

# Installation and Operation Guide

*It's Under Control®*

## VXP-82

VXP-82 All-in-one Presentation System



### FEDERAL COMMUNICATIONS COMMISSION NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received including interference that may cause undesired operation.

### Industry Canada Compliance Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received including interference that may cause undesired operation.

Cet appareil est conforme avec Industrie Canada exempts de licence standard RSS (s). Son fonctionnement est soumis aux deux conditions suivantes:

1. Ce dispositif ne peut causer des interférences nuisibles.
2. Cet appareil doit accepter toute interférence reçue y compris des interférences qui peuvent provoquer un fonctionnement indésirable.



### DECLARATION OF CONFORMITY (DOC)

The Declaration of Conformity for this product can be found on the RTI website at: [www.rticontrol.com/declaration](http://www.rticontrol.com/declaration)

## SAFETY SUGGESTIONS

**Read Instructions.** Read all safety and operating instructions before operating the unit.

**Retain Instructions.** Keep the safety and operating instructions for future reference.

**Heed Warnings.** Adhere to all warnings on the unit and in the operating instructions.

**Follow Instructions.** Install and operate in accordance with the manufacturer's instructions.

**Accessories.** Only use attachments/accessories specified by the manufacturer.

**Portable Cart Warning.** Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

**Heat.** Do not block any ventilation openings.

**Heat.** Keep the unit away from heat sources such as radiators, heat registers, stoves, etc., including amplifiers that produce heat.

**Power.** Unplug this apparatus during lightning storms or when unused for long periods of time.

**Power Sources.** Connect only to the power cord that was included with the unit.



**Power Cord Protection.** Route power supply cords so that they are not likely to be walked on or pinched by items placed on or against them, paying particular attention to the cords at plugs, at convenient receptacles, and at the point at which they exit from the unit.

**Power Cord Grounding Plug.** Do not remove the grounding prong of the grounding-type plug. A grounding type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

**MAINS Outlet.** Where MAINS outlets are used, the apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.

**MAINS Plug.** Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

**Water and Moisture.** Do not use the unit near water—for example, near a sink, in a wet basement, near a swimming pool, near an open window, etc.

**Object and Liquid Entry.** Do not allow objects to fall or liquids to be spilled into the enclosure through openings.

**Cleaning.** Clean only with dry cloth.

**Servicing.** Do not attempt any service beyond that described in the operating instructions. Refer all other service needs to qualified service personnel.

**Damage Requiring Service.** The unit should be serviced by qualified service personnel when:

- Objects have fallen or liquid has been spilled into the unit.
- The power supply cord or the plug has been damaged.
- The unit does not appear to operate normally or exhibits a marked change in performance.
- The unit has been dropped or the enclosure has been damaged.

### WARNING!

**TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE.**

### LIMITED WARRANTY

Remote Technologies Incorporated warrants its products for a period of three (3) years from the date of purchase from Remote Technologies Incorporated or an authorized Remote Technologies Incorporated distributor.

This warranty may be enforced by the original purchaser and subsequent owners during the warranty period, so long as the original dated sales receipt or other proof of warranty coverage is presented when warranty service is required. Except as specified below, this warranty covers all defects in material and workmanship in this product. The following are not covered by the warranty:

Damage resulting from:

1. Accident, misuse, abuse, or neglect.
2. Failure to follow instructions contained in this Guide.
3. Repair or attempted repair by anyone other than Remote Technologies Incorporated.
4. Failure to perform recommended periodic maintenance.
5. Causes other than product defects, including lack of skill, competence or experience of user.
6. Shipment of this product (claims must be made to the carrier).
7. Being altered or which the serial number has been defaced, modified or removed.

Remote Technologies Incorporated is not liable for any damages caused by its products or for its failure of its products to perform, including any lost profits, lost savings, incidental damages, or consequential damages.

Remote Technologies Incorporated is not liable for damages based upon inconvenience, loss of use of the product, loss of time, interrupted operation, commercial loss, any claim made by a third party or made by you for a third party.

Remote Technologies Incorporated's liability for any defective product is limited to repair or replacement of the product, at our option.

If any component of your VXP-82 needs service, please contact Remote Technologies Incorporated by telephone or E-mail for return information. **Please do not return products to Remote Technologies Incorporated without return authorization.**

### DISCLAIMER

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## CHAPTER 1 | WELCOME

### **Thank you for using the VXP-82 All-in-One Presentation System.**

The VXP-82 combines robust AV switching with powerful control to deliver the ultimate presentation solution for boardrooms, lecture halls, classrooms and conference rooms. The all-in-one switcher features video scaling and switching, audio mixing, control and KVM functionality in a 2U rack-mountable unit. With support for multiple AV inputs and outputs, built-in control and HDBaseT communication, the VXP-82 enables presentations in two rooms simultaneously.

The VXP-82 8x2 multi-format matrix switch scales content from a wide range of sources, delivering high quality video via HDMI and HDBaseT outputs. Support for de-embedded audio, mic inputs, and mixing capability enables flexible audio output options. With a built-in control processor and compatibility with the entire range of RTI controllers, the VXP-82 also offers complete automation of the installation.

### CHAPTER 1 | PRODUCT CONTENTS

Contents within the box include the following items:

- One (1) VXP-82 All-in-One Presentation System
- Two (2) Rack Mount Ears
- Six (6) Mounting Screws
- One (1) U.S. Power Cord
- Three (3) International Power Cords
- Two (2) Phoenix Connectors (3.5mm, 3 Pins)
- Two (2) Phoenix Connectors (3.5mm, 5 Pins)
- Three (3) Terminal Blocks (4 Position)
- Three (3) Terminal Blocks (2 Position)
- Two (2) RS-232 Adapters
- One (1) Installation Guide

#### UNPACKING AND INSPECTION

After unpacking the VXP-82, save all of the packing materials in case you need to ship the unit.

Thoroughly inspect the VXP-82 and packing materials for signs of damage. Report any damage to the carrier immediately. Report any equipment malfunctions to RTI or an authorized RTI distributor.

#### IMPORTANT NOTES

Please read these important notes about the VXP-82:

- The VXP-82 should be placed in an area where it is around normal room temperature (between 60°F to 90°F).
- Avoid installing the VXP-82 in a location with little or no air circulation.
- Avoid installing the VXP-82 in a location where it can come in contact with direct sunlight.
- Do not let the VXP-82 system get wet. It should not be handled with wet hands or placed in an area where it could get wet.
- Do not subject the VXP-82 to smoke, dust, or vibrations.
- Only use the power cord that is supplied with the VXP-82. Using the wrong type of power cord may result in damage.
- Do not disassemble the unit. Service of the VXP-82 should be performed by authorized personnel only.

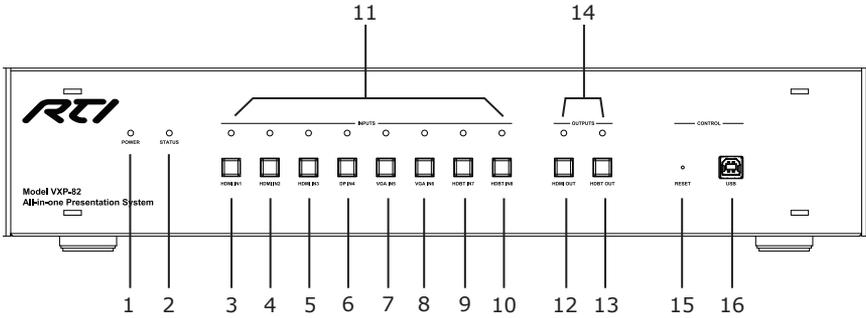
## CHAPTER 2 | FEATURES AND DESCRIPTION

**The VXP-82 provides superior quality and reliability as well as these features:**

- 8x2 4K All-in-One Scaling Presentation Matrix Switcher.
- Support for HDCP 2.2 and HDMI 2.0
- Seamless audio and video switching.
- Built-in scaler supports up to 4K@60Hz 4:4:4 8bit video output.
- HDBaseT inputs/output:
  - Transmission via Cat5e cable: 4K@60Hz 4:2:0 8bit signal up to 90m/300ft, 1080p@60Hz 4:4:4 8bit signal up to 100m/330ft
  - Transmission via Cat-6/6a/7 cable: 4K@60Hz 4:2:0 8bit signal up to 100m/330ft, 1080p@60Hz 4:4:4 8bit signal up to 100m/330ft.
- HDBaseT ports support KVM, Ethernet, IR and RS-232 pass-through in addition to PoH (Power over HDBaseT) to power extenders.
- Supports Auto-CEC control, set through driver commands or Web UI.
- USB host and device ports enable bi-directional KVM functionality - Ideal for presentation settings.
- Supports de-embedded audio of HDMI and HDBaseT outputs, set independently to output any mixed result.
- Control via front panel, built-in processor, and Web UI.
- Built-in control processor with 128Mb of non-volatile flash memory.
- Control of devices via six routable IR ports, two RS-232 ports, three relays, three voltage triggers, and three voltage sense inputs.
- Support for RTI wired and wireless controllers (remote controls require RTI RM-433 433MHz or ZM-24 2.4GHz Zigbee antennas).
- Support for with RTiPanel App.
- Flexible installation options with tabletop or rack-mount design.

### CHAPTER 2 | FEATURES AND DESCRIPTION

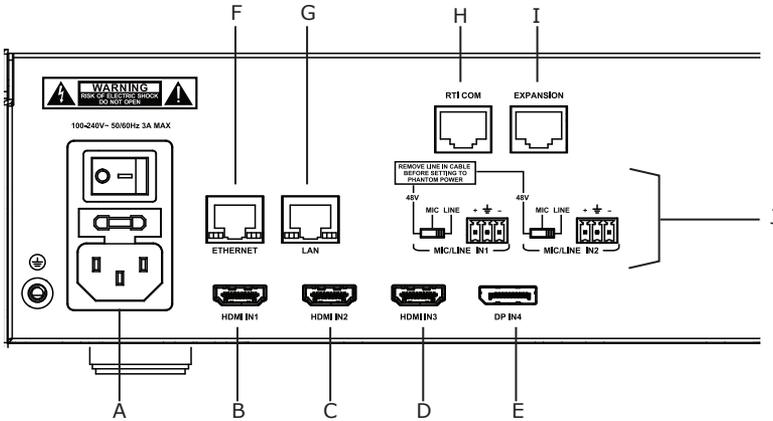
#### VXP-82 FRONT PANEL DESCRIPTION



No.	Name	Function
1	POWER LED Indicator	Turns red when powered on.
2	STATUS LED Indicator	When powered on, the status LED is red, then turns yellow, and then goes out. This indicates the status of the built-in processor.
3	HDMI IN1 Selection	Press to select HDMI IN1 source as input.
4	HDMI IN2 Selection	Press to select HDMI IN2 source as input.
5	HDMI IN3 Selection	Press to select HDMI IN3 source as input.
6	DP IN4 Selection	Press to select Display Port IN source as input.
7	VGA IN5 Selection	Press to select VGA IN5 source as input.
8	VGA IN6 Selection	Press to select VGA IN6 source as input.
9	HDBT IN7 Selection	Press to select HDBT IN7 source as input.
10	HDBT IN8 Selection	Press to select HDBT IN8 source as input.
11	Input Selection Indicator	Indicators are located above the selection buttons. When the button function is enabled, the LED is blue.
12	HDMI OUT Selection	Press to select HDMI output.
13	HDBT OUT Selection	Press to select HDBT video output.
14	Output Selection Indicator	LED is located above the selection button. When the button function is enabled, the LED is blue.
15	Reset	Use a pointed stylus to hold down the RESET button for three or more seconds and then release to reset the VXP-82 control processor only.
16	USB	USB port

## CHAPTER 2 | FEATURES AND DESCRIPTION

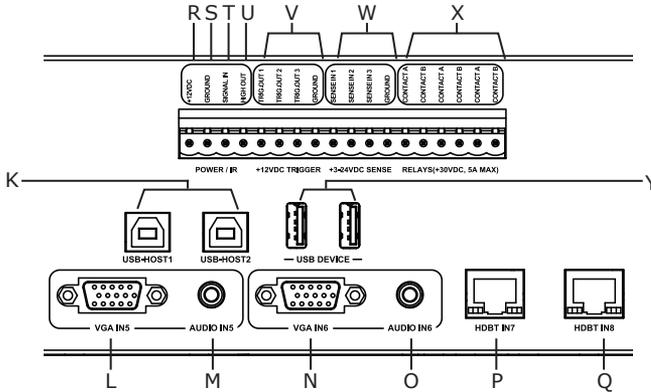
### VXP-82 REAR PANEL DESCRIPTION



No.	Name	Function
A	AC Power Input	Connect the power cord provided. Accepts AC power of 100-240V 50/60Hz. Power Button: Press to power on/off VXP-82.
B	HDMI IN1	Connect to an HDMI source device.
C	HDMI IN2	Connect to an HDMI source device.
D	HDMI IN3	Connect to an HDMI source device.
E	DP IN4	Connect to Display Port video source device.
F	ETHERNET	Connect to an Ethernet network to share network access with Ethernet equipped devices via the HDBaseT extenders. This port is not used for control, Ethernet passthrough only. NOTE: This port is segmented from the LAN port, keeping the shared network and the network used by the control system separate if needed.
G	LAN	Connect to an Ethernet network to enable telnet or web UI Control.
H	RTI COM	Connect to a ZM-24 Zigbee transceiver module for two-way communication with RTI handheld controllers.
I	EXPANSION	Connect to a CB-8 connecting block to receive IR signals and two-way RS-485 communication from RTI wired controllers.
J	MIC/LINE IN 1-2 Selector switch and Ports 1&2	PHANTOM POWER/MIC/LINE IN audio selector switch: PHANTOM POWER: MIC input with phantom power. MIC: MIC input. LINE IN: Line in input *Warning*: Before the selector switch is set to position "PHANTOM POWER", ensure any Line In device connected to "MIC/LINE IN" port has been removed or device damage may occur. MIC/LINE IN Ports: Connect to audio devices based on the settings of PHANTOM POWER/MIC/LINE IN Selector Switch. See Pinout section.

### CHAPTER 2 | FEATURES AND DESCRIPTION

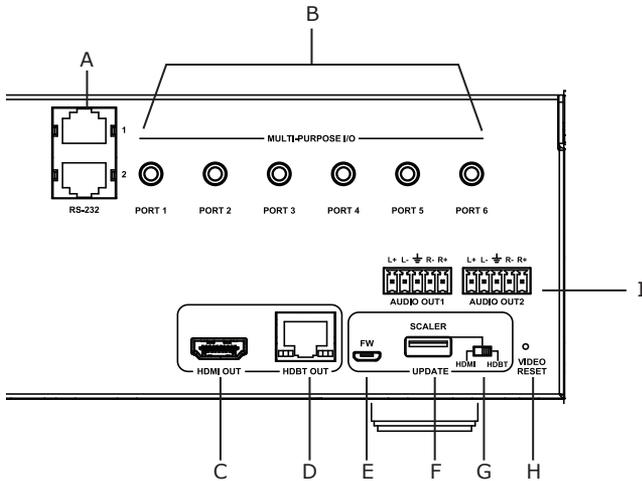
#### VXP-82 REAR PANEL DESCRIPTION



No.	Name	Function
K	USB HOST 1-2	Connect to USB HOST devices such as a PC. Ports bind with HDMI IN 1-2 by default. They can be configured to bind with other inputs (Except for HDBaseT inputs) through driver commands and Web UI. <i>Refer to Chapter 3.</i>
L	VGA IN5	Connect to VGA video source.
M	AUDIO IN5	Connect to audio device. Audio input embedded with the VGA source.
N	VGA IN6	Connect to VGA video source.
O	AUDIO IN6	Connect to audio devices. Audio input embedded with the VGA source.
P	HDBT IN7	Connect to an HDBaseT transmitter via Cat-5e/6/7 cable.
Q	HDBT IN8	Connect to an HDBaseT transmitter via Cat-5e/6/7 cable.
R	+12VDC	Positive power supply connection for external devices such as IR or RF receivers. Internally tied to power port.
S	GROUND	Ground connection for devices connected to +12VDC, SIGNAL IN or HIGH OUT terminals.
T	SIGNAL IN	Used to connect to an RTI RM-433 RF receiver or industry standard IR repeater system. Signal voltage can be from 3VDC - 12VDC.
U	HIGH OUT	Used to power up to 10 infrared emitters, an IR blaster, or extending IR control over a long distance (1000 ft. max).
V	+12VDC TRIGGER OUTPUTS	Connect positive lead to trigger output (1-3) and the negative lead to the ground terminal.
W	+3-24VDC SENSE INPUTS	Connect conductors from a +3-24VDC source device to a sense input (1-3) and the ground terminal.
X	RELAYS	Relays cause a dry contact closure. All relays are Normally Open when not energized, and may be programmed to behave Normally Closed. Connect the A and B contact terminals of a relay to the device.
Y	USB DEVICE	Connect to USB devices such as a keyboard, Mouse, or USB Camera. <i>Refer to Chapter 3.</i>

## CHAPTER 2 | FEATURES AND DESCRIPTION

### VXP-82 REAR PANEL DESCRIPTION



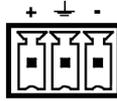
No.	Name	Function
A	RS-232 PORTS 1-2	RJ-45 output ports for RS-232 communication using Cat-5 cable. The VXP-82 ships with two RJ-45 (female) to DB-9 (male) adapters. NOTE: RS-232 communication cabling should be limited to 50 feet (16m) depending on baud rate. See Pinout section.
B	MPIO PORTS 1-6	Each port is compatible with industry standard IR emitters and IR repeating systems. Each output port is capable of driving up to four IR emitters directly.
C	HDMI OUT	Connect to an HDMI display.
D	HDBT OUT	Connect to VXP-R HDBaseT Extender or compatible HDBaseT receiver via a Cat 5e/6/7 cable.
E	FW PORT	<i>Service use only.</i>
F	SCALER	<i>Service use only.</i>
G	HDMI/HDBT SWITCH	<i>Service use only.</i>
H	VIDEO RESET	Use a pointed stylus to hold down the RESET button for three or more seconds, and then release it to reset VXP-82 video matrix only.
I	AUDIO OUT 1-2	Audio outputs for de-embedded audio from the selected video source assigned to HDMI or HDBT output, or the MIC/LINE audio inputs. By default, AUDIO OUT Port 1 is assigned to the HDMI output and AUDIO OUT Port 2 is assigned to the HDBT output. <i>See Audio Control Section - Pg18</i>  Connect to audio system such as an amplifier. <i>See Pinout section - Pg14</i>

### CHAPTER 2 | FEATURES AND DESCRIPTION

#### PINOUT INFORMATION

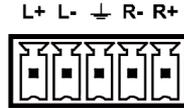
##### MIC/LINE IN

Connect to MIC/LINE IN audio device with the included 3-pole terminal block.



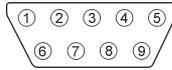
##### AUDIO OUT

Connect to audio system using the included 5-pole terminal block. Compatible with balanced audio XLR 5pin DIN cables.



##### DB-9 ADAPTOR PINOUT

Pin	Signal Name	Signal Description
1	DCD	Carrier Detect
2	RXD	Receive Data
3	TXD	Transmit Data
4	DTR	Data Terminal Ready
5	GND	Signal Ground
6	DSR	Data Set Ready
7	RTS	Request To Send
8	CTS	Clear To Send
9	NC	Not Connected



#### USB KVM CONTROL SETUP AND NOTES:

For shared KVM (keyboard, video camera, mouse) control via USB, follow the steps below.  
NOTES:

- When using VXP-R/VXP-T Extenders, the dip switches should be in the UP position.
- The USB HOST ports of the VXP-R HDBT Receiver are not active.

#### VXP-82 Standalone (No Extenders):

1. Connect Laptop/PC to HDMI IN port 1 or 2 and to the USB HOST port 1 or 2.
2. Connect KVM devices to USB DEVICE ports.

NOTES:

- By default, the HDMI IN port 1 and USB HOST port 1 are bound, and the HDMI IN port 2 and the USB HOST port 2 are bound.
- When the HDMI OUT port is set to the HDMI IN 1 or 2 as the video source, KVM devices plugged into the USB DEVICE ports will bind to the corresponding USB host to enable KVM control of the PC.
- The two USB HOST ports can be configured to bind with other inputs (except for HDBT IN) through driver commands and Web UI.

#### VXP-82 with VXP-R Receiver

1. Connect Host PC to video input and USB HOST ports on VXP-82.
2. Connect KVM devices to the USB DEVICE ports on the VXP-R.

NOTE: When the Host PC is selected as the video source on HDBT OUT of VXP-82, the KVM USB devices plugged into the VXP-R will be connected to the Host PC.

#### VXP-82 with VXP-T Transmitter

1. Connect Host PC to HDMI input and USB HOST ports on VXP-T.
2. Connect KVM devices to VXP-82.

NOTE: When the video source is set to the HDBT Input from the VXP-T, the KVM devices plugged into VXP-82 will be connected to the Host PC.

#### VXP-82 with Both VXP-T and VXP-R HDBT Extenders

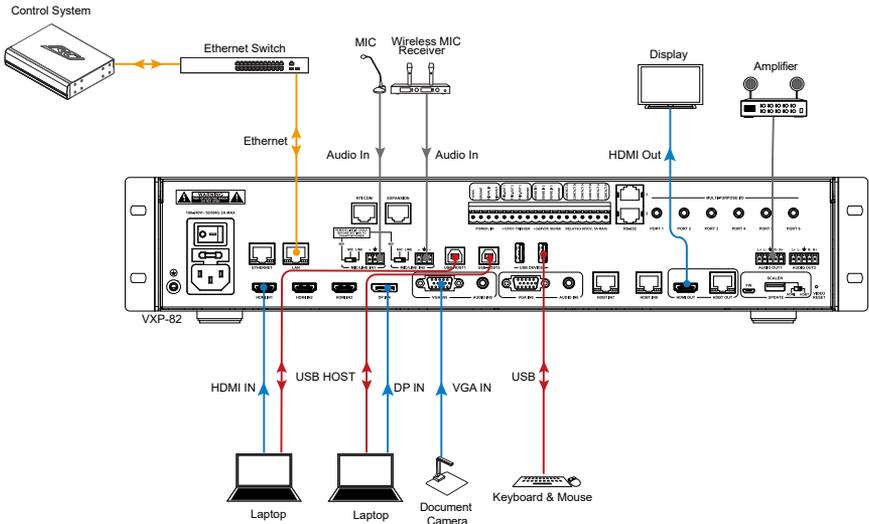
1. Connect Host PC to the USB HOST port on the VXP-82 or a VXP-T Transmitter.
2. Connect KVM devices to the USB DEVICE ports of the VXP-R or VXP-82.

NOTE: When a Host PC is selected as the video source on HDBT OUT of VXP-82, the KVM USB devices plugged into the VXP-R will be connected to the Host PC.

## CHAPTER 3 | INSTALLATION AND OPERATION

### CONNECTIONS - VXP-82 Standalone (No VXP-R/VXP-T Extenders)

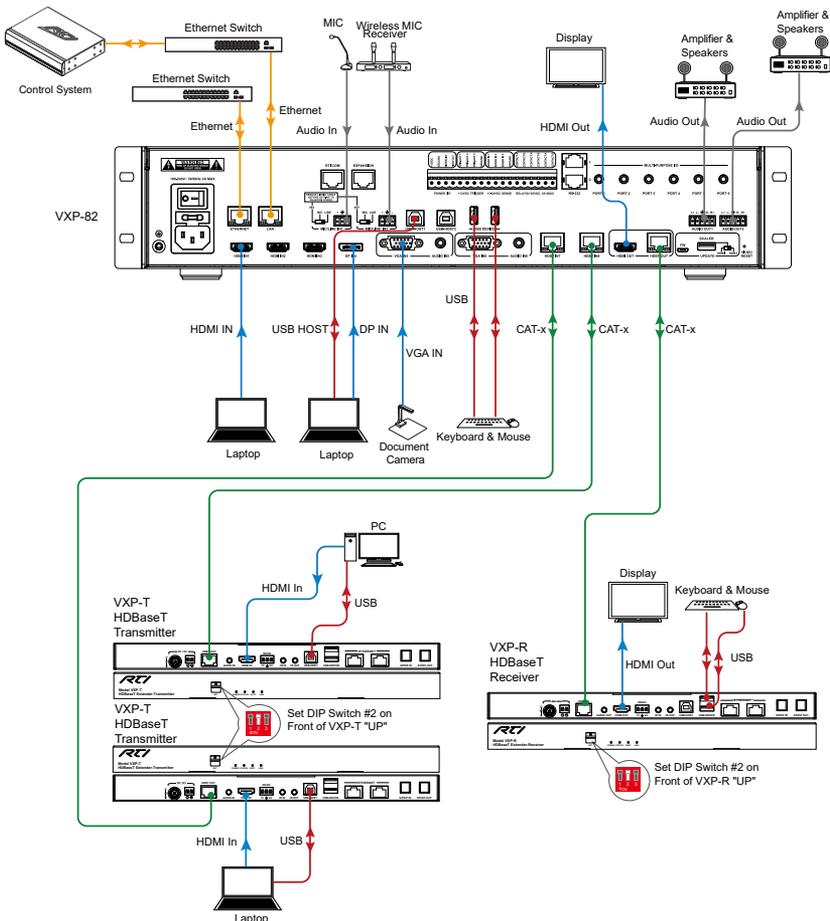
1. Connect video sources to the HDMI IN, DP IN and VGA IN ports.
2. Connect display (e.g. projector, LED/LCD display) to the HDMI OUT port.
3. Connect Microphone or audio source to MIC/LINE IN.
4. Connect audio system (e.g. amplifier) to the AUDIO OUT port.
5. Connect PC to the USB HOST port and connect KVM devices to USB DEVICE ports.  
(See *USB KVM CONTROL SETUP AND NOTES* on previous page)
6. Connect Ethernet network devices:
  - LAN Control Port (Telnet/Web UI): Connect an Ethernet network to the LAN port for IP control of systems such as AV sources, lighting, climate, shades etc.
  - ETHERNET Pass-Through Port: Not used in this configuration.
7. Connect control ports to devices requiring control via built-in processor:
  - IR, RS-232, Voltage Triggers, Sense Inputs, Relays (See Chapter 2: Back Panel Descriptions)
8. Connect RTI Controller accessories:
  - RTICOM: Wire to ZM-24 Transceiver using Cat5 cable for control via RTI remote.
  - Expansion: Wire to CB-8 Connecting Block using Cat-5 cable for control via RTI keypads and touchpanels. (Note: Most RTI touchpanels also use Ethernet communication - check touchpanel documentation).
9. Power on all attached devices.



### CHAPTER 3 | INSTALLATION AND OPERATION

#### CONNECTIONS - VXP-82 with VXP-R/VXP-T HDBaseT Extenders

1. Connect video sources to the VGA IN, DP IN and HDMI IN ports.
2. Connect a display (e.g. projector, LED display) to the HDMI OUT port.
3. Connect Microphone or audio source to MIC/LINE IN ports.
4. Connect audio system (e.g. amplifier) to the AUDIO OUT ports.
5. Connect Ethernet network devices:
  - LAN Control Port (Telnet/Web UI): Connect an Ethernet network to the LAN port for IP control of systems such as AV sources, lighting, climate, shades etc.
  - ETHERNET Port: Connect to corporate network. Used to extend Ethernet to RJ-45 ports on HDBaseT extenders for connection to devices such as laptops.
6. Connect control ports to devices requiring control via processor (See Chapter 2):
  - IR, RS-232, Voltage Triggers, Sense Inputs, Relays
7. Connect RTI Controller accessories (See Chapter 2):
  - RTICOM: Wire to ZM-24 Transceiver using Cat5 cable for control via RTI remote.
  - Expansion: Wire to CB-8 Connecting Block using Cat-5 cable for control via RTI keypads and touchpanels. (Note: Check touchpanel documentation).
8. Connect VXP-T HDBaseT Transmitters to HDBT IN ports with Cat-5e/6/7 cables.
  - Connect HDMI sources, USB Host devices, network cables, IR/RS232 cables etc.
9. Connect VXP-R HDBaseT Receiver to HDBT Out port with Cat-5e/6/7 cable.
  - Connect HDMI display, USB devices, network cables, IR/RS232 cables etc.
10. Set Dip switches on extenders to appropriate setting (see diagram below).



## CHAPTER 3 | INSTALLATION AND OPERATION

### WEB INTERFACE

The Web UI designed for the VXP-82 is available for basic controls and advanced settings for the device. The Web UI can be accessed through an internet browser.

#### Get Access to the Web UI

1. Connect your PC and the LAN port of the switcher to the same local area network.
2. Input the switcher's IP address in your browser and press Enter.

#### Important Note:

If you have trouble finding the IP address, use an IP scanner and look for a MAC address one increment above the XP Processor MAC address

Example:

00:15:26:XX:XX:34 - XP controller MAC (Used to redeem RTIPanel License)

00:15:26:XX:XX:35 - 8x2 matrix MAC (IP address associated with this MAC is used to access the web UI)

3. The following window will display, enter the default password "admin", and click "Login".

Outputs   Inputs	HDMI IN 1	HDMI IN 2	HDMI IN 3	DP IN 4	VGA IN 5	VGA IN 6	HDBT IN 7	HDBT IN 8	CEC Control
HDMI OUT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="ON"/> <input type="button" value="OFF"/>
HDBT OUT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="ON"/> <input type="button" value="OFF"/>
Signal Status	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Active     No Signal     Selected

### Web UI Introduction

The Web UI main page includes several tabs for basic and advanced settings including Video Control, Audio Control, Configuration and Settings.

### VIDEO CONTROL

#### Video Switch

This section manages distribution of input video source to output displays. Click the switch button (white to green) to select the input source for the output display.

- **Signal Status:** Show the status of input sources, active (green) or no signal (grey).
- **CEC Control (ON/OFF):** Click to power on or off the CEC-enabled display device immediately.

By default, HDMI IN1 routes to HDMI OUT. HDMI IN2 routes to HDBT OUT.

### CHAPTER 3 | INSTALLATION AND OPERATION

#### AUDIO CONTROL

##### (1) Audio Switch

Audio Switch

Outputs   Inputs	MIC/Line IN 1	MIC/Line IN 2	DE-EMBED IN 1	DE-EMBED IN 2
AUDIO OUT 1				
AUDIO OUT 2				
HDMI OUT				
HDBT OUT				

Selected

This section manages distribution of audio input to audio output. Click the switch button (white to green) to select the audio input for the output.

By default, De-EMBED IN1 routes to AUDIO OUT1 and HDMI OUT, DE-EMBED IN2 routes to AUDIO OUT2 and HDBT OUT.

De-embedded Audio of HDMI OUT, De-embedded Audio of HDBT OUT, AUDIO OUT1, AUDIO OUT2 can be set to output any mixed result listed in below table.

Mixed Result	MIC/LINE IN1	MIC/LINE IN2	De-embedded IN1	De-embedded IN2
1	√			
2		√		
3			√	
4				√
5	√	√		
6	√		√	
7	√			√
8		√	√	
9		√		√
10			√	√
11	√	√	√	
12	√	√		√
13	√		√	√
14		√	√	√
15	√	√	√	√

**Note:** You also can be set to output the results shown in the table through driver commands.

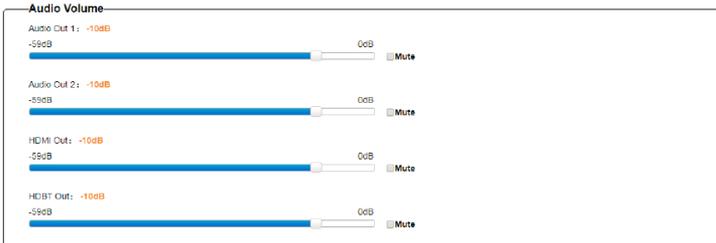
## CHAPTER 3 | INSTALLATION AND OPERATION

### (2) Audio Volume

Adjust the volume of the output audio.

**Mute:** Click to mute/unmute audio output.

By default, the volume of output audio is -10dB.

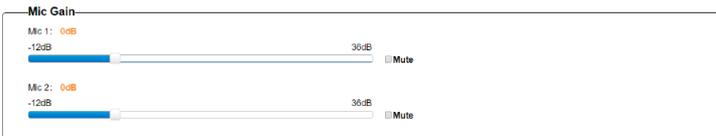


### (3) Mic Gain

Adjust the volume of MIC/LINE IN audio input.

**Mute:** Click to mute/unmute audio output.

By default, the volume of MIC/LINE audio input is 0dB.

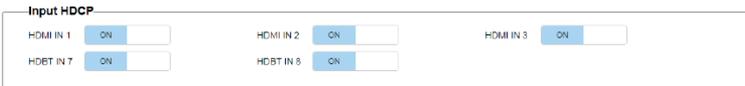


## CONFIGURATION

### (1) Input HDCP

This section allows you to enable or disable HDCP capability of each input. By default, HDCP Support is switched to ON at each input to allow for HDCP-protected content transmission.

By default, Input HDCP Support is set as ON at each input port.



### CHAPTER 3 | INSTALLATION AND OPERATION

#### (2) EDID

This section allows you to configure EDID setting of each input port.

**EDID**

<p>HDMI IN 1</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080/60Hz 2CH(Default)</span> </div> <input type="button" value="✓ Apply"/>	<p>HDMI IN 2</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080/60Hz 2CH(Default)</span> </div> <input type="button" value="✓ Apply"/>
<p>HDMI IN 3</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080/60Hz 2CH(Default)</span> </div> <input type="button" value="✓ Apply"/>	<p>DP IN 4</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080/60Hz 2CH(Default)</span> </div> <input type="button" value="✓ Apply"/>
<p>VGA IN 5</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080@60Hz 2CH (Default)</span> </div> <input type="button" value="✓ Apply"/>	<p>VGA IN 6</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080@60Hz 2CH (Default)</span> </div> <input type="button" value="✓ Apply"/>
<p>HDBT IN 7</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080/60Hz 2CH(Default)</span> </div> <input type="button" value="✓ Apply"/>	<p>HDBT IN 8</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080/60Hz 2CH(Default)</span> </div> <input type="button" value="✓ Apply"/>

**Apply:** Click to enable the EDID setting.

To set up the EDID setting for HDMI IN1:  
Go to the HDMI IN1 and select the settings from its drop-down menu.

**EDID**

<p>HDMI IN 1</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080/60Hz 2CH(Default)</span> </div> <ul style="list-style-type: none"> <li>Copy edid from HDBT OUT</li> <li>Copy edid from HDMI OUT</li> <li>3840x2160/60Hz 2CH</li> <li>3840x2160/30Hz 2CH</li> <li style="background-color: #007bff; color: white;">1920x1080/60Hz 2CH (Default)</li> <li>1600x1200/60Hz 2CH</li> <li>1680x1050/60Hz 2CH</li> <li>1600x900/60Hz 2CH</li> <li>1440x900/60Hz 2CH</li> <li>1360x768/60Hz 2CH</li> <li>1280x1024/60Hz 2CH</li> <li>1280x768/60Hz 2CH</li> <li>1280x720/60Hz 2CH</li> <li>1024x768/60Hz 2CH</li> </ul>	<input type="button" value="✓ Apply"/>
<p>HDMI IN 2</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080/60Hz 2CH(Default)</span> </div> <input type="button" value="✓ Apply"/>	<input type="button" value="✓ Apply"/>
<p>HDMI IN 3</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080/60Hz 2CH(Default)</span> </div> <input type="button" value="✓ Apply"/>	<input type="button" value="✓ Apply"/>
<p>DP IN 4</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080/60Hz 2CH(Default)</span> </div> <input type="button" value="✓ Apply"/>	<input type="button" value="✓ Apply"/>
<p>VGA IN 5</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080@60Hz 2CH (Default)</span> </div> <input type="button" value="✓ Apply"/>	<input type="button" value="✓ Apply"/>
<p>VGA IN 6</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080@60Hz 2CH (Default)</span> </div> <input type="button" value="✓ Apply"/>	<input type="button" value="✓ Apply"/>
<p>HDBT IN 7</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080/60Hz 2CH(Default)</span> </div> <input type="button" value="✓ Apply"/>	<input type="button" value="✓ Apply"/>
<p>HDBT IN 8</p> <div style="border: 1px solid gray; padding: 2px;"> <span>1920x1080/60Hz 2CH(Default)</span> </div> <input type="button" value="✓ Apply"/>	<input type="button" value="✓ Apply"/>

Then click "Apply" to take effect.  
By default, input EDID is set as 1920x1080/60Hz 2.0ch.

## CHAPTER 3 | INSTALLATION AND OPERATION

### (3) CEC Control

**CEC Control**

Output: HDMI OUT ▾

Auto CEC Control: ON

Delay Time(min): 3 (1-30min)

- **Output:** Select Output port. HDMI OUT or HDBT OUT.
- **Auto CEC Control (ON/OFF):** Click to enable or disable the CEC Auto Control.
- **Delay Time (1~30min):** Click the up/down arrow to set the time for the display to power off automatically when no signal is present. For example, if Auto control is set to On and the time is set to 3 minutes, the output display will power off automatically when there's no signal at the display for 3 minutes.

By default, CEC Auto Control is set to ON.

### (4) Output Resolution

Configure Resolution of each output port.

**Output Resolution**

HDMI OUT: Auto ▾

HDBT OUT: Auto ▾

Set the scaler for HDMI OUT and HDBT OUT to auto or fixed resolution. When set to Auto scaling mode, the scaler will analyze the EDID of the connected display and optimum resolution for the display. For HDBT OUT, displays which can support higher than 4K@60Hz 4:2:0 will be recognized as a 4K@30Hz 4:4:4 display to meet the ability of HDBaseT and scaler.

Go to the HDMI OUT and select the settings from its drop-down menu.

To set up the fixed resolution for HDMI OUT:

1920x1080

**CEC Control**

Output: HDMI OUT ▾

Auto CEC Control: ON

Delay Time(min): 3 (1-30min)

**Output Resolution**

HDMI OUT: Auto ▾

HDBT OUT: Auto ▾

4096x2160@60  
4096x2160@30  
4096x2160@25  
4096x2160@24  
3840x2160@60  
3840x2160@50  
3840x2160@30  
3840x2160@25  
3840x2160@24  
1920x1200@60  
1920x1080@60  
1920x1080@50  
1280x720@60  
1280x720@50  
1680x1050@60  
1600x1200@60  
1600x900@60  
1440x900@60  
1366x768@60

### CHAPTER 3 | INSTALLATION AND OPERATION

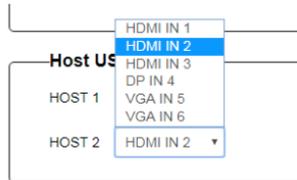
#### (5) Host USB Bind

**Host USB Bind**

HOST 1 HDMI IN 1

HOST 2 HDMI IN 2

This section allows USB ports to be configured to bind with inputs (Except for HDBT IN).



By default, USB HOST1 is set to bind with HDMI IN1 and USB HOST2 is set to bind with HDMI IN2.

#### SETTINGS

##### (1) General Setting

**Generic Setting**

Key Lock:  OFF

This section allows you to lock the buttons on switcher.

- **ON:** Click to enable KEY LOCK.
  - **OFF:** Click to disable KEY LOCK.
- By default, KEY LOCK is set as OFF.

##### (2) Network

**Network**

IP Mode: DHCP

IP Address:

Subnet Mask:   Apply

Note: LAN Module will automatically reboot after changing Network setting.

Network is used to set between the dynamic and static IP address.

- **DHCP:** When enabled, the IP address of the Matrix is assigned automatically by the DHCP server connected.
  - **Static:** When enabled, set up the IP address manually.
  - **Apply:** Click to enable the network setting.
- By default, the Network is set as DHCP IP address.

#### Note:

- When "Static" is selected, please ensure your PC is in the same network segment as the Matrix, i.e. the IP address of your PC should be set as 192.168.xxx.xxx.
- Please wait for about 30 seconds for LAN module to reboot and reconnect after the network setting is changed.

## CHAPTER 3 | INSTALLATION AND OPERATION

### (3) Password

**Password**

Login Password:

New Password:

Confirm New Password:   Apply

**Note:** Password must be 4 to 16 characters in length (alphanumeric only).

This section is where Login Password to be changed.

**Note:** Password must be 4 to 16 characters in length, alphanumeric only.  
By default, Login password is **admin**.

### (4) Firmware Upgrade

**Firmware Upgrade**

File:

This section allows you to upgrade the Web UI.

To update the Web UI:

1. Click "Browse" for the update bin file.
2. Then click "Upgrade" to proceed.

### (5) System

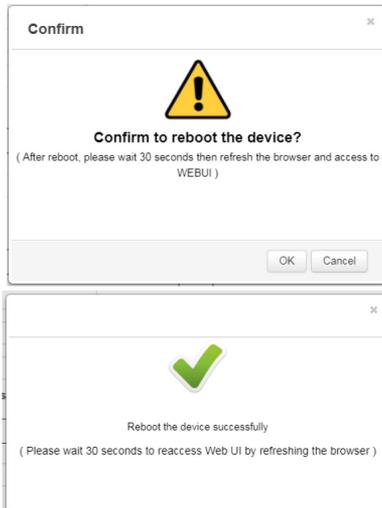
**System**

This section allows you to reboot or reset the VXP-82 to factory defaults.

- **Reboot:** Click to reboot matrix.
- **Factory Reset:** Click to reset matrix to factory default.

#### To reboot matrix:

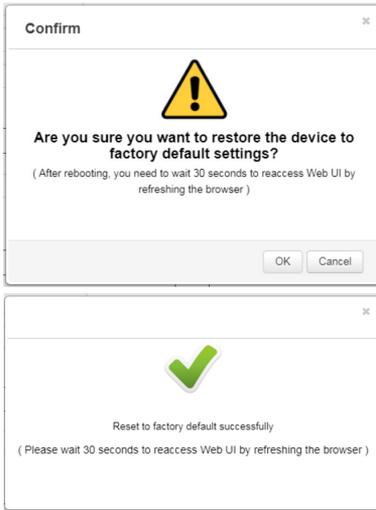
Click "Reboot" and then click "OK" in the pop-up window. Then wait 30 seconds to refresh and re-login the Web UI.



## CHAPTER 3 | INSTALLATION AND OPERATION

### To reset matrix to factory defaults:

Click "Factory Reset" and then click "OK" in the pop-up window. Then wait 30 seconds to refresh and re-login the Web UI.



### (6) Firmware Version

Firmware Version	
ARM	V2.0
MCU	V2.0

This section allows you to obtain information of the current firmware in use.

## CHAPTER 4 | SPECIFICATIONS

### GENERAL

AC Input Voltage	100-240V AC 50/60Hz
Height	2U, 3.5 inches (89mm)
Width	17.32 inches (440mm) - Fits in a standard 19" equipment rack
Depth	13 inches (330mm)
Weight	14 lbs (6.35 kg)
Warranty	Three Years (Parts & Labor)

### CONTROL PROCESSOR CONNECTIONS

IR Output ports	Six 3.5mm jacks
IR Output Drive	100mA maximum per port, adjustable 200mA maximum high IR output port
IR Frequency Transmission Range	15kHz - 460kHz
Trigger Outputs	Three, 12 VDC, 100mA max each
Relays	Three, 30VDC / 5 Amps
Sense Inputs	Three, +3-24 VDC
RS-232 Ports	Two, Bi-directional RJ45 Connections
Ethernet Port	One, 10/100Base-T, RJ45 Connection
USB 2.0 Ports	One, Programming
RTI Com Port	Zigbee® Communication Port, RJ45 Connection

### AUDIO CONNECTIONS

Signal Input	Two mono analog, mic or line level
Signal Output	Two stereo de-embedded audio output
Phantom Power	Enable/Disable per channel

## CHAPTER 4 | SPECIFICATIONS

### VIDEO CONNECTIONS

Video Input	Three HDMI, One Display port , Two VGA, Two HDBaseT (PoH) (RJ45)
Video Output	One HDMI, One HDBaseT (PoH) (RJ45)
Resolution Range	800 x 600 @ 60Hz to 4K x 2K @ 60Hz
HDBaseT Transmission Distance	<ul style="list-style-type: none"> <li>1080p @60Hz ≤ 100m</li> <li>4K x 2K @ 60Hz ≤ 90m</li> </ul>
Switching	Seamless
EDID Management	Built-in EDID data and manual EDID management
HDCP	Supports up to HDCP 2.2

### ANALOG LINE OUTPUTS WITH DSP

Output Signal Type/ Format	Stereo 2-Channel
Frequency Response	20Hz to 20kHz ≤ 3 dB
Phantom Power	Enable/Disable per channel

## CHAPTER 5 | SERVICE AND SUPPORT

### Contacting RTI

For news about the latest updates, new product information, and new accessories, please visit our web site at: **[www.rticontrol.com](http://www.rticontrol.com)**

For general information, you can contact RTI at:

**Remote Technologies Incorporated**

**5775 12th Ave. E Suite 180**

**Shakopee, MN 55379**

**Tel. (952) 253-3100**

**Fax (952) 253-3131**

**[info@rticontrol.com](mailto:info@rticontrol.com)**

### Service & Support

If you are encountering any problems or have a question about your RTI product, please contact RTI Technical Support for assistance (see the Contacting RTI section of this guide for contact details).

RTI provides technical support by telephone or e-mail. For the highest quality service, please have the following information ready:

- Your Name
- Company Name
- Telephone Number
- E-mail Address
- Product model and serial number (if applicable)

If you are having a problem with hardware, please note the equipment in your system, a description of the problem, and any troubleshooting you have already tried.

**\*Please do not return products to RTI without return authorization.\***

*It's Under Control®*



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