBaseT I/O board)*2 •3D (4K digital/4K HDBaseT I/O board)*2 •x.v.Color (4K digital/4K HDBaseT I/O board)*2 •Scaling (Scan converter output board) •SDI Loop-through output connector •Videowall output (Scan converter output board) •Up to 492 ft. (150 m) over Cat6 cable at 1080p (24 bit) in Long reach mode*3
Audio	•Lip Sync (Scan converter output board) •Embedding •De-embedding •Dante I/O(audio board)
Control input	•RS-232C •LAN
Others	•EDID emulation •Slot boards, fan unit, and power unit can be replaced without removing from rack •Redundant power supply (Optional) •Alarm output (Monitoring power supply voltage, fans, internal temperature, and board status) •Preset memory •Last memory •Connection Reset •Button security lockout •LAN and RS-232C transmission (HDBaseT/4K HDBaseT I/O board and HDBaseT scan converter output board)*1 •System check •WEB browser control •Status notification •HDBaseT status display

Redundant power supply (optional) is included in the picture above.   FDX-S32U

*1 FDX-S32: Up to 4K@30, HDCP 1.4. LAN and RS-232C transmission (HDBaseT I/O board and HDBaseT scan converter output board) *2 FDX-S32U only *3 If using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission

Connection Diagram
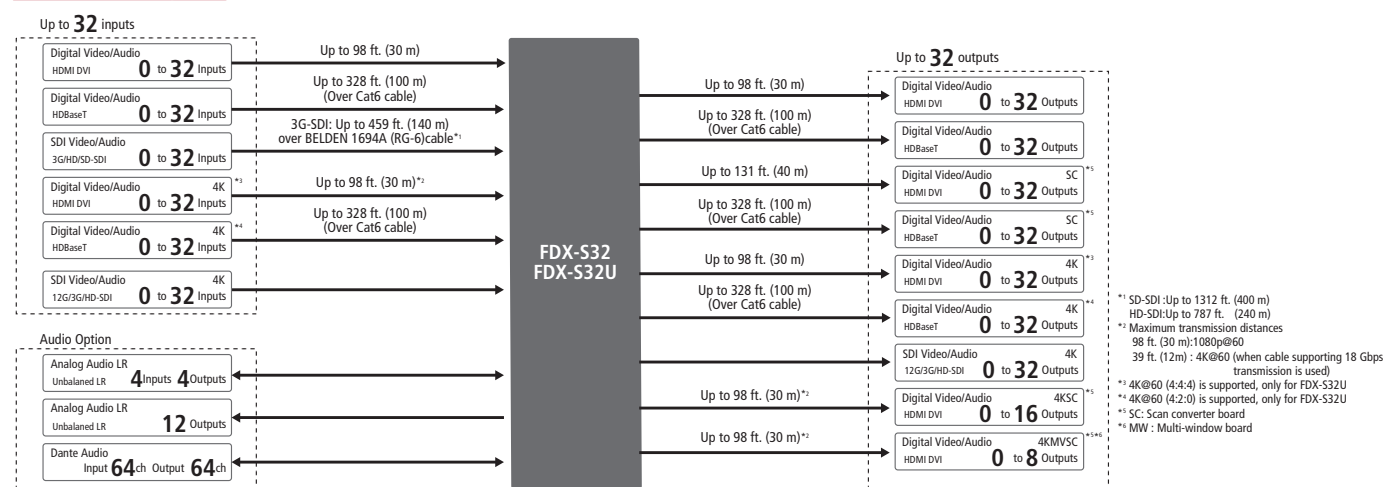
4K@30 Modular Matrix Switcher with 64 Inputs & 64 Outputs | FDX-S64
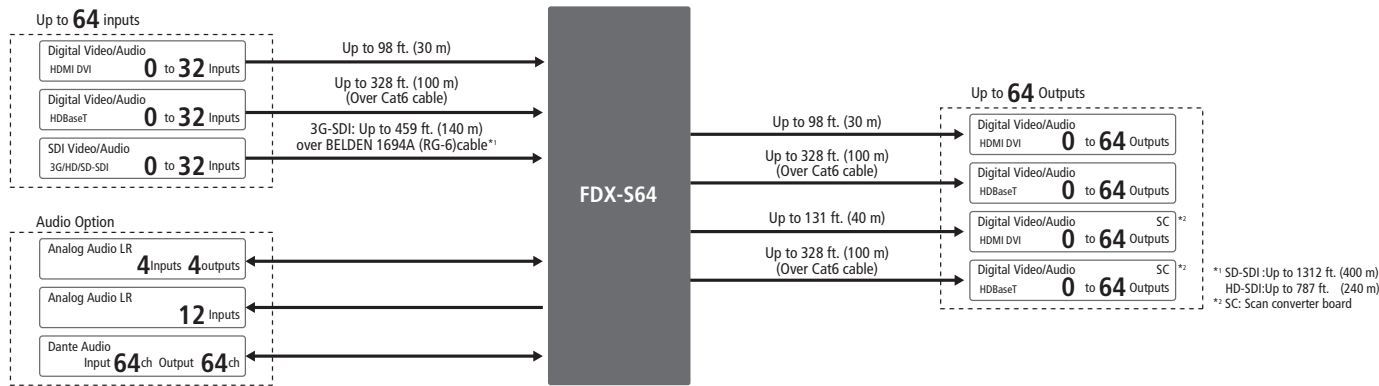
The FDX-S64 is an HDCP-compliant modular digital matrix switcher that supports resolutions up to 4K@30. It provides up to 64 inputs and 64 outputs.
Video and embedded audio can be switched simultaneously.
With audio boards, input digital audio signals can be converted into output analog audio or Dante network audio signals. Input analog audio signals and Dante network audio signals can be converted into digital audio signals and embedded to desired output video channels.
The FDX-S64 features RS-232C/LAN ports for remote control, redundant power supply, and system check that outputs an alarm in case an abnormality is detected in power supply voltage, fans, internal temperature, or board.
The redundant power supply ensures constant availability and minimizes the chance of a failure even for mission-critical environments.

Features

Video	•Up to 4K@30 •HDCP 1.4 •3G-SDI/HD-SDI/SD-SDI input (FDX-SIV4S) •Automatic signal equalization Output: Up to 131 ft. (40 m) (FDX-SOV4HS) •Up to 984 ft. (300 m) over coaxial cable (FDX-SIV4S) •Motion adaptive interlaced/progressive conversion (FDX-SOV4HS, FDX-SOV4TS, FDX-SOV2UHS, FDX-SOV1UHM) •Aspect ratio control (FDX-SOV4HS, FDX-SOV4TS, FDX-SOV2UHS, FDX-SOV1UHM) •Seamless switching with one black frame (FDX-SOV4HS, FDX-SOV4TS, FDX-SOV2UHS, FDX-SOV1UHM) •Anti-snow •Scaling (FDX-SOV4HS, FDX-SOV4TS, FDX-SOV2UHS, FDX-SOV1UHM) •SDI Loop-through output connector (FDX-SIV4S) •Videowall output (FDX-SOV4HS, FDX-SOV4TS, FDX-SOV2UHS, FDX-SOV1UHM) •Simultaneous display of up to 4 input images on a screen (FDX-SOV1UHM) •Up to 492 ft. (150 m) over Cat6 cable in Long reach mode* (FDX-SIV4T, FDX-SOV4TS, FDX-SOV4T)
Audio	•Lip Sync (Scan converter output board) •Embedding •De-embedding •Dante I/O(audio board)
Control input	•RS-232C •LAN
Others	•EDID emulation •Slot boards, fan unit, and power unit can be replaced without removing from rack •Redundant power supply (Optional) •Alarm output (Monitoring power supply voltage, fans, internal temperature, and board status) •Preset memory •Last memory •Connection Reset •Button security lockout •LAN and RS-232C transmission (HDBaseT/4K HDBaseT I/O board and HDBaseT scan converter output board)*1 •System check •WEB browser control •Status notification •HDBaseT status display

FDX-S64

*For long reach mode, video signals up to 1080p (24 bit) can be transmitted to 492 ft. (150 m) at maximum if using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission.

Connection Diagram

Up to **64** inputs
- Digital Video/Audio HDMI DVI **0** to **32** Inputs
- Digital Video/Audio HDBaseT **0** to **32** Inputs
- SDI Video/Audio 3G/HD/SD-SDI **0** to **32** Inputs

Up to 98 ft. (30 m)
Up to 328 ft. (100 m) (Over Cat6 cable)
3G-SDI: Up to 459 ft. (140 m) over BELDEN 1694A (RG-6)cable*1

Audio Option
- Analog Audio LR **4** Inputs **4** outputs
- Analog Audio LR **12** Inputs
- Dante Audio Input **64** ch Output **64** ch

FDX-S64

Up to 98 ft. (30 m)
Up to 328 ft. (100 m) (Over Cat6 cable)
Up to 131 ft. (40 m)
Up to 328 ft. (100 m) (Over Cat6 cable)

Up to **64** Outputs
- Digital Video/Audio HDMI DVI **0** to **64** Outputs
- Digital Video/Audio HDBaseT **0** to **64** Outputs
- Digital Video/Audio HDMI DVI **0** to **64** Outputs SC *2
- Digital Video/Audio HDBaseT **0** to **64** Outputs SC *2

*1 SD-SDI :Up to 1312 ft. (400 m)
 HD-SDI:Up to 787 ft. (240 m)
*2 SC: Scan converter board

FDX-S Series | I/O boards/units

FDX-S Series boards/units

Category	I/O	Model Number	Board	Maximum Formats	No. of Ports
4K@60 HDMI/DVI board	Input	FDX-SIV4UH		4K@60 (4:4:4) 4K	4
	Output	FDX-SOV4UH		4K@60 (4:4:4) 4K	
4K@60 HDBaseT board	Input	FDX-SIV4UT		4K@60 (4:2:0) 4K*1	4
	Output	FDX-SOV4UT		4K@60 (4:2:0) 4K*1	
4K@30 HDMI/DVI board	Input	FDX-SIV4H		4K@30 4K*1	4
	Output	FDX-SOV4H		4K@30 4K*1	
4K@30 HDBaseT board	Input	FDX-SIV4T		4K@30 4K*1	4
	Output	FDX-SOV4T		4K@30 4K*1	
12G/3G/HD-SDI board	Input	FDX-SIV4US		4K@60 (4:4:4) 4K	4
	Output	FDX-SOV4US			
3G/HD/SD-SDI board	Input	FDX-SIV4S		1080p*2	4
HDMI/DVI scan converter board	Output	FDX-SOV4HS		1080p QWXGA*3	4
HDBaseT scan converter board	Output	FDX-SOV4TS		1080p QWXGA*3	4
4K@60 HDMI/DVI scan converter board	Output	FDX-SOV2UHS		4K (4096×2160) WQXGA*4	2
4K@60 Multi-view board	Output	FDX-SOV1UHM		4K (4096×2160) WQXGA*4	1
Analog audio board	Input	FDX-SAB4A		—	8
	Output				
Analog audio board	Output	FDX-SOA12A		—	12
Dante audio board	Input	FDX-SAB64D		—	2
	Output				
Redundant power supply unit	—	FDX-SRP08 FDX-SRP16 FDX-SRP32		—	—

*1 For WQHD/WQXGA, only Reduced Blanking is supported.
*2 3G-SDI: Level A and Level B.
 720p: 23.98 Hz and 24 Hz are not supported.
*3 For VESAHD/WUXGA/QWXGA, only Reduced Blanking is supported.
*4 For VESAHD/WUXGA/QWXGA/WQHD/WQXGA, only Reduced Blanking is supported.
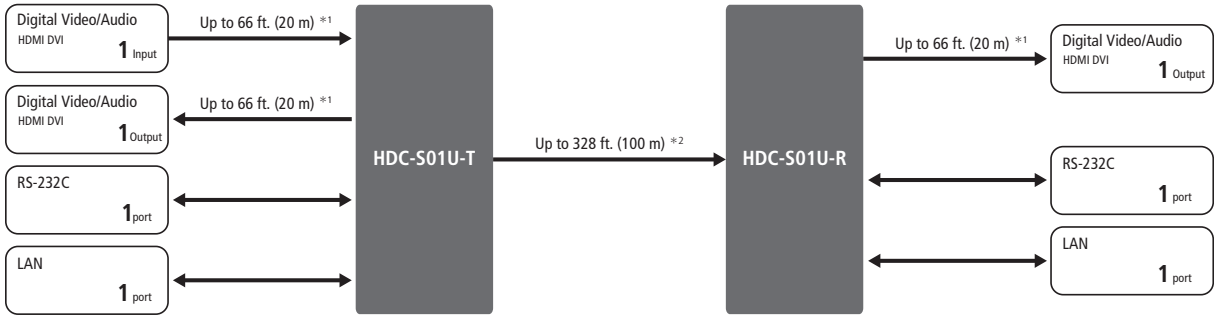
4K@60 HDBaseT Extender | HDC-S01U

The HDC-S01U-T (transmitter)/HDC-S01U-R (receiver) is an HDBaseT extender for sending HDMI signals up to 328 ft. (100 m) over a Category (CAT) cable without compression or processing. The HDC-S01U-T/R supports video signals at resolutions up to 4K@60 (4:4:4) and is HDCP 2.2 compliant. HDBaseT signal is encrypted robustly by copyright protection technology. Integrator-friendly features include bidirectional RS-232C and LAN communication allowing control commands and status to be sent and monitored. Additionally, the HDC-S01U-T includes a local HDMI output connector for real-time video monitoring.

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •HDR •3D •x.v.Color •Up to 328 ft. (100 m) 4K@60 (4:4:4) (when CAT6A (U/FTP, 23 AWG) cable is used) •HDMI Transmission distances 1080@60: Up to 66 ft. (20 m) 4K@60: Up to 39 ft. (12 m) (when cable supporting 18 Gbps transmission is used)
Communication	•RS-232C •LAN
Others	•DDC buffer •Connection Reset pass-through

*1If exceeding 328 ft. (100 m) in Long reach mode, CAT.5E HDC, Cat5e STP, and Cat6A STP cables are recommended.

HDC-S01U-T   HDC-S01U-R

Connection Diagram

```
Digital Video/Audio
HDMI DVI       1 Input      Up to 66 ft. (20 m) *1
Digital Video/Audio
HDMI DVI       1 Output     Up to 66 ft. (20 m) *1        HDC-S01U-T   Up to 328 ft. (100 m) *2   HDC-S01U-R
RS-232C        1 port
LAN            1 port

                                                          Up to 66 ft. (20 m) *1     Digital Video/Audio
                                                                                     HDMI DVI    1 Output
                                                          RS-232C     1 port
                                                          LAN         1 port
```

*1 Maximum transmission distances
   66 ft. (20 m):1080p@60
   26 ft. (8 m),39 ft. (12m) : 4K@60 (4:4:4) (when cable supporting 18 Gbps transmission is used)
*2 Maximum transmission distances
   328 ft. (100 m) : 4K@60 (4:4:4) (when CAT6A (U/FTP,23AWG) cables is used)

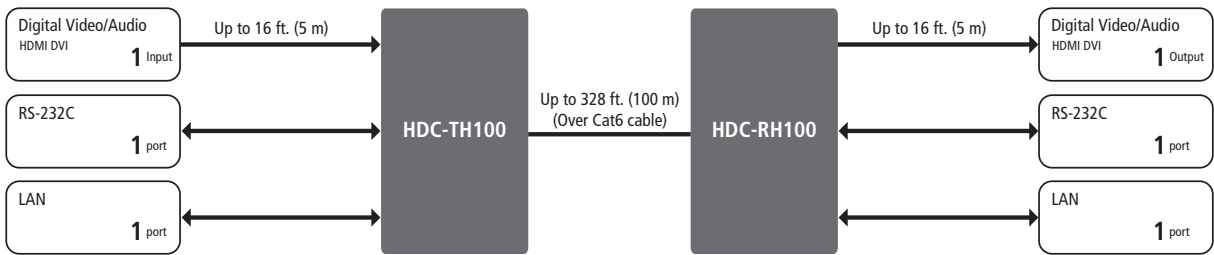## 4K@60 HDBaseT Extender | HDC-H100

The HDC-H100 is an extender for HDBaseT signals using a single category cable to transmit data over a long distance. The product supports 4K@60 video signals, extending them digitally end-to-end. Bidirectional RS-232C and LAN communication are also supported.
Input video signal is converted to HDBaseT signal and sent up to 328 ft. (100 m).

Features

Video	•Up to 4K@60 (4:2:0) •HDCP 1.4/2.2 (Pass-through) •Transmission over Cat5e UTP cable •Up to 328 ft. (100 m) 4K@60 over CAT.5E HDC/Cat5e STP/Cat6 STP cable •Up to 328 ft. (100 m) over Cat6 UTP cable at 1080p (24 bit) •Up to 492 ft. (150 m) over cat6 cable at 1080p (24 bit) in Long reach mode* •No actual extension delay (10 µs or less/328 ft. (100 m))
Others	•CEC (Pass-through) •AC adapter with locking mechanism •Up to 4 units can be installed in a 1U rack

*If using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission

HDC-TH100   HDC-RH100

Connection Diagram

```
Digital Video/Audio
HDMI DVI       1 Input      Up to 16 ft. (5 m)
RS-232C        1 port                          HDC-TH100   Up to 328 ft. (100 m)   HDC-RH100
LAN            1 port                                      (Over Cat6 cable)

                                                          Up to 16 ft. (5 m)      Digital Video/Audio
                                                                                  HDMI DVI    1 Output
                                                          RS-232C     1 port
                                                          LAN         1 port
```

HDMI/Analog HDBaseT Transmitter with 2 Inputs & 1 Output | HDC-TH200

The HDC-TH200 is an HDBaseT transmitter that features both HDMI/DVI and analog input signals. It also acts as a simple switcher, automatically sending and switching to an active input.
The HDC-TH200 can also embed the analog video into the digital stream. Pair with any of IDK's HDBaseT receivers for video and audio extension to 328 ft. (100 m).

Features

Video	•Up to 1080p/QWXGA (Reduced Blanking) •HDCP 1.4 •3D Y/C separation for NTSC and PAL signals •Automatic input signal equalization Input: Up to 98 ft. (30 m) •Up to 328 ft. (100 m) over Cat6 cable •Anti-snow •Up to 492 ft. (150 m) in Long reach mode (1080p 60 Hz 24 bit or less)*
Audio	•Embedding
Communication	•LAN
Control input	•RS-232C (HDBaseT)
Others	•EDID emulation •Automatic input channel switching •CEC (Pass-through) •Last memory •Connection Reset •Button security lockout •AC adapter with locking mechanism

*If using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission

HDC-TH200

Connection Diagram

```
Digital Video/Audio
HDMI DVI       1 Input      Up to 98 ft. (30 m)

Analog Video
Composite
(Y/C)
RGB
YPbPr          1 Input                               HDC-TH200    Up to 328 ft. (100 m)*    Digital Video/Audio
                                                                                            HDBaseT    1 Output
Analog Audio
Unbalanced LR  1 Input

LAN            1 Port
```

*For long reach mode, video signals up to 1080p (24 bit)
 can be transmitted to 492 ft. (150 m) at maximum
 if using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission.
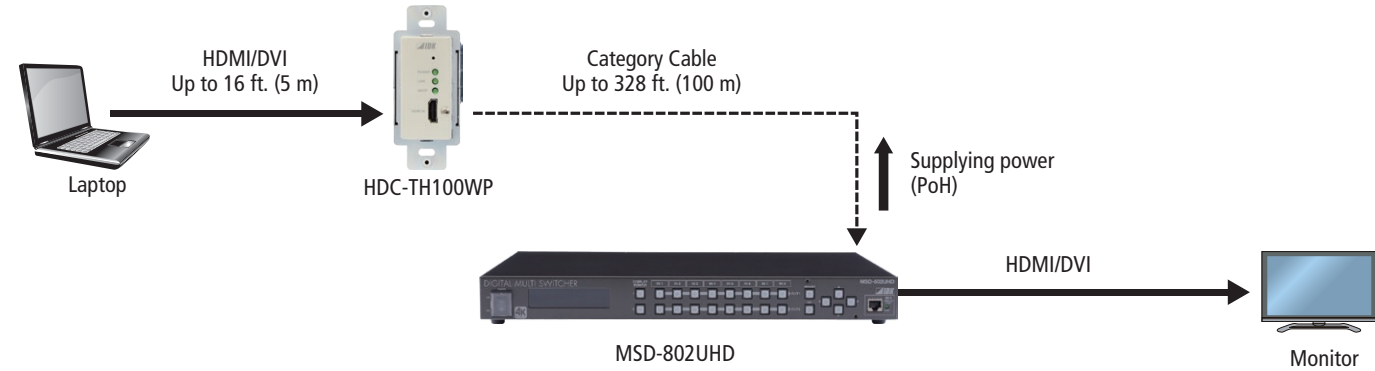
4K@60 Wallplate HDBaseT Transmitter | HDC-TH100WP

The HDC-TH100WP is a wall-mountable transmitter for a long-haul transmission of HDMI signal over one single category cable.
The image quality will not be deteriorated, since video signals are transmitted at a resolution up to 4K@60 without compression.
Input video signals are converted to HDBaseT signals and transmitted up to 328 ft. (100 m).
PoH (Power over HDBaseT) is supported. Connecting to a receiver supporting PoH power supply (PSE) function eliminates the need for a local power supply.

Features

Video	•Up to 4K@60 (4:2:0) •HDCP 1.4/2.2 (Pass-through) •Transmission over Cat5e UTP cable •Up to 328 ft. (100 m) 4K@60 over CAT.5E HDC/Cat5e STP/Cat6 STP cable •Up to 328 ft. (100 m) over Cat6 UTP cable at 1080p (24 bit) •Up to 492 ft. (150 m) over Cat6 cable at 1080p (24 bit) in Long reach mode* •No virtual delay (10 µs or less/328 ft. (100 m))
Others	•CEC (Pass-through) •PoH (HDBaseT output)

*If using with IDK's HDBaseT products supporting 328 ft. (100 m) transmisson

HDC-TH100WP

Application Example

```
                HDMI/DVI                         Category Cable
                Up to 16 ft. (5 m)               Up to 328 ft. (100 m)
Laptop                      HDC-TH100WP
                                                              Supplying power
                                                              (PoH)

                                                                   HDMI/DVI
                        MSD-802UHD                                         Monitor
```

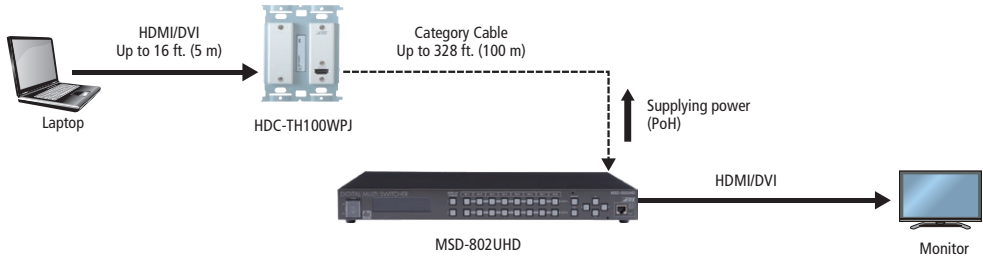## 4K@60 Wallplate HDBaseT Transmitter | HDC-TH100WPJ

The IDK HDC-TH100WPJ is a wall-mountable transmitter for a long-haul transmission of HDMI signal over one single cable.
The image quality will not be deteriorated, since video signal is transmitted at a resolution up to 4K@60 without compression.
Input video signal is converted to HDBaseT signal and sent up to 328 ft. (100 m).
PoH (Power over HDBaseT) is supported. Connecting a receiver supporting PoH power supply (PSE) function eliminates the need for a local power supply.

Features

Video	•Up to 4K@60 (4:2:0) •HDCP 1.4/2.2 (Pass-through) •Transmission over Cat5e UTP cable •Up to 328 ft. (100 m) 4K@60 over CAT.5E HDC/Cat5e STP/Cat6 STP cable •Up to 328 ft. (100 m) over Cat6 UTP cable at 1080p (24 bit) •Up to 492 ft. (150 m) over Cat6 cable at 1080p (24 bit) in Long reach mode* •No virtual delay (10 µs or less/328 ft. (100 m))
Others	•CEC (Pass-through) •PoH (HDBaseT output)

*If using with IDK's HDBaseT products supporting 328 ft. (100 m) transmisson

HDC-TH100WPJ   HDC-TH100WPJ-B

Application Example

HDMI/DVI
Up to 16 ft. (5 m)

Category Cable
Up to 328 ft. (100 m)

Supplying power
(PoH)

HDMI/DVI

Laptop   HDC-TH100WPJ

MSD-802UHD   Monitor

4K@60 HDBaseT Transceiver with 2 Inputs & 2 Outputs | HDC-TR121UHD

The HDC-TR121UHD is an HDBaseT extender with EDID emulator for sending HDMI, DVI, or HDBaseT input signals at up to 4K@60(4:4:4) over a Category cable without compression or processing.
Input video signal is converted to HDMI and HDBaseT that can be transmitted up to 100 m (328 ft.); 1080p (24 bit) video signals can be sent up to 150 m (492 ft.) in Long reach mode.
The HDMI OUT1 enables down conversion outputting 4K input video at 1080p automatically depending on sink device status. The two video inputs can be controlled by the front panel or an external controller.
For video signal that is distributed to an HDMI/DVI and HDBaseT simultaneously, video/audio can be off for each output.
The HDC-TR121UHD also features Daisy chain for extending and distributing video, audio, and control signals. In addition, digital audio signals can be de-embedded onto the analog output signals. It supports bidirectional RS-232C communication and LAN transmission.
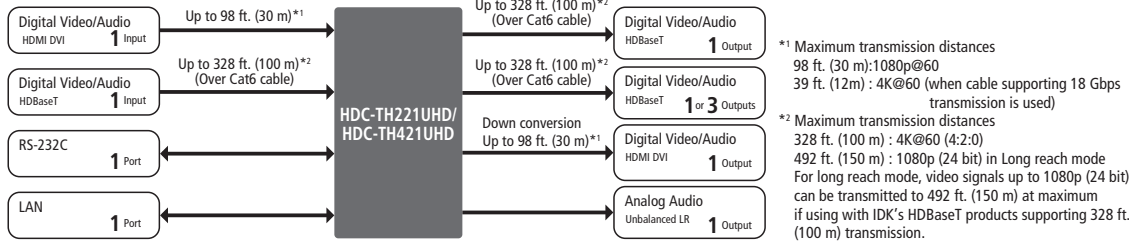Internal Web pages provide system status for troubleshooting and device monitoring using a browser.

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •HDR •3D •x.v.Color
	•Up to 328 ft. (100 m) 4K@60 over CAT.5E HDC/Cat5e STP/Cat6 STP cable
	•Transmission over Cat5e UTP cable*1
	•Up to 328 ft. (100 m) over Cat6 UTP cable*2
	•Up to 492 ft. (150 m) in Long reach mode (1080p 60 Hz 24 bit or less)*3
	•HDMI Transmission distances:
	    Up to 98 ft. (30 m) : 1080p@60
	    Up to 39 ft. (12 m) : 4K@60 (when cable supporting 18 Gbps transmission is used)
	•No virtual delay (10 µs or less/328 ft. (100 m)) •Each video output OFF •OUT1 supports down conversion (4K to 1080p) •Daisy chain connection •Anti-snow

Audio	•De-embedding
Communication	•Point-to-point (bidirectional) and point-to-multipoint (unidirectional) RS-232C communication •LAN •HDBaseT: RS-232C and LAN are supported
Others	•EDID emulation •WEB browser control •Status notification •HDBaseT status display •I/O signal status display •Automatic input •CEC (Pass-through) •Connection Reset •Button security lockout •AC adapter with locking mechanism

*1 If exceeding 164 ft. (50 m), CAT.5E HDC, Cat5e STP, and Cat6 UTP/STP cables are recommended. *2 If the 4K format exceeds 230 ft. (70 m), CAT.5E HDC, Cat5e STP, and Cat6 STP cables are recommended.
*3 If exceeding 328 ft. (100 m) in Long reach mode, CAT.5E HDC, Cat5e STP, and Cat6 STP cables are recommended.

HDC-TR121UHD

Connection Diagram

Digital Video/Audio HDMI DVI — 1 Input
Up to 98 ft. (30 m)*1

Up to 328 ft. (100 m)*2 (Over Cat6 cable)
Digital Video/Audio HDBaseT — 1 Input

RS-232C — 1 Port

LAN — 1 Port

HDC-TR121UHD

Up to 328 ft. (100 m)*2 (Over Cat6 cable)
Digital Video/Audio HDBaseT — 1 Output

Up to 98 ft. (30 m)*1
Digital Video/Audio HDMI DVI Down-conversion — 1 Output

Analog Audio LR Unbalanced — 1 Output

*1 Maximum transmission distances
  98 ft. (30 m) : 1080p@60
  39 ft. (12m) : 4K@60 (when cable supporting 18 Gbps transmission is used)
*2 Maximum transmission distances
  328 ft. (100 m) : 4K@60 (4:2:0)
  492 ft. (150 m) : 1080p (24 bit) in Long reach mode
  For long reach mode, video signals up to 1080p (24 bit) can be transmitted to 492 ft. (150 m) at maximum if using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission.

4K@60 HDBaseT Transmitter with 2 Inputs & 3/5 Outputs | HDC-TH221UHD/HDC-TH421UHD

The HDC-TH221UHD and HDC-TH421UHD are two-input receivers with EDID emulator for sending HDMI, DVI, and HDBaseT input signals at up to 4K@60 (4:4:4) over a Category cable without compression or processing.
Input video signals are converted to HDBaseT format and can be transmitted up to 100 m (328 ft.); 1080p (24 bit) video signals can be sent up to 150 m (492 ft.) in Long reach mode.
The HDC-TH221UHD/HDC-TH421UHD includes one HDMI output and two/four HDBaseT outputs. The HDMI OUT1 enables down conversion outputting 4K input video at 1080p automatically depending on sink device status. The two video inputs can be controlled by the front panel or an external controller. For video signal that is distributed to an HDMI/DVI and HDBaseT simultaneously, video/audio can be off for each output.
The HDC-TH221UHD/HDC-TH421UHD also features Daisy chain for extending and distributing video, audio, and control signals. In addition, digital audio signals can be de-embedded onto the analog output signals. It supports bidirectional RS-232C communication and LAN transmission.
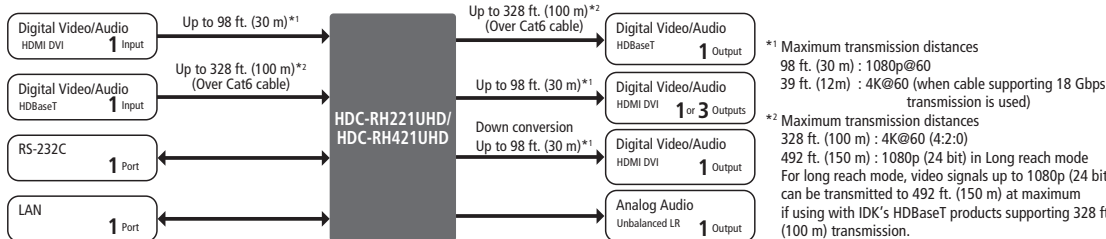Internal Web pages provide system status for troubleshooting and device monitoring using a browser.

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •HDR •3D •x.v.Color
	•Up to 328 ft. (100 m) 4K@60 over CAT.5E HDC/Cat5e STP/Cat6 STP cable
	•Transmission over Cat5e UTP cable*1
	•Up to 328 ft. (100 m) over Cat6 UTP cable*2
	•Up to 492 ft. (150 m) in Long reach mode (1080p 60 Hz 24 bit or less)*3
	•HDMI Transmission distances:
	    Up to 98 ft. (30 m): 1080p@60
	    Up to 39 ft. (12 m): 4K@60 (when cable supporting 18 Gbps transmission is used)
	•No virtual delay (10 µs or less/328 ft. (100 m)) •Each video output OFF •OUT1 supports down conversion (4K to 1080p) •Daisy chain connection •Anti-snow

Audio	•De-embedding
Communication	•Point-to-point (bidirectional) and point-to-multipoint (unidirectional) RS-232C communication •LAN •HDBaseT: RS-232C and LAN are supported
Others	•EDID emulation •WEB browser control •Status notification •HDBaseT status display •I/O signal status display •Automatic input channel switching •CEC (Pass-through) •Connection Reset •Button security lockout •AC adapter with locking mechanism

*1 If exceeding 164 ft. (50 m), CAT.5E HDC, Cat5e STP, and Cat6 UTP/STP cables are recommended. *2 If the 4K format exceeds 230 ft. (70 m), CAT.5E HDC, Cat5e STP, and Cat6 STP cables are recommended.
*3 If exceeding 328 ft. (100 m) in Long reach mode, CAT.5E HDC, Cat5e STP, and Cat6 STP cables are recommended.

HDC-TH421UHD

Connection Diagram

Digital Video/Audio HDMI DVI — 1 Input
Up to 98 ft. (30 m)*1

Digital Video/Audio HDBaseT — 1 Input
Up to 328 ft. (100 m)*2 (Over Cat6 cable)

RS-232C — 1 Port

LAN — 1 Port

HDC-TH221UHD/ HDC-TH421UHD

Up to 328 ft. (100 m)*2 (Over Cat6 cable)
Digital Video/Audio HDBaseT — 1 Output

Up to 328 ft. (100 m)*2 (Over Cat6 cable)
Digital Video/Audio HDBaseT — 1 or 3 Outputs

Down conversion Up to 98 ft. (30 m)*1
Digital Video/Audio HDMI DVI — 1 Output

Analog Audio Unbalanced LR — 1 Output

*1 Maximum transmission distances
  98 ft. (30 m):1080p@60
  39 ft. (12m) : 4K@60 (when cable supporting 18 Gbps transmission is used)
*2 Maximum transmission distances
  328 ft. (100 m) : 4K@60 (4:2:0)
  492 ft. (150 m) : 1080p (24 bit) in Long reach mode
  For long reach mode, video signals up to 1080p (24 bit) can be transmitted to 492 ft. (150 m) at maximum if using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission.

4K@60 HDBaseT Receiver with 2 Inputs & 3/5 Outputs | HDC-RH221UHD/HDC-RH421UHD

The HDC-RH221UHD and HDC-RH421UHD are two-input HDBaseT receivers with EDID emulator for sending HDMI, DVI, and HDBaseT input signals at up to 4K@60(4:4:4) over a Category cable without compression or processing.
Input video signals are converted to HDBaseT format and can be transmitted up to 100 m (328 ft.); 1080p (24 bit) video signals can be sent up to 150 m (492 ft.) in Long reach mode.
The HDC-RH221UHD/HDC-RH421UHD includes two/four HDMI outputs and one HDBaseT output. The HDMI OUT1 enables down conversion outputting 4K input video at 1080p automatically or manually depending on sink device status. The two video inputs can be controlled by the front panel or an external controller.
The HDC-RH221UHD and HDC-RH421UHD also feature Daisy chain for extending and distributing video, audio, and control signals. In addition, digital audio signals can be de-embedded onto the analog output signals. The HDC-RH221UHD and HDC-RH421UHD support bidirectional RS-232C communication and LAN transmission.
Internal Web pages provide system status for troubleshooting and device monitoring using a browser.

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •HDR •3D •x.v.Color
	•Up to 328 ft. (100 m) 4K@60 over CAT.5E HDC/Cat5e STP/Cat6 STP cable
	•Transmission over Cat5e UTP cable*1
	•Up to 328 ft. (100 m) over Cat6 UTP cable*2
	•Up to 492 ft. (150 m) in Long reach mode (1080p 60 Hz 24 bit or less)*3
	•HDMI Transmission distances:
	    Up to 98 ft. (30 m): 1080p@60
	    Up to 39 ft. (12 m): 4K@60 (when cable supporting 18 Gbps transmission is used)
	•No virtual delay (10 µs or less/328 ft. (100 m)) •OUT1 supports down conversion (4K to 1080p) •Each video output OFF •Daisy chain connection •Anti-snow

Audio	•De-embedding
Communication	•Point-to-point (bidirectional) and point-to-multipoint (unidirectional) RS-232C communication •LAN •HDBaseT: RS-232C and LAN are supported
Others	•EDID emulation •WEB browser control •Status notification •HDBaseT status display •I/O signal status display •Automatic input channel switching •CEC (Pass-through) •Connection Reset •Button security lockout •AC adapter with locking mechanism

*1 If exceeding 164 ft. (50 m), CAT.5E HDC, Cat5e STP, and Cat6 UTP/STP cables are recommended. *2 If the 4K format exceeds 230 ft. (70 m), CAT.5E HDC, Cat5e STP, and Cat6 STP cables are recommended.
*3 If exceeding 328 ft. (100 m) in Long reach mode, CAT.5E HDC, Cat5e STP, and Cat6 STP cables are recommended.

HDC-RH421UHD

Connection Diagram

Digital Video/Audio HDMI DVI — 1 Input
Up to 98 ft. (30 m)*1

Digital Video/Audio HDBaseT — 1 Input
Up to 328 ft. (100 m)*2 (Over Cat6 cable)

RS-232C — 1 Port

LAN — 1 Port

HDC-RH221UHD/ HDC-RH421UHD

Up to 328 ft. (100 m)*2 (Over Cat6 cable)
Digital Video/Audio HDBaseT — 1 Output

Up to 98 ft. (30 m)*1
Digital Video/Audio HDMI DVI — 1 or 3 Outputs

Down conversion Up to 98 ft. (30 m)*1
Digital Video/Audio HDMI DVI — 1 Output

Analog Audio Unbalanced LR — 1 Output

*1 Maximum transmission distances
  98 ft. (30 m) : 1080p@60
  39 ft. (12m) : 4K@60 (when cable supporting 18 Gbps transmission is used)
*2 Maximum transmission distances
  328 ft. (100 m) : 4K@60 (4:2:0)
  492 ft. (150 m) : 1080p (24 bit) in Long reach mode
  For long reach mode, video signals up to 1080p (24 bit) can be transmitted to 492 ft. (150 m) at maximum if using with IDK's HDBaseT products supporting 328 ft. (100 m) transmission.

HDBaseT Power Injector | HDC-P1502
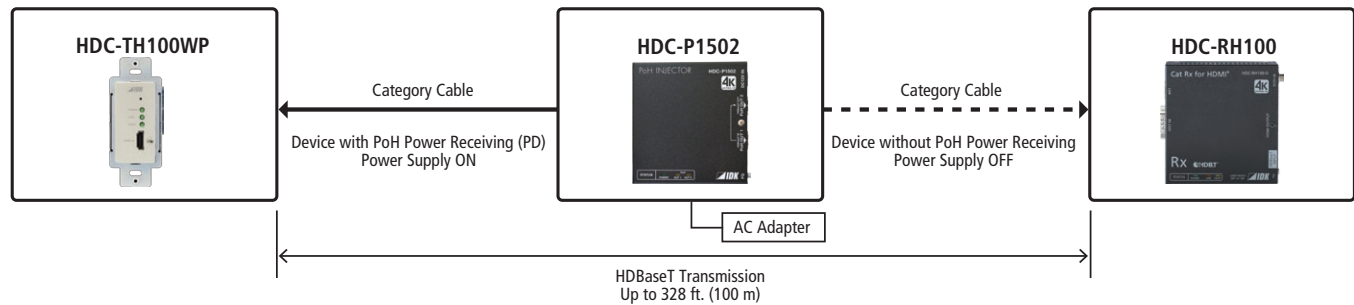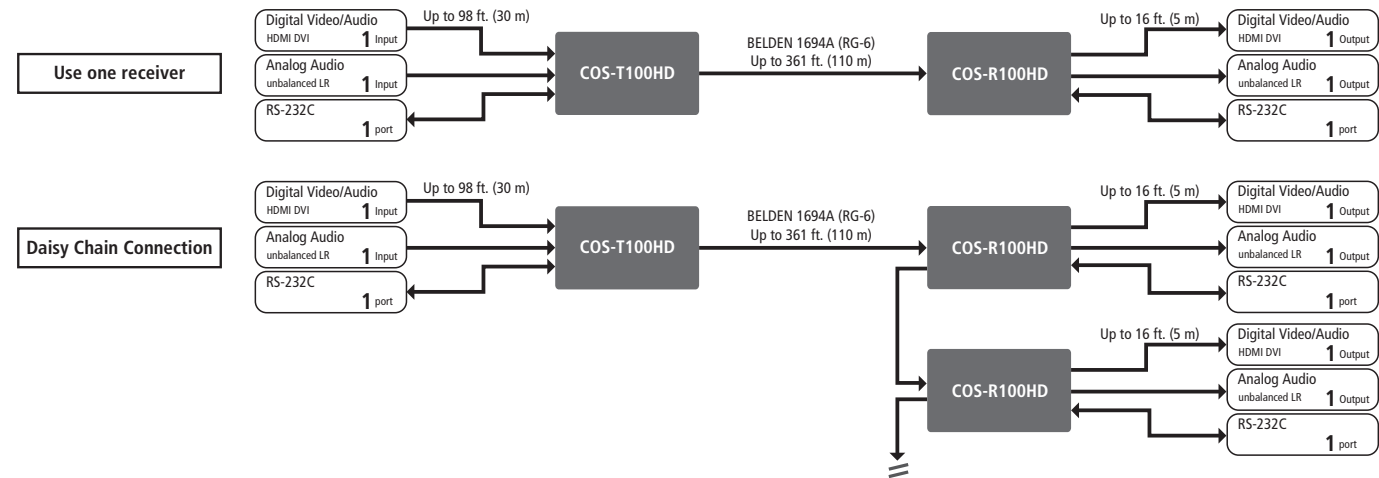
4K ULTRA HD

The HDC-P1502 is a single port power injector that supplies power to a PoH transmitter and receiver, such as HDC-TH100WP (Wall-plate HDMI category cable transmitter). Since the injector provides power to a transmitter and receiver (up to 15 W per device) simultaneously by installing within the HDBaseT transmission line, it eliminates the need for a local power supply. The HDC-P1502 stops supplying power if detecting PoH incompliant, cable's short, overload, and heat problem.

Features

Video	•Up to 4K@60 (4:2:0) •HDCP 1.4/2.2 (Pass-through) •Cat5e UTP cable transmission •Up to 328 ft. (100 m) 4K@60 over CAT.5E HDC/Cat5e STP/Cat6 STP cable •Up to 328 ft. (100 m) over Cat6 UTP cable at 1080p (24 bit) •Up to 492 ft. (150 m) in Long reach mode 1080p 60 Hz 24 bit or less*
Others	•PoH (IEEE 802.3af) •Status monitor •Power supply to transmitter and receiver simultaneously •Supply power in Long reach mode •AC adapter with locking mechanism •Up to 4 units can be installed in a 1U rack

*If using with IDK's HDBaseT products supporting 328 ft. (100 m) transmisson

HDC-P1502

Application Example

HDC-TH100WP

Category Cable

Device with PoH Power Receiving (PD)
Power Supply ON

HDC-P1502

Category Cable

Device without PoH Power Receiving
Power Supply OFF

HDC-RH100

AC Adapter

HDBaseT Transmission
Up to 328 ft. (100 m)

4K@60 HDMI Extender | AVE-S01UC

4K ULTRA HD

The AVE-S01UC is an extender set for transmitting HDMI signals long distances over a Category (CAT) cable.
Input signals are converted into an AVX signal and can be transmitted up to 328 ft. (100 m). The extender supports video signals at resolutions up to 4K@60 (4:4:4) and is HDCP 2.2 compliant. RS-232C bidirectional communication and LAN are also supported.
Use the transmitter and receiver together.
The AVE-S01UC-R can be used as a receiver of MSD-V41UC/MSD-V42UC/NJR-P01UCW-T.

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •HDR •Maximum extension distance of category cable 328 ft. (100m): 4K@60 (4:4:4) (When CAT6A cable is used) •HDMI maximum distances:TBD: 4K@60 (4:4:4) (When cable supporting 18 Gbps transmission is used)TBD: 1080p@60
Communication	•Bidirectional RS-232C •LAN
Others	•EDID emulation •DDC buffer •Connection Reset

AVE-S01UC-T

AVE-S01UC-R

Connection Diagram

Digital Video/Audio
HDMI DVI
1 Input

Up to *** ft. (** m) *1

RS-232C   1 port

AVE-S01UC-T

Up to 328 ft. (100 m) *2

AVE-S01UC-R

Up to *** ft. (** m) *1

Digital Video/Audio
HDMI DVI
1 Output

LAN   1 port

RS-232C   1 port

LAN   1 port
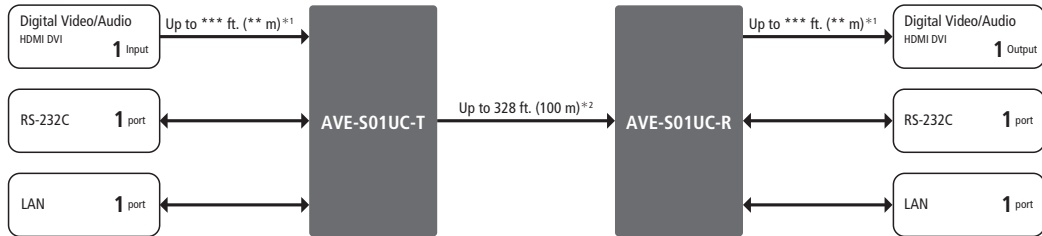
*1 Maximum transmission distances
   *** ft. (** m):1080p@60
   *** ft. (**m) : 4K@60 (when cable supporting 18 Gbps transmission is used)
*2 Maximum transmission distances
   328 ft. (100 m) : 4K@60 (when Cat6A STP cable is used)

HDMI Coaxial Cable Extender | COS-100HD

The COS-100HD HDMI Coaxial Cable Extender is an extender for transmission of HDMI signals using a coaxial cable.
The receiver supports Daisy Chain connection and bidirectional communication via RS-232C.
The COS-100HD-B enables HDMI transmission using the existing coaxial cables.
A digital audio input and an analog audio input are switch selectable.

COS-T100HD   COS-R100HD

Features

Video	•Up to 1080p/QWXGA (Reduced Blanking) •HDCP 1.4 •Up to 558 ft. (170 m) over BELDEN 7731A (RG-11) cable •Up to 361 ft. (110 m) over BELDEN 1694A (RG-6) cable •Up to 328 ft. (100 m) over BELDEN 1505A (RG-59) cable •Transmitter HDMI input: Up to 98 ft. (30 m) •Daisy chain connection •Anti-snow
Audio	•Embedding/De-embedding
Communication	•Bidirectional RS-232C
Others	•EDID emulation •Connection Reset •Built-in test pattern/tone output •Displaying I/O signal status(7-segement OSD) •Transmit HDMI and serial signal using one coaxial cable •AC adapter with locking mechanism

Connection Diagram

Use one receiver

Digital Video/Audio
HDMI DVI   1 Input

Up to 98 ft. (30 m)

Analog Audio
unbalanced LR   1 Input

RS-232C   1 port

COS-T100HD

BELDEN 1694A (RG-6)
Up to 361 ft. (110 m)

COS-R100HD

Up to 16 ft. (5 m)

Digital Video/Audio
HDMI DVI   1 Output

Analog Audio
unbalanced LR   1 Output

RS-232C   1 port

Daisy Chain Connection

Digital Video/Audio
HDMI DVI   1 Input

Up to 98 ft. (30 m)

Analog Audio
unbalanced LR   1 Input

RS-232C   1 port

COS-T100HD

BELDEN 1694A (RG-6)
Up to 361 ft. (110 m)

COS-R100HD

Up to 16 ft. (5 m)

Digital Video/Audio
HDMI DVI   1 Output

Analog Audio
unbalanced LR   1 Output

RS-232C   1 port

COS-R100HD

Up to 16 ft. (5 m)

Digital Video/Audio
HDMI DVI   1 Output

Analog Audio
unbalanced LR   1 Output

RS-232C   1 port

4K@60 HDMI Distribution Amplifier with 1 Input & 2 to 8 Outputs | VAC-S U Series
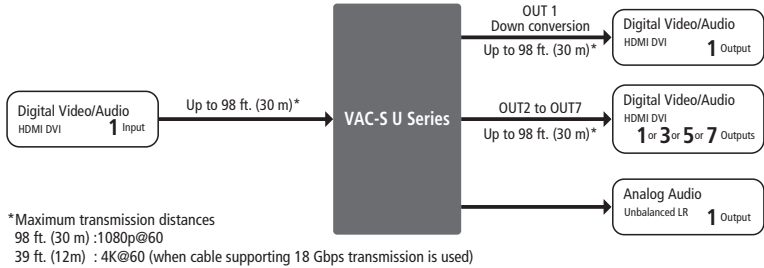
The VAC-S U series is a HDCP 2.2 compliant distribution amplifier for HDMI signals at resolutions up to 4K@60 (4:4:4).
OUT1 includes a down converter that enables 4K input video signals to be converted automatically to 1080p if the sink device does not support 4K. It also features audio de-embed function.
Output signal can be set to muted (black screen) or disabled for each channel separately.
Input and output signals of VAC-S in the system can be monitored from WEB browser for problem analysis.

Features

Video	•Up to 4K@60 (4:4:4)
	•HDCP 1.4/2.2
	•HDR
	•3D
	•x.v.Color
	•HDMI Transmission distances:
	   Up to 98 ft. (30 m): 1080p@60
	   Up to 39 ft. (12 m): 4K@60 (when cable supporting 18 Gbps transmission is used)
	•Each video output OFF
	•OUT1 supports down conversion (4K to 1080p)
	•Anti-snow

Audio	•De-embedding
Control input	•LAN
Others	•Status notification •I/O signal status display •EDID emulation •DDC buffer •WEB browser control •CEC (Pass-through) •Connection Reset •Button security lockout •AC adapter with locking mechanism •System check

VAC-S18U

Models

Model Number	input	output
VAC-S12U	1	2
VAC-S14U	1	4
VAC-S16U	1	6
VAC-S18U	1	8

Connection Diagram

Digital Video/Audio HDMI DVI **1** Input — Up to 98 ft. (30 m)* — VAC-S U Series

OUT 1 Down conversion Up to 98 ft. (30 m)* → Digital Video/Audio HDMI DVI **1** Output

OUT2 to OUT7 Up to 98 ft. (30 m)* → Digital Video/Audio HDMI DVI **1** or **3** or **5** or **7** Outputs

Analog Audio Unbalanced LR **1** Output

*Maximum transmission distances
 98 ft. (30 m) :1080p@60
 39 ft. (12m) : 4K@60 (when cable supporting 18 Gbps transmission is used)

4K@60 HDMI Switcher with 2 Inputs and 1 Output | IMP-S21U

The IMP-S21U is an HDCP 2.2-compliant 4K@60 HDMI switcher with two inputs and one output.
Digital audio of selected input channel can be de-embedded to analog audio.
The switcher also includes RS-232C and LAN as communication ports that offer remote setting from WEB browser or control commands. Additionally, contact inputs/tally outputs enable the IMP-S21U to be controlled from the PC I/O board and a control box.

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •HDR •3D •x.v.Color •HDMI Transmission distances 1080p@60: Up to 98 ft. (30 m) 4K@60: Up to 39 ft. (12 m) (when cable supporting 18 Gbps transmission is used) •Anti-Snow
Audio	•De-embedding
Communication	•RS-232C •LAN •Contact closure
Others	•EDID emulation •All functions and configuration settings accessible through browser •Input channel automatic switching •Input channel sequence switching •DDC buffer •Last memory •Connection Reset •Button security lockout •AC adapter with locking mechanism

IMP-S21U

Connection Diagram

Digital Video/Audio HDMI DVI **2** Inputs — Up to 98 ft. (30 m)* — IMP-S21U

Up to 98 ft. (30 m)* → Digital Video/Audio HDMI DVI **1** Output

→ Analog Audio Balanced/Unbalanced LR **1** Output

*Maximum transmission distances
98 ft. (30 m) :1080p@60
39 ft. (12m) : 4K@60 (when cable supporting 18 Gbps transmission is used)
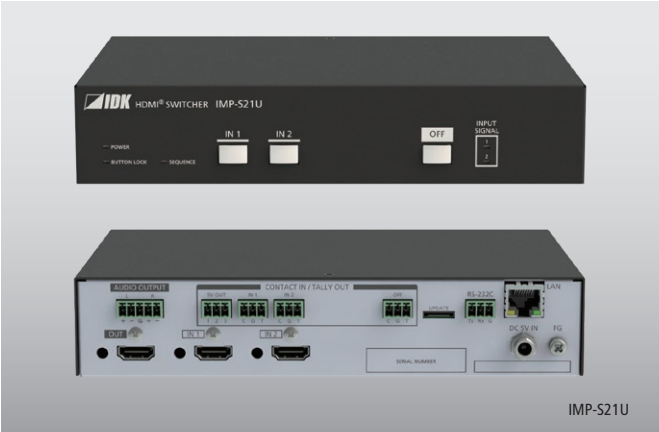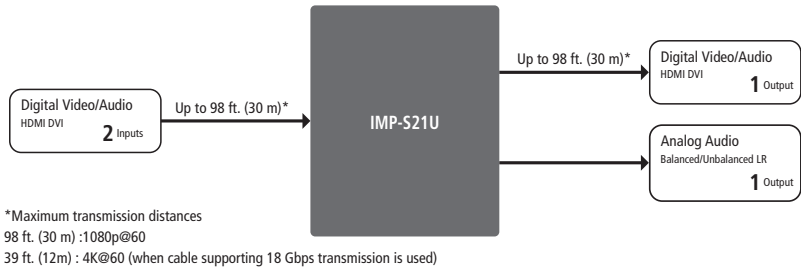
4K@60 HDMI Switcher with 4 Inputs & 1 Output | IMP-S41U

The IMP-S41U is an HDCP 2.2-compliant 4K@60 HDMI switcher with four inputs and one output.
Digital audio of selected input channel can be de-embedded to analog audio.
The switcher also includes RS-232C and LAN as communication ports that offer remote setting from WEB browser or control commands. Additionally, contact inputs/tally outputs enable the IMP-S41U to be controlled from the PC I/O board and a control box.

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •HDR •3D •x.v.Color
	•HDMI Transmission distances
	   1080p@60: Up to 98 ft. (30 m)
	   4K@60: Up to 39 ft. (12 m) (when cable supporting 18 Gbps transmission is used)
	•Anti-Snow

Audio	•De-embedding
Communication	•RS-232C •LAN •Contact closure
Others	•EDID emulation •All functions and configuration settings accessible through browser •Automatic input channel switching •Input channel sequence switching •DDC buffer •Last memory •Connection Reset •Button security lockout •AC adapter with locking mechanism

IMP-S41U

Connection Diagram

Digital Video/Audio HDMI DVI **4** Inputs — Up to 98 ft. (30 m)* — IMP-S41U

Up to 98 ft. (30 m)* → Digital Video/Audio HDMI DVI **1** Output

→ Analog Audio Balanced/Unbalanced LR **1** Output

*Maximum transmission distances
 98 ft. (30 m) :1080p@60
 39 ft. (12m) : 4K@60 (when cable supporting 18 Gbps transmission is used)

4K@60 Multi-Window Video Processor with 4 Inputs & 1 Output | ICP-401UHD
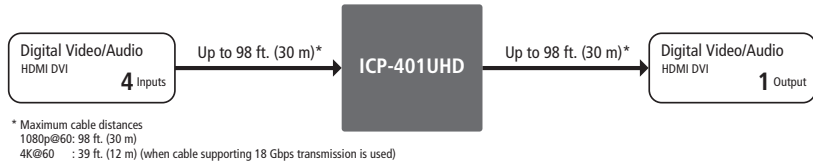
4K ULTRA HD

The ICP-401UHD is a 4K@60(4:4:4) HDCP 2.2-compliant four-window video processor that can display multiple video sources on a single screen with customizable layout.
The ICP-401UHD can also be used as a 4-input and 1-output truly seamless switcher.
Additionally, the LAN port enables you to control the ICP-401UHD remotely.

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •Motion adaptive interlaced/progressive conversion •Scan conversion •Aspect ratio control •Truly seamless switching (Single-window display)* •Anti-snow
Audio	•Volume adjustment (Input/Output)
Video combination	•Simultaneous display of up to 4 input images on a screen •Window settings 　Background color 　Layout order 　Displaying/hiding 　Position/size 　Title character •CUT/FADE switching effect •32 window layout patterns
Control input	•LAN
Others	•EDID emulation •All functions and configuration settings accessible through browser •Preset memory •Last memory •Connection Reset •Button security lockout

*Seamless switching with a black frame when video combination is enabled.

ICP-401UHD

Connection Diagram

Digital Video/Audio HDMI DVI **4** Inputs — Up to 98 ft. (30 m)* — ICP-401UHD — Up to 98 ft. (30 m)* — Digital Video/Audio HDMI DVI **1** Output

* Maximum cable distances
　1080p@60: 98 ft. (30 m)
　4K@60　: 39 ft. (12 m) (when cable supporting 18 Gbps transmission is used)

4K@60 HDMI Frame Synchronizer/Scaler | DFS-01UHD

4K ULTRA HD

The DFS-01UHD is a digital frame synchronizer with a scan converter 1 input and 1 output.
For video input, HDMI or DVI signals can be input. Input video signal is converted and output at a resolution up to 4K@60 (4:4:4).
Audio volume can be controlled. The Lip Sync function corrects the gap between the video and audio. The DFS-01UHD also has a LAN port as communication ports for control to enable external control and remote setting.

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •Motion adaptive interlaced/progressive conversion •Horizontal flip •Scan conversion •Aspect ratio control •Video rotation (by 90 degrees)* •External synchronization I/O for videowall •Anti-snow
Audio	•Volume adjustment •Lip Sync
Control input	•LAN
Others	•CEC (Pass-through) •EDID emulation •All functions and configuration settings accessible through browser •Preset memory •Last memory •Connection Reset •Button security lockout •System check

*For 4K format and dot clock of 165 MHz or more, only 180-degree rotation is supported.

DFS-01UHD

Connection Diagram

Digital Video/Audio HDMI DVI **1** Input — Up to 98 ft. (30 m)* — DFS-01UHD
→ External Sync SYNC/CLK **1** Output
← External Sync SYNC/CLK **1** Input
← Up to 98 ft. (30 m)* — Digital Video/Audio HDMI DVI **1** Output

* Maximum cable distances
　1080p@60: 98 ft. (30 m)
　4K@60　: 39 ft. (12 m) (when cable supporting 18 Gbps transmission is used)

4K@30 HDMI Frame Synchronizer/Scaler | DFS-01HD

4K ULTRA HD

The DFS-01HD is a digital frame synchronizer with a scan converter 1 input and 1 output.
For video input, HDMI or DVI signals can be input. Input video signal is converted and output at a resolution up to 4K@30.
Audio volume can be controlled. The Lip Sync function corrects the gap between the video and audio. The DFS-01HD also has a LAN port as communication ports for control to enable external control and remote setting.

Features

Video	•Up to 4K@30 •HDCP 1.4 •Motion adaptive interlaced/progressive conversion •Horizontal flip •Scan conversion •Aspect ratio control •Video rotation (by 90 degrees)* •External synchronization I/O for videowall •Anti-snow
Audio	•Volume adjustment •Lip Sync
Control input	•LAN
Others	•CEC (Pass-through) •EDID emulation •All functions and configuration settings accessible through browser •Preset memory •Last memory •Connection Reset •Button security lockout •System check

*For 4K format and dot clock of 165 MHz or more, only 180-degree rotation is supported.

DFS-01HD

Connection Diagram

Digital Video/Audio HDMI DVI **1** Input — Up to 98 ft. (30 m)* — DFS-01HD
→ External Sync SYNC/CLK **1** Output
← External Sync SYNC/CLK **1** Input
← Up to 98 ft. (30 m)* — Digital Video/Audio HDMI DVI **1** Output

*Maximum cable distances
　1080p@60: 98 ft. (30 m)
　4K@30　: 66 ft. (20 m)

4K@60 HDMI Audio Embedder/De-Embedder | UHDS-01
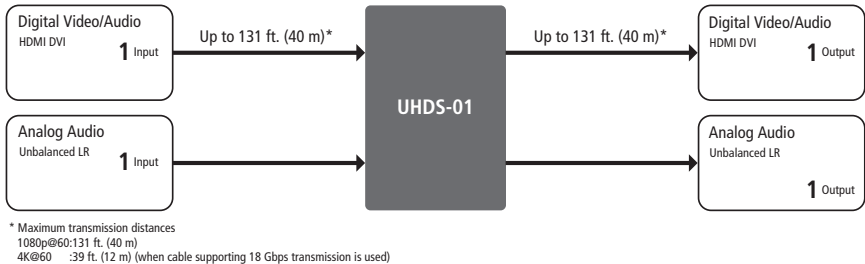
4K ULTRA HD

The UHDS-01 is a 4K@60(4:4:4) and HDCP supported HDMI audio embedder/de-embedder.
Input HDMI audio can be converted into analog audio while input analog audio can be embedded into HDMI signals.

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 •HDR •3D •x.v.Color •Transmission distances 　1080p@60: Up to 131 ft. (40 m) 　4K@60　: Up to 39 ft. (12 m) (when cable supporting 18 Gbps 　　　　　　　　　　　　　 transmission is used) •Anti-snow
Audio	•Embedding/De-embedding
Others	•EDID emulation •DDC buffer •CEC (Pass-through) •Displaying I/O signal status •Connection Reset

UHDS-01

Connection Diagram

Digital Video/Audio HDMI DVI **1** Input — Up to 131 ft. (40 m)* — UHDS-01 — Up to 131 ft. (40 m)* — Digital Video/Audio HDMI DVI **1** Output

Analog Audio Unbalanced LR **1** Input → UHDS-01 → Analog Audio Unbalanced LR **1** Output

* Maximum transmission distances
　1080p@60:131 ft. (40 m)
　4K@60　:39 ft. (12 m) (when cable supporting 18 Gbps transmission is used)

## 4K@60 HDMI EDID Emulator/Cable Equalizer | DDC-03UHD

4K ULTRA HD

The DDC-03UHD is a 4K@60(4:4:4) and HDCP 2.2 supported EDID emulator. It includes the built-in EDID to offer plug-and-play between a PC and monitor. The cable equalization for input and CDR (Clock Data Recovery re-clocks input signals degraded by HDMI cables) enable long-haul video transmission.

Features

Video	•Up to 4K@60 (4:4:4) •HDCP 1.4/2.2 (Pass-through)
	•HDR •3D •x.v.Color
	•Automatic input signal equalization
	  Input: Up to 98 ft. (30 m) (1080p@60)
	      Up to 39 ft. (12 m) (4K@60) (when cable supporting 18 Gbps
	                          transmission is used)

Audio	•Audio input enabled/disabled
Others	•EDID emulation •CEC (Pass-through) •DDC buffer •Clock Data Recovery •HDCP input enabled/disabled •Connection Reset pass-through •AC adapter with locking mechanism

DDC-03UHD

Connection Diagram

Digital Video/Audio
HDMI DVI
1 Input

Up to 98 ft. (30 m)*1

DDC-03UHD

Up to 66 ft. (20 m)*2

Digital Video/Audio
HDMI DVI
1 Output

*1 Maximum cable distances
  1080p@60: 98 ft. (30 m)
  4K@60   : 39 ft. (12 m) (when cable supporting 18 Gbps transmission is used)
*2 Maximum cable distances
  1080p@60: 66 ft. (20 m)
  4K@60   : 26 ft. (8 m) (when cable supporting 18 Gbps transmission is used)
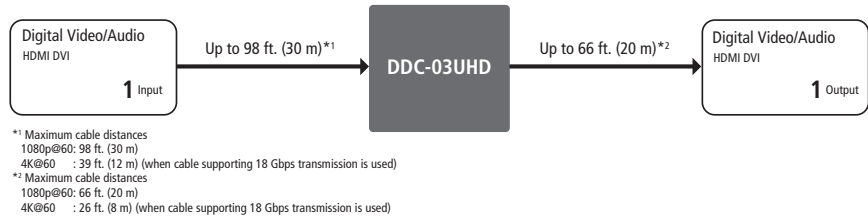
Thumbnail Previewer | PRV-100

The PRV-100 is a thumbnail previewer for NJR-R01UHD output video.
The PRV-100 video can be encoded to H.264 format and transmitted in unicast or multicast stream.

Features

Thumbnail preview	•Capturing and viewing up to 100 video channels periodically •Free thumbnail preview layout •Up to 128 layouts can be registered
Encode	•H.264 encoder •Unicast or multicast transmission
External control	•WEB browser control - No need to install software •Images of multi sources can be checked on a single screen by using the PRV-100 with IDK's HDMI products
Others	•AC adapter with locking mechanism

PRV-100

Application Example

Thumbnail preview images

Control of IP-NINJAR

4K UHD Blu-ray Player NJR-T01UHD

4K PC NJR-T01UHD

4K Video Camera NJR-T01UHD

10 Gb Ethernet Switch

NJR-R01UHD HDMI PRV-100

NJR-CTB
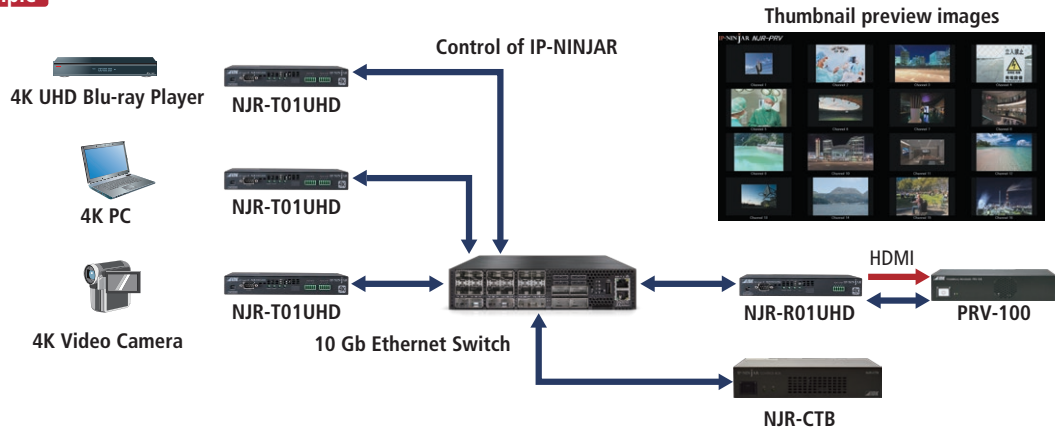
Power Distribution Unit with 12 V, 9 Outputs | PDU-1209

The PDU-1209 is a power distribution unit that provides power for up to nine compatible model devices.
The PDU-1209 has overcurrent protection. If the PDU-1209 detects a power failure or a fan failure, the appropriate front panel LED is illuminated and the PDU-1209 outputs a warning alarm.

Features

Power supply	•DC 12 V 3.3 A output to 9 channels •Overcurrent protection
Others	•Alarm output (DC or fan failure) •DC cable with locking mechanism

PDU-1209

Application Example

PDU-1209

DC power can be distributed up to 9 channels
(Each output 12 VDC 3.3 A)

DIN plug DC cable

NJR-T01UHD
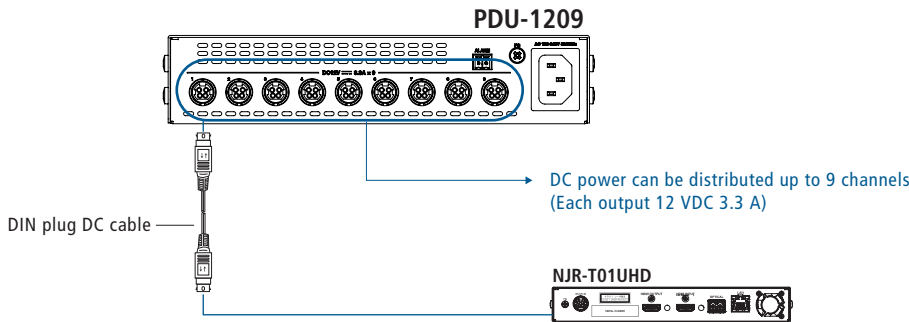
Power Distribution Unit with 5/12 V, 15 Outputs | PD-S15

The PD-S15 is a power distribution unit with 5 V and 12 VDC power.
By using a dedicated DC power cable (sold separately), the PD-S15 supplies power to up to 15 IDK products which operate via an AC adapter.

Features

Power supply	•DC 5/12 V 3/5 A output to 15 channels •Overcurrent protection
Others	•DC Cable with rocking mechanism

PD-S15

Application Example

PD-S15

DC 5 V Products

DC cable for 5V (option)

DC 12 V Products

DC cable for 12V (option)

DC Power can be distributed up to 15 channels
(Each output 5/12 VDC 3/5 A)
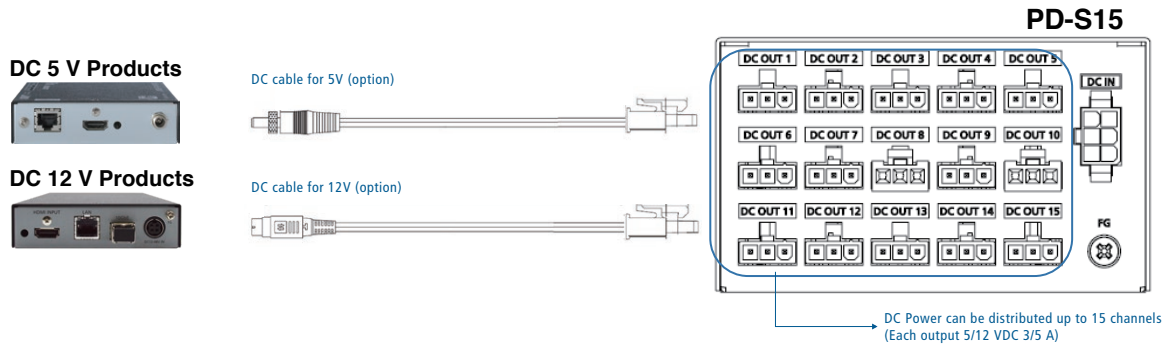
Programmable Button Controller | SWC-2000

The SWC-2000 is a remote programmable button controller. Control command can be registered and linked to the buttons by using web browser. The SWC-2000 can control connected units which are connected via LAN or RS-232C. The SWC-2000 can be used on a desk or mounted to a rack.

Features

- •Remote controlling IDK products over LAN or RS-232C
- •16 control command buttons (Up to 10 commands per button) •PJLink
- •Standby
- •Button security lockout
- •Up to 32 commands can be registered over WEB browser
- •Settable LED flashing time
- •EIA rack and tabletop mountable

SWC-2000

Optional   For SWC-2000

Product	SWC-2000	
Bracket drawing		
The number of units	1	2
Part number	RM-SWC2001	RM-SWC2002

Native Application for Smartphone & Tablets | iq System

"iq System" is a native app for Smart Phones & Tablets, enabling intuitive control of IDK products.
It is an excellent choice for conference rooms, classrooms, meeting spaces and beyond.

Features

iq + MOBILE DEVICE = SYSTEM CONTROL

- •Bring your own device (BYOD) - iPhone, iPad & Android apps put you directly in command
- •Elegant, simple and intuitive – single layer "graphic language" makes any system cohesive
- •Ready to use – no complicated programming
- •User definable naming and icon selection
- •Advanced features supporting permissioning and workgroup definition
- •System control is provided simultaneously for multiple users and devices
- •Control third party equipment

SWIPE • TAP • CONTROL

- •Swipe to select display and review system status
- •Graphically meaningful icons for immediate recognition of command types
- •Tap to link or un-link video and audio sources
- •Swipe to control presentation volume and input audio level settings
- •Instant mute control
- •Input signal presence and system status indication
- •Preset memory recall

BENEFITS

- •Instant solution for AV system control – use your existing mobile devices
- •No need for third party control systems – no need for application specific hardware
- •Wireless, portable and can be enabled on multiple user's devices or on "in-room" devices
- •Is entirely scalable – control one device today and an entire system tomorrow

- •Intuitive, requiring only very casual user instruction
- •Creates a seamless, single layer system control experience
- •Select source & target device by name/icon

THE LANGUAGE OF SIMPLICITY

Video & Audio linked switch and control

Video & Audio unlinked switch and control

Audio volume adjustment and control

Input & output setting
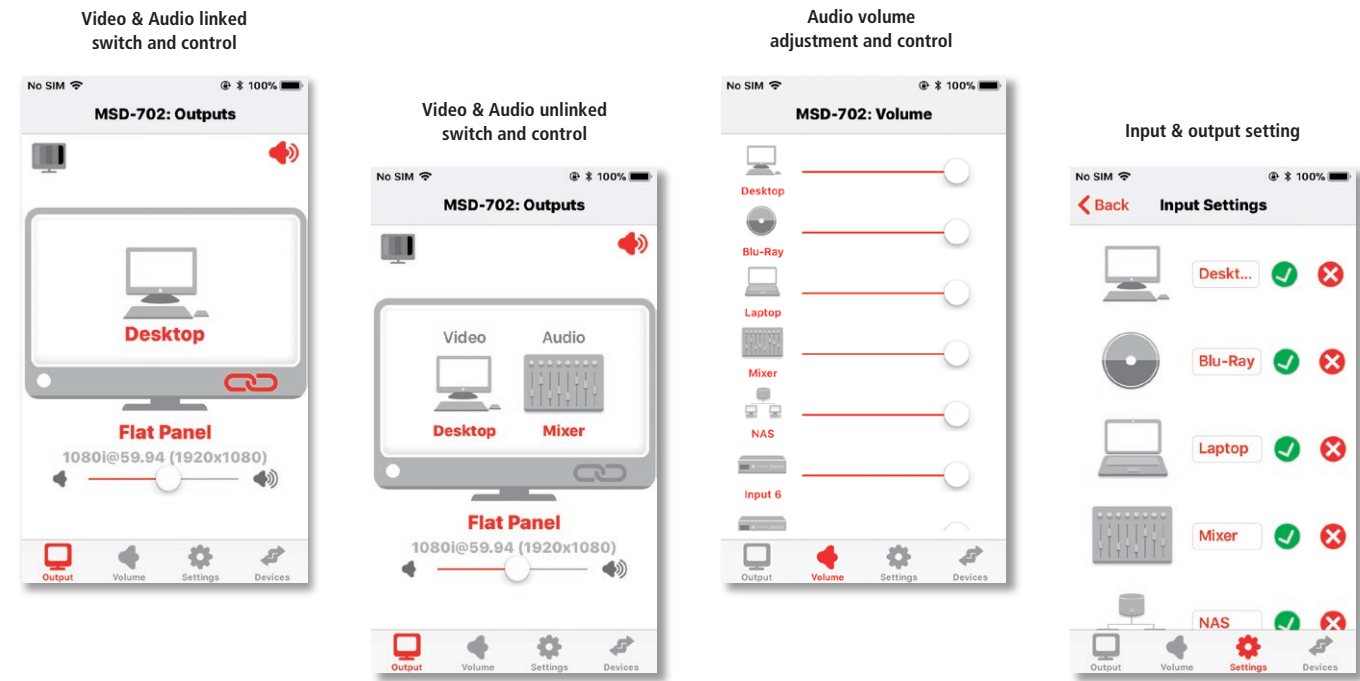
EIA Rack Mounting Hardware/Offset Bracket

Rack Mounting Offset Bracket

RM-OFS100
for MSD

<example>

expansion

The RM-OFS100 provides clearance for the front panel.
This is designed to permit mounting the 1U devices from the rack mounting surface with a cable connected.
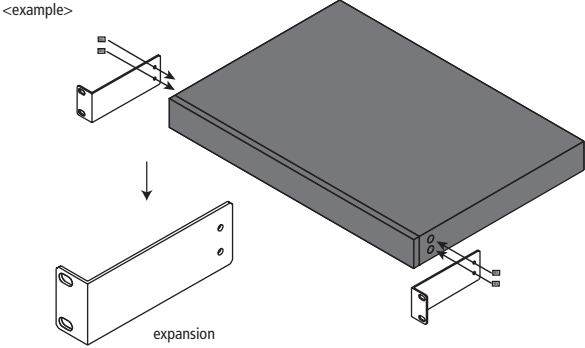
RM-OFS220
for MSD-701AMP

<example>

RM-OFS220
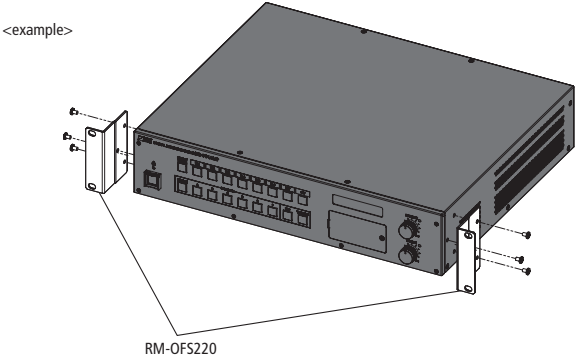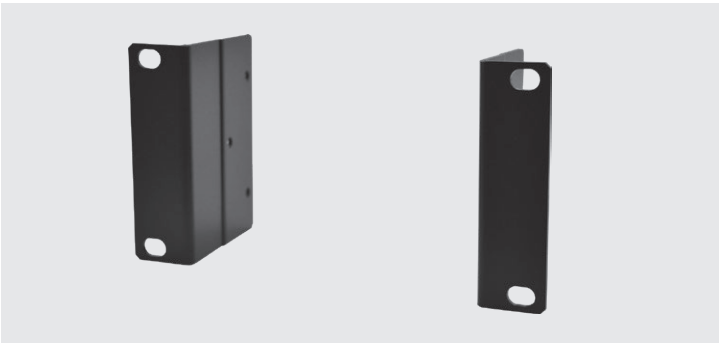
Rack Mounting Hardware for half-rack width products

RM-44S
for 1 half-rack width products

<example>

RM-44S

RM-44S is for 1 half-rack product.
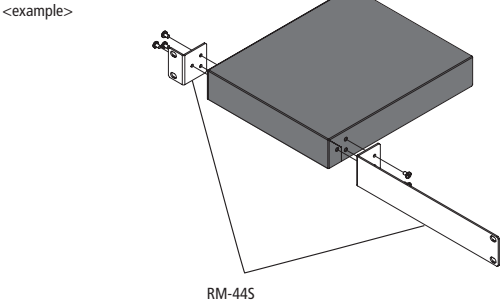
RM-44D
for 2 half-rack width products

<example>

RM-44D

RM-44D is for 2 half-rack products.
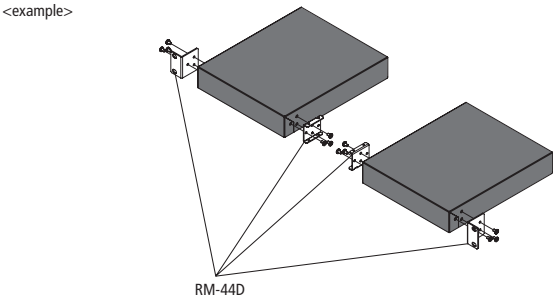
EIA Rack Mounting Hardware/Offset Bracket

Rack Mounting Hardware for half & quarter-rack width products

RM-SF
Full-rack width tray, (180 mm) depth

<example>
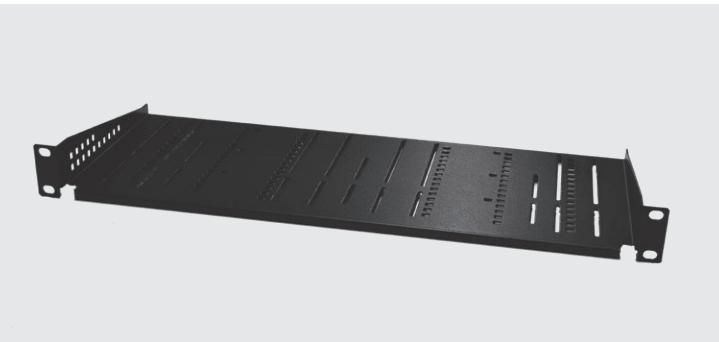
RM-SF

RM-SF is for 4 quarter-rack products, 2 thin type half-rack products with 7.1 in. (180 mm) depth.
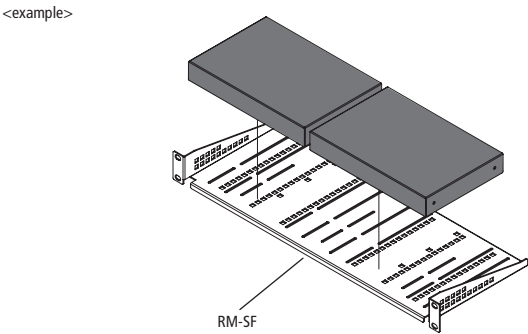
RM-SFL
Full-rack width tray, (315 mm) depth
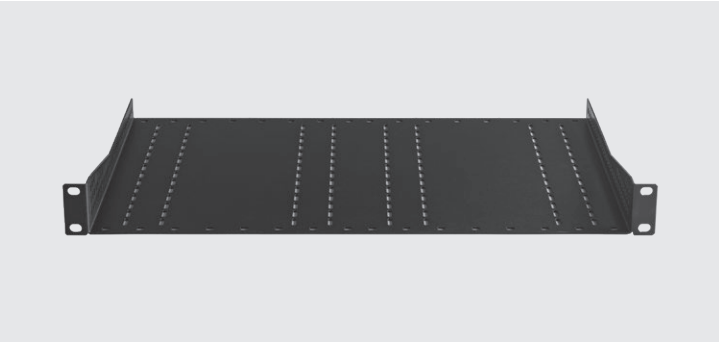
RM-SFL is for 4 quarter-rack products, 2 thin type half-rack products with 12.4 in. (315 mm) depth.

RM-SH
Harf-rack width tray

<example>

RM-SH

RM-SH is for combination of half-rack width and Thin type half-rack width or quarter-rack width.
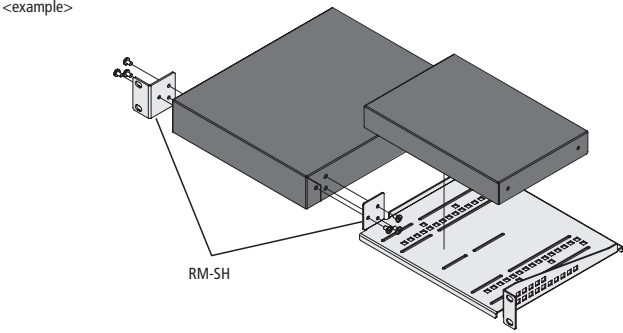
RM-SBP
Blank panel

<example>

RM-SBP
× 2

RM-SF

RM-SBP is quarter-rack blank panel.
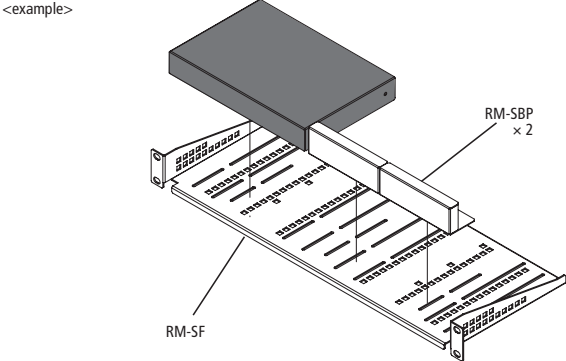
EIA Rack Mounting Hardware/Multi-unit Rackmount Chassis

Multi-unit Rackmount Chassis

RM-SV5
for Half-rack width size

<example>
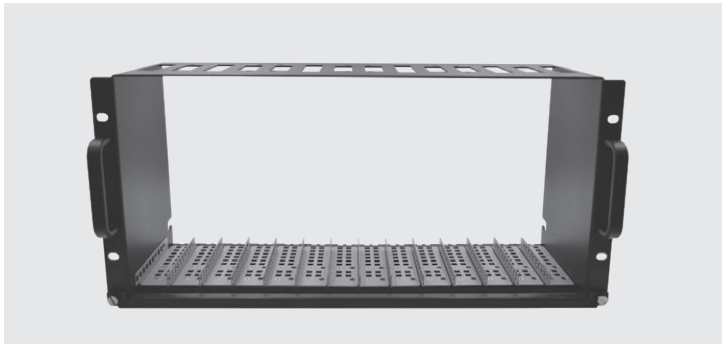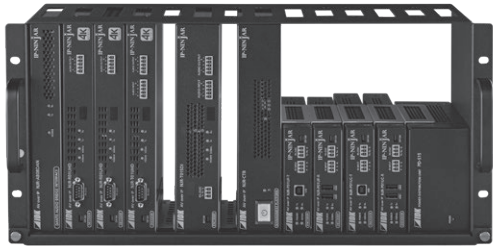
For products with a height of 30 mm, up to 14 units can be rack-mounted.

Optional

Standard bracket	RM-TAB
Bracket for EIA 1/4 width products	RM-QSP

RM-SV3
for Quater-rack width size

<example>
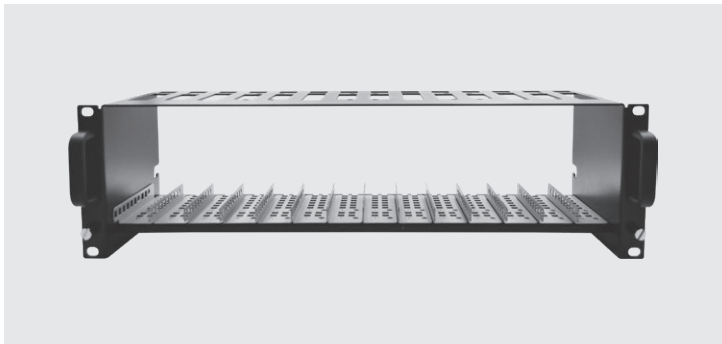
For products with a height of 30 mm, up to 14 units can be rack-mounted.

Optional

Bracket for HDC-H100/COS-100HD	RM-TAB-BM

RM-SV3-BM
for HDC-H100/COS-100HD

<example>
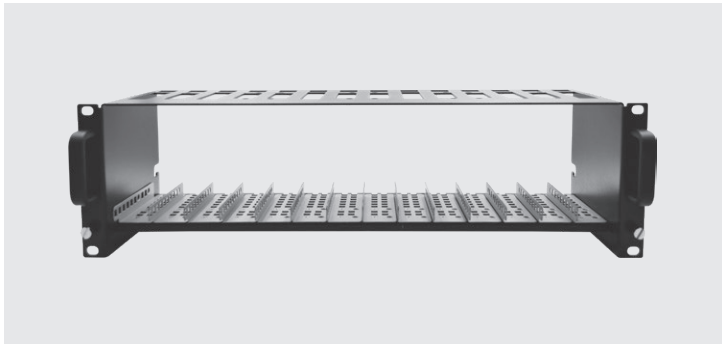
EIA Rack Mounting Hardware/FAN Unit

Multi-unit Rackmount Chassis

RM-AP165
Rear space expansion tray

<example>

Storage Rack
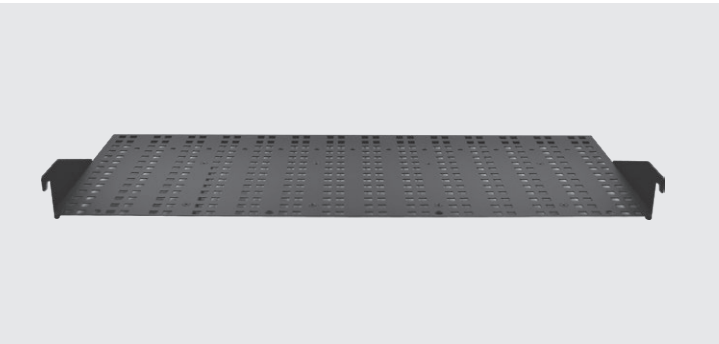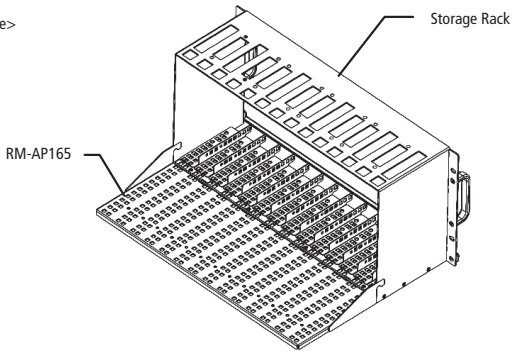
RM-AP165

The RM-AP165 provides extra space in the rear side of the RM-SV series.

RF-4
FAN Unit

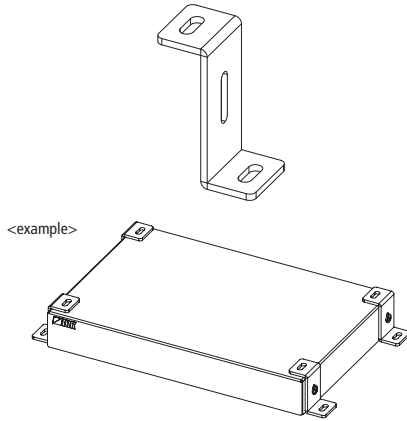<example>

Intake air

RM-FAN150

Release air
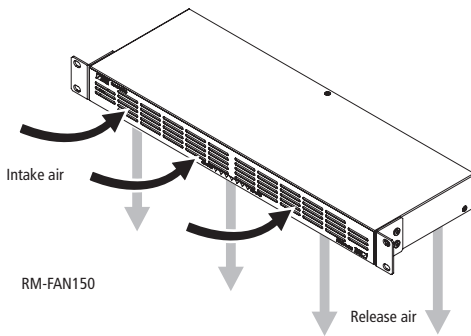
The RF-4 is a cooling fan unit that can be mounted to the rack to avoid rise in internal rack temperature.
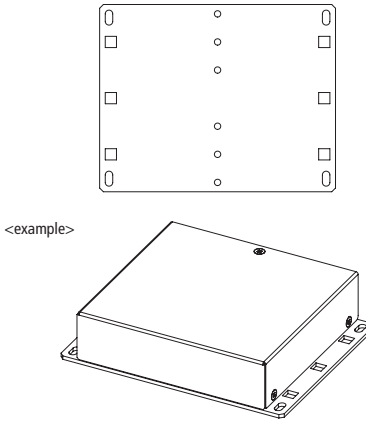
Mounting Bracket

FP-Z30
Mounting Bracket for 30 mm height products

<example>
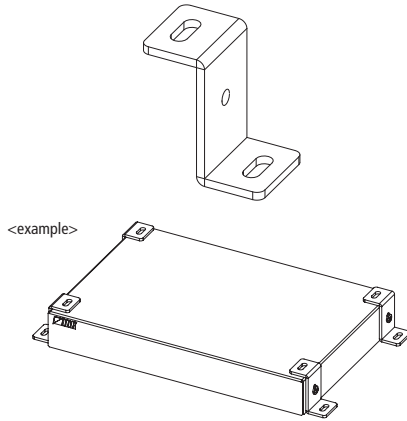
FP-Z42
Mounting Bracket for 42 mm height products

<example>

FP-100
Mounting Plate for 100 mm height products

<example>

Mounting Hardware
Features
AV over IP
Digital Multi Switchers
Modular Matrix Switchers
Extenders
Distribution Amplifiers
Others
Controllers
Mounting Hardware
Standard Resolutions

Standard Resolutions

Resolution	General Name	Dot Clock	Horizontal Frequency	Vertical Frequency	Aspect Ratio
640×480	VGA	25.175 MHz	31.469 kHz	59.54 Hz	4 : 3
800×600	SVGA	40 MHz	37.879 kHz	60.317 Hz	4 : 3
1024×768	XGA	65 MHz	48.363 kHz	60.004 Hz	4 : 3
1280×720	720p (HDTV)	74.25 MHz	45 kHz	60 Hz	16 : 9
1280×768	WXGA	79.5 MHz	47.776 kHz	59.87 Hz	15 : 9
1280×800	WXGA	83.5 MHz	49.702 kHz	59.81 Hz	16 : 10
1280×960	Quad-VGA	108 MHz	60 kHz	60 Hz	4 : 3
1280×1024	SXGA	108 MHz	63.98 kHz	60.02 Hz	5 : 4
1300×768	WXGA	85.5 MHz	47.712 kHz	60.015 Hz	16 : 9
1366×768	WXGA	85.5 MHz	47.712 kHz	59.79 Hz	16 : 9
1400×1050	SXGA+	121.75 MHz	65.317 kHz	59.978 Hz	4 : 3
1440×900	WXGA+	106.5 MHz	55.935 kHz	59.887 Hz	16 : 10
1600×900 (RB)*	WXGA++	108 MHz	60 kHz	60 Hz	16 : 9
1600×1200	UXGA	162 MHz	75 kHz	60 Hz	4 : 3
1680×1050	WSXGA+	146.25 MHz	65.29 kHz	59.954 Hz	16 : 10
1920×1080	1080i (HDTV)	74.175 MHz	33.716 kHz	59.94 Hz	16 : 9
1920×1080	Interlace	74.175 MHz	67.5 kHz	59.94 Hz	16 : 9
1920×1080	1080p (HDTV)	148.5 MHz	66.587 kHz	60 Hz	16 : 9
1920×1080	CEA-861 standards	148.5 MHz	66.587 kHz	60 Hz	16 : 9
1920×1080 (RB)*	VESA CVT standards	138.5 MHz	67.158 kHz	59.934 Hz	16 : 9
1920×1080	VESA CVT standards	173 MHz	67.158 kHz	59.963 Hz	16 : 9
1920×1200 (RB)*	WUXGA	154 MHz	74.038 kHz	59.95 Hz	16 : 10
1920×1200	WUXGA	193.25 MHz	74.556 kHz	59.885 Hz	16 : 10
2048×1152 (RB)*	QWXGA	162 MHz	72.000 kHz	60.000 Hz	16 : 9
2560×1440 (RB)*	WQHD	241.5 MHz	88.787 kHz	59.951 Hz	16 : 9
2560×1600 (RB)*	WQXGA	268.5 MHz	98.713 kHz	59.972 Hz	16 : 10
3840×2160	4K UHDTV HDMI 1.4b standards	297 MHz	67.5 kHz	30 Hz	16 : 9
4096×2160	4K Digital Cinema SMPTE standards	297 MHz	54 kHz	24 Hz	17 : 9 (approx.)
4096×2160 (RB)*	4K VESA DMT standards	556.774 MHz	133.32 kHz	60 Hz	17 : 9 (approx.)
3840×2160	4K UHDTV HDMI 2.0 standards	594 MHz	135 kHz	60 Hz	16 : 9
4096×2160	4K HDMI 2.0 standards	594 MHz	135 kHz	60 Hz	17 : 9 (approx.)

*(RB) = Reduced Blanking

Aspect Ratio Control

The MSD series products support aspect ratio control that is convenient for correcting a mismatch in aspect ratio between source video and display. The feature automatically detects the aspect ratio of source signals and the original aspect ratio can be preserved in a letter box or full screen mode.

Input signal	Monitor/Projector aspect				
	4:3	5:4	5:3	16:9	16:10
Video signal 4:3					
Video signal 5:4					
Video signal 5:3					
Video signal 16:9					
Video signal 16:10					
Video signal 14:9					

Background color can be changed.

Standard Resolutions

Features

AV over IP

Digital
Multi Switchers

Modular
Matrix Switchers

Extenders

Distribution
Amplifiers

Others

Controllers

Mounting
Hardware

Standard
Resolutions

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