FASTLIGN

TOUCHLESS ALIGNMENT CHECK

Installation Manual

Version 1.2 Rev 001

Please thoroughly read all instructions before beginning the installation.
Our support team is ready to assist. Please contact support@bl-innovare.com or call 1.855.233.8632 ext. 5. for assistance.

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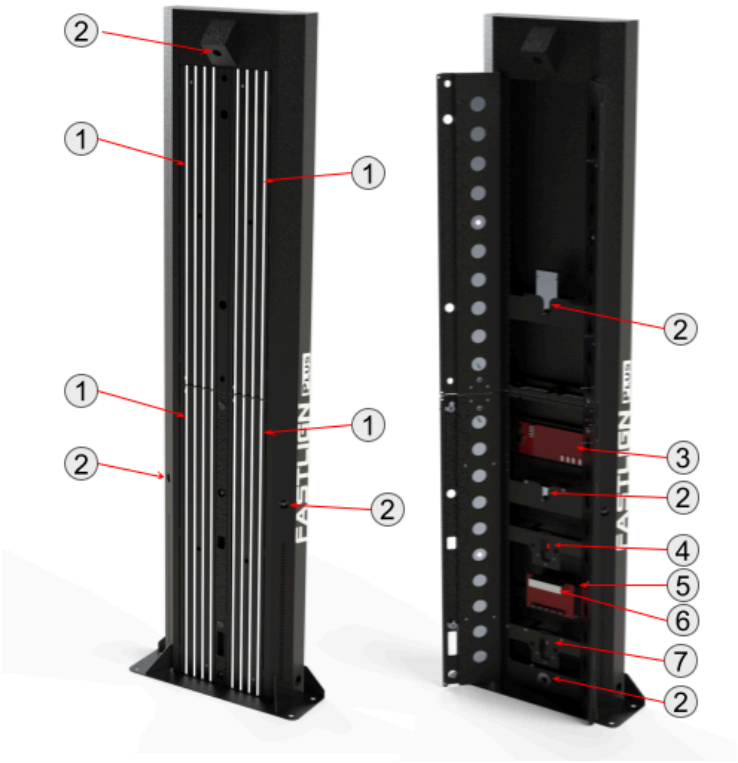
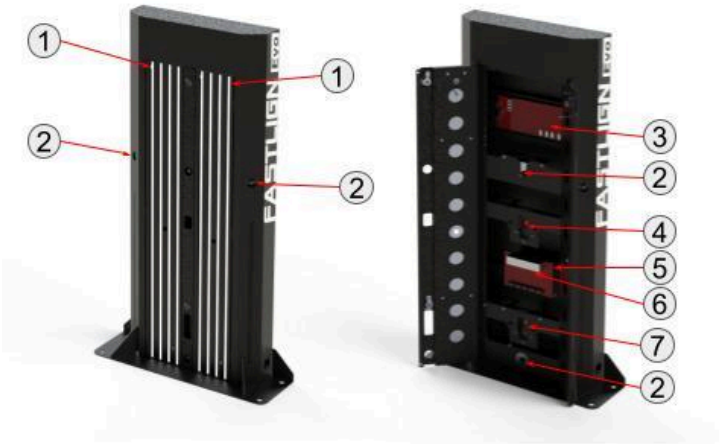
FASTLIGN PLUS



No.	Part
1	LED Panel
2	Camera
3	Circuit Board 1
4	Photosensor
5	Network Switch
6	Circuit Board 2
7	FL Laser

FASTLIGN EVO



Pre-Installation Site Requirements

Before the assembly and installation of the FASTLIGN system, the following must be in place.

The FASTLIGN Server Box Requires:

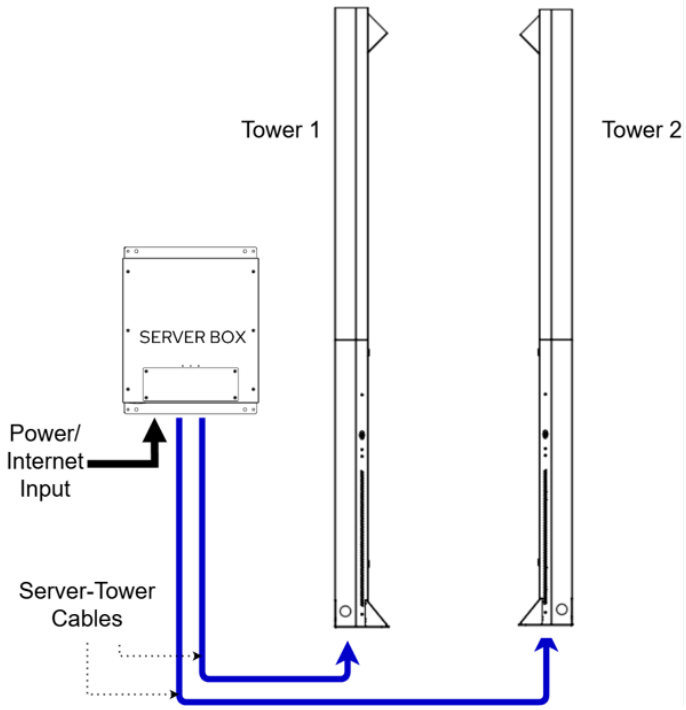
- 120-240VAC power using a locally sourced IEC C13 power cable. Each system consumes 300W.
- Cable internet access.
- To be installed in an indoor environment, no greater than 75' away from the FASTLIGN towers.

Cabled Internet Network Requirements:

- The FASTLIGN server is configured to use an IP address received via DHCP.
- The FASTLIGN server requires the ability to make outbound requests using port 443 (HTTPS).
- For optimal performance, a minimum of 15 Mb/s upload speed is required. For higher volume sites (300 cars/day) 20-30 Mb/s is recommended.

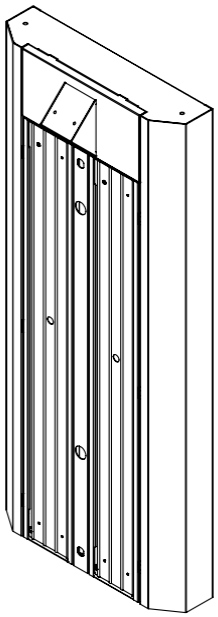
Server - Tower Cables:

From the FASTLIGN server box to each tower, a 16AWG 2-conductor copper cable and a cat 6 network cable are required. Cabling must be secured along a wall or structure and protected from any potential mechanical damage. Ground cable covering is required if applicable.



Parts List

No	Part
1	Top Tower (only available for FASTLIGN Plus system)
2	Bottom Tower (FASTLIGN Plus and Evo systems)
3	Server Box
4	Concrete Anchors



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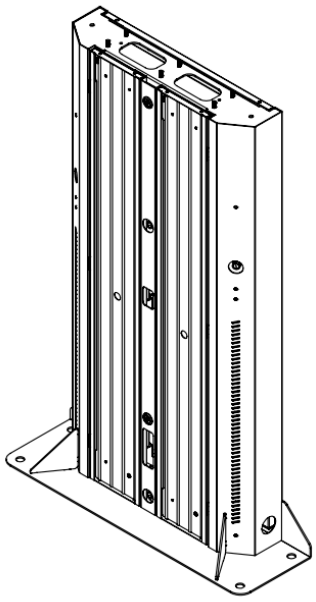

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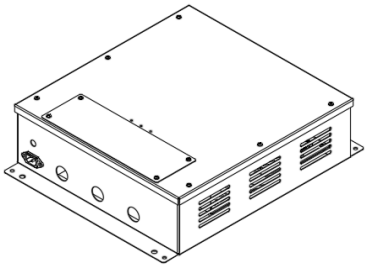


3

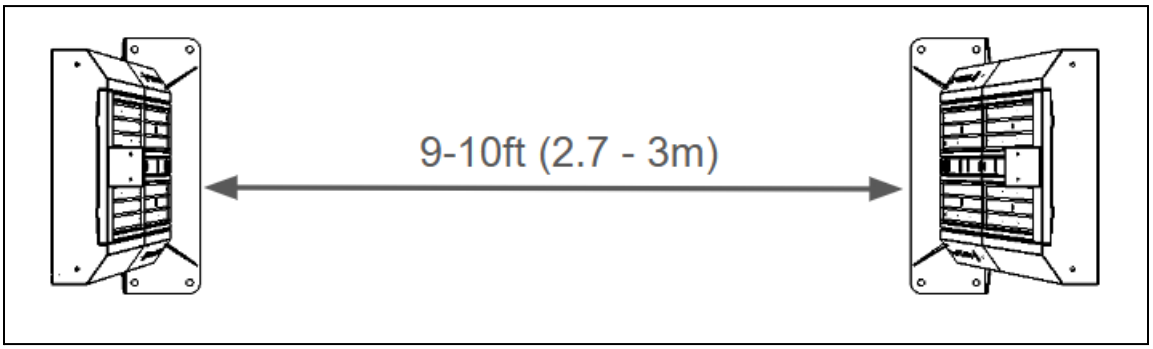
4

Positioning

Each FASTLIGN system comes with two functionally identical towers.
The following constraints must be considered when positioning the towers:

- The towers must face each other and be 9-10 ft apart.

FASTLIGN TOP VIEW



- Cars must drive straight through the towers. Avoid sections where drivers would be expected to turn while passing between the towers. If drivers turn the steering wheel, it will reduce the reliability of the measurements.

- From the figure above,
    - (1) Cars should drive in the center of the towers.
    - (2) Cars may tend to drive closer to one tower than the other
    - (3) consider using cones to control the flow of traffic
- The driveway must be flat and contain no bumps. Towers should be minimum 1 car length away from an entrance or exit because of the bump at doorways.
- Avoid areas with high sun exposure. Sunlight will negatively affect laser readings.

Assembly

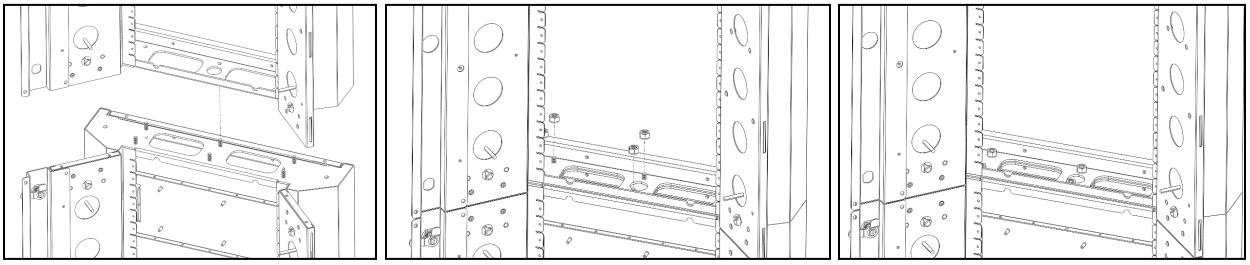
4.1

- Drill 4 holes in the ground at the desired location of each tower, using a ⅜" concrete drill bit, (minimum depth 1.75")
- **Consider** the positions of the towers carefully before drilling holes. Refer to the positioning section on page 5
- Mounting Flange dimensions are found in section 5.

4.2 Anchor the bottom post to the ground using the provided concrete anchors..

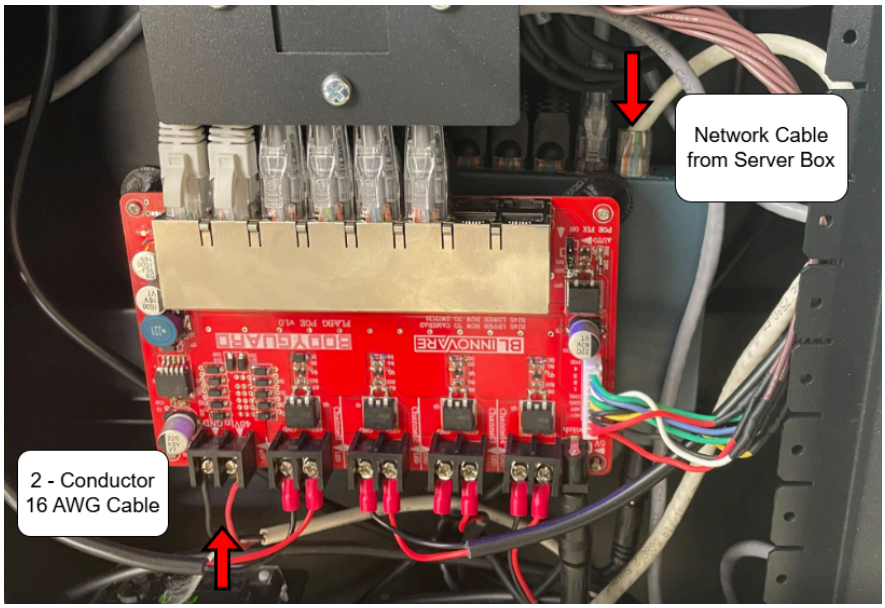
4.3 Open the front of each tower using the provided keys.

4.4 Attach the top tower to the bottom and tighten using the 6 provided 5/16" locknuts.



4.5

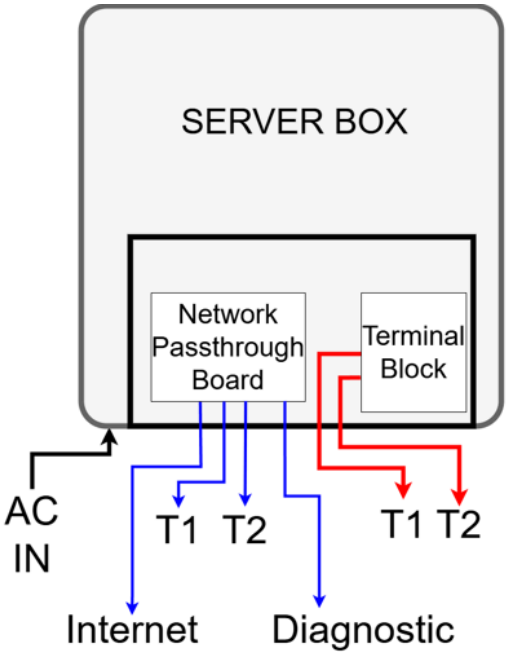
- Run the 16AWG 2-conductor cable and the network cable in thru the side of the tower
- Connect the 16AWG copper cable to the 2 screw terminals pictured
- Plug in the network cable into the open port on the network switch.



4.6 Close the doors and lock using the keys.

Server Setup

The FASTLIGN server box and POE switch must be mounted to a wall or stored on a shelf, anywhere within 75 ft of the FASTLIGN towers. The server box and POE switch are not waterproof and must be placed in an indoor environment. The server box will be connected to each tower using cables that do not exceed 100 ft in length. They are most often positioned on a wall in the service area but may be placed in an adjacent server room if the cables do not exceed the 100ft constraint. Longer cables will increase the system's current load drop and may damage the equipment. (Server box mounting hardware is not included.)

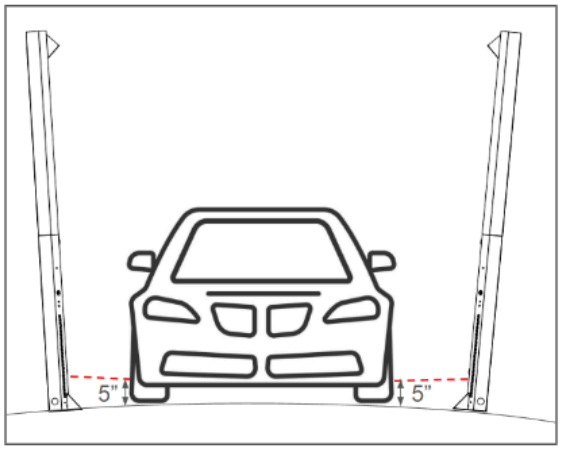


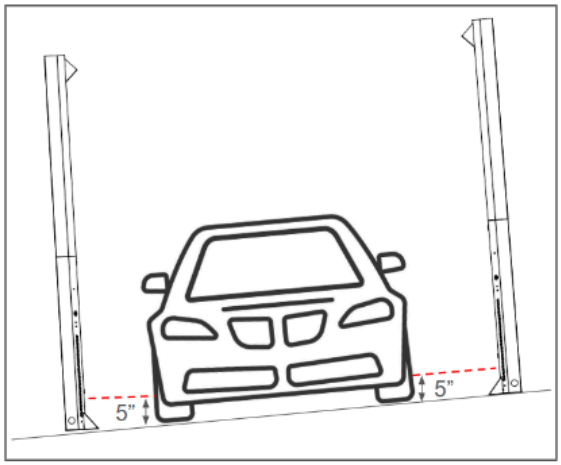
T1-2: Network and power cables that connect to the PCBs in towers 1 and 2

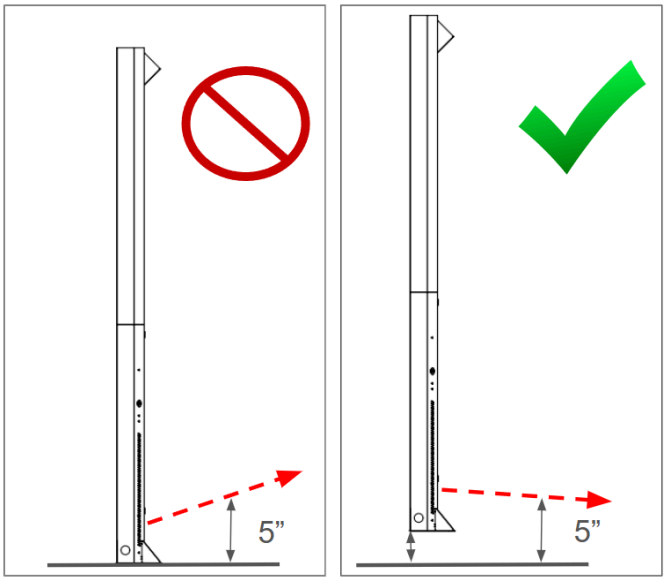
Laser Calibration

Each FASTLIGN tower has one laser sensor that will need to be adjusted upon installation. The bottom laser should strike a passing car at 5” off the ground.

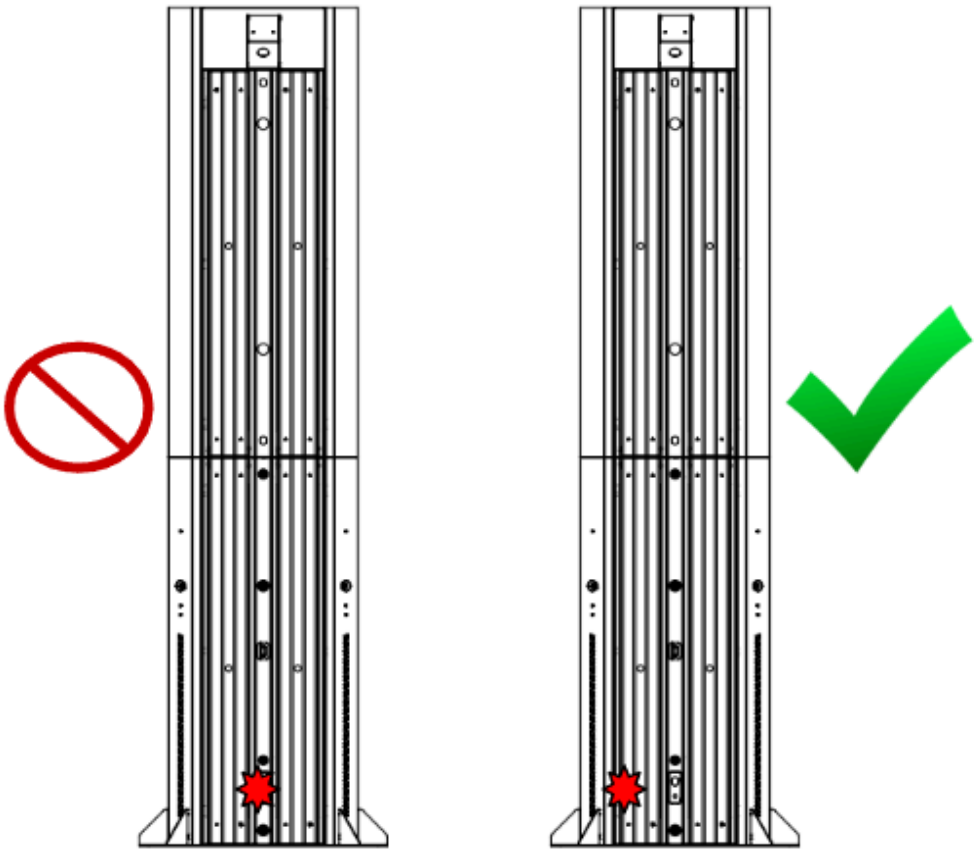
Important: When calibrating the lasers, it is critical that the 5" measurement is taken **where the tire will be passing**, and not at any other point along the laser’s beam. Some sites will have slightly slanted or curved floors for drainage, so measuring 5" off the ground too close or too far away from where the wheel passes could cause an inaccurate calibration.







Inspect where the lasers are hitting the opposite tower. If the laser beam from Tower 1 gets too close to the laser emitter on tower 2, then it can cause some interference and confuse the measurement. Ensure to aim the lasers such that they do not hit the opposite lasers.



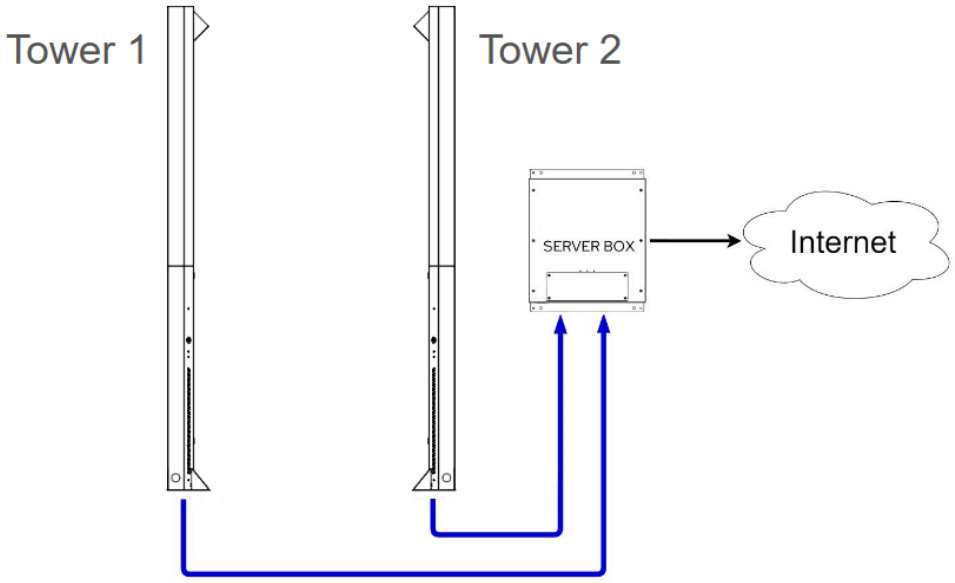
Networking

To ensure the BODYGUARD features are recording, the FASTLIGN system requires **FULL OUTBOUND** access to the following sites:

- app.bodyguardcam.com
- prod-vpn.bodyguardcam.com
- *.s3.amazonaws.com.
- *.bitbucket.org
- *.docker.com
- *.docker.io
- *.auth0.com
- Ubuntu Linux OS Update repository servers

The FASTLIGN server is configured to use an IP address received via DHCP.

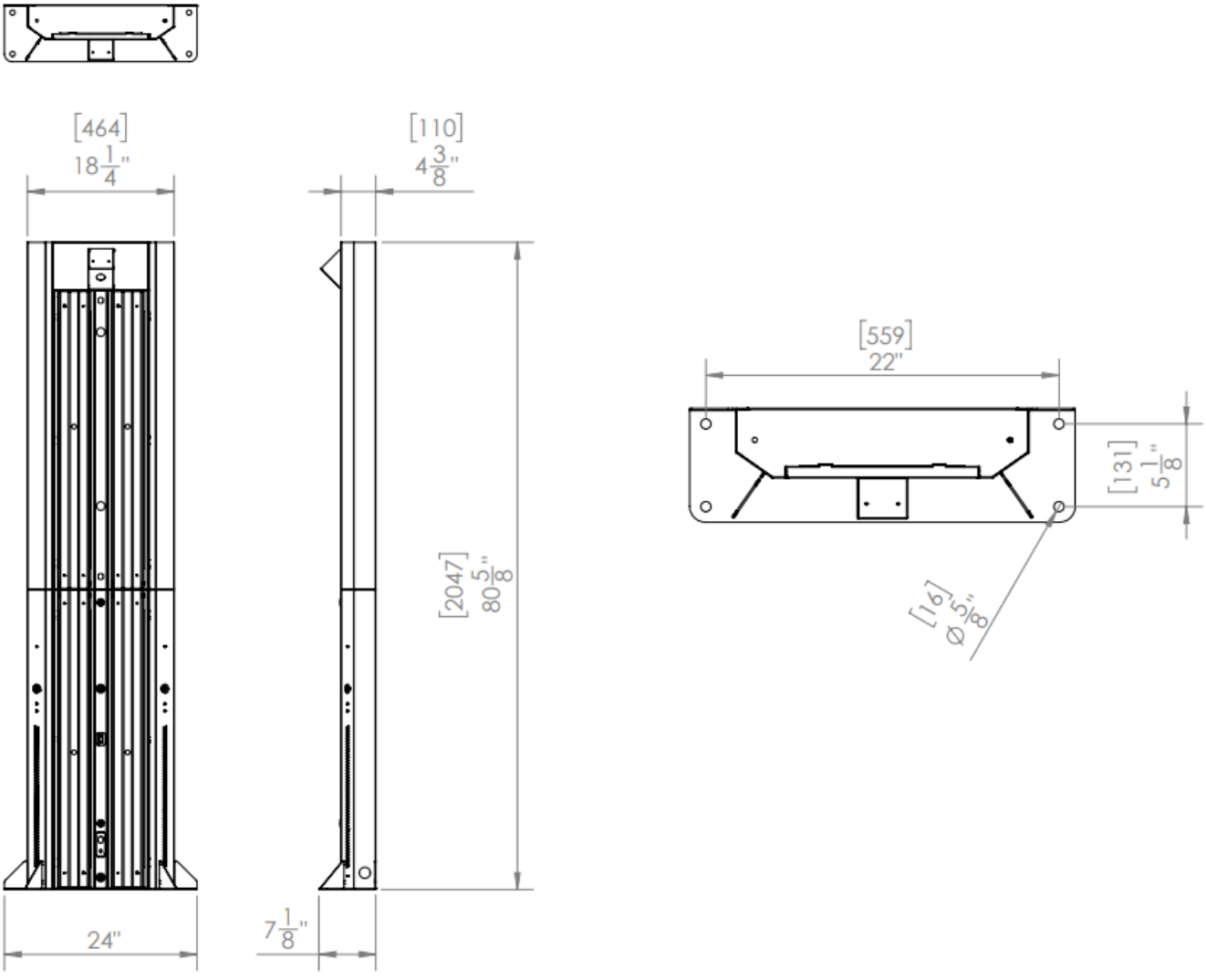
Network Flow Diagram:



Product Dimensions

FASTLIGN Plus dimensions

Units: Inches[mm]



FASTLIGN Evo dimensions

Units: Inches[mm]