



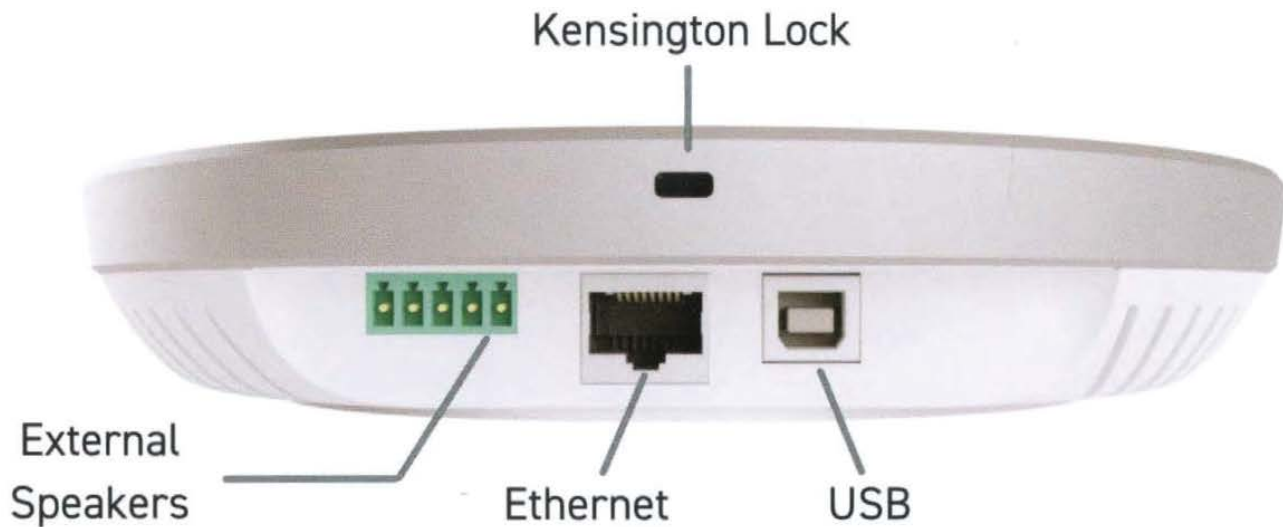
# STEM **HUB EXPRESS**

**COMMUNICATION CENTER**

# **USER GUIDE**

# OVERVIEW

Stem Hub Express is the communication center and acts as the brain of a room, connecting your network of Stem Ecosystem™ products to external loudspeakers and other conferencing interfaces over USB Type B, or SIP.



## Features

# MOUNTING

1. Using a level, mark two points on your mounting surface at exactly 2.75 inches apart (7 cm).
2. Install the provided screws at the marked positions. Use the provided anchors as necessary.
3. Align the keyholes on the back of the device with the screws and lightly push in and down to lock into place.
4. That's it! Hub Express is now mounted!



# SETTING UP

Stem Hub Express enables all endpoints to communicate with each other and provides one place to make connections to external loudspeakers, and other conferencing interfaces for all Stem Ecosystem devices.

1. Connect Hub Express to a network that supports PoE+ using an Ethernet cable. This connection provides the device with power, data, and other IoT and SIP capabilities.

**Note:** If your network doesn't support PoE+, you should purchase a separate PoE+ injector or PoE+ enabled switch.

2. Plug your audio and conferencing devices into Hub using the following connectors. These connections will be utilized for all Stem Ecosystem devices on the network.

**USB (Type B):** Enables video and audio conferencing capabilities when connected to your PC.

**External Speakers:** A female terminal block connector (unamplified) for external speakers or amplifiers. Use with the provided male terminal block connector.

3. Complete your setup using the Stem Ecosystem platform.

**Important** To ensure that external loudspeakers perform properly, use Stem RoomAdapt.

For more information on setting up your room, visit [stemaudio.com/manuals](http://stemaudio.com/manuals) or [stemaudio.com/videos](http://stemaudio.com/videos).

# STEM ECOSYSTEM PLATFORM

We recommend using the Stem Ecosystem Platform for all installations.

Access the Stem Ecosystem Platform using Stem Control, through the apps available for iOS, Windows, and Android, or by typing in the product's IP address in a web browser.

# NEED SOME HELP

**Website:** [stemaudio.com](http://stemaudio.com)

**Email:** [customerservice@stemaudio.com](mailto:customerservice@stemaudio.com)

**Telephone:** (949) 877-STEM (7836)

**Product Guides:** [stemaudio.com/manuals](http://stemaudio.com/manuals)

**Setup Videos:** [stemaudio.com/videos](http://stemaudio.com/videos)

**Additional Installation Resources:** [stemaudio.com/installation-resources](http://stemaudio.com/installation-resources)



# HUBX1 SPECIFICATIONS

- Frequency Response: 50Hz – 16KHz
- Noise cancellation: >15dB (without pumping noise)
- Weight: 0.5 lbs. (0.23 kg)
- Dimensions: 7 x 1.5 in (17.8 x 3.8 cm) D x H
- Power Consumption: PoE+ 802.3 at Type 2
- Operating Systems: Windows 98 and up / Linux / MacOS.

## Connectors

- USB: USB Type B
- Ethernet: RJ45 connector (requires PoE+)
- Analog: Female Terminal Block (for external speakers)

## What's In The Box

- USB Type A to USB Type B Cable: 12 ft. (3.7 m)
- CAT 6 Ethernet Cable: 15 ft. (4.6 m)
- Terminal Block Connector (male)
- Philips Head Screws and Drywall Anchors (2)

## Certifications

This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Industry Canada ICES-003 Compliance Label: CAN ICES-3 (A)/NMB-3(A)

# IMPORTANT PRODUCT INFORMATION

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Please consider the environment, electric products and packaging are part of regional recycling schemes and do not belong to regular household waste.

# WARRANTY

The following warranty statement is effective for all Stem Audio products as of May 1st, 2019. Stem Audio ("the Manufacturer") warrants that this product is free of defects in both materials and workmanship. Should any part of this product be defective, the Manufacturer agrees, at its option, to repair or replace with a like-new replacement any defective part(s) free of charge (except transportation charges) for a period of two years for all products. This warranty period begins on the date the end-user is invoiced for the product, provided the end-user provides proof of purchase that the product is still within the warranty period and returns the product within the warranty period to Stem Audio or an authorized Stem Audio dealer according to the Product Return and Repair Policy listed below. All inbound shipping costs are the responsibility of the end-user, Stem Audio will be responsible for all outbound shipping costs.

## Product Return and Repair Policy

1. If purchased directly from Manufacturer (Stem Audio):  
An RMA (Return Merchandise Authorization) number must be obtained by the end user from Stem Audio. Product serial number and proof of purchase must be presented in order to request an RMA number for a warranty claim. The end-user must return the product to Stem Audio and must display the RMA number on the outside of the shipping package.
2. If purchased through an authorized dealer, return to seller:  
End-users should refer to seller's return policy. Seller may, at its discretion, provide an immediate exchange or may return the product to the Manufacturer for repair.

THIS WARRANTY IS VOID IF: The product has been damaged by negligence, accident, act of God, or mis-handling, or has not been operated in accordance with the procedures described in the operating and technical instructions; or; The product has been altered or repaired by other than the manufacturer or an authorized service representative of the Manufacturer; or; Adaptations or accessories other than those manufactured or provided by the Manufacturer have been made or attached to the product which, in the determination of the Manufacturer, shall have affected the performance, safety or reliability of the product; or; The product's original serial number has been modified or removed.

NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE, APPLIES TO THE PRODUCT. MANUFACTURER'S MAXIMUM LIABILITY HEREUNDER SHALL BE THE AMOUNT PAID BY THE END USER FOR THE PRODUCT.

The Manufacturer shall not be liable for punitive, consequential, or incidental damages, expenses, or loss of revenue or property, inconvenience, or interruption in operation experienced by the end-user due to a malfunction in the purchased product. No warranty service performed on any product shall extend the applicable warranty period. This warranty extends only to the original end-user and is not assignable or transferable. This warranty is governed by the laws of the State of California.

For more information or technical support please refer to our website [www.stemaudio.com](http://www.stemaudio.com), email us at [customerservice@stemaudio.com](mailto:customerservice@stemaudio.com), or call (949) 877-7836.



**SHURE**  
**STEM**  
ECOSYSTEM

STEM WALL



STEM TABLE



STEM CEILING



STEM SPEAKER



STEM HUB



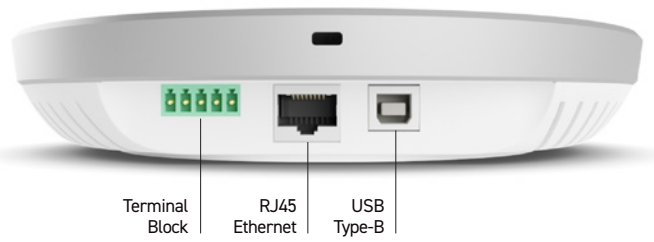
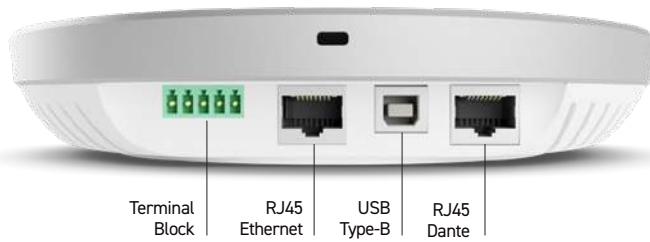
STEM CONTROL



STEM HUB & HUB EXPRESS

# THE BRAINS OF THE OPERATION

**Communication Center** — When you have more than one Stem device in a room or you need additional connectivity options, Stem Hub brings it all together, enabling multiple audio endpoints to communicate with each other and function as one room ecosystem.



## + ONE CENTRAL DEVICE

Hub processes and centralizes the audio from all your Stem devices to provide a single audio channel for the entire room, and acts as the ecosystem interface for connection with your video conferencing platform.

## + DANTE® AUDIO NETWORKING FOR HUB

Connect your room and Stem Ecosystem into a Dante network with a single Dante input and output channel to and from Hub. The device is also compatible with Dante Domain Manager, allowing seamless expansion over any network infrastructure.

## + INSTALLATION

Power over Ethernet (PoE+) and networked setup eliminate complicated cabling and make installation effortless.



### MOUNTING

Mount on a wall and hide it behind a screen



### DIMENSIONS

Diameter: 7 in. (17.8 cm)  
Height: 1.5 in. (3.8 cm)



### CONNECTIONS

RJ45 Ethernet, RJ45 Dante (in Hub only), USB Type B, and Female Terminal Block

## + STEM ECOSYSTEM PLATFORM

Stem devices are backed by a robust platform full of tools designed to make the process of adopting new technology effortless for anyone. You can access the Stem Ecosystem platform via Stem Control, iOS or Android app, or via HTML web browser.

### RoomDesign

Virtually recreate your room so you know exactly what audio devices you need before you buy. Choose your favorite combination of devices, place them in your desired location, and even check the estimated coverage ranges.

### RoomAdapt

No manual configuration or tuning needed. At the press of a button, Stem devices will listen to and automatically adjust and optimize device settings specific to the acoustic signature of your room.

### RoomCheck

By listening to your voice, the noise in the room, and measuring the reverberation that your room acoustics produce, RoomCheck generates a heatmap highlighting the expected audio quality for different areas in the room.

### Remote Management

See what's happening across your organization at any given moment. Learn from data-rich statistics about room usage and performance, or schedule automatic device updates, all in one place.



**SHURE**  
**STEM**  
ECOSYSTEM

# STEM HUB & HUB EXPRESS COMMUNICATION CENTER

## OVERVIEW

Stem Hub Communication Center is required when more than one Stem Ecosystem audio endpoint is used in a room, allowing multiple devices to communicate with each other and function as an ecosystem. With two different variations to choose from, Hub and Hub Express, you have a variety of flexible connectivity options to integrate with conferencing platforms or expand the system over any network infrastructure.

- Connects up to 10 audio endpoints, centralizes and processes signals from all connected devices to provide a single audio channel for the entire room.
- Ethernet connection provides the device with data, power, SIP, and the ability to communicate with other networked endpoints.
- Hub: Dante® digital audio networking (1 input / 1 output) including compatibility with Dante Domain Manager for seamless expansion over any network infrastructure.
- USB connectivity allows to connect a Stem Ecosystem room solution directly to a PC for video conferencing, Power over Ethernet (PoE+).
- Female terminal block connector is available to connect existing analog speakers in the room or to add them for additional speaker output.
- Power over Ethernet (PoE+).
- Wall mountable with slim design to hide the device behind a screen.
- Kensington lock equipped.

## SPECIFICATIONS (subject to change)

### GENERAL

Connector Type	RJ45 and USB Type B
Power Requirements	Power over Ethernet Plus (PoE+) 802.3 at Type 2
Control Application	Stem Ecosystem Platform
Weight	0.5 lbs (0.23 kg)
Product Dimensions	7 x 1.5 in (17.8 x 3.8 cm) D x H
Operating Temperature Range	-6.7°C (20°F) to 40°C (104°F)
Storage Temperature Range	-29°C (-20°F) to 74°C (165°F)

### AUDIO

Frequency Response	50 Hz to 16 kHz
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## ACCESSORIES (included in the box)

CAT 6 Ethernet Cable: 15 ft. (4.6 m)

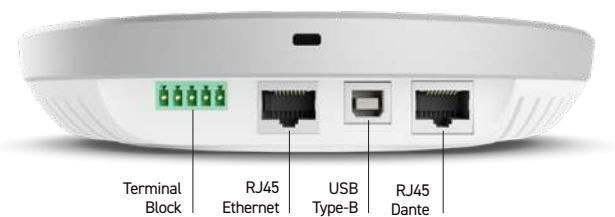
USB Type A to USB Type B Cable: 12 ft. (3.7 m)

Terminal Connector

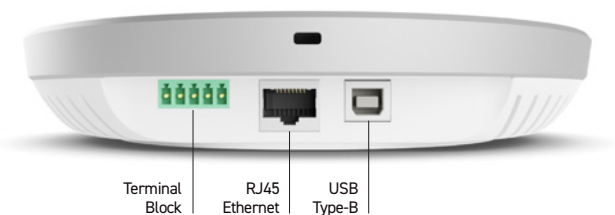
Wall Mounting Kit (Screws and Drywall Anchors)



**STEM HUB & HUB EXPRESS**  
Communication Center



**STEM HUB**  
Connections



**STEM HUB EXPRESS**  
Connections

# Stem Audio User Agreement

This Stem Audio Software and Product End User Agreement (this "Agreement") is a binding agreement between STEM AUDIO, a California corporation (the "Company"), and you ("your" or "you") for the Stem Audio products that you purchased from Stem Audio or one of its authorized distributors (the "Products") and the software included with the Products and made available to you as an owner of the Products (the "Software"). By using or accessing the Products and the Software, you agree to this Agreement. If you are using the Software and Services on behalf of a company, then you represent and warrant that you have the authority do so on behalf of your company.

1. License Grant and Scope. Subject to and conditioned upon your strict compliance with all terms and conditions set forth in this Agreement, the Company hereby grants to you a non-exclusive limited license to use, the Software, as incorporated into, or used in conjunction with, the Products and the documentation provided by the Company (the "Documentation") with the Software and the Products, subject to all conditions and limitations set forth in this Agreement.

2. Use Restrictions. You shall not directly or indirectly: (a) use the Software or the Documentation beyond the scope of the license granted under Section 1; (b) modify, translate, adapt, or otherwise create derivative works of the Software or the Documentation; or (c) reverse engineer, disassemble, decompile, decode, or otherwise attempt to derive or gain access to the source code of the Software or any part thereof;

3. Collection and Use of Information By Company.

(a) You acknowledge that the Company collects the following data relating to your Products, which are provided by the Company to you to provide product support to you and to further development of current and future Products by the Company (collectively, "Data"):

(i) data from tests performed by you using the Products (e.g., Room Check, Room Adapt, and Room Test). This data will include, without limitation, the audio recordings from the sounds tests that you perform as well as information relating to the microphone sensitivities, and reverberance levels captured by the speakers (note:audio will be recorded to capture the "test tones" (and other background noise) during these tests);

(ii) network performance of your Products, such as the number of lost packets and the network bandwidth of the system in which the Products are being operated;

(iii) error logs identifying system errors with respect to the Product and the Software (e.g., the loss of connection with respect to a unit or room or a failure of Software test with respect to the Product). The error information collected will consist of the MAC address of the Product, the time the error occurred, and the type of error event;

(iv) information relating to room pairings and how units work as part of a unit or room. The information collected will consist of the MAC address of the Products, the existence of a pairing, the time the pairings occurred, and the units paired;

(v) setup and configurations of Products using the Software. The information collected consists of how many units are in a room setup and the type of units in a room setup. Identifying information relating to the actual room where the Products are setup will not be collected.

(b) You further agree that the Company may use the foregoing information collected to measure the performance of the Products and Software and to develop updates, upgrades, and improved Products and Software.

4. Information Not Collected By the Company. Data collected and stored will be identified only by the unique MAC address of the units to which the Data relates. The Company will not store or use the Data with information relating to a particular user, organization, or location, unless the Company is researching a particular inquiry by you, in which case you will need to provide the Company with the unique MAC address for the Product so that Company can identify your device to investigate your inquiry. Repair and maintenance logs will be kept separate from any Data (as defined in this Agreement).



The Company's repair and maintenance logs that are associated with your account will be utilized only for servicing your account (de-identified general repair and maintenance history for Products and Software may be maintained by the Company to track general Product and Software performance).

5. DISCLAIMER OF WARRANTIES. Except as expressly provided by the Company in a written Company warranty provided by the Company to you, the Software and Products are provided "AS-IS". To the maximum extent permitted by law, the Company disclaims all warranties express or implied, including the implied warranty of non-infringement, merchantability, and fitness for a particular purpose.

6. Limitation of Liability. TO THE FULLEST EXTENT PERMITTED UNDER APPLICABLE LAW:

(a) IN NO EVENT WILL COMPANY OR ITS AFFILIATES, OR ANY OF ITS OR THEIR RESPECTIVE COMPANIES OR SERVICE PROVIDERS, BE LIABLE TO YOU OR ANY THIRD PARTY FOR ANY USE, INTERRUPTION, DELAY, OR INABILITY TO USE THE SOFTWARE; LOST REVENUES OR PROFITS; DELAYS, INTERRUPTION, OR LOSS OF SERVICES, BUSINESS, OR GOODWILL; LOSS OR CORRUPTION OF DATA; LOSS RESULTING FROM SYSTEM OR SYSTEM SERVICE FAILURE, MALFUNCTION, OR SHUTDOWN; FAILURE TO ACCURATELY TRANSFER, READ, OR TRANSMIT INFORMATION; FAILURE TO UPDATE OR PROVIDE CORRECT INFORMATION; SYSTEM INCOMPATIBILITY OR PROVISION OF INCORRECT COMPATIBILITY INFORMATION; OR BREACHES IN SYSTEM SECURITY; OR FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT, EXEMPLARY, SPECIAL, OR PUNITIVE DAMAGES, WHETHER ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT, BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), OR OTHERWISE, REGARDLESS OF WHETHER SUCH DAMAGES WERE FORESEEABLE AND WHETHER OR NOT THE COMPANY WAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

(b) IN NO EVENT WILL COMPANY AND ITS AFFILIATES', INCLUDING ANY OF ITS OR THEIR RESPECTIVE COMPANYS' AND SERVICE PROVIDERS', COLLECTIVE AGGREGATE LIABILITY UNDER OR IN CONNECTION WITH THIS AGREEMENT OR ITS SUBJECT MATTER, UNDER ANY LEGAL OR EQUITABLE THEORY, INCLUDING BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, AND OTHERWISE, EXCEED THE TOTAL AMOUNT PAID TO THE COMPANY PURSUANT TO THIS AGREEMENT FOR THE PARTICULAR PRODUCTS AND SOFTWARE TO WHICH SUCH LIABILITY RELATES.

7. Governing Law. This Agreement shall be interpreted and construed in accordance with the laws of California. Any and all claims, controversies and causes of action arising out of or relating to this Agreement, whether sounding in contract, tort or statute, shall be governed by the laws of the California, including its statutes of limitations, without giving effect to any conflict-of-laws rule that would result in the application of the laws of a different jurisdiction. Any action arising out of this agreement shall be brought exclusively in a court of competent jurisdiction located in Orange County, California.

8. Entire Agreement; Amendments; Severability; Counterparts. This Agreement constitutes the entire agreement and understanding of the parties, and supersedes any and all previous agreements and understandings, whether oral or written, between the parties with respect to the matters set forth in this Agreement. No provision of this Agreement may be amended, modified or waived, except in a writing signed by the parties. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision, and if any restriction in this Agreement is found by a court to be unreasonable or unenforceable, then such court may amend or modify the restriction so it can be enforced to the fullest extent permitted by law. The section headings in this Agreement have been inserted as a matter of convenience of reference and are not a part of this Agreement.





**Stem audio**  
**QUALITY CERTIFICATE**

Tested by: NAU214  
Date: September 6, 2021

Hardware Version: 4.5  
Firmware Version: 2.2.3.0  
Model: HUBX

MAC Address: D8:34:EE:10:1B:D4  
Serial: AAH31180333

USB Port: PASSED  
Ethernet Port: PASSED  
External Speaker Port: PASSED