AV-over-IP Distribution System

Flexible HD Audio and Video Distribution over IP

Raritan's AV-over-IP Distribution System (RAV-IP) for small and mid-sized applications provides high performance video and audio distribution via HDMI, USB, IR and serial. The encoder/decoder based system can be installed in mere minutes using low cost Cat5/6 cable, fiber, and Gigabit Ethernet switches. The system supports point-to-point extension, distribution, multi-casting, and switching. Integration with popular AV Control Systems like AMX and Crestron is now available.

High Performance Audio, Video, KVM & Control

With RAV-IP you can stream 1080p video at up to 60 frames-per-second with low latency and minimum bandwidth. Supported video formats include: 1080p, 720p 3D, 1920x1200 (WUXGA) video. Supported audio formats include: LPCM, DTSTM & Dolby® Audio Up to 7.1 channels.

Connect via Cat5 Cable or Fiber

RAV-IP supports both low-cost Cat5/6 connections, as well as fiber for longer distances up to 10 kilometers. The system is unique in its flexible support for Cat5 and fiber in a single inexpensive system.

Installation and Configuration Made Easy

To install and configure RAV-IP, connect the encoders and decoders to your input and output devices, and then to a mangaed Gigabit Ethernet switch with Cat5/6 cabling or fiber. The system can then automatically set the IP addresses, or they can be assigned statically or via DHCP. A web-based GUI and Windows-based Configuration Program is available for configuration.

For smaller installations, use the channel switches on the encoder/decoders to assign video inputs to outputs. To switch channels, use the included remote control, just like your TV remote control at home! A USB KVM control is also available. In addition AV control system integration is now supported.

For larger installations, use our Windows-based Configuration Program to discover and assign IP addresses and to support integration with AV Control Systems like AMX and Crestron.
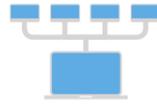
Features and Benefits

- AV and KVM over IP extension, distribution, and switching.
- High performance HDMI-over-IP with audio, USB, IR and serial.
- Supports both Cat5 and fiber connections.
- Installs out of the box with minimal setup requirement.
- Uses low cost Cat5/6 cable, fiber, and Ethernet switches.
- Switches with rotary channel switch or included remote control.
- Easy to expand - just add additional encoders and decoders.
- AMX and Crestron control system integration

Supports a Wide Range of Applications

Raritan's AV-over-IP Distribution System is perfect for small and mid-sized applications because you can quickly set it up with standard products from your local electronics store. USB keyboard and mouse, IR, and serial control are available to support both A/V and computer devices.

Common applications include

Digital Signage and Video Distribution

Corporate Lobbies and Conference Rooms

Education
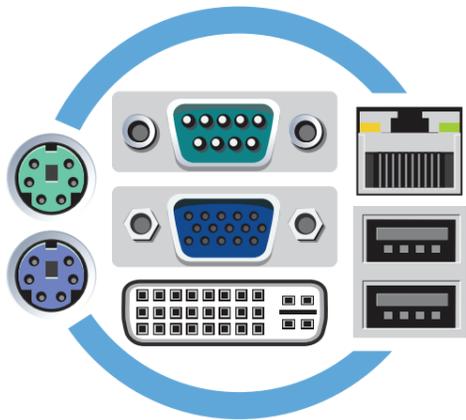
Houses of Worship

Entertainment and Broadcast

Rental and Staging

Transportation and Energy

Control Rooms

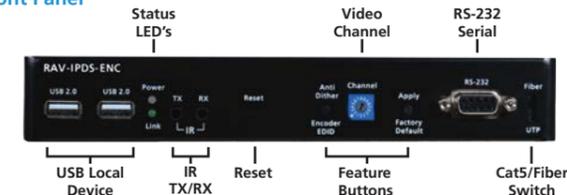| Connection	Encoder	Decoder
VIDEO INPUT CONNECTOR	1 x HDMI Type A 19-pin, female, locking	
VIDEO OUTPUT CONNECTOR	1 x HDMI Type A 19-pin, female, loopback, locking	1 x HDMI Type A 19-pin, female, locking 1 x DVI-I , female (non-HDCP video only)
AUDIO LINE INPUT	1 x 3.5mm mini-stereo jack	
AUDIO LINE OUTPUT	1 x 3.5mm mini-stereo jack, with loopback port	1 x 3.5mm mini-stereo jack
MIC INPUT		1 x 3.5mm mini-stereo jack
USB HOST INTERFACE	1 x USB Type B, female, USB 2.0	
USB DEVICE CONNECTORS		4 x USB Type A, female, 3 x USB 2.0, 1 x USB 1.1
RS-232 CONNECTOR	1 x DB-9 female	1 x DB-9 male
IR EMITTER	1 x 3.5mm mini-mono jack	1 x 3.5mm mini-mono jack
IR EXTENDER	1 x 3.5mm mini-stereo jack	1 x 3.5mm mini-stereo jack
ETHERNET CONNECTORS	1 x RJ-45, shielded 1 x SFP slot for Fiber Module (single mode / multimode)	1 x RJ-45, shielded 1 x SFP slot for Fiber Module (single mode / multimode)
CHANNEL SELECTOR	16 Channel Rotary Switch	16 Channel Rotary Switch
LINK INDICATOR	1 x LED, green	1 x LED, green
POWER INDICATOR	1 x LED, blue	1 x LED, blue
USB INDICATOR		1 x LED, amber
POWER SUPPLY	5V DC, 3A, locking	5V DC, 3A, locking

Flexible to the Max

RAV-IP is the most flexible AV-over-IP system with Cat5 and fiber connections, for both AV and computer devices. It can function as a Cat5 KVM Extender, Fiber KVM Extender or a multi-channel video distribution system. Up to 10 Kilometer distances can be supported with the optional single and multimode fiber modules.
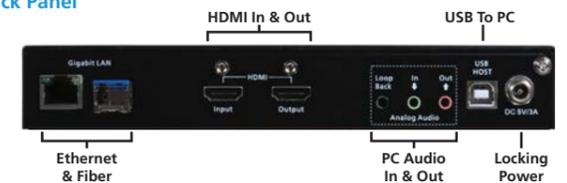
Encoder (Transmitter) Connections

Front Panel

Status LED's · Video Channel · RS-232 Serial

RAV-IPDS-ENC

USB 2.0 · USB 2.0 · Power · TX · RX · Reset · Anti Dither · Channel · Apply · RS-232 · Fiber · Link · IR · Encoder EDID · Factory Default · UTP

USB Local Device · IR TX/RX · Reset · Feature Buttons · Cat5/Fiber Switch

Back Panel

HDMI In & Out · USB To PC

Gigabit LAN · HDMI · Input · Output · Loop Back · In · Out · Analog Audio · USB HOST · DC 5V/3A

Ethernet & Fiber · PC Audio In & Out · Locking Power

Decoder (Receiver) Connections

Front Panel

Status LED's · Video Channel · Cat/Fiber Switch

RAV-IPDS-DEC

Power · TX · RX · Reset · Select USB · USB 2.0 · Channel · Apply · Fiber · RS-232 · Link · USB · Decoder EDID · USB 2.0 · Factory Default · UTP

RS-232 Serial · IR TX/RX · Feature Buttons · USB Devices USB Console · Feature Buttons

Back Panel

Microphone & Speakers

Gigabit LAN · DVI-I · HDMI · IN · OUT · Analog Audio · Output · DC 5V/3A

Ethernet & Fiber · HDMI & DVI-I Out · Locking Power

Specification	Detail
HDMI VIDEO RESOLUTION	Up to 1080p@60Hz, 720p 3D
PC DVI RESOLUTION	Up to 1920x1200@60Hz
HDMI AUDIO IN/OUT	Up to 7.1 ch LPCM, DTS, Dolby
DVI	v1.0
HDCP	1.1/1.2
DISTANCE/CAT5	Point to Point 100M
FIBER/DISTANCE	Multimode/550 meters Single/10 Kilometers
RS-232 BAUD RATE	300 - 230,400 bps
	Default 115,200 bps
IR CONTROL PASS THRU	20-60Khz, two way IR pass-thru
POWER ADAPTER	5V DC, 3A
POWER CONSUMPTION	10 Watts (maximum)
OPERATING TEMPERATURE	0-40ºC
STORAGE TEMPERATURE	-20~50ºC
DIMENSIONS	195mm x 32mm x 114mm
WEIGHT	3.6 kg (1.8 kg per unit)

A/V Specifications

- HDMI (audio/video), USB, IR, serial, audio in/out, DVI-I
- High quality 1080p video at up to 60 frames-per-second
- 1080p, 1920x1200 (WUXGA) & 720p 3D video
- HDMI digital & PC analog audio
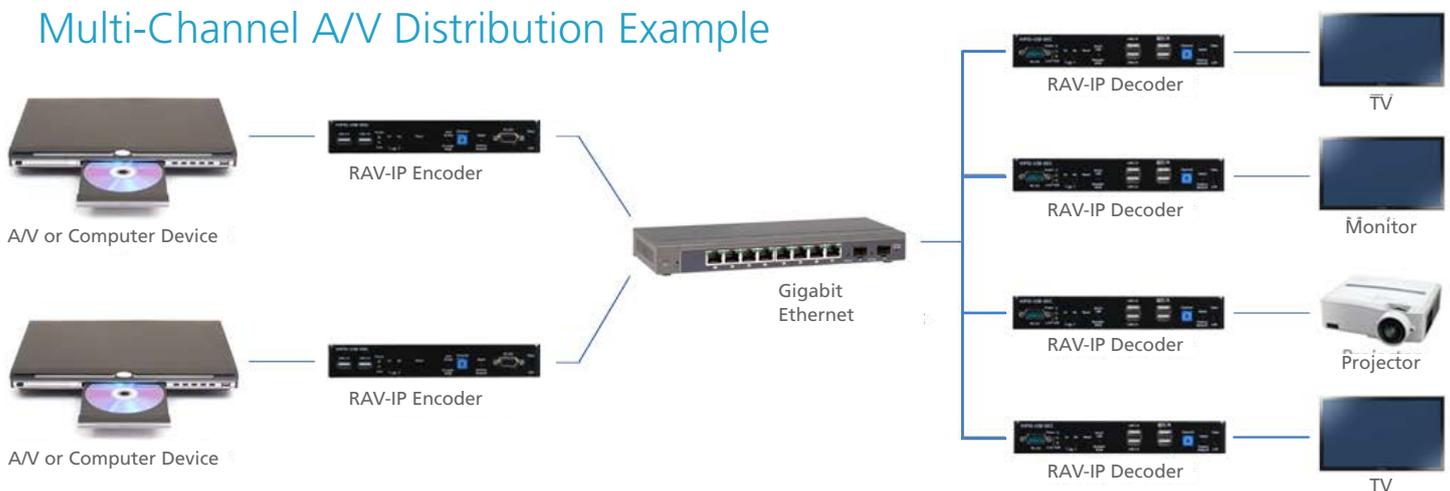- Flexible bandwidth usage(5 Mb to 100 Mb)
- HDCP

Flexible IP Networking

- Uses Cat5/6 cabling and Gigabit Ethernet switches.
- Optional SFP fiber transceivers for up to 10 km distances.
- Encoder & decoder based solution.
- Automatically sets IP addresses for fast setup.
- Browser-based user interface.

Comprehensive Control Options

- Set channel with simple rotary channel switch.
- Switch channels with included remote control.
- Control A/V devices via IR or serial.
- USB KVM control for keyboard, mouse, touch screen.
- Up to two second channel switching.
- AMX & Crestron control system integration.

Multi-Channel A/V Distribution Example

A/V or Computer Device

RAV-IP Encoder

A/V or Computer Device

RAV-IP Encoder

Gigabit Ethernet

RAV-IP Decoder — TV

RAV-IP Decoder — Monitor

RAV-IP Decoder — Projector

RAV-IP Decoder — TV

![Raritan logo]

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