

Lü INTERACTIVE PLAYGROUND



ÜNO/DÜO CONFIGURATION

EN - Installation Instructions

Revision Sept 14th, 2018

About This Guide

The Lü Interactive System Installation Manual has basic product information such as safety and operation.

Disclaimer

This information and specifications contained in this installation manual are subject to change without notice.

Important Safety Instructions

1. Always connect the product to a grounded circuit
2. Do not use this apparatus near water.
3. Clean only with a dry cloth.
4. Do not block any ventilation openings.
5. If mounting the product overhead, make sure there is adequate support for the product's weight and always secure the product using a safety cable and install the product following best practices and local laws and regulations.
6. Only use attachments/accessories specified by the manufacturer.
7. Only plug this apparatus after the installation and proper verification.
8. Do not use Lü system in an environment where temperatures exceed +40°C (104°F).
9. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, 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.
10. To completely disconnect AC power from this apparatus, the power supply cord must be unplugged.
11. Lü loudspeakers are easily capable of generating sound pressure levels sufficient to cause permanent hearing damage to anyone within normal coverage distance. Caution should be taken to avoid prolonged exposure to sound pressure levels exceeding 90 dB.

IMPORTANT: Do not modify this product! Changes or modifications not expressly approved by the manufacturer could void the user's warranty.

Lü Installation suppliers policies

Responsability

Lü Interactive Playground inc. will provide a completely tested and functional product from its warehouses in Canada, and take care of shipping the product to its final destination without any damage. It is the installation supplier responsibility to validate the condition of the received product at the moment of delivery. Any accident or damage to the product during the installation process is the full responsibility of the supplier, including fees for reparation, replacement and shipping for needed parts.

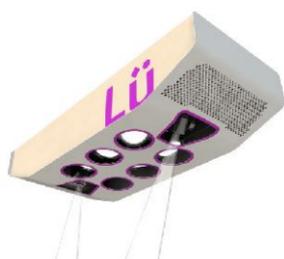
Installation methods, process, and safety are the supplier responsibility for the total lifetime of the product.

For any additional questions or validations, please contact our installation coordination team at info@play-lu.com.

Product components

Each ÜNO configuration consist of (3) ceiling mounted modules:

1



Light & Sound Module

6x 200w LED PAR to manage the ambient lighting and general colors, 2x Robotised LED light fixtures for special light effects and a powerful 2000 watts sound system.

2



Projector Module

5500 lumens WXGA projector protected in a custom enclosure

3



Camera Module

3D camera system.

And (2) remote controllers in a transport case:

4



1x Projector's remote controller

5



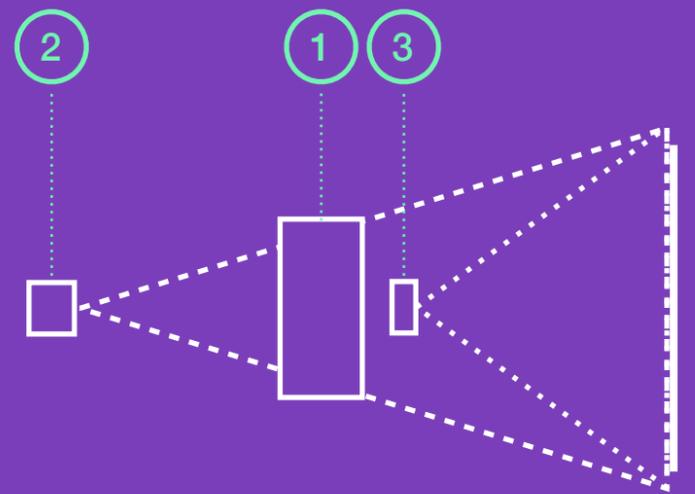
1x Lü system remote controller

Installation configuration

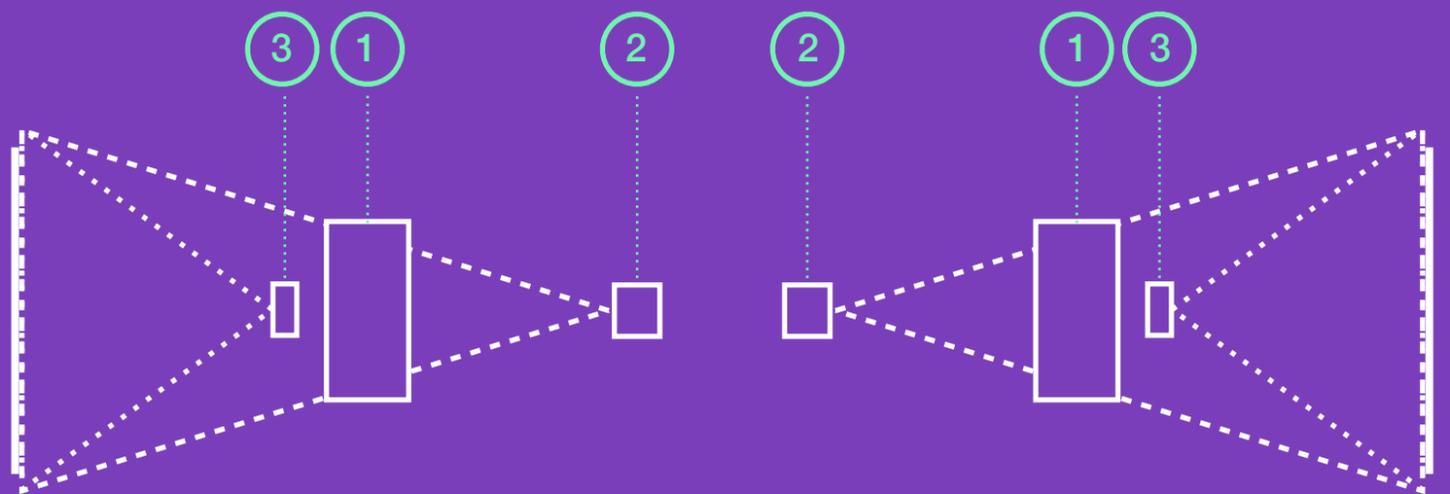
ÜNO vs DÜO

Lü can be sold in two different configurations. ÜNO is one interactive wall. DÜO is two interactive walls facing each other. DÜO is the equivalent to having two ÜNO configurations, with some minor tweaks to allow synced experiences using the full gymnasium

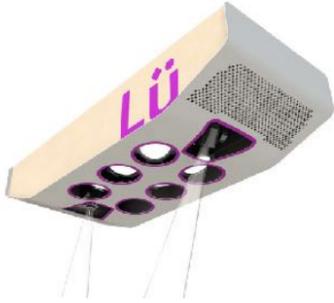
ÜNO



DÜO



Technical Specifications

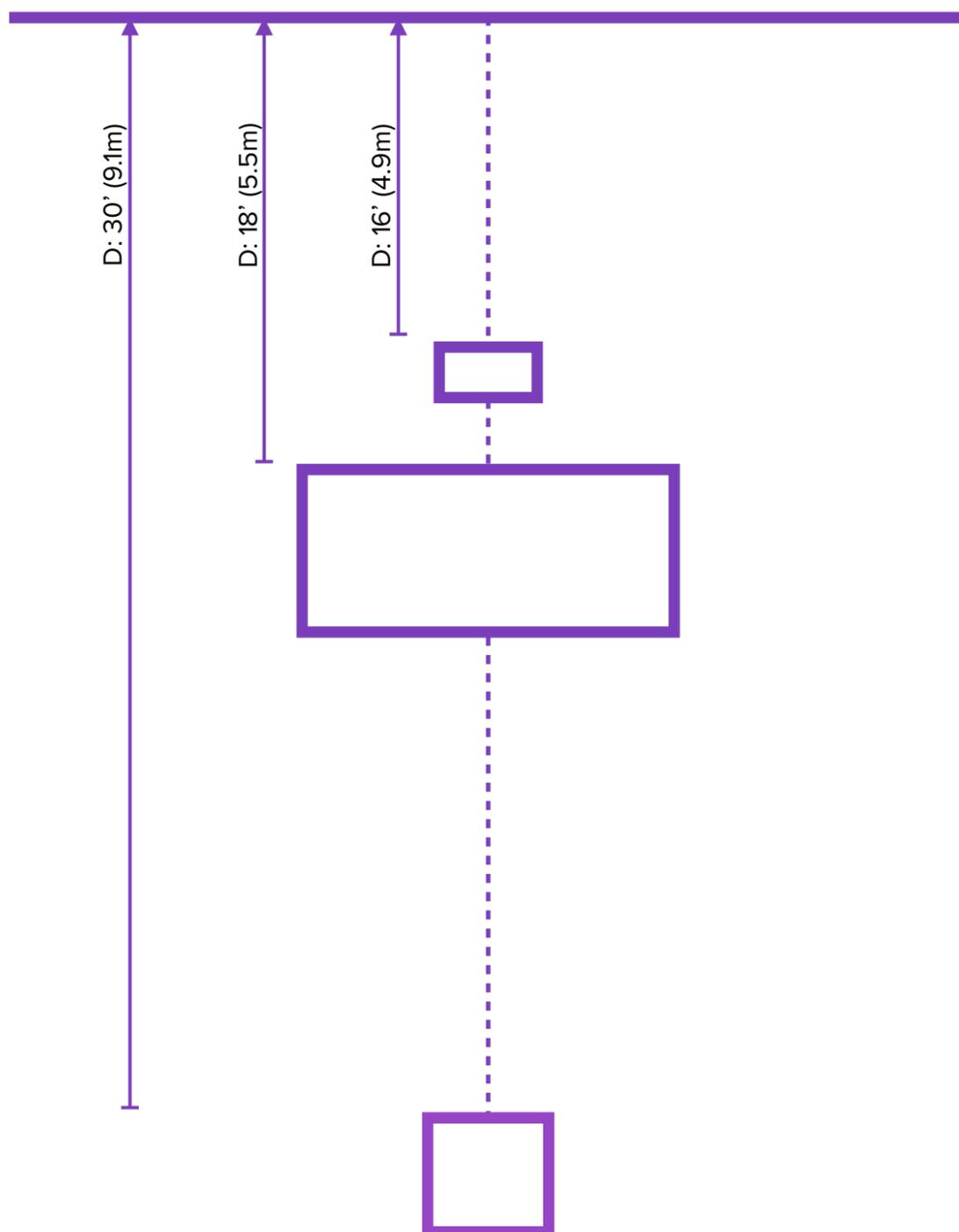
			
	CAMERA MODULE	LIGHT & SOUND MODULE	PROJECTOR MODULE
INSTALLATION POSITION*	16' from the wall / 18' high	18' from the wall / 20' high	30' from the wall / 18' high
SIZE	12" L x 12" L x 8" H	33" L x 84" L x 20" H	22" L x 20" L x 10" H
WEIGHT	5kg	125 kg	15 kg
RIGGING	1 1/2-11.5 NPS THREADED FITTING	4 Hanging Points (+2 rig points for installation)	1 1/2-11.5 NPS THREADED FITTING
POWER CONSUMPTION	100-240V - 75W	100-240V - 1000W	100-240V - 462W

* Installation positions are optimal positions, but can be adapted to different spaces when required. Contact us for more details.

Installation configuration

Top view

All units are to be ceiling mounted, aligned on the projection surface like the diagram below. Some exceptions for special environments can be made, please contact us for more options.



Projection surface

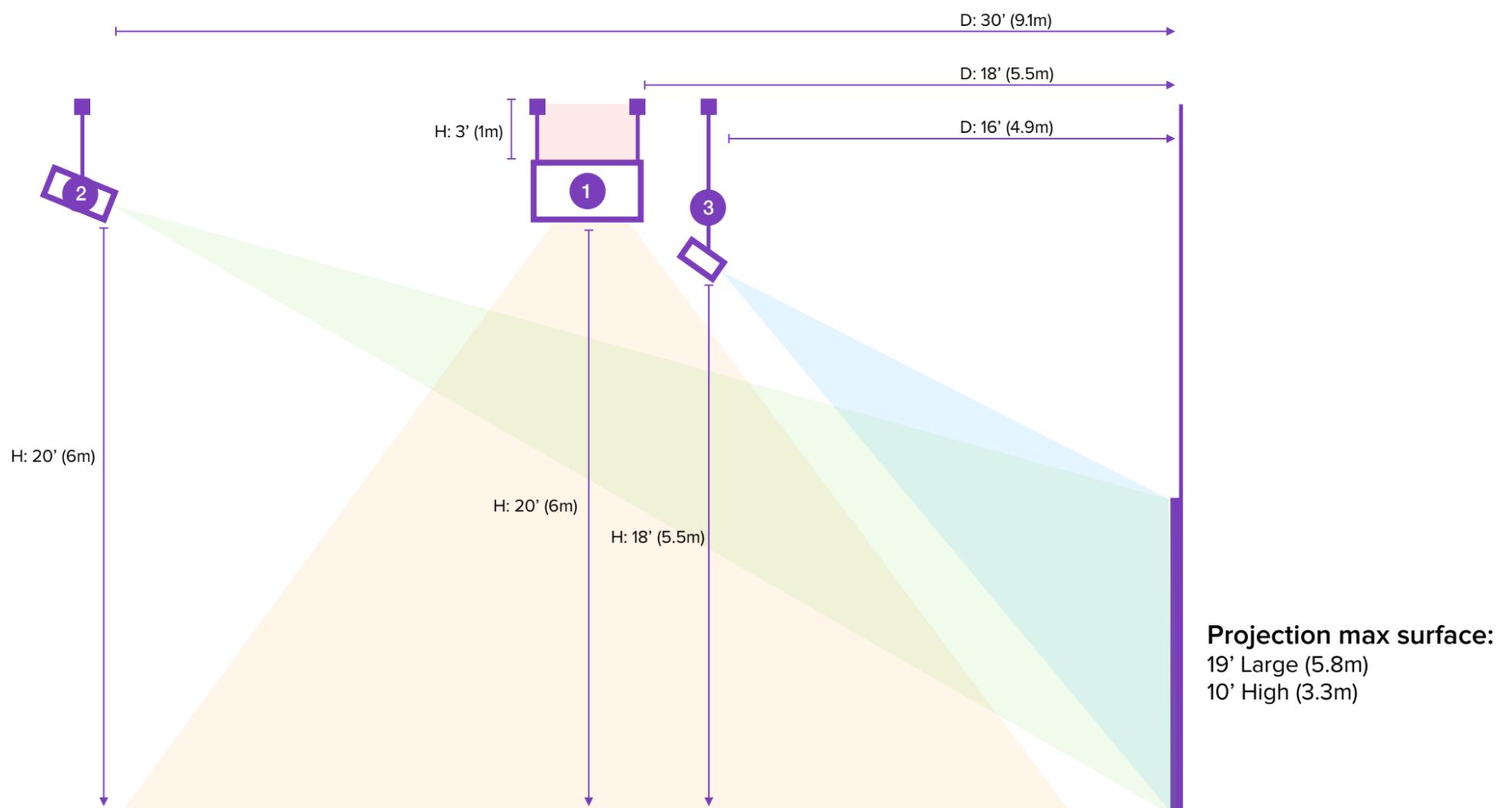
Max: 19' Large (5.8m) - 10' High (3.3m)

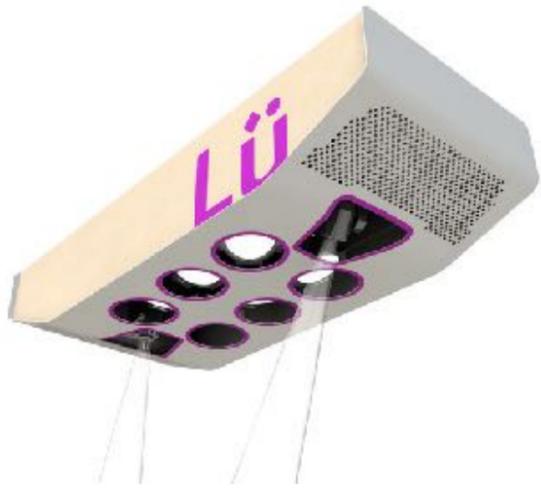
- 3 Camera Module**
Install at 18' (5.5m) from the floor
- 1 Light & Sound Module**
Install at 20' (6m) from the floor
Must have 3' (1m) clearance over the unit for maintenance
- 2 Projector Module**
Install at 20' (6m) from the floor

Installation configuration

Side view

All units are to be ceiling mounted, aligned on the projection surface like the diagram below. Some exceptions for special environments can be made, please contact us for more options.





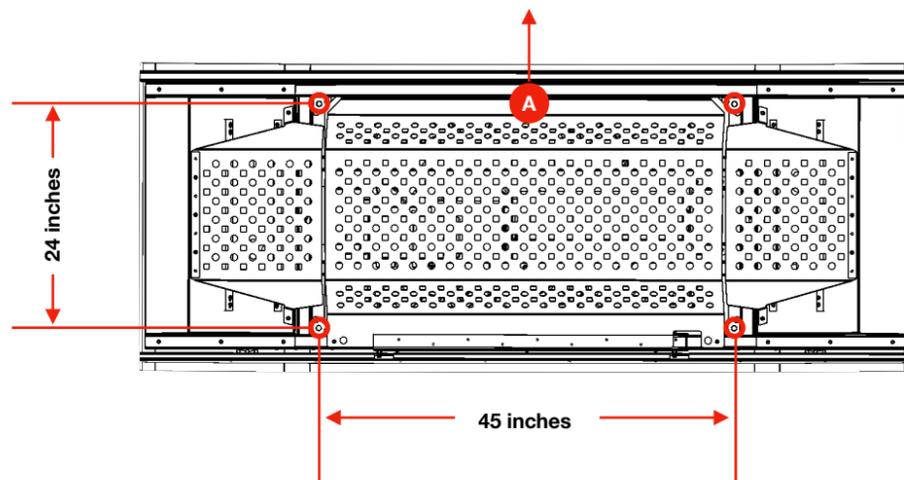
Installation - Rigging

Light Module

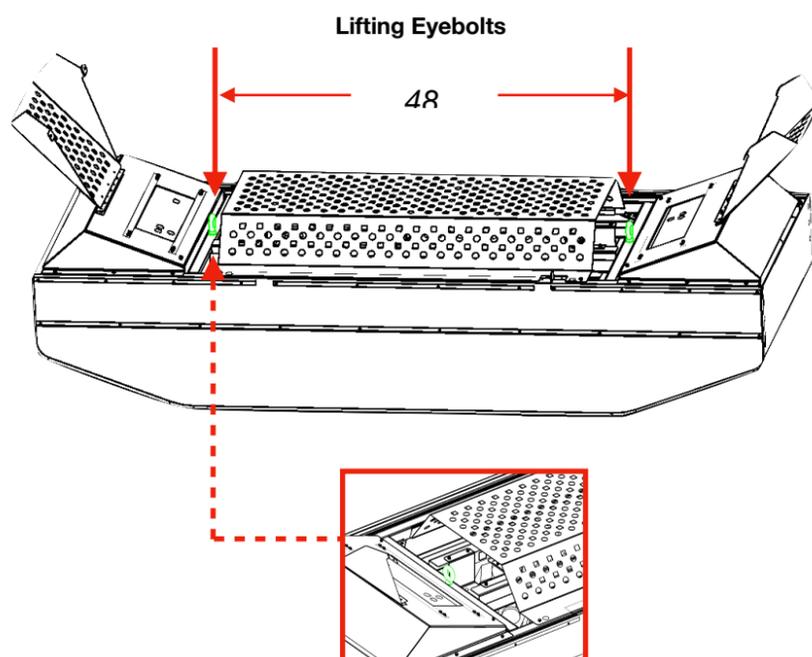
To be ceiling mounted using the 4 rig points located on the main frame.

Size of holes: 1/2" (15mm)

Mount unit with side "A" facing toward the interactive projection wall.



To facilitate lifting using a hoister from floor to ceiling, we included two eyebolt centred on the unit.

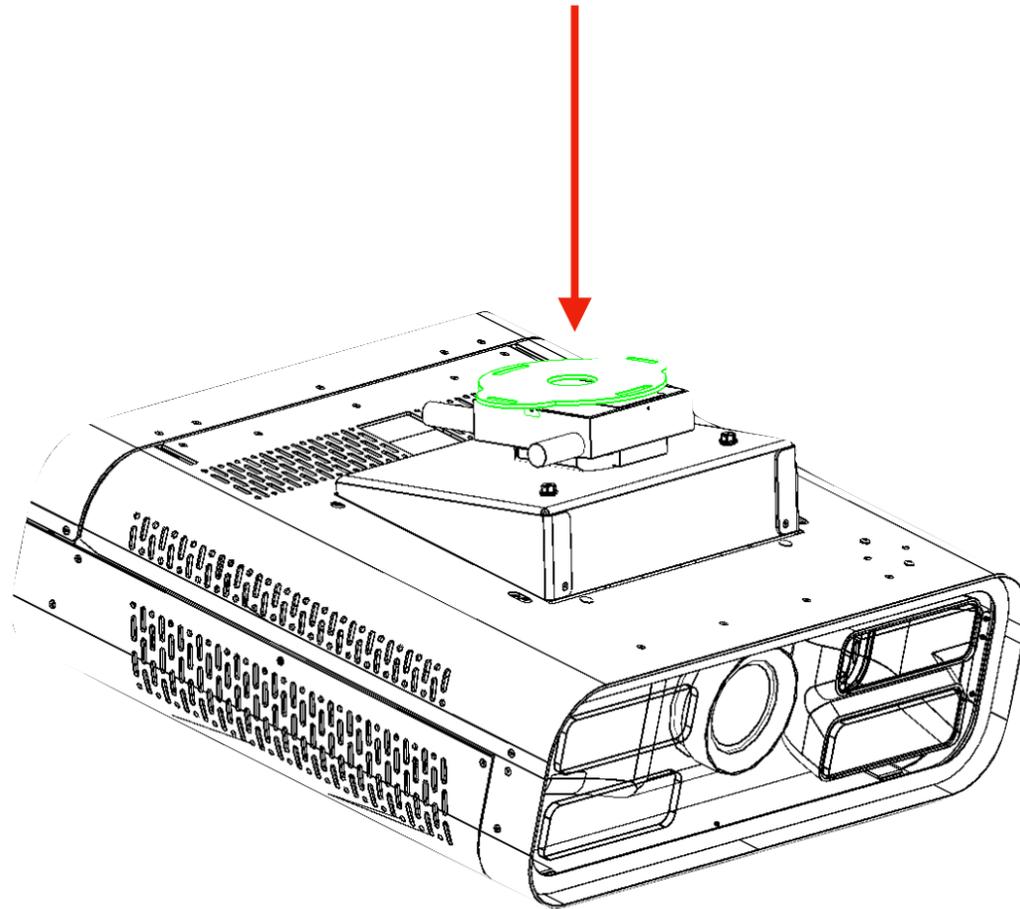




Installation - Rigging

Projection Module

To be ceiling mounted
using a pole with 1 1/2-11.5
NPS THREADED FITTING

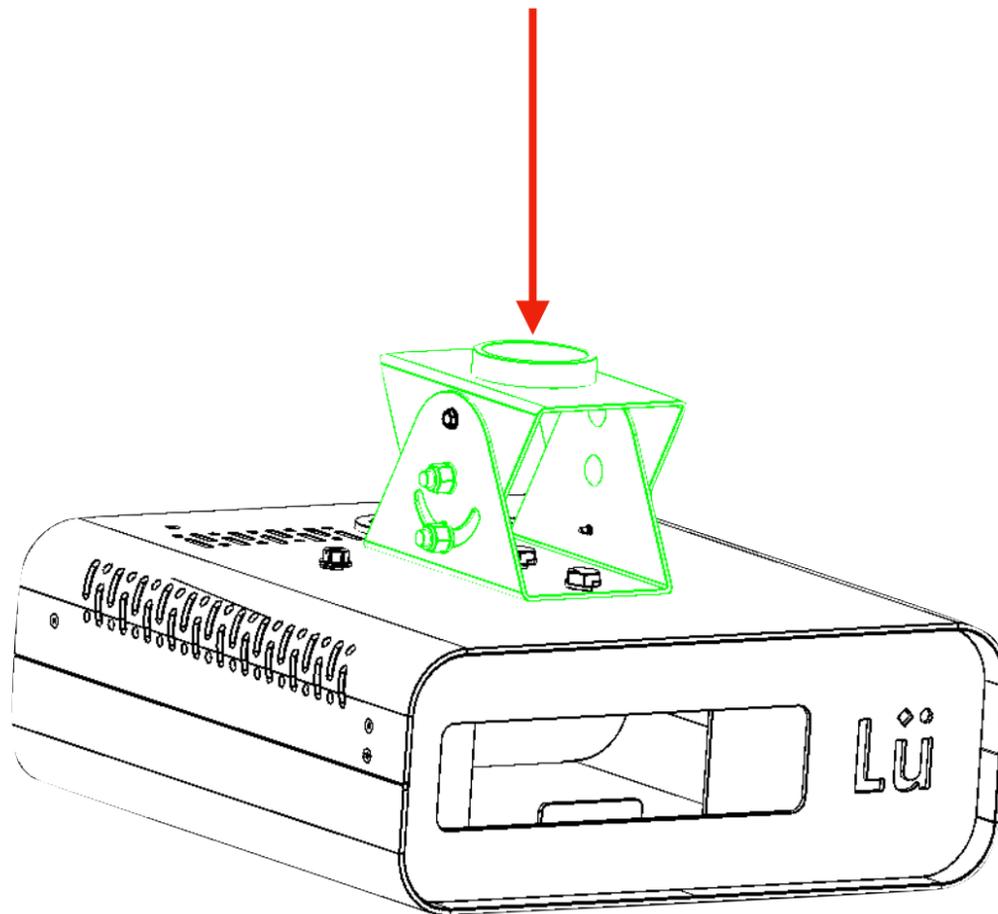




Installation - Rigging

Camera Module

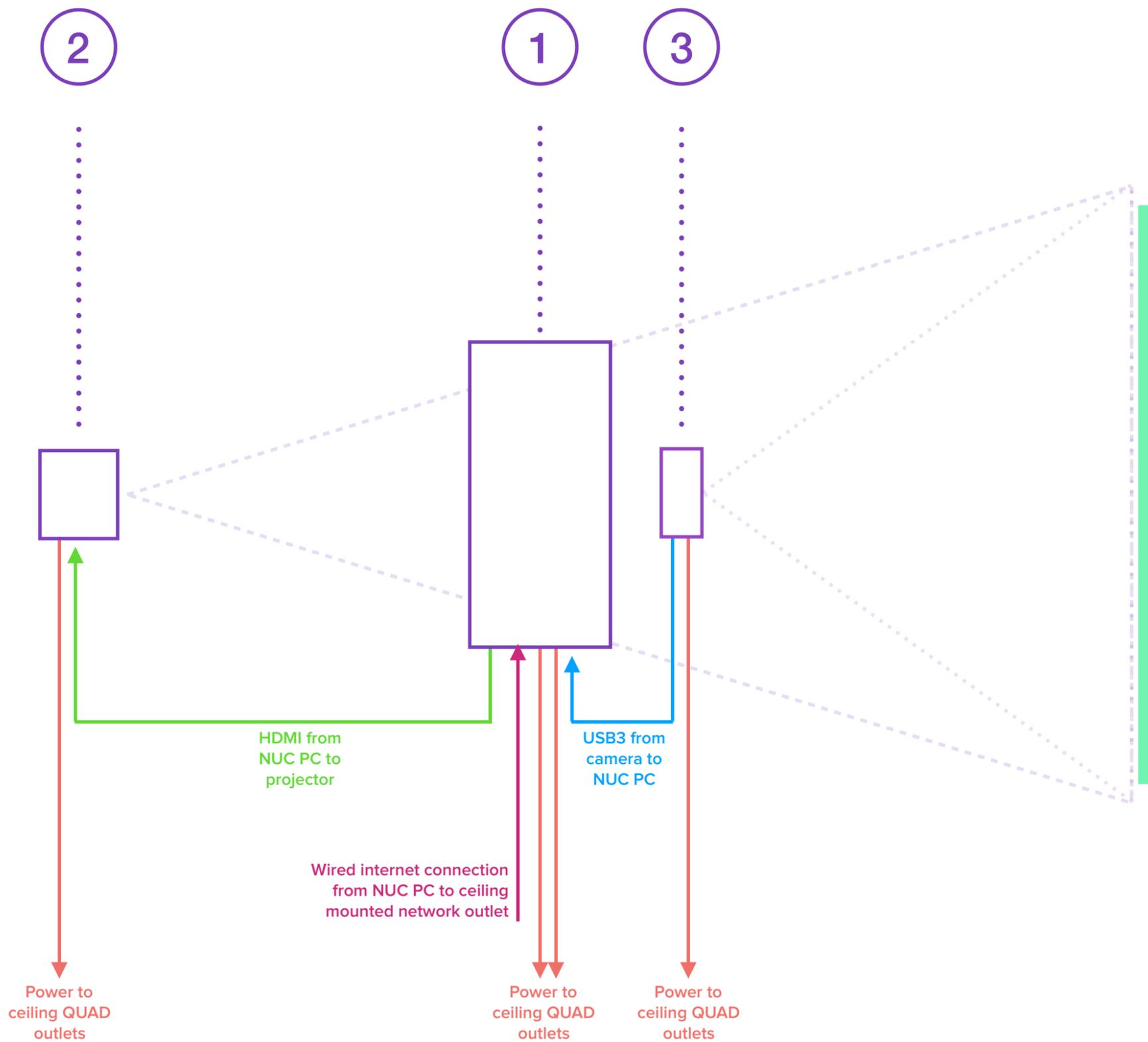
To be ceiling mounted
using a pole with 1 1/2-11.5
NPS THREADED FITTING



Operation

ÜNO - Connection diagram

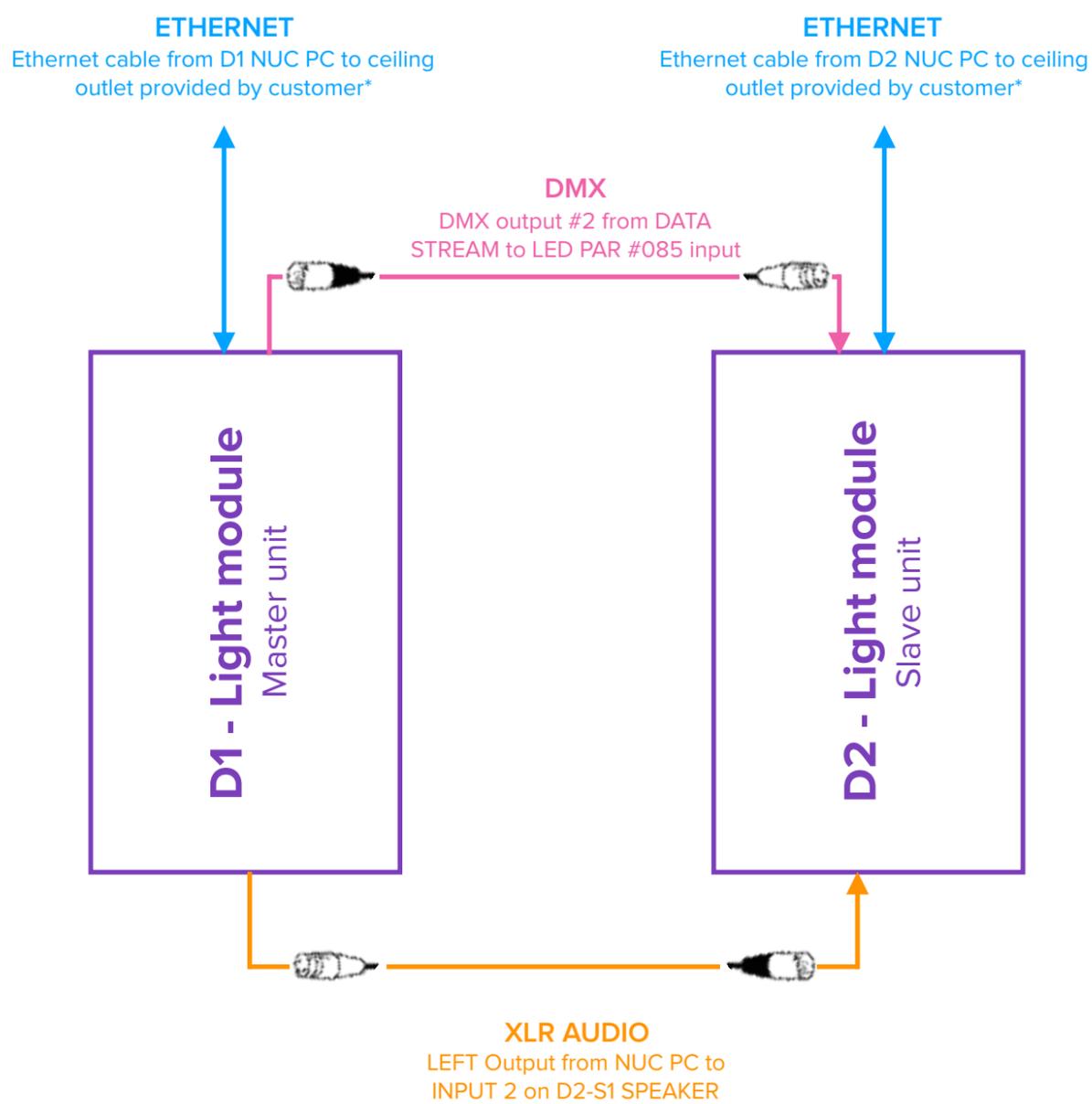
Connect modules 1, 2 and 3 following this diagram with provided cables



Operation

DÜO - Connection diagram

1. Connect modules 1, 2 and 3 using the ÜNO connection diagram
2. Inter-connect the two light modules together following this diagram

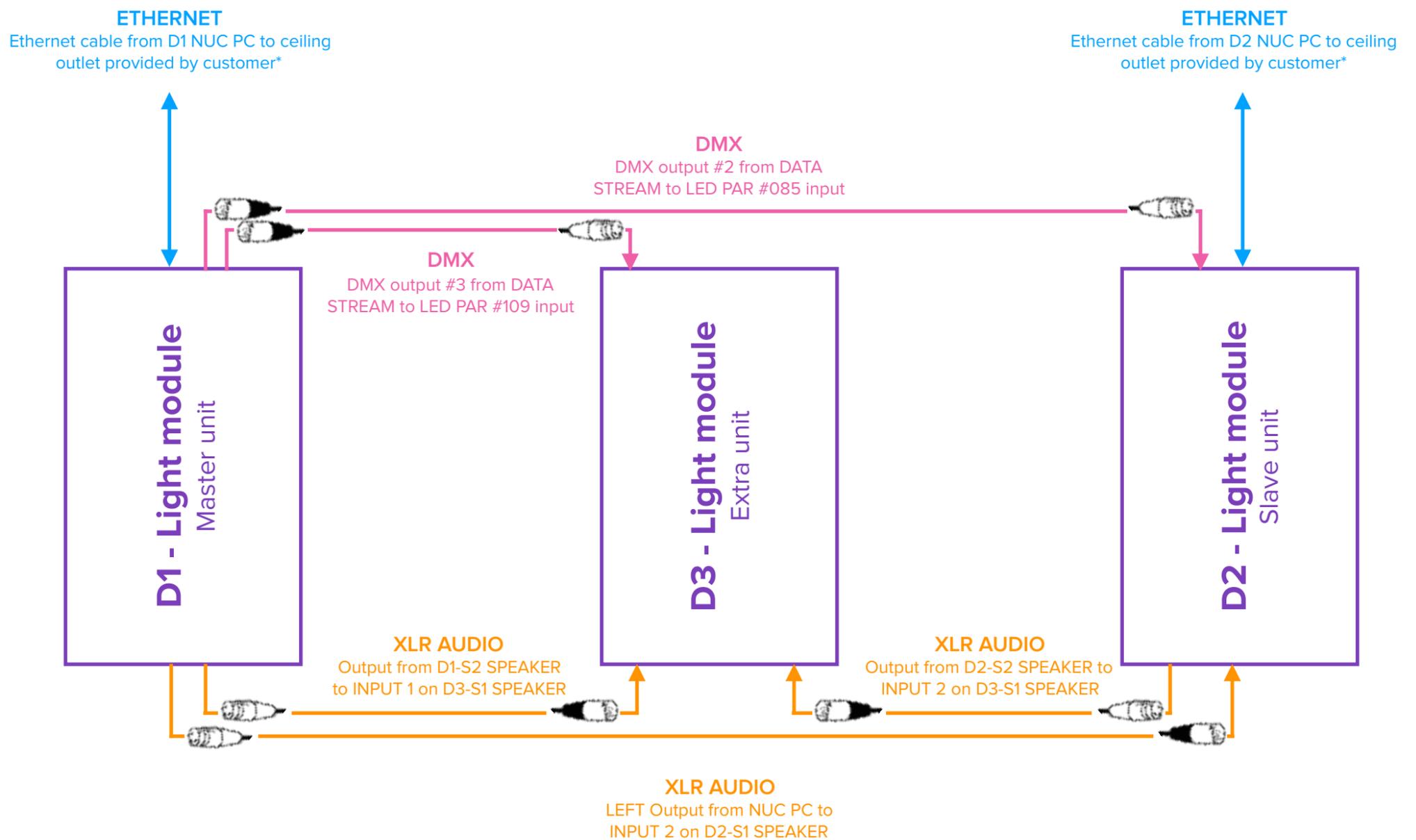


The two computers must be on the same network for the DÜO system to work. Only one DÜO system per network.

Operation

DÜO with extra lighting unit - Connection diagram

1. Connect modules 1, 2 and 3 using the ÜNO connection diagram
2. Inter-connect the two light modules together following this diagram



Operation

Site and screen preparation

Mark the (4) corners of your projection location on the wall

1

Ideal position is to set the bottom of the screen at 1 feet (30cm) from the floor. Maximum Width of 19' (5,8m), height of 10,68 feet (3,25m).

***Always respect a ratio of 16:9 for your screen.



Focus projector into position

2

**Make sure the projector is turned on, on the right input (you should see Lü interface from the computer), and the aspect ratio of the projector should be on FULL.

A. Using projector's lens shift adjustment, lower the image to the maximum position.

B. Adjust focus and zoom to get optimal size using projector lens

C. Position image over the 4 markers using mounting bracket adjustments and fine-tune size by adjusting zoom and focus and the same time.

Image should easily cover the 4 markers on the wall with an extra 10" (25cm) from the closest markers. This extra room will allow user to reposition projector over time without having to access physically the projector.



D. Map projected image on your 4 markers using digital 4 corner image distortion. (GEOMETRY BUTTON / 4 CORNERS)



Operation

System Calibration

When all components are rigged, and connected, you are ready for calibration.

Camera calibration

In the Lü main menu, hit the gear shortcut in the main menu and enter camera calibration. On the purple background interface, hit the “V” key on the keyboard to display the camera feed from the kinect, and adjust camera position to center the projection area in the RGB field of view from the camera. Please consider the image of the projection has to be in the 4:3 ratio of the displayed image:

Reference for camera positioning:

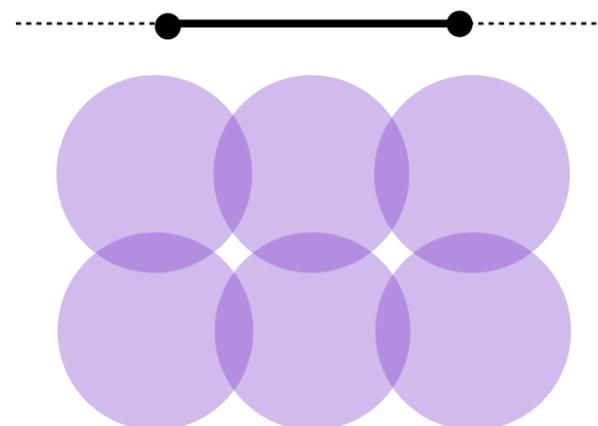


When camera is in final position, hit “ESC” key on keyboard two times to exit advanced calibration, and click on the “CALIBRATE”

Lock the 1.5” pipe with self drilling screw on two ends.
Lock the camera tilt adaptor using a self drilling screw.

Lights calibration

Adjust all 6 LED PAR positions to optimize the floor space covered by the light beams. The hot spots from the first row of light beam must be at least 8’ (2.4m) from the projection wall.



Operation

Camera Calibration

Calibration will adjust the camera used to detect balls on the wall. Once the system is calibrated, it is not necessary to repeat the operation each time. The system should only be calibrated when you feel that the contact between the ball and the wall is not accurate. To calibrate the system, follow the steps below:

A. Select the  button in the settings () menu.

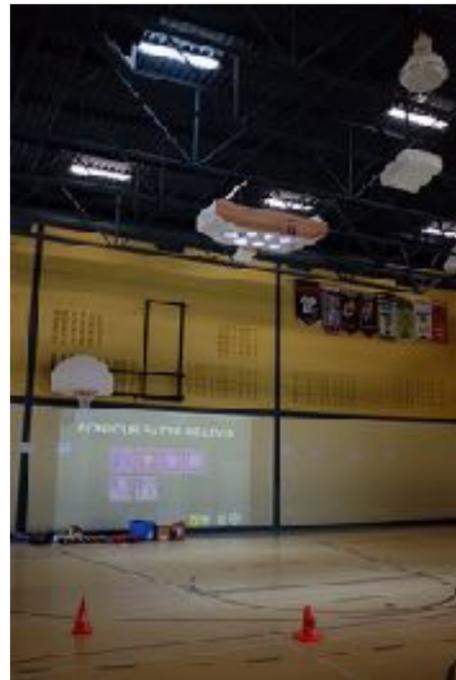
B. Click on the  button.

C. While the system is calibrating, a calibration grid will appear and after a few seconds the message “Calibration Successful” will display.

D. Press “Esc” and “Enter” to return to the homepage.

E. Throw a ball into the white section to confirm that the contact of the ball on the wall is now adjusted.

Installation examples



Complete components documentation

For more detailed informations about some selected Lü interactive playground components:

Video projector - Epson 5520w projector

<https://files.support.epson.com/docid/cpd5/cpd52631.pdf>

Loudspeakers - Electro-Voice ZLX 12P

http://www.electrovoice.com/binary/ZLX_F01U319253_en.pdf

PC Computer - Intel NUC

<https://www.intel.com/content/www/us/en/products/boards-kits/nuc/kits/nuc6i5syh.html>

DMX Distribution - Chauvet Data Stream 4

https://www.chauvetdj.com/wp-content/uploads/2015/12/Data_Stream_4_UM_Rev2_WO-1.pdf

Wireless microphone - Shure BLX14R

<http://pubs.shure.com/guide/BLX4R/en-US>

Contact informations

For support, any questions or comment on this product:

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