



BRIDGE

User Manual

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User Manual

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This manual must be accessible to the person operating this product. As such, the product owner must store it in a safe place and make it available upon request to any operator.

Resale of this product must include a copy of this manual.

This manual can be downloaded from

<https://adamsonsystems.com/en/support/downloads-directory>

EU Declaration of Conformity

Adamson Systems Engineering declares that the products stated below are in conformance with the relevant fundamental health and safety criteria of the applicable EC Directive(s), in particular:

Directive 2014/35/EU: Low Voltage Directive
913-0005 Bridge

Directive 2014/30/EU: Electromagnetic Compatibility Directive
913-0005 Bridge



Signed at Port Perry, ON. CA - July 23rd, 2021



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Symbols



This symbol alerts the user that there are important operating and maintenance instructions in the literature accompanying this appliance



This symbol alerts the user to the presence of voltages that can cause dangerous electric shock



This symbol alerts the user to the weight of the appliance that can cause muscle strain or back injury



This symbol alerts the user that the appliance can be hot to the touch and should not be touched without taking care and instruction



Safety & Warnings



Read these instructions and keep them available for future reference.

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<https://adamsonsystems.com/en/support/downloads-directory>

Heed all warnings and follow all instructions.

- Clean this product with a dry cloth only.
- Never restrict the ventilation ports.
- Protect the cabling from being walked on or pinched.
- Only use attachments and/or accessories specified by Adamson Systems Engineering.
- A qualified technician must be present during the installation and use of this product. Adamson Systems Engineering will not be liable for damages caused by any possible misuse of this product.
- Inspect the product before each use. If any sign of defect or damage is detected, immediately withdraw the product from use for maintenance.
- Refer all servicing of this product to qualified service personnel.



This product contains potentially dangerous voltages.

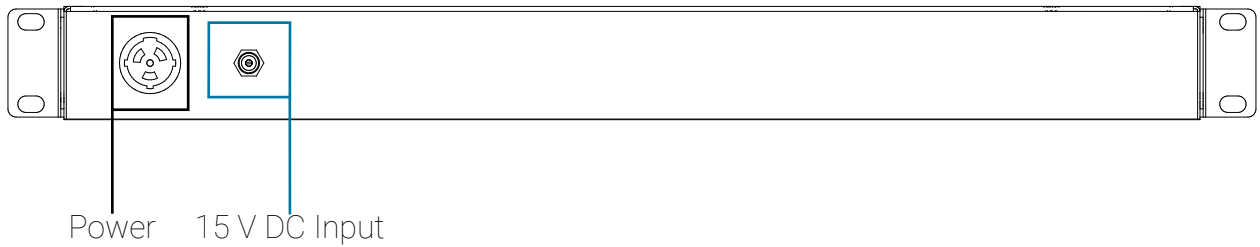
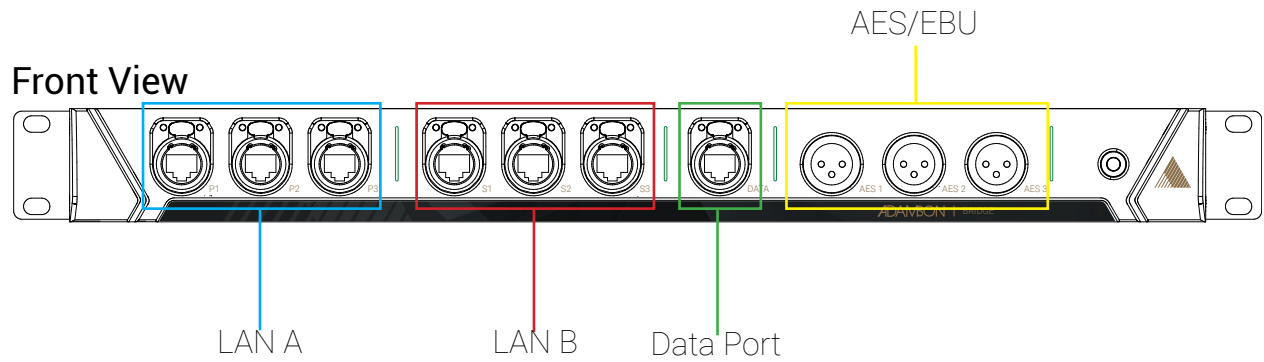
- Do not open the unit. There are no user serviceable parts inside this product. Failure to comply voids warranty.
- Do not use this product with a power cable that does not have a polarized, grounded plug. This product must be grounded/earthed.
- Do not install this product in wet or humid locations.
- Unplug this product from the power source during lightning storms.
- Be sure to use caution while moving this product to avoid injury.



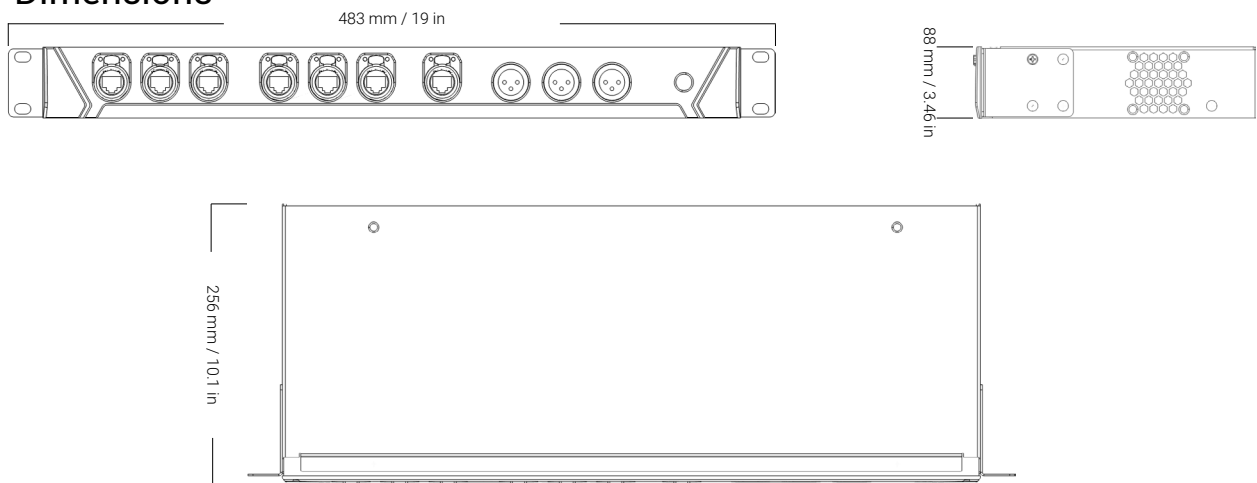
This product can get hot when in use for extended periods of time.

- To reduce the risk of overheating the product, avoid exposing it to direct sunlight.
- Do not install this product near heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.

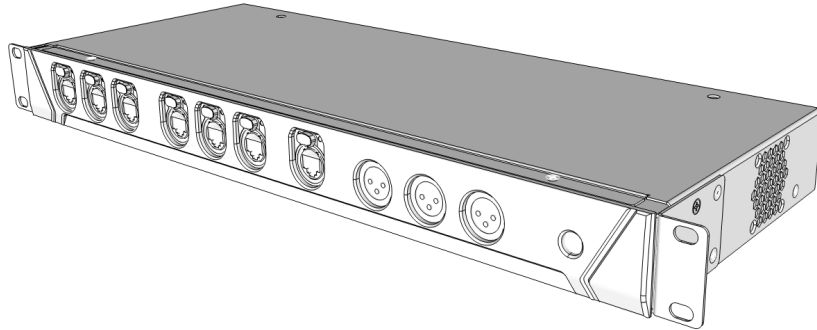
Product Overview



Dimensions



Product Overview



Specifications

- The Bridge acts as a Milan compliant Ethernet switch, providing three primary and three secondary Gigabit etherCON™ connection points to handle incoming and outgoing network signals.
- An additional primary data port is provided to connect Lab.gruppen infrastructure.
- The front panel includes three XLR connectors for three AES/EBU digital output streams each containing two discrete signals.
- 6x DSP channels are available on the Bridge, each offering mute, gain, polarity, delay and EQ.
- The Bridge accepts two AVB audio streams containing eight signals each.
- All 16 AVB audio channels can be mixed into the six DSP channels.
- The 15 V DC input is used for back-up power in the event of AC power loss. Use only the supplied 15 V DC power supply connected to a secondary power supply.

Connecting the Bridge

The Bridge and other Adamson devices can be connected to the AI software using standard ethernet cabling (minimum Cat5e). If the network is used for control only, standard gigabit switches can be used in addition to the switch-ports of the Bridge. A **maximum of eight** devices can be connected in a daisy-chain.

AVB Milan Audio

Full network connectivity, including AVB audio transport and control requires AVB enabled switches. Currently Luminex Gigacore Series and Extreme Networks X-Series switches with AVB license were tested to work with Adamson AVB systems. As the Bridge includes a Milan enabled switch it can be used for smaller AVB Milan setups without additional switches.

Adamson AVB components use a fixed presentation time of 2 ms (network latency). From the talker to the furthest listener in a network chain a maximum of 2 ms latency is allowed. If the total network latency exceeds 2 ms the audio connection will break. Each CS-Series cabinet and rack-mounted equipment includes switch fabric and introduces a fixed latency. An additional latency is introduced by the talker when creating the stream:

- CS-Series cabinets: 0.26 ms
- Adamson Gateway and Bridge: 0.14 ms
- Creation of Stream on an Adamson Gateway: 0.12 ms
- Gigabit AVB Switch: 0.12 ms

Below is an example calculation for a setup with an Adamson Gateway converting an analog signal to AVB, connected to two Bridges. Five CS7 are connected in daisy-chain to the second Bridge:

Adamson Gateway (Creation of Stream + Switch)	0.26 ms
Bridge	0.14 ms
Bridge	0.14 ms
CS7	0.26 ms
CS7	0.26 ms
CS7	0.26 ms
CS7	0.26 ms
CS7	<u>0.26 ms</u>
Total Latency:	1.84 ms

The number of devices that can be daisy chained in your network depends on the network setup and resulting latency. The total latency can be inspected for each AVB patched device on the diagnose page. AVB audio connections can be patched in the AI software or in a third party application like [Hive](#).

Clear User Data

The Bridge can be reset to firmware default settings, either through the AI software on the menu page (allows for multiple devices to be cleared at the same time), or on the diagnose page or by following the power cycle sequence below. Clear user data will clear all user settings (EQ, gain, delay) as well as control and AVB patch.

1. Power up the device. The fan will briefly run at full speed before going to idle.
2. When the status LED flashes in green once, disconnect power.
3. Power up the device. The fan will briefly run at full speed before going to idle.
4. When the status LED flashes in green twice, disconnect power.
5. Power up the device. The fan will briefly run at full speed before going to idle.
6. When the status LED flashes in green three times, disconnect power.
7. Power up the device. The fan will run at full speed for a longer period of time than the previous times, at this point the LED flashes orange.
8. The factory reset is successful when the status LED continuously turns green.