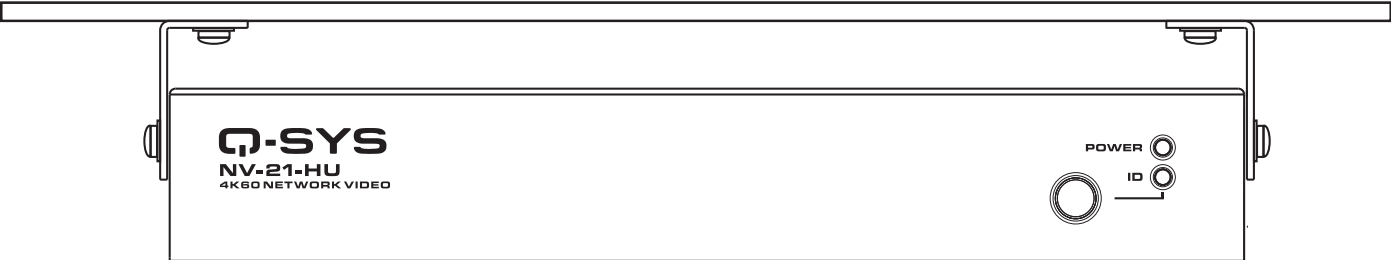


# Hardware User Manual



NV-21-HU  
4K60 Network Video Endpoint for Q-SYS



TD-001670-01-C



## 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 lightning flash with arrowhead symbol in a triangle alerts the user to the presence of uninsulated dangerous voltage within the product's enclosure that may constitute a risk of electric shock to humans.



The exclamation point within a triangle alerts the user to important safety, operating, and maintenance instructions in this manual.



### IMPORTANT SAFETY INSTRUCTIONS



TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

- **Elevated Ambient Operating Temperature** – If installed in a closed or multi-unit assembly, the ambient operating temperature of the rack environment may be greater than room ambient. Ensure that the maximum operating temperature range is not exceeded. Refer to the "FCC Statement" section.
- **Reduced Air Flow** – Installation of the equipment should be such that the amount of air flow required for safe operation of the equipment is not compromised.

1. Read, follow, and keep these instructions.
2. Heed all warnings.
3. Do not use this apparatus near water.
4. Do not submerge the apparatus in water or liquids.
5. Do not use any aerosol spray, cleaner, disinfectant or fumigant on, near or into the apparatus.
6. Clean only with a dry cloth.
7. Do not block any ventilation opening. Install in accordance with the manufacturer's instructions.
8. Keep all ventilation openings free of dust or other matter.
9. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
10. Do not unplug the unit by pulling on the cord, use the plug.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. Adhere to all applicable, local codes.
15. Consult a licensed, professional engineer when any doubt or questions arise regarding a physical equipment installation.

## Maintenance and Repair



Advanced technology, e.g., the use of modern materials and powerful electronics, requires specially adapted maintenance and repair methods. To avoid a danger of subsequent damage to the apparatus, injuries to persons and/or the creation of additional safety hazards, all maintenance or repair work on the apparatus should be performed only by a QSC authorized service station or an authorized QSC International Distributor. QSC is not responsible for any injury, harm or related damages arising from any failure of the customer, owner or user of the apparatus to facilitate those repairs.



**IMPORTANT!:** 802.3bt Type 3 Class 5 (45W from PSE, 40W at NV-21-HU) power input required or 12 VDC 9A power supply required. For more information, see "Power Requirements" on page 5.



**WARNING!:** This product is intended to be powered by a listed power supply with a mating connector, output rated 12VDC, 9A minimum or Power over Ethernet (PoE) compliant with IEEE 802.3bt, and rated 0.8A minimum, TMA 40°C, and maximum altitude of 2000m. If you need further assistance, contact QSC, LLC for further information.

## Environmental

- **Expected Product Life Cycle:** 10 years
- **Storage Temperature Range:** -20°C to +70°C (-4°F to 158°F)
- **Storage Humidity Range:** 5% to 90% RH non-condensing
- **Operating Temperature Range:** 0°C to 40°C (32°F to 104°F)
- **Operating Humidity Range:** 5% to 90% RH non-condensing

## FCC Statement

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. 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 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.

# RoHS Statements

The QSC Q-SYS NV-21-HU is in compliance with European RoHS Directive.

The QSC Q-SYS NV-21-HU is in compliance with "China RoHS" directives. The following table is provided for product use in China and its territories.

QSC Q-SYS NV-21-HU						
部件名称 (Part Name)	有害物质 (Hazardous Substances)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(vi))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电路板组件 (PCB Assemblies)	X	○	○	○	○	○
机壳装配件 (Chassis Assemblies)	X	○	○	○	○	○

本表格依据 SJ/T 11364 的规定编制。

O: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。

X: 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。

(目前由于技术或经济的原因暂时无法实现替代或减量化。)

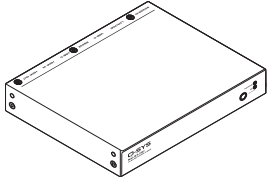
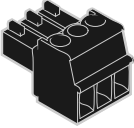

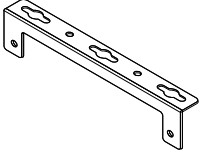
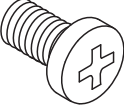
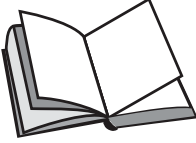
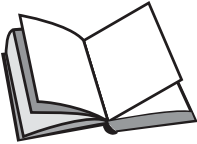
This table is prepared following the requirement of SJ/T 11364.

O: Indicates that the concentration of the substance in all homogeneous materials of the part is below the relevant threshold specified in GB/T 26572.

X: Indicates that the concentration of the substance in at least one of all homogeneous materials of the part is above the relevant threshold specified in GB/T 26572.

(Replacement and reduction of content cannot be achieved currently because of the technical or economic reason.)

## What's in the Box

 <p>(1x) NV-21-HU</p>	 <p>(1x) Euro Connector 3-position, black RS232</p>	 <p>(4x) Foam Spacer</p>
 <p>(2x) Mounting Bracket</p>	 <p>(6x) Phillips Pan Head M4 x 7mm (4 used + 2 spares)</p>	 <p>(1x) Warranty TD-000453</p>
 <p>(1x) Safety Information TD-001652</p>		

## Introduction

The Q-SYS NV Series NV-21-HU is the next evolution for native video distribution on the Q-SYS Platform. The NV-21-HU is a software configurable endpoint offering a comprehensive single-cable solution for video distribution, AV bridging, and device charging via USB-C. The NV-21-HU's compact size and reduced I/O make it ideal for supporting meeting rooms, learning spaces, hospitality and entertainment installations. The NV-21-HU can be used alongside other Q-SYS NV Series video endpoints, providing system design flexibility. Like all Q-SYS products, the NV-21-HU offers native integration and control, simplifying configuration and operation.



**NOTE:** NV-21-HU network video endpoints require a Q-SYS Core processor and Q-SYS Designer Software (QDS) version 9.8.1 and later for configuration and operation. Information about the QDS components related to the NV-21-HU, including their properties and controls, can be found in Q-SYS Help at [help.qsys.com](http://help.qsys.com). Or, simply drag an NV-21-HU component from the Inventory into the Schematic and press F1.

## Power Requirements

The Q-SYS NV-21-HU has a flexible power solution that allows the integrator to choose to use either Power over Ethernet (PoE) 802.3bt Type 3 Class 5 (45W from PSE, 40W at NV-21-HU) or a 12VDC 9A power supply accessory, part number FG-901591-xx.

With either power solution, you must follow the safety instructions for the chosen power source. Refer to the NV-21-HU Specifications Sheet at [qsys.com](http://qsys.com) for additional power supply details.



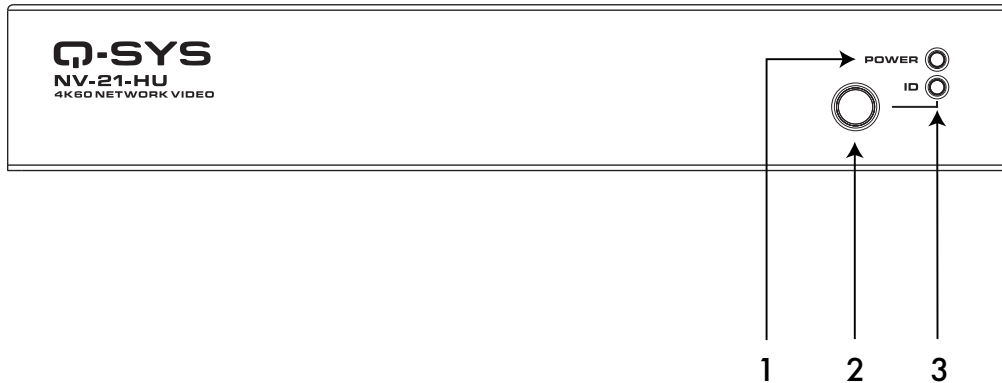
**NOTE:** The NV-21-HU includes a USB-C port that is capable of charging external devices such as phones, tablets, and laptops. The 12VDC 9A power supply accessory (part number FG-901591-xx) is required for this capability.



**NOTE:** If using the 12VDC 9A power supply accessory (part number FG-901591-xx), the power supply cord shall be connected to a socket-outlet with an earthing connection.

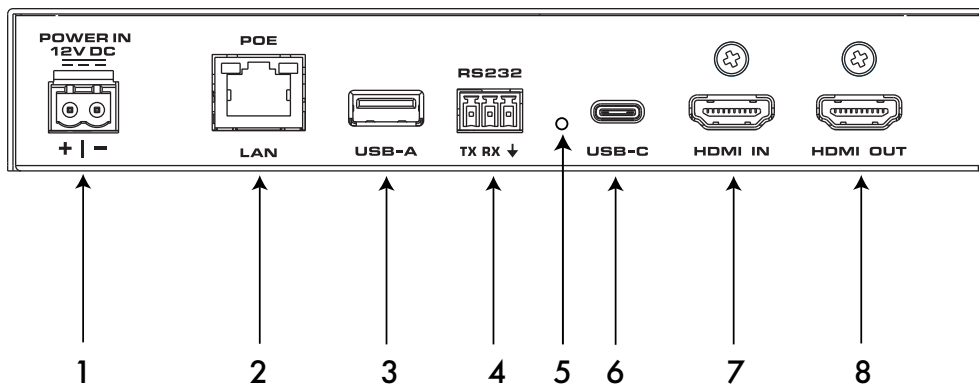
# Connections and Callouts

## Front Panel



1. **Power LED** – Illuminates blue when the NV-21-HU is powered on.
2. **ID Button** – Locates the NV-21-HU in Q-SYS Designer Software and Q-SYS Peripheral Manager.
3. **ID LED** – Blinks green when placed into ID Mode via ID Button or Q-SYS Peripheral Manager.

## Rear Panel



1. **External Power Input** – Auxiliary power, 12VDC, 9A. Uses a 2-pin Euro connector (not included).
2. **LAN / PoE** – RJ-45 connector, 2.5GbE, 802.3bt Type 3 Class 5 (45W from PSE, 40W at NV-21-HU). For connection to Q-LAN.
3. **USB-A** – USB 3.0 Type-A Host Port. Supports 5VDC @ 900mA max.
4. **RS232** – Serial Transmit and Receive. Uses the black 3-pin Euro connector.
5. **Reset Button** – Use a paper clip, or similar tool, to press and hold the reset button for 10 seconds to reset the NV-21-HU to factory values.
6. **USB-C** – USB 3.2 Gen 1x1 (5Gbps) Type-C Device Port, supporting DisplayPort Alt-Mode (DP 1.4 Sink) and USB Power Delivery up to 65W.
7. **HDMI In** – HDMI 2.0 Input with support for HDCP 2.3 and HDCP 1.4.
8. **HDMI Out** – HDMI 2.0 Output with support for HDCP 2.3 and HDCP 1.4.

# Installation

The NV-21-HU can be mounted under a table or desk, on a rack shelf, flush-mounted (such as on a wall), or simply be placed freestanding on a surface without mounting. Regardless of your chosen installation method, you must observe the Ventilation Requirements.

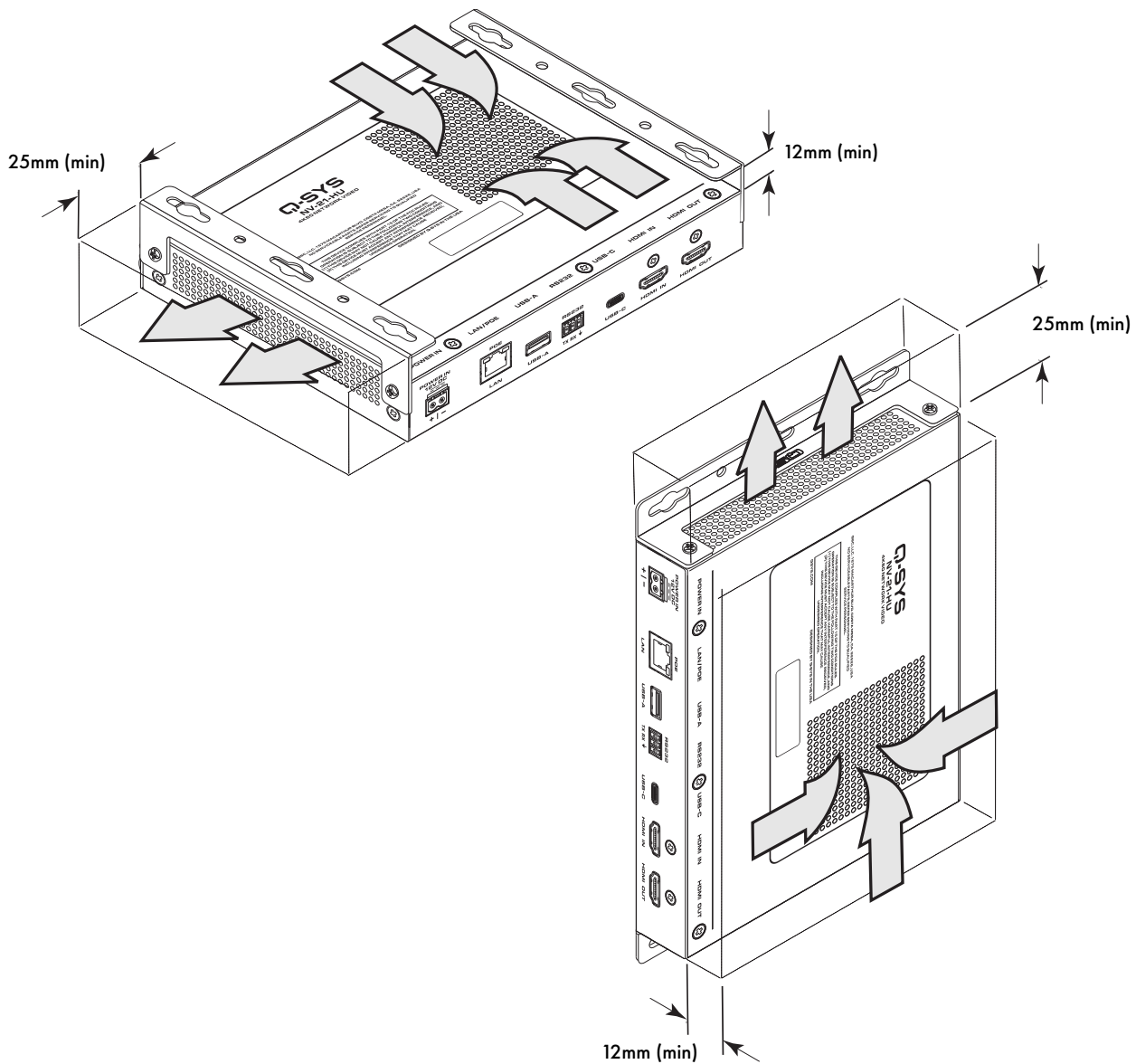
- "Ventilation Requirements" on page 7
- "Under Table Mounting" on page 8
- "Flush / Wall Mounting" on page 9
- "Freestanding Installation" on page 9



**NOTE:** If mounting the unit on a rack shelf, note that the height of the unit with bracket is 1RU. Instructions for rack shelf mounting are not included in this manual. Consult your rack shelf documentation for guidance.

## Ventilation Requirements

Maintain at least 12mm clearance for fresh air intake and 25mm clearance for exhaust outflow, regardless of installation method and unit orientation.

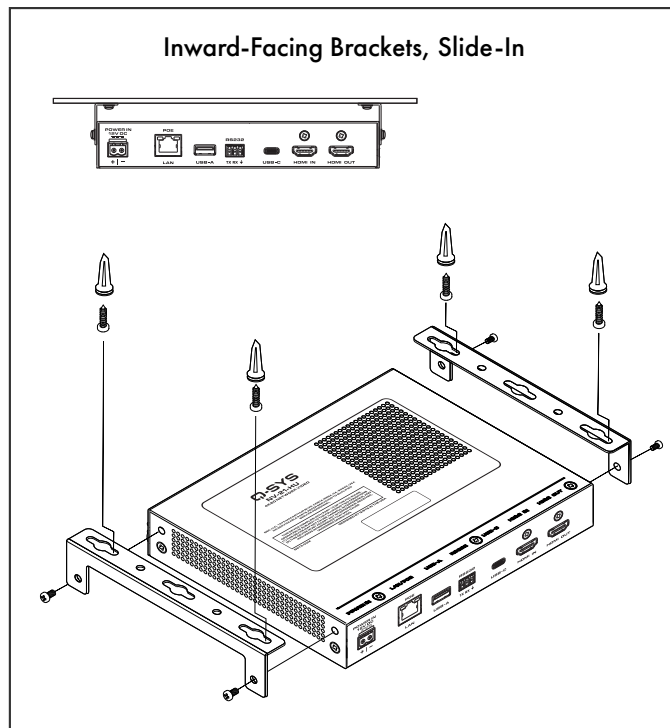
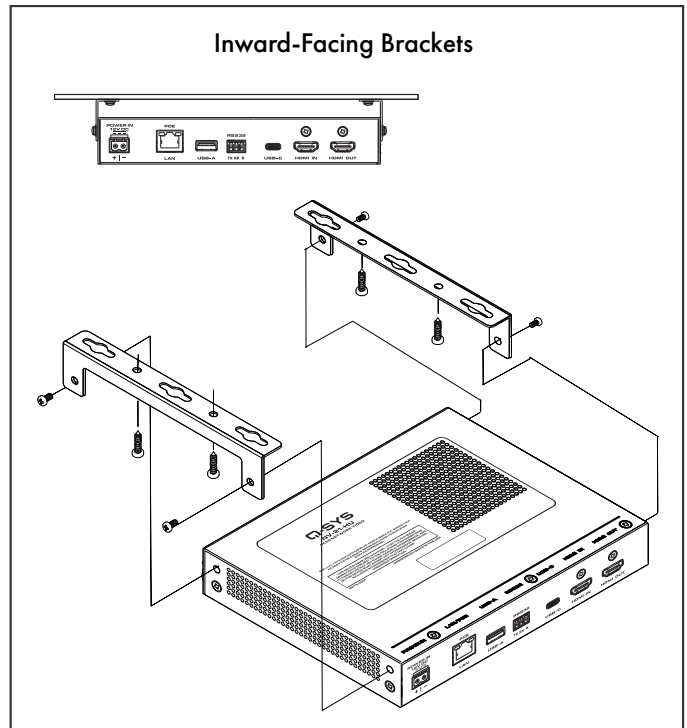
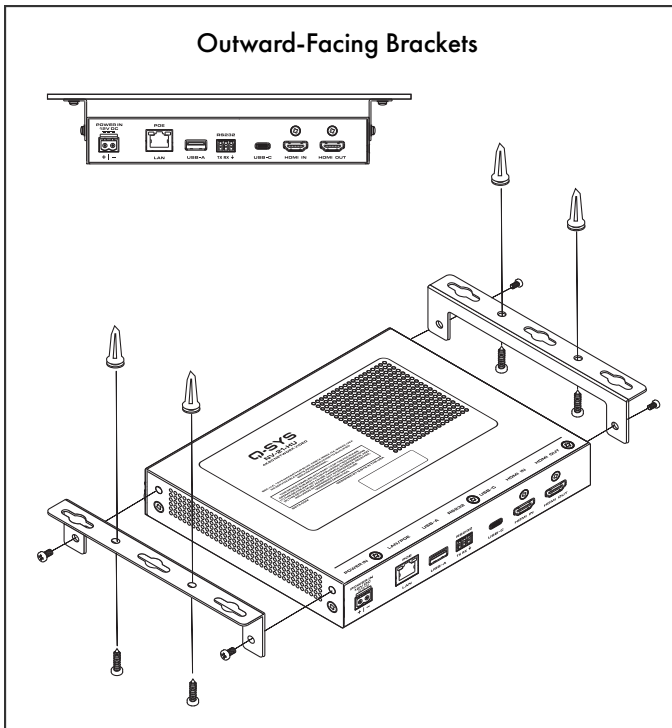


# Installation Cont'd

## Under Table Mounting

Use the two (2) included brackets and four (4) Phillips pan head screws. Brackets can be attached to the unit either outward-facing or inward-facing, as shown. Screw and anchor hardware for mounting the brackets to the surface is pictured but not included.

**TIP:** If a semi-permanent installation is desired, use the bracket keystone holes in conjunction with screws tightened loosely to the brackets to allow for easy slide-on and slide-off of the unit.

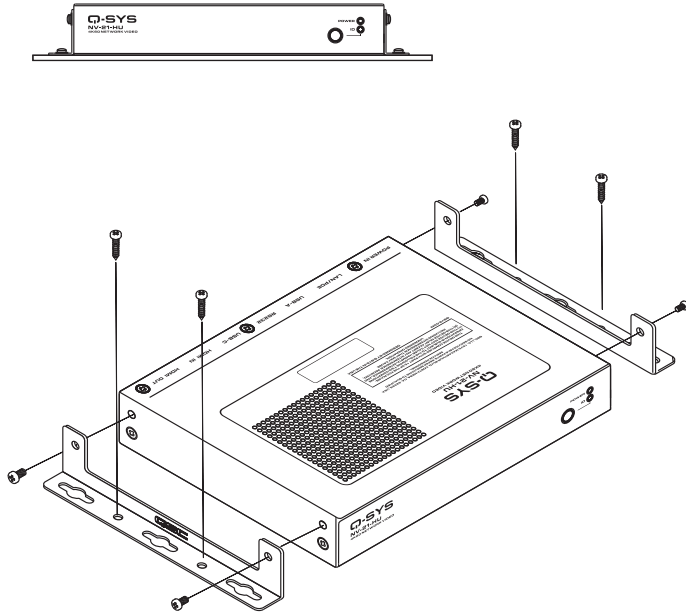




# Installation Cont'd

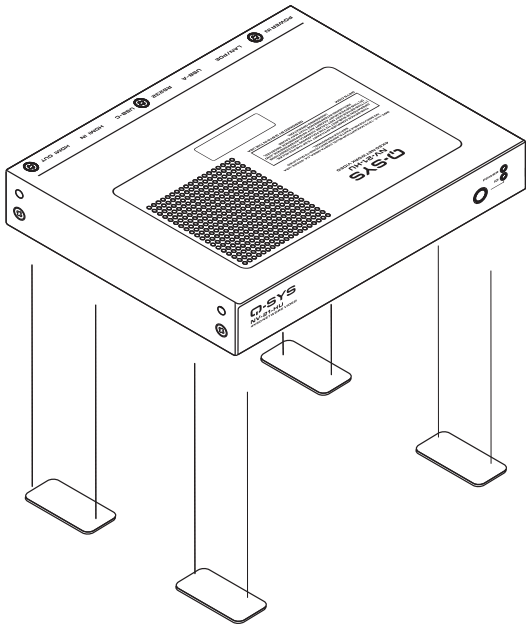
## Flush / Wall Mounting

Use the two (2) included brackets and four (4) Phillips pan head screws. Screws for mounting the brackets to the surface are pictured but not included.



## Freestanding Installation

Attach the four (4) included foam spacers to the underside of the unit.





## Self Help Portal

Read knowledge base articles and discussions, download software and firmware, view product documents and training videos, and create support cases.

[qscprod.force.com/selfhelpportal/s/](https://qscprod.force.com/selfhelpportal/s/)

## Customer Support

Refer to the Contact Us page on the Q-SYS website for Technical Support and Customer Care, including their phone numbers and hours of operation.

[qsys.com/contact-us/](https://qsys.com/contact-us/)

## Warranty

For a copy of the QSC Limited Warranty, go to:

[qsys.com/support/warranty-statement/](https://qsys.com/support/warranty-statement/)

Q-SYS  
**SHIFT**<sup>™</sup> Q-SYS Shift is a trademark of QSC, LLC.

© 2023 QSC, LLC All rights reserved. QSC, the QSC logo, Q-SYS, and the Q-SYS logo are registered trademarks of QSC, LLC in the U.S. Patent and Trademark Office and other countries. Patents may apply or be pending. All other trademarks are the property of their respective owners.

[qsys.com/patents](https://qsys.com/patents)  
[qsys.com/trademarks](https://qsys.com/trademarks)