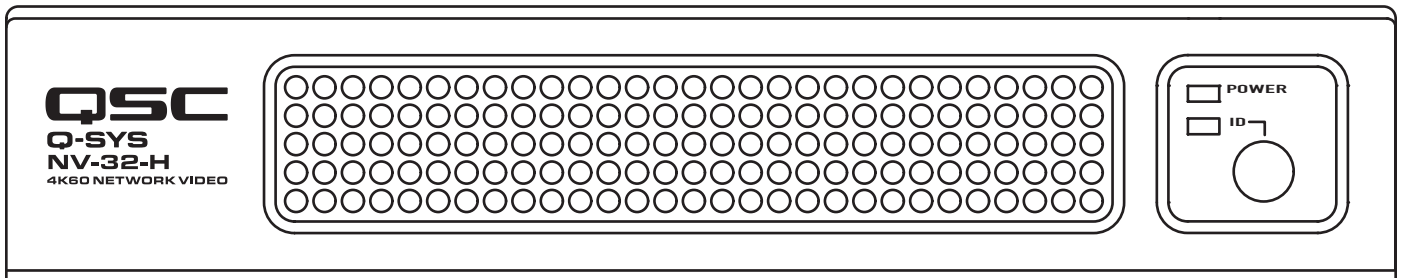


## Hardware User Manual

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**Q-SYS NV-32-H Network Video Endpoint for the Q-SYS Ecosystem**



TD-001543-01-A



# EXPLANATION OF TERMS AND SYMBOLS

The term "WARNING!" indicates instructions regarding personal safety. If the instructions are not followed the result may be bodily injury or death.

The term "CAUTION!" indicates instructions regarding possible damage to physical equipment. If these instructions are not followed, it may result in damage to the equipment that may not be covered under the warranty.

The term "IMPORTANT!" indicates instructions or information that are vital to the successful completion of the procedure.

The term "NOTE" is used to indicate additional useful information.



The intent of the lightning flash with arrowhead symbol in a triangle is to alert the user to the presence of un-insulated "dangerous" voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to humans.



The intent of the exclamation point within an equilateral triangle is to alert the user to the presence of important safety, and operating and maintenance instructions in this manual.



## IMPORTANT SAFETY INSTRUCTIONS



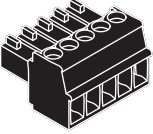

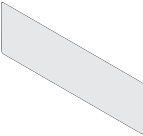
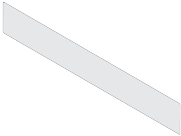
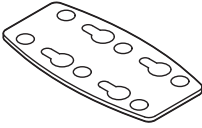
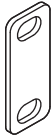
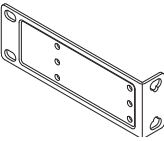
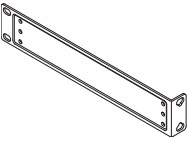
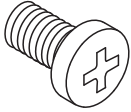





Refer to *Safety Information and Regulatory Statements Q-SYS NV-32-H 4K60 Network Video* for important information.

## Warranty

For a copy of the QSC Limited Warranty, visit the QSC website at [www.qsc.com](http://www.qsc.com)

## What's in the Box

 (1x) Q-SYSNV-32-H	 (1x) Power 2-POS 5.08 Pitch	 (2x) GPIO 5-POS 3.5 Pitch	 (1x) Foam Spacer
 (2x) Rack-Ear Cover Label 1/4, 1RU	 (1x) Rack-Ear Cover Label	 (2x) Joining Plate	 (2x) Rack Spacer Plate
 (2x) Rack Ear 1/4, 1RU	 (1x) Rack Ear	 (6x) Phillips Pan Head M4 x 7 mm	 (6x) Phillips Flathead M3 x 6 mm
	 (1x) Q-SYS NV-32-H Safety Instructions TD-001542	 (1x) QSC Warranty TD-000453	

# Introduction

The Q-SYS NV-32-H is a network video endpoint native to the Q-SYS Ecosystem, serving as a multi-stream, software-configurable HDMI encoder/decoder that enables network-based video distribution. Optimized for the meeting room, the Q-SYS NV-32-H delivers the right balance of high quality (supporting resolutions up to 4K60 4:4:4), low-latency and network-efficient video distribution across a standard gigabit infrastructure.

## Powering the Q-SYS NV-32-H



**WARNING!:** To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth when using class I power supply.

The Q-SYS NV-32-H has a flexible power solution that allows the integrator to choose to use either a 48VDC power supply or a 802.3bt PoE++ injector. Please note that 802.3bt is a high-power over Ethernet standard that allows for up to 71W of power delivered to end-point devices over standard Ethernet cabling. Equipment meeting the 802.3bt standard is required to power the Q-SYS NV-32-H. The Q-SYS NV-32-H will not work using PoE or PoE+ (802.3af or 802.3at) equipment.

With either power solution please make sure to follow the safety instructions for the specific power supply or injector chosen. For details on the 48vDC or PoE++ power supply requirements please see the product specifications at the end of this document.

## Installation

### Ventilation

Minimum open space of 6 inches measured from the back of the Q-SYS NV-32-H.

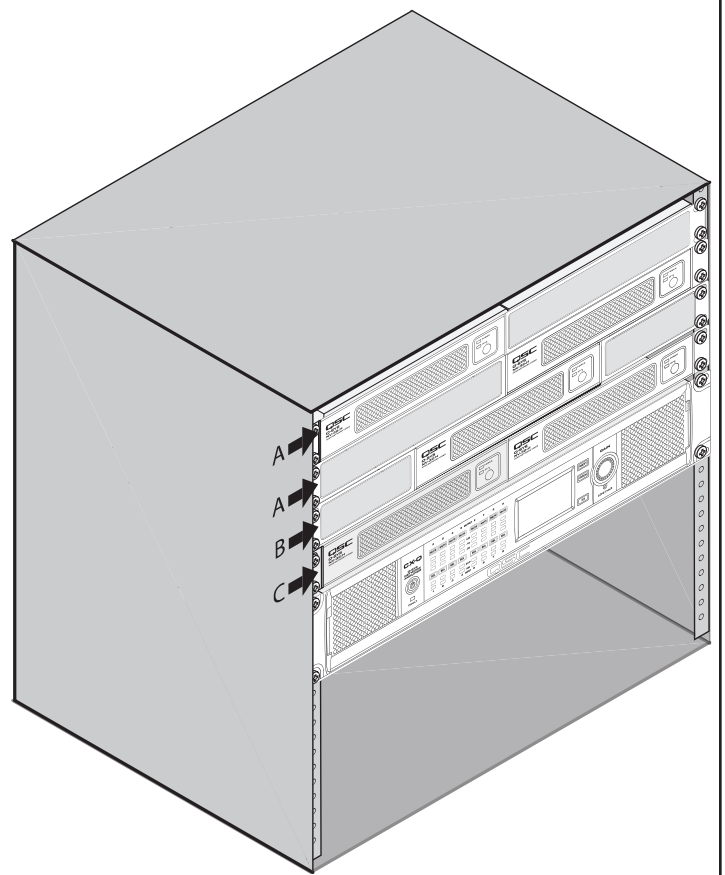


**NOTE:** In order to provide adequate dissipation of heat, keep the space directly to the rear of the Q-SYS NV-32-H free of obstacles.

### Select the Installation Configuration

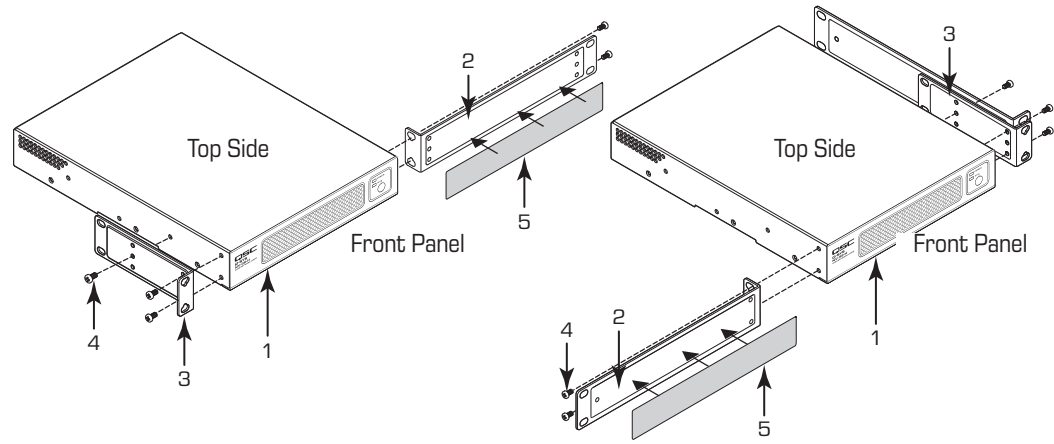
Choose one of the following configuration options:

- A.** One Q-SYS NV-32-H 19-inch Rack (Left or Right Mount)
- B.** One Q-SYS NV-32-H 19-inch Rack (Center Mount)
- C.** Two Q-SYS NV-32-H's 19-inch Rack
- D.** One Q-SYS NV-32-H Half Rack
- E.** Under Table or on Wall



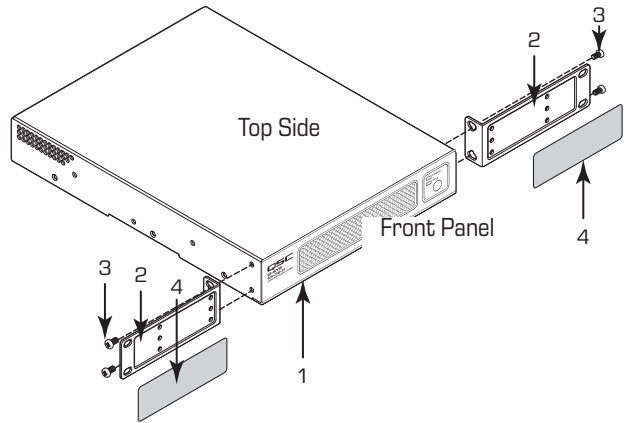
**A. One Q-SYS NV-32-H 19-inch Rack (Left or Right Mount)**

- 1. (x1)
- 2. (x1)
- 3. (x1)
- 4. (x5)
- 5. (x1)

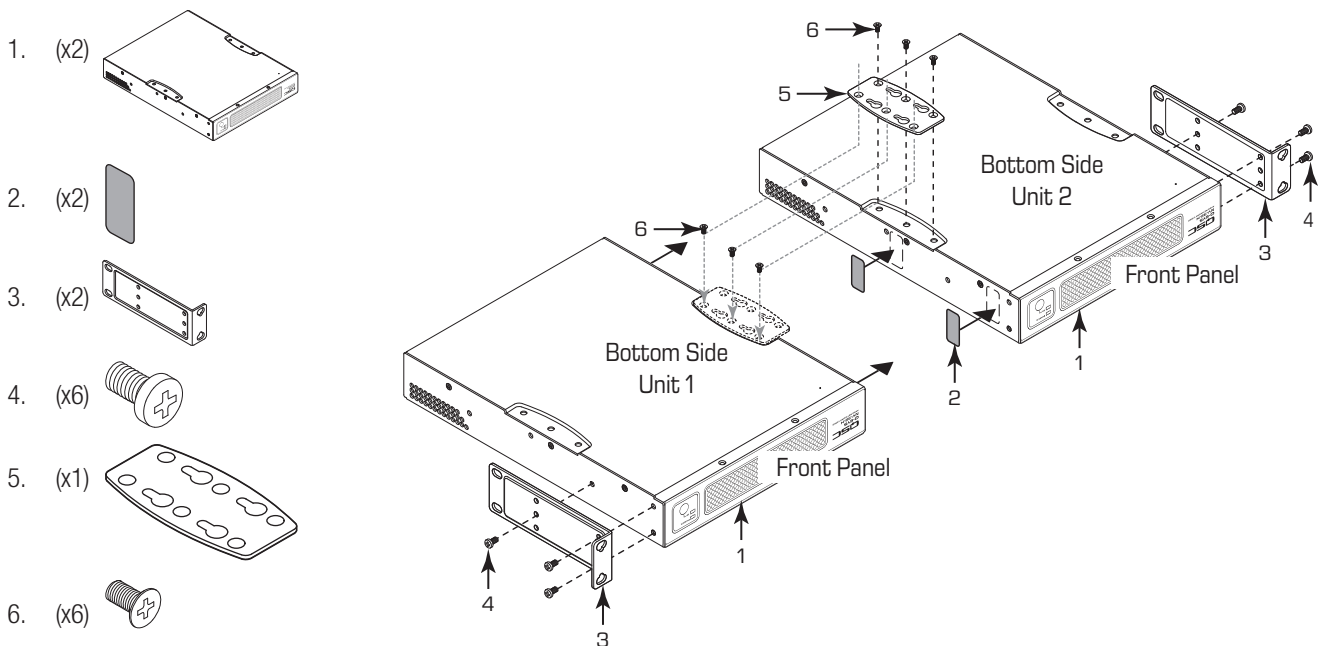


**B. One Q-SYS NV-32-H 19-inch Rack (Center Mount)**

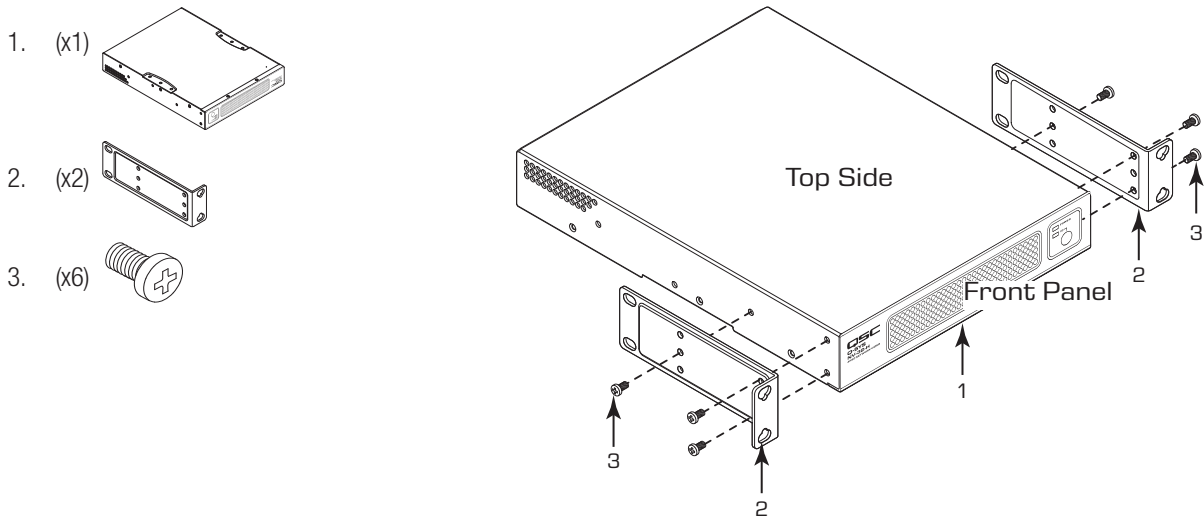
- 1. (x1)
- 2. w(x2)
- 3. (x4)
- 4. (x2)



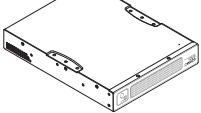
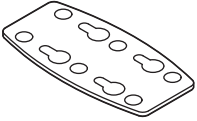


**C. Two Q-SYS NV-32-H's 19-inch Rack**

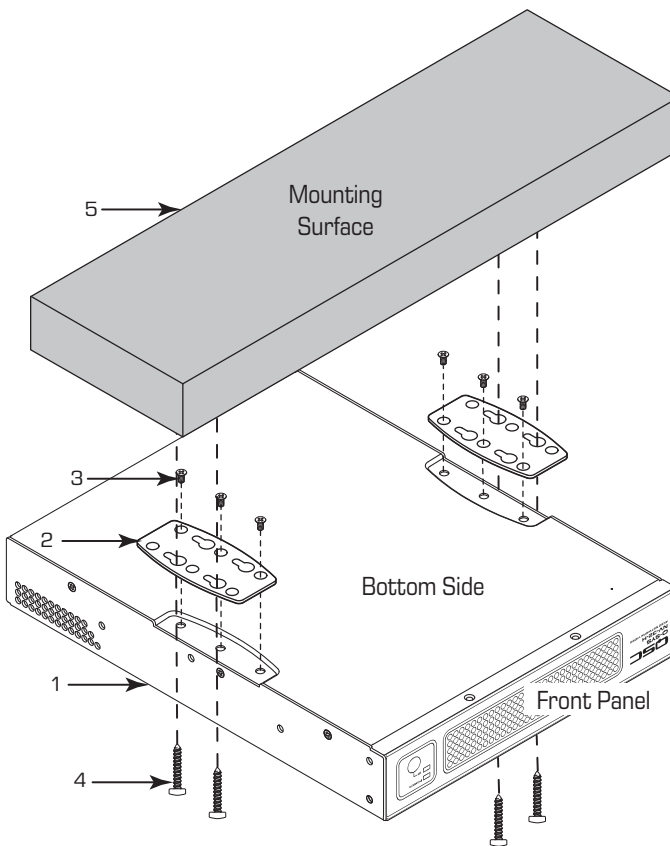


**D. One Q-SYS NV-32-H Half Rack**



### E. Under Table or on Wall


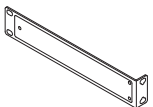

1. (x1) 
2. (x2) 
3. (x6) 
4. (x4)  Not supplied – use appropriate screws for mounting surface.
5. Mounting Surface

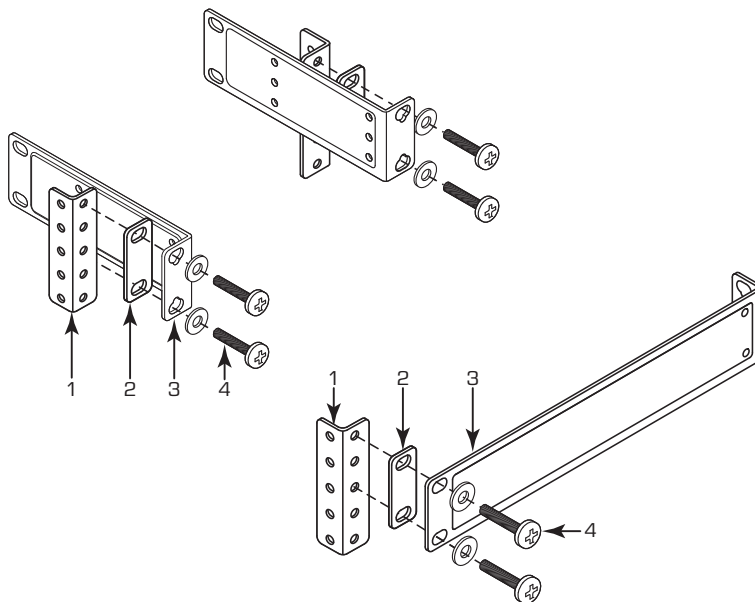


## Rack Mounting Options

### All Configurations

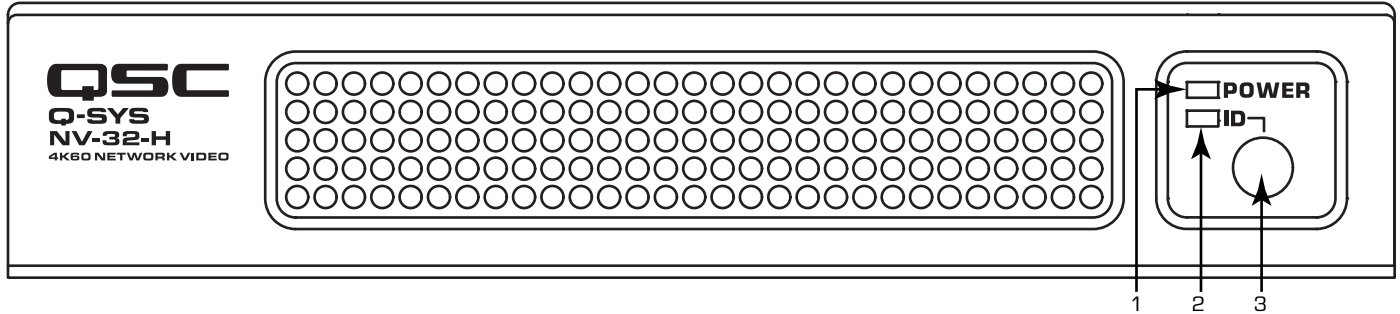
Using the examples shown in mounting options **A** through **E**, you can mount any of the Q-SYS NV-32-H configurations. The example at the lower right can be flipped to accommodate a single Q-SYS NV-32-H on the left side.

1. Equipment Rack (not supplied)
2. (2) Rack Ear Spacer 
3. (2) Rack Ear  OR 
4. (4) Rack-Mounting Screws and Washers (not supplied)



# Features

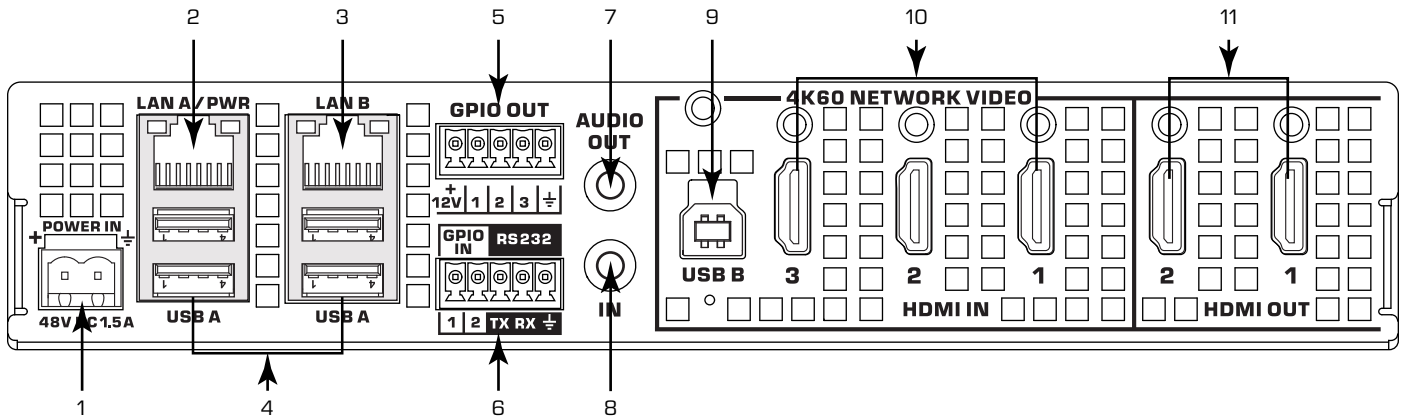
## Front Panel



— Figure 1 —

1. **Power LED** – illuminates blue when the Q-SYS NV-32-H is powered on
2. **ID LED** – LED blinks when placed into ID Mode via ID Button or Q-SYS Configurator Software
3. **ID Button** – Locates the Q-SYS NV-32-H in Q-SYS Designer GUI and Configurator

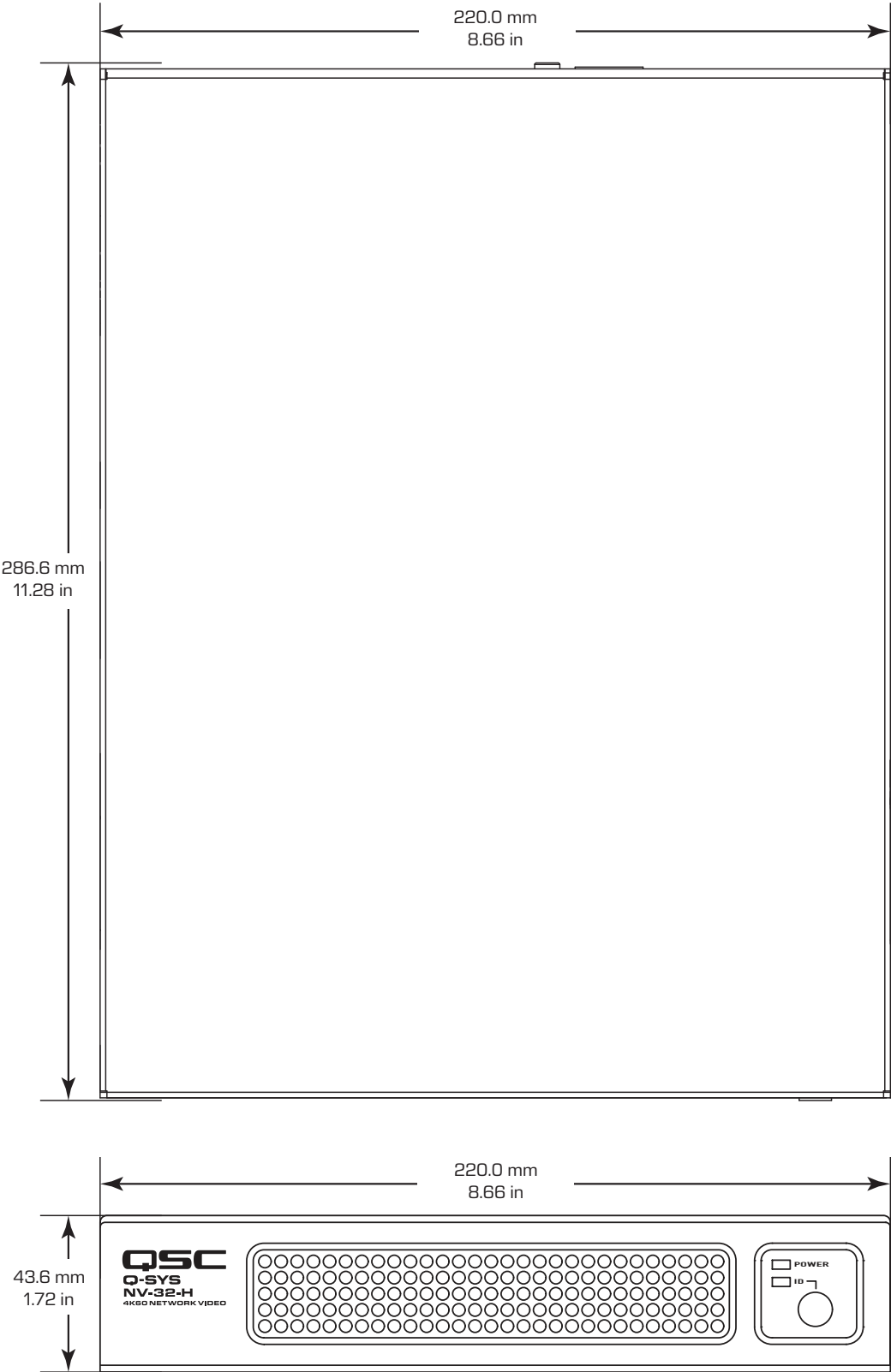
## Rear Panel



— Figure 2 —

1. **External Power Input 48 VDC 1.5 A** – Auxiliary power, 48 VDC, 1.5A, 2-pin Euro connector
2. **LAN A/ PoE ++** – connection for Q-LAN network, 802.3bt power, RJ-45 connector
3. **LAN B** – RJ-45 connector, not active at initial release
4. **USB Type A** – USB type A host connectors (blue connector is for USB 3.0 connection). 1.0 A, total, is available for all four Type-A USBs.
5. **GPIO Out**
  - **12 VDC Output** – 12 V, 0.2 A output used for GPIO signals.
  - **GPIO Outputs** – 3 outputs, open collector (24 V, 0.2 A maximum) with pull up to +3.3 V, (pins 1-3 equal pins 1-3 in the Q-SYS Designer GPIO Output component).
  - **Ground** – Use this ground reference for 12 VDC and GPIO outputs.
6. **GPIO Inputs / RS-232**
  - **GPIO Inputs** – 2 inputs, 0-24 V analog input, or contact closure, pins 1-2 equal pins 1-2 in the Q-SYS Designer GPIO Input component).
  - **RS-232** – Transmit and Receive
  - **Ground** – Use this ground reference for GPIO inputs and RS-232.
7. **Analog Audio Output** – 3.5 mm connector unbalanced stereo line output
8. **Analog Audio Input** – 3.5 mm connector unbalanced stereo mic/line input
9. **USB B** – USB Type B Device connector for web conference integration
10. **HDMI Inputs** – HDMI 2.0 Input with support for HDCP 2.2 and HDCP 1.4
11. **HDMI Output** – HDMI 2.0 Output with support for HDCP 2.2 and HDCP 1.4

# Dimensions





# Specifications

<b>Video I/O</b>	
HDMI 2.0 inputs	Three HDMI inputs capable of receiving source input video formats up to 4K60 4:4:4
HDMI 2.0 outputs	Two HDMI outputs capable of scaling and outputting video formats up to 4K60 4:4:4
Scaler	Each HDMI output features a robust, polymorphic 4K60 4:4:4 scaler than can accommodate the most challenging resolution and frame rate conversions.
<b>Audio I/O</b>	
HDMI inputs	8-channel PCM audio, Q-SYS routable
HDMI outputs	8-channel PCM audio, Q-SYS routable
Analog audio input	3.5 mm unbalanced stereo mic/line input Q-SYS routable
Signal-to-noise:	80 dB
THD+N:	0.009% @ 0 dB
Input frequency response:	20 Hz to 20 kHz +0.05% / -0.5%
Input Impedance (unbalanced):	5 k $\Omega$ nominal Analog to digital converters: 24 bit, 48 kHz
Analog audio output	3.5 mm unbalanced stereo line output Q-SYS routable
Signal-to-noise:	90 dB THD+N: 0.0167% @ 0 dB
Output frequency response:	20 Hz to 20 kHz +0.2% / -0.5%
<b>Other Connectors</b>	
External power supply	48 VDC Nominal, 1.5 A on 2-pin Euro connector
GPIO	Euro connector for extension of Q-SYS Control to third-party devices, user configurable
LAN A	Gigabit LAN connection for interface with Q-LAN; PoE++
PoE++ (Power over Ethernet) specification/wattage	Conforms to IEEE 802.3bt Type 4 specification, PD class 8 (71W at PD, 90W at PSE)
LAN B	No functionality at initial release
RS-232	Three-pin Euro connector for extension of Q-SYS Control to third-party devices, user configurable
USB Type A	USB type A host connectors (blue connector is for USB 3.0 connection). 1.0 A total is available for all four Type-A USBs.
<b>General</b>	
Dimensions	8.66 in x 11.28 in x 1.72 in 220 mm x 286.6 mm x 43.6 mm
Weight	4.0 lb (1.81 kg)
Mounting options	Rack- (1 RU half-rack width), surface-, table-, or wall-mountable. All mounting hardware is included with the exception of surface-specific screws and washers.
Regulatory compliance	CE, FCC Part 15 Class B, RoHS
<b>Environmental</b>	
Ambient operating temperature range	0-50° C
Humidity	5 to 85% non-condensing
Storage temperature	-20 to 70° C

Specifications are subject to change without notice.

**Mailing Address:**

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Tel: +1.888.252.4836 (U.S./Canada)

Tel: +1.949.791.7722 (non-U.S.)



Q-SYS™ Customer Support

\*Q-SYS 24/7 Support is for Emergency assistance with Q-SYS systems only. 24/7 support guarantees a call back within 30 min after a message is left. Please include, Name, Company, Call Back Number and description of the Q-SYS emergency for prompt call back. If calling during business hours please use the standard support numbers above.

Q-SYS Support Email

[qsysupport@qsc.com](mailto:qsysupport@qsc.com)

(Immediate email response times not guaranteed)