4K HDMI Matrix Switch Over HDBase-T with Power Over Ethernet (PoE)
VEEMUX®

Route and distribute Ultra-HD 4Kx2K, Multi-channel Audio, Ethernet, IR, and Power up to 375 feet using CATx cable

- Configure and control the switch through Ethernet, serial port, front panel buttons, or IR remote control.
- Supports Ultra-HD 4Kx2K resolutions to 4096x2160, HDTV resolutions to 1080p, and computer resolutions to 1920x1200.
  - With CAT5e (24 AWG), up to 250 feet.
  - With CAT6 (23 AWG), up to 350 feet.
  - With CAT7 (23 AWG), up to 375 feet.
- Each input can be independently connected to any or all outputs.
- HDCP compliant.
- Supports Power over Ethernet (PoE) - power supply not required at the remote unit.
- HDMI features supported:
  - 24/36-bit Deep Color
  - x.v.Color
  - Dolby TrueHD, DTS-HD Master Audio, Dolby Digital, DTS 7.1 and LPCM
  - 3D
  - Bandwidth up to 300 MHz (9 Gbps)
  - Support for CEC (consumer electronic control) compatible devices.
  - Lip Sync
- No loss of audio or video quality between the switch and remote units.
- Bi-directional IR from input and output locations.
- Supports external and internal EDID settings.
- Compact 2RU design.
- Mounting tabs included.
- Features an Ethernet port on the switch and receivers for connecting network devices such as 100Base-T routers, hubs, smart TVs, or smart Blu-Ray players.
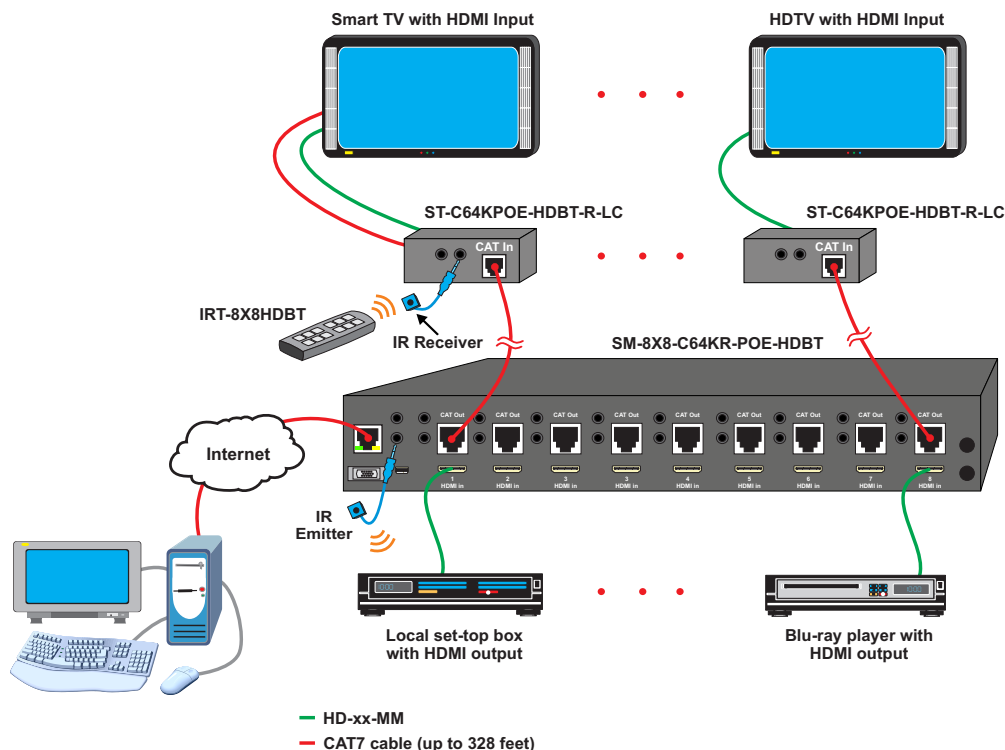

VEEMUX® SM-8X8-C64KR-POE-HDBT (Front & Back)

The VEEMUX® 4K HDMI Matrix Switch Over HDBase-T with Power Over Ethernet routes uncompressed digital HDMI signal and IR from eight HDMI video sources to eight displays (projectors, monitors, etc.) and speakers via inexpensive CATx cable using HDBase-T technology. It is capable of connecting to as many as eight HDMI video sources directly and eight video displays via receivers with a maximum extension of 375 feet from the switch using CAT7 cable. Power over Ethernet (PoE) provides power to all connected receivers.

DIGITAL SIGNAGE

Configuration and Cable Illustration

Smart TV with HDMI Input

HDTV with HDMI Input

ST-C64KPOE-HDBT-R-LC

ST-C64KPOE-HDBT-R-LC

IRT-8X8HDBT

IR Receiver

SM-8X8-C64KR-POE-HDBT

Internet

IR Emitter

Local set-top box with HDMI output

Blu-ray player with HDMI output

— HD-xx-MM
— CAT7 cable (up to 328 feet)

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Specifications

SM-8X8-C64KR-POE-HDBT

- Eight female HDMI input connectors
- Eight female RJ45 HDBase-T connectors for sending/receiving ultra high definition video, audio, IR, Ethernet and DDC signals.
- Eighteen female 3.5mm ports for IR transmitters and receivers.
  - IR transport channel is bi-directional - the transmitter or receiver can be connected to the switch.
  - "All IR" input or output transmits signals to multiple transmitters or receivers within direct line-of-sight.
- One female Ethernet port for Telnet and web server control, and/or for connecting a network device such as a 100Base-T router, hub, smart TV or smart Blu-Ray player.
- One female DB9 connector for RS232 control.
- One Mini USB Type B connector for firmware updates only.

Dimensions

- WxDxH (in): 17.25x10.x3.6 (438x254x91 mm)

Power

- 100 to 240 VAC at 50 or 60 Hz via AC adapters.
- One powers the switch and the other provides Power over Ethernet (PoE).
- Input voltage: 24 VDC.
- Power consumption: 65W.

Environmental

- Operating temperature: 32 to 104°F (0 to 40°C)
- Storage temperature: -4 to 140°F (-20 to 60°C)
- Operating/storage relative humidity: 20 to 90% non-condensing RH.

Regulatory Approvals

- CE, FCC, RoHS

Warranty

- Two years.

Package Includes

- One 8x8 HDMI Matrix Switch Over HDBase-T
- Two 24V power supplies (one for PoE)
- One IR remote
- Two IR emitters
- Two IR receivers
- Mounting tabs
- User manual

Remote Unit (Receiver)
Video Output

- Supports Ultra-HD 4Kx2K resolutions to 4096x2160, HDTV resolutions to 1080p, and computer resolutions to 1920x1200
- One female HDMI output connector.
- One female RJ45 HDBase-T connector for sending/receiving high definition video, audio, IR, Ethernet and DDC signals.
- Two female 3.5mm ports for connecting an IR transmitter or receiver.
- One female Ethernet port for connecting a network device such as a 100Base-T router, hub, smart TV, or smart Blu-Ray player.

Dimensions

- WxDxH (in): 4.02x4.53x0.98 (102x115x25 mm)

Power

- Powered by matrix switch via Power over Ethernet (PoE).
- Power consumption: 7W.

Environmental

- Operating temperature: 32 to 104°F (0 to 40°C)
- Storage temperature: -4 to 140°F (-20 to 60°C)
- Operating/storage relative humidity: 20 to 90% non-condensing RH.

Regulatory Approvals

- CE, FCC, RoHS.
- TAA compliant.

Cables

- Use HD-xx-MM cable to connect an HDMI source or display.
  - Inputs
    - 8-bit resolution: up to 49 ft (15 m).
    - 12-bit resolution: up to 33 ft (10 m).
  - Output: 20 ft (6.1 m).
- Use CAT5e/6/7 solid straight through cables for TIA/EIA 568B wiring terminated with standard RJ45 connectors.
  - CAT5e (24 AWG), up to 250 feet.
  - CAT6 (23 AWG), up to 350 feet.
  - CAT7 (23 AWG), up to 375 feet.
- Cables not included.

Compatible NTI Products

- Combine NTI's video converters, extenders, and scalers for complex applications.
  - Ultra Low-Cost VGA + Audio to HDMI Converter Cable (VGAA-HD-ULC)
    - Supports HDTV resolutions to 1080p only.
    - Requires USB power to operate.
  - VGA/Component Video to HDMI Converter (VGACMP-HD)
    - Supports HDTV resolutions to 1080p and computer resolutions to 1920x1200 only.
  - VGA/Component Video/HDMI Scaler/Converter (PCHD-HDMI-SCALER)
    - Supports HDTV resolutions to 1080p and computer resolutions to 1920x1200 only.
  - Multiple HDMI Extender Over HDBase-T with Power over Ethernet (ST-C64K-HDBT-L8-R)

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Control Methods

Front Panel Interface

- Configuration and control can be done using the front panel buttons.
- LED display shows which input device is being used by each output device.

RS232

- Configuration and control can be done through the serial port.

IR Remote Control

- IR control of matrix switch:
  - The matrix switch can be controlled with the included IR remote using the built-in IR receiver on the switch or remotely via an IR receiver or emitter connected to the remote unit.
- IR control of connected sources:
  - HDMI sources can be controlled remotely using the source's IR remote control through the remote unit's IR receiver and switch's emitter.
- IR control is bi-directional.

Ethernet Control

- Configuration can be done over the Internet via web server or telnet.
- 10/100Base-T Ethernet interface.
  - **Web Server**
    - Control the unit's power, input/output ports, and EDID.
    - Reset the IP configuration of a device.
  - **Telnet**
    - Commands are similar to RS232 commands.

HDMI Matrix Switch Over HDBase-T with Power Over Ethernet		
NTI Part #	HDMI Inputs	RJ45 Outputs
SM-8X8-C64KR-POE-HDBT	8	8

HDMI HDBase-T POE Receiver	
NTI Part #	Supported Features
ST-C64KPOE-HDBT-R-LC	4K HDMI, IR, Ethernet, Power over Ethernet

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