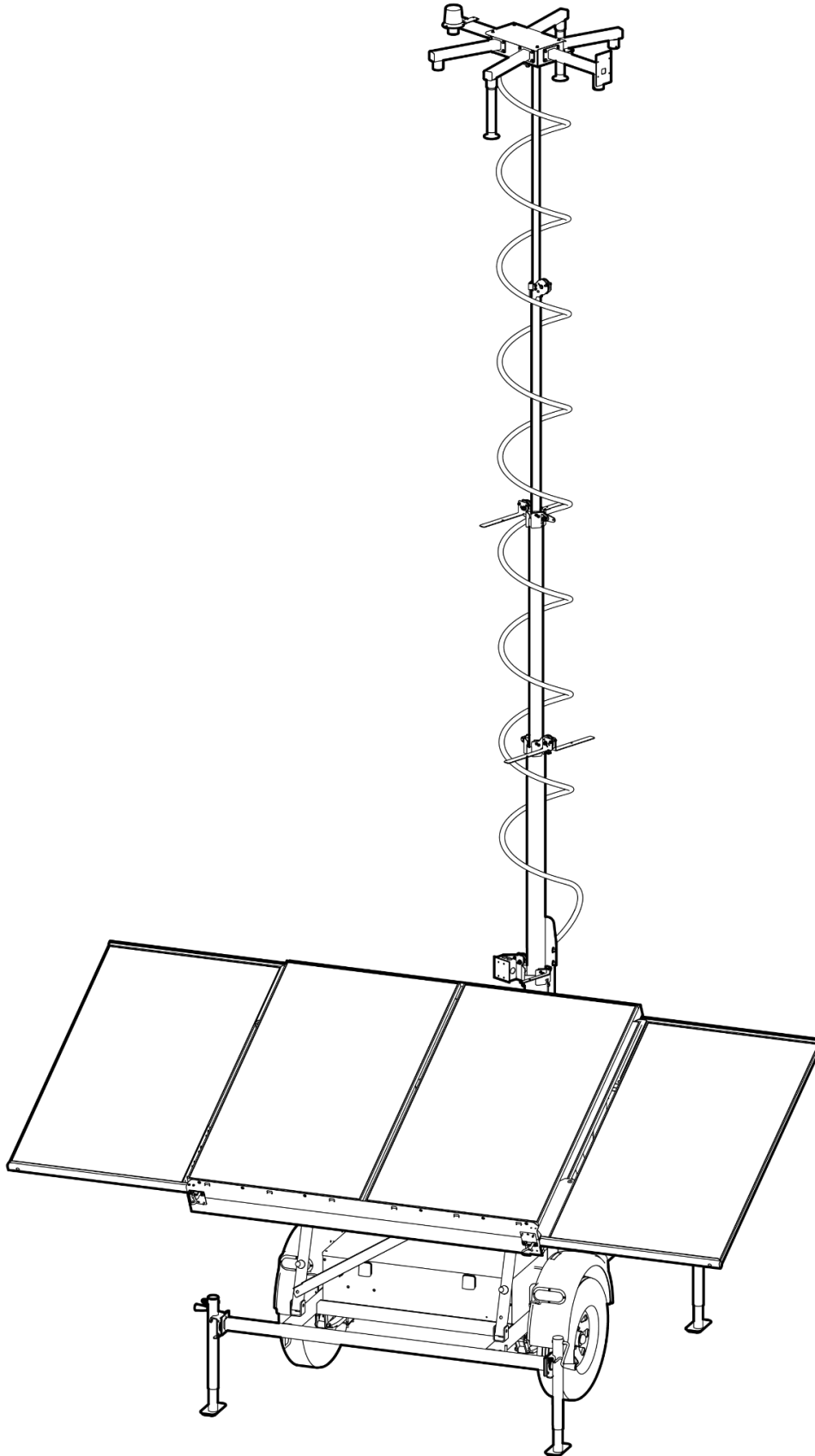# MT81-6KWH MT81-13KWH
Cloud-Managed Security Trailer

Document

Document Details

Version
V1.0
(V1.0 published 10/31/25)

Firmware
Firmware version can be verified on Verkada
Command command.verkada.com.

Product Models
This install guide pertains to models:
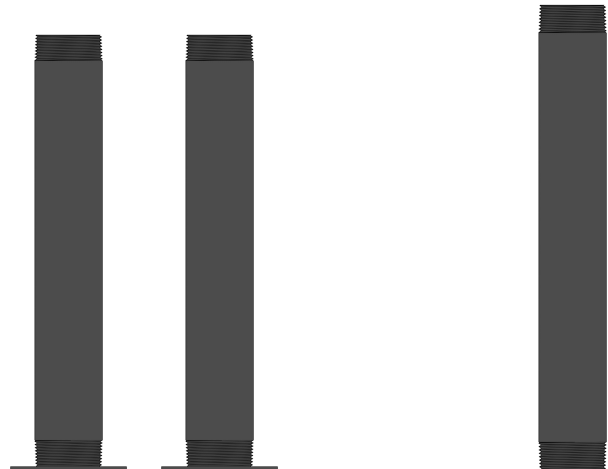
- MT81-6KWH-HW
- MT81-13KWH-HW

Contents

1 Introduction

1.1 What's Included*

MT81 Security Trailer
(Pictured: MT81-13KWH-HW)

Bullet Camera Drop Pipe (2 pcs)
Length: 12"

NPT Drop Pipe (1 pc)
Thread: 1.5" NPT **Length:** 14"
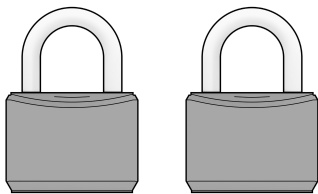
Combination Locks
(2 pcs)

Hex Key (1 pc)
Drive: 3mm hex

BZ11 Sealing Screws (2 pcs)
Drive: #2 Phillips
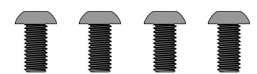
M4 Machine Screws (4 pcs)
Length: 10mm **Drive:** #2 Phillips

What you'll need

- A smartphone or laptop
- Compatible Verkada devices** with their included hardware
- An adjustable wrench
- A flush cutter tool
- A digital level
- A #2 Phillips screwdriver or power drill with a #2 Phillips driver bit
- Microfiber cleaning cloth and glass cleaner
- A forklift and/or raised loading dock

Connect

For easy registration and setup, scan the QR code on the Verkada Trailer Controller inside the NEMA box.

If you prefer to manually register your product, please proceed to:
verkada.com/start

* Included items can be found in the security trailer's NEMA enclosure
** Verkada devices - including cameras, gateways, and talk-down speakers - are purchased and ship separately.

1.2 Trailer Overview

Gateway Arm

Blue Strobe Light

Camera Arm

Bullet Drop Pipe
Mounted on NPT Arm

Electric Mast Winch

Battery Box

Trailer Tongue
(raised)

Cable Conduit
Contains 1x Cat6 cable, 6x Cat5e cables, strobe light power cable

Panel Sliding Lock

NEMA Box
Contains controls for electric mast winch and panel tilt actuators

AC Power In

License Plate Mount

Stabilizer Leg
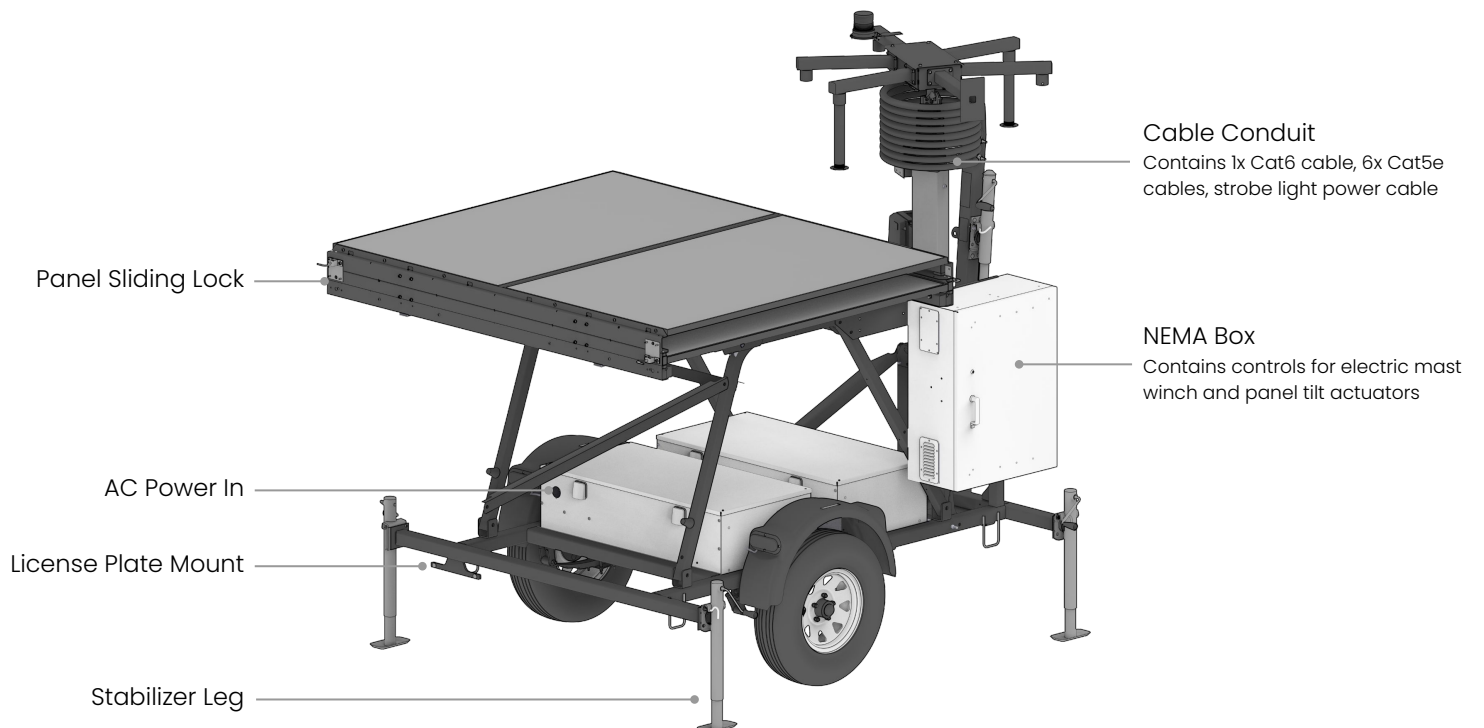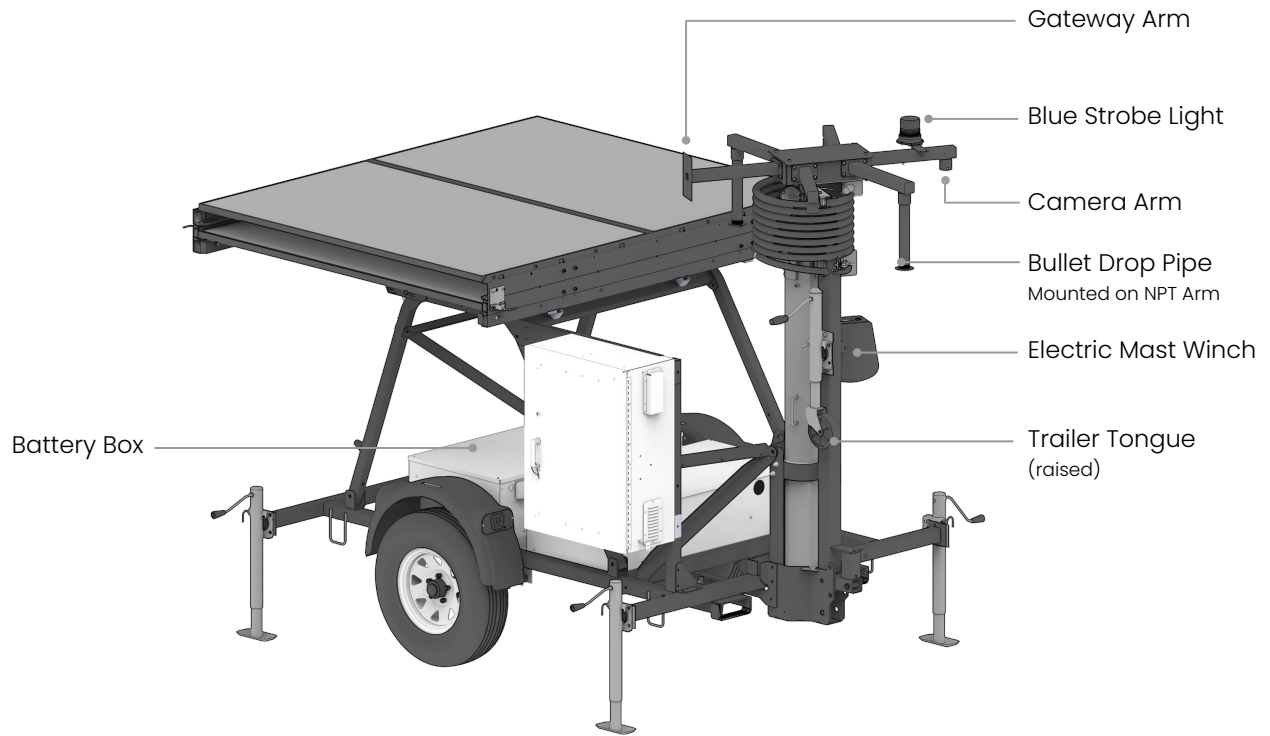
1.3 Trailer Overview (Fully Deployed)

24' 6" (747cm)

13' 8" (417cm)

10' 9" (327cm)
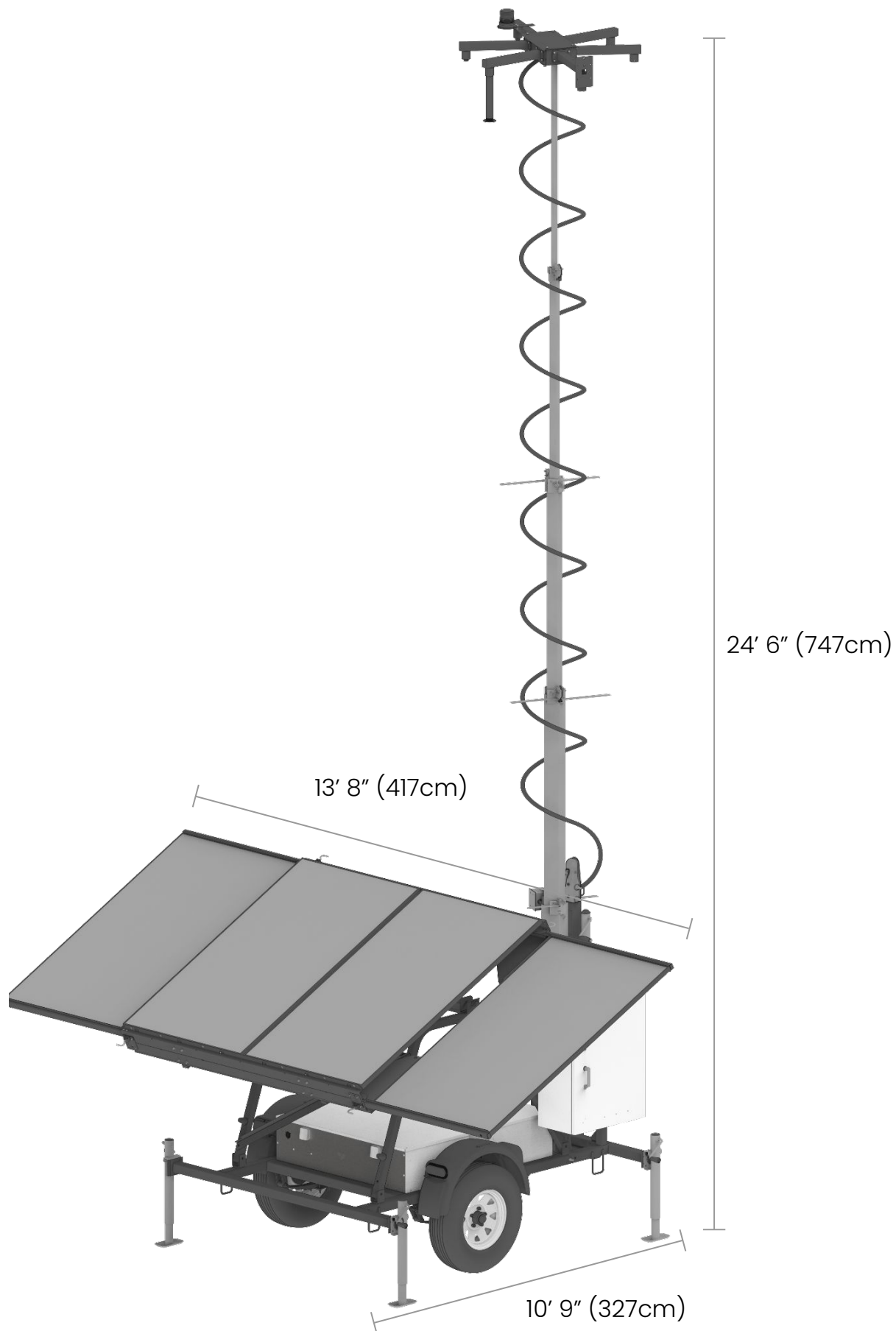
1.4 Verkada Trailer Controller (VTC) Overview

For easy registration and setup, scan the QR code on the Verkada Trailer Controller inside the NEMA box. If you prefer to manually register your product, please proceed to: verkada.com/start.
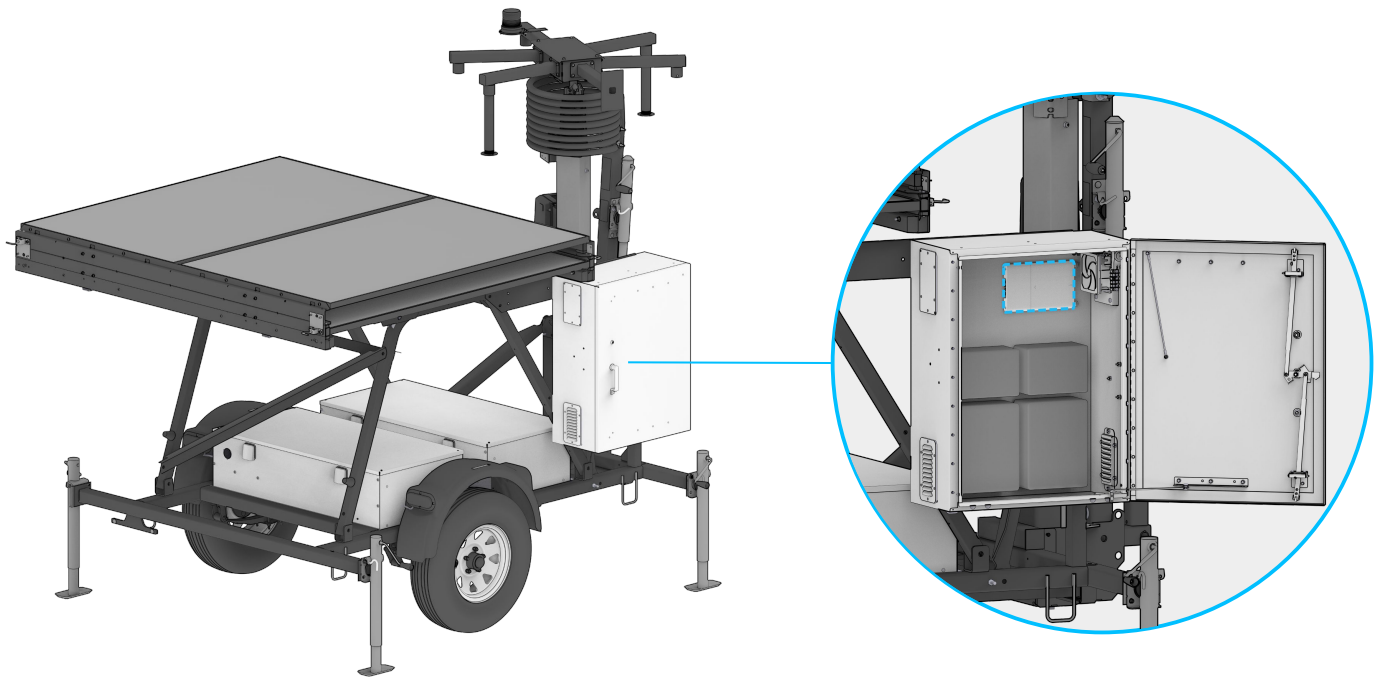
Regular operation

● **Solid Orange**
VTC is on and booting up.

☀ **Flashing Orange**
VTC is updating firmware.

● **Solid Blue**
VTC is powered and online.

☀ **Flashing Blue**
VTC is powered and offline.

Status LED

QR Code
Scan to register MT81 on Command.

1.5 Inside the NEMA Enclosure

Trailer Internals

The Verkada Trailer Controller, solar controller, DC-DC converter, DC-AC inverter, AC power strip, solar communicator, and Power-over-Ethernet (PoE) switch are located inside the trailer's NEMA enclosure. These devices are pre-wired and do not require setup during trailer installation.

Seven ethernet cables run from the PoE switch up the mast to support the camera array, with each cable labeled at both ends for easy identification. The PoE switch includes additional unused ports that can power supplementary devices if needed. Please note that connecting additional devices will impact your trailer's solar uptime projections.
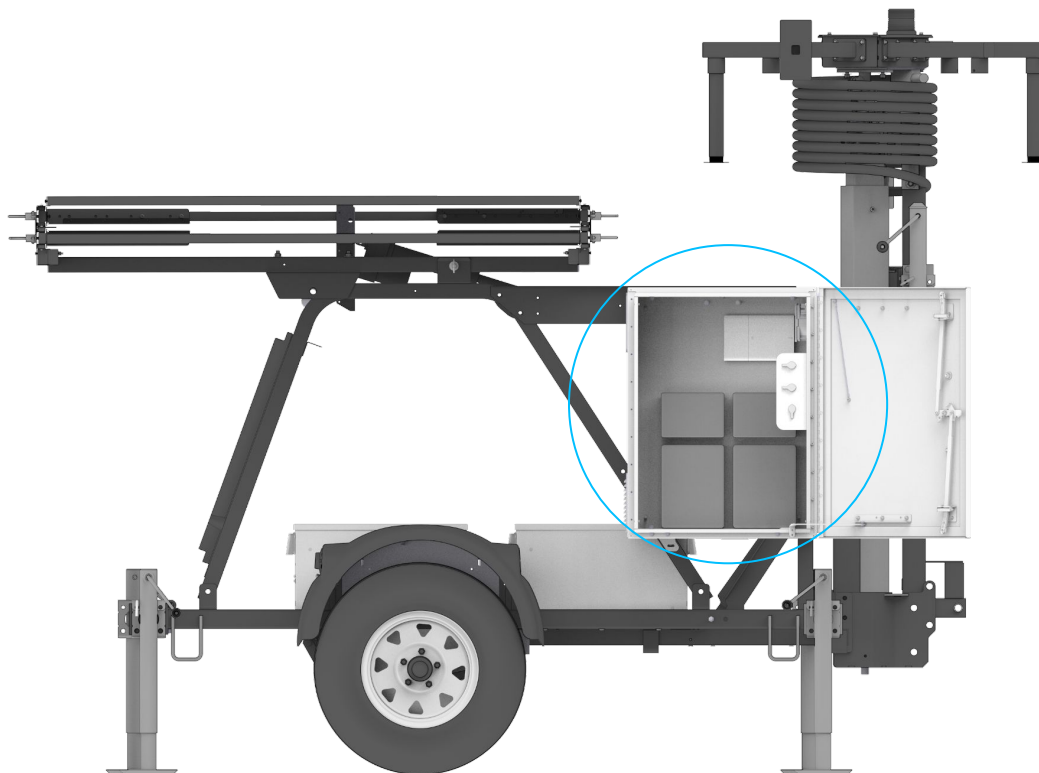
## 2.1 Safety During Install and Service

Please adhere to the following safety guidelines when installing or servicing the trailer:

- Perform install and maintenance in dry conditions. The trailer's NEMA enclosure should always be closed after install or servicing and should not be opened in extreme weather.

- Turn the main power switch to the OFF position (see image below) before performing any service.

- If disconnecting the trailer's battery cables, always disconnect the positive (+) cables first. Do not allow the positive cable to short to ground.

- If the ground under or around the trailer is damp or wet, move the trailer to a dry location and allow it to dry before servicing.

- Do not service the trailer if your clothing or skin is wet.

- Keep the trailer and all its components clean.

MAIN POWER

OFF
SERVICE ONLY

ON
NORMAL OPERATION
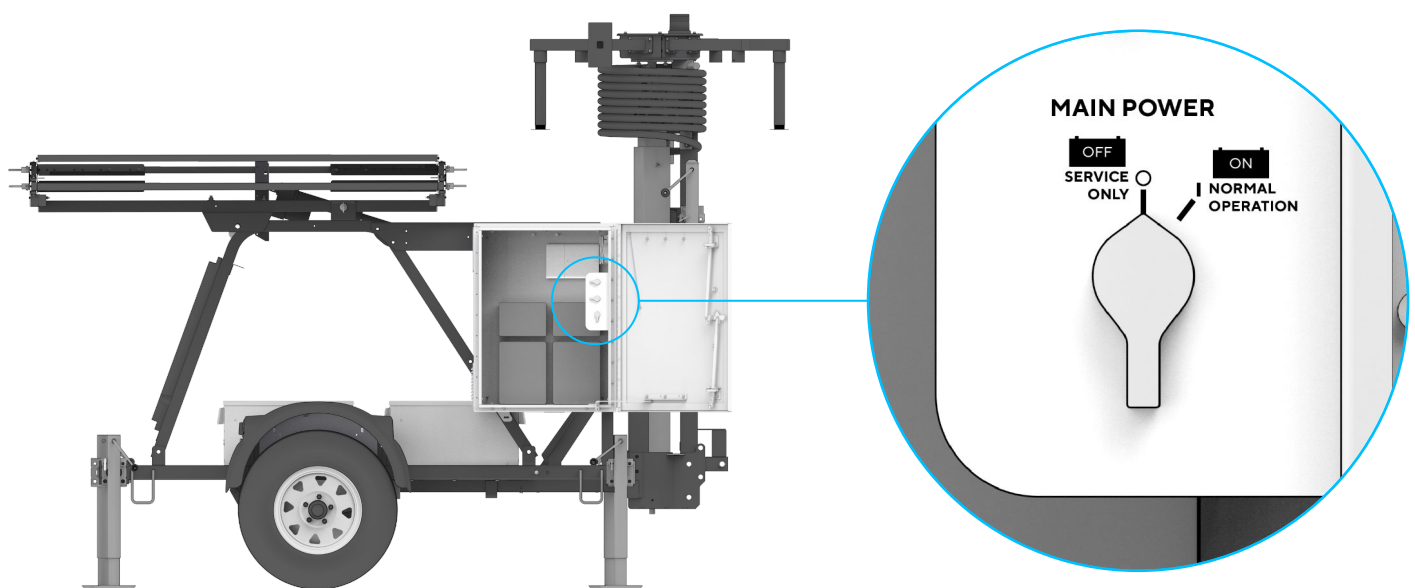
3.1 Receiving and Unloading the Trailer (1/3)

Trailers are shipped via flatbed truck. The receiving organization must provide a loading dock or operate their own forklift (72″ fork blades recommended) to unload the trailer from the flatbed truck upon delivery. **This equipment and personnel must be available at the time of scheduled delivery.**
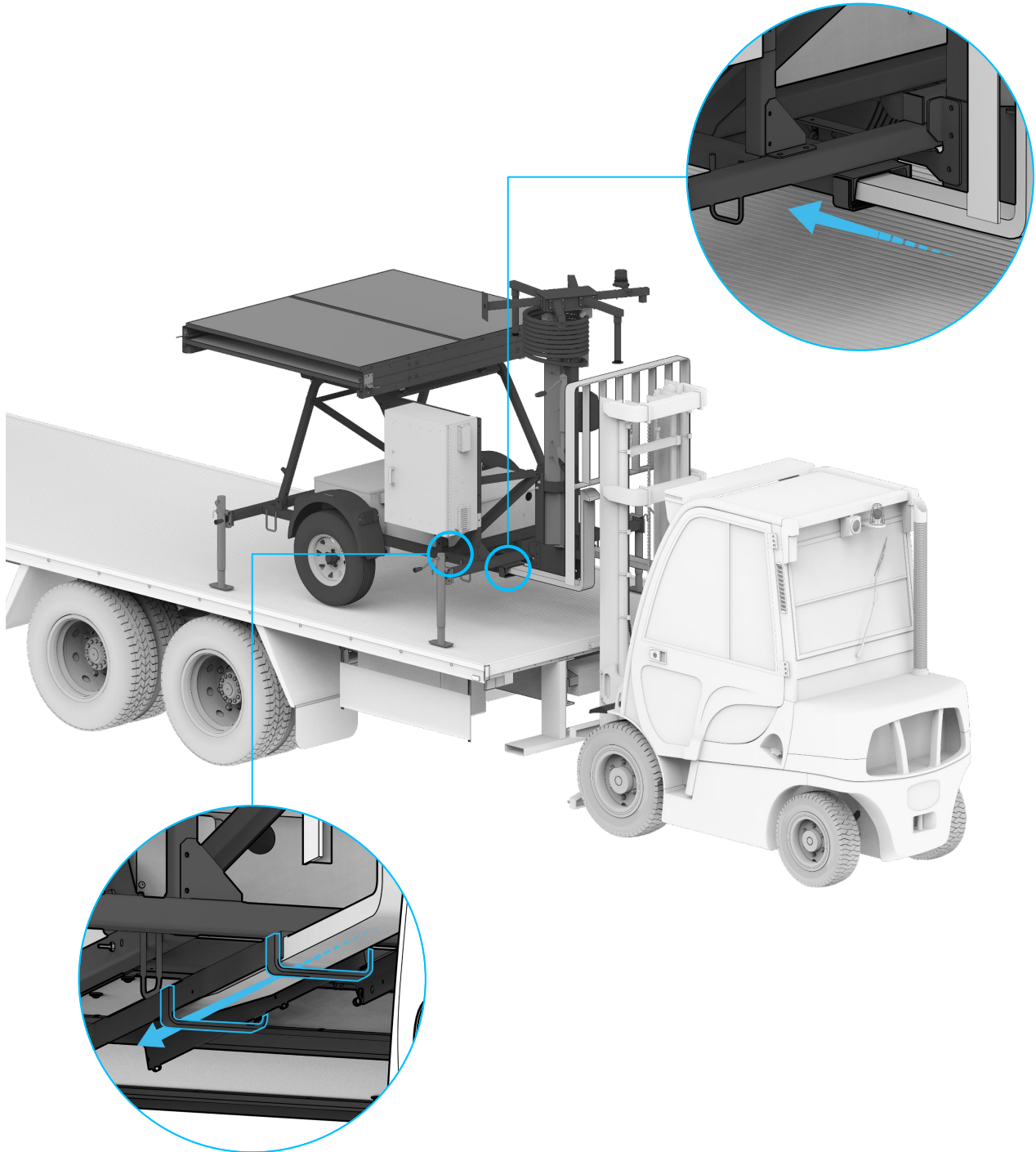

Loading Dock

37 5/16″
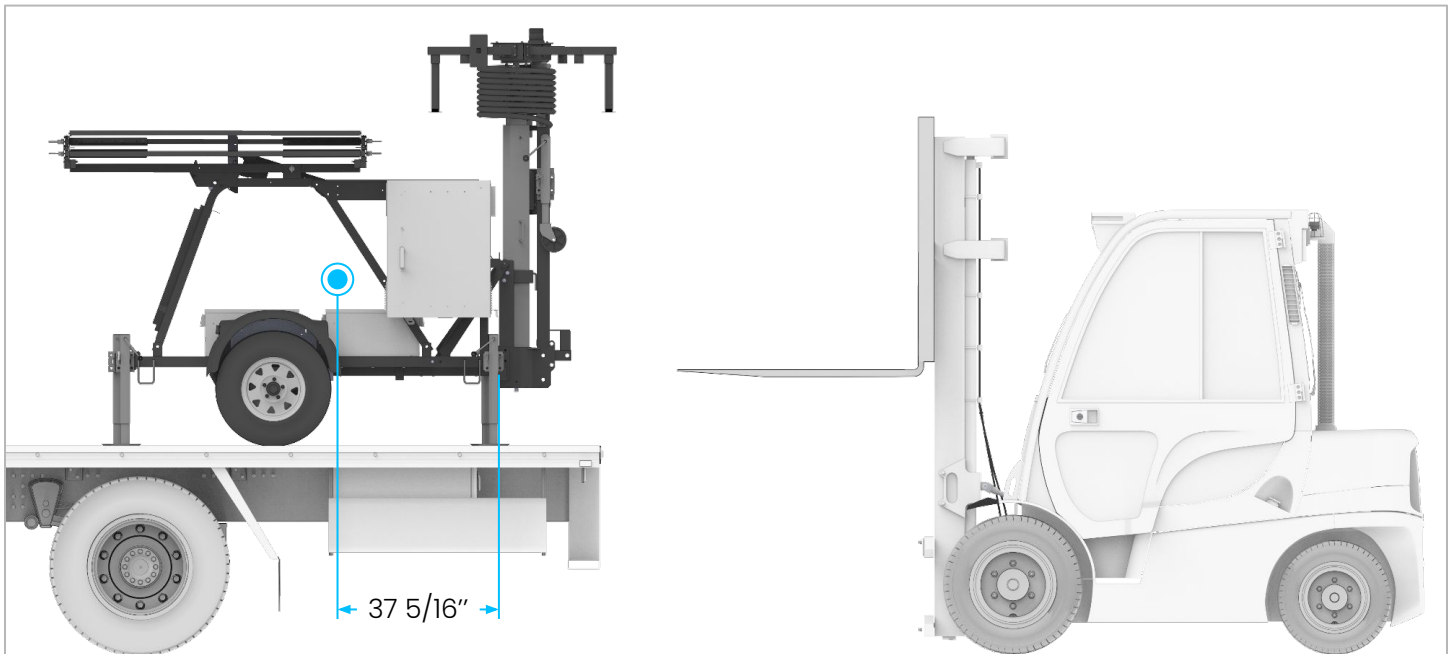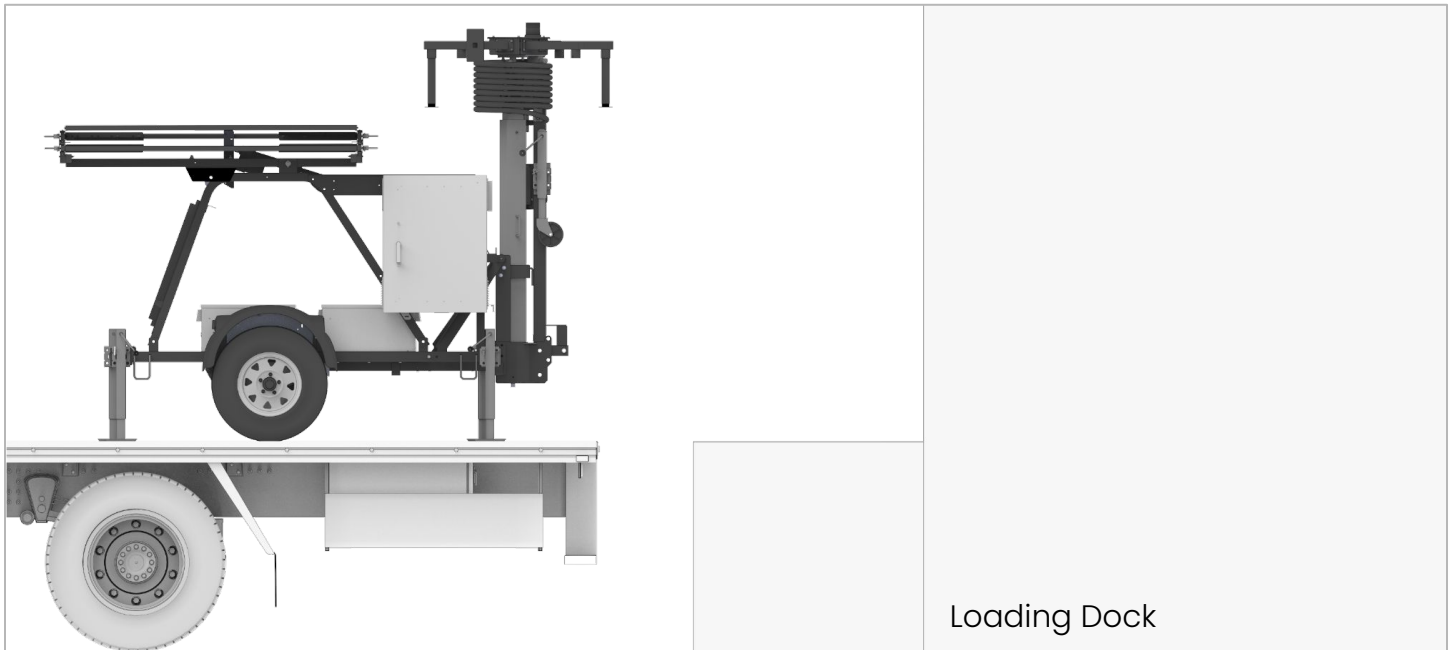
◉ Center of Mass

3.1 Receiving and Unloading the Trailer (2/3)

Use a forklift to unload the trailer, ensuring the fork is supporting the trailer in the labeled designated slots.

Note: The trailer has 2 fork pockets in the front. Each pocket consists of two loops.
**The forks must extend through both pairs of loops.**

3.1 Receiving and Unloading the Trailer (3/3)

Ensure that the trailer is placed on flat ground and stabilizer arms are extended for support.

Use a flush cutter to remove zip ties securing the NEMA box door in transit. The included locks can be used to secure the NEMA box and prevent the hitch arm from being lowered to prevent theft.
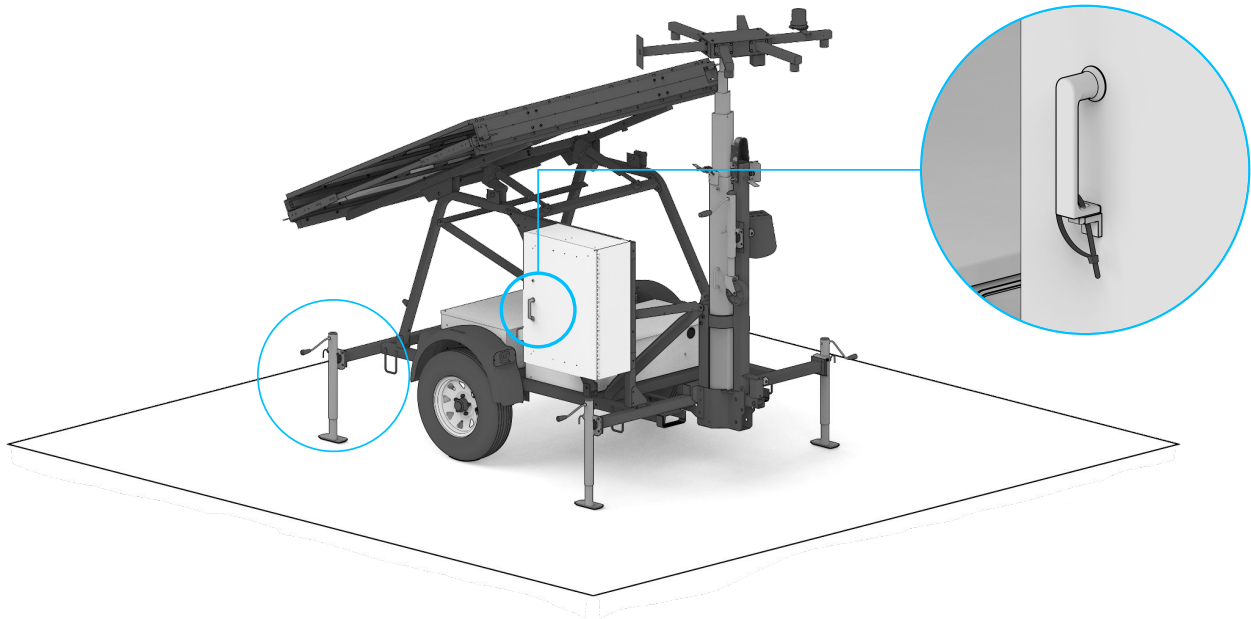
To deploy stabilizer legs

Pull the spring-loaded locking pin on the stabilizer leg out. With the pin pulled out, rotate the leg 90º and release the pin to lock the leg in place.

Adjust the height of each stabilizer leg using the hand crank. Extend each leg until the legs are supporting the weight of the trailer, and the trailer is level.
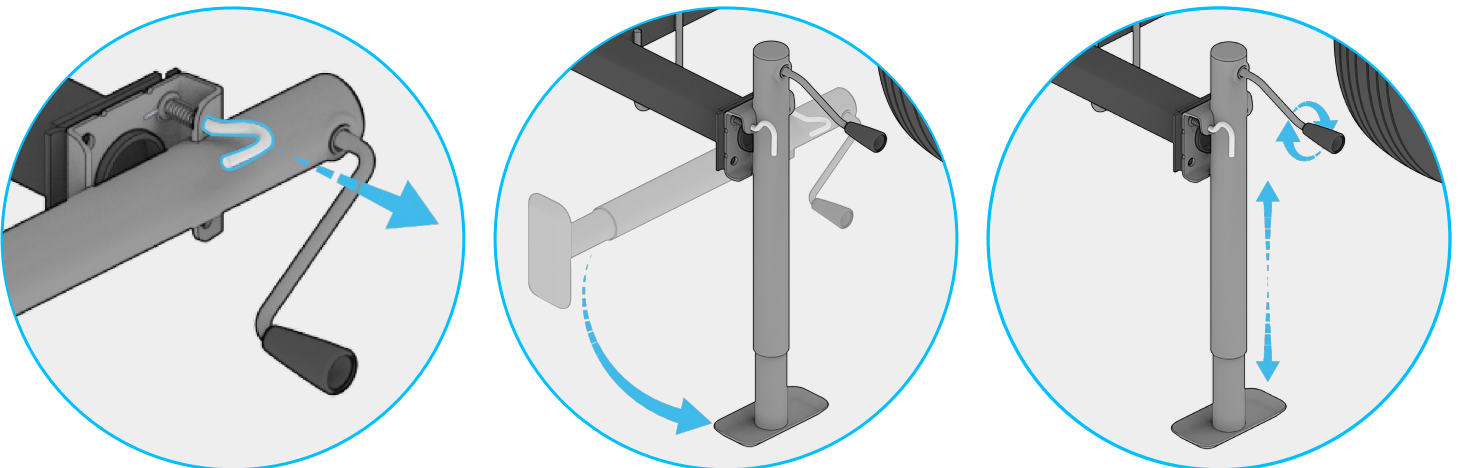
4.1 Best Practices for Device Mounting

When mounting cameras, always ensure that the installed devices do not block the field-of-view of any other cameras.

Additionally, confirm that they do not cause IR interference when operating in night mode.

The included 12" bullet drop pipes allow bullet cameras to get a more head-on view for better license-plate recognition (LPR) performance and are recommended for mounting bullet cameras.

The included 14" NPT drop pipe is recommended for use with a fisheye or multisensor camera to prevent IR interference from other cameras.

It is recommended to stage and update all mounted devices to the latest firmware before installation on the trailer.
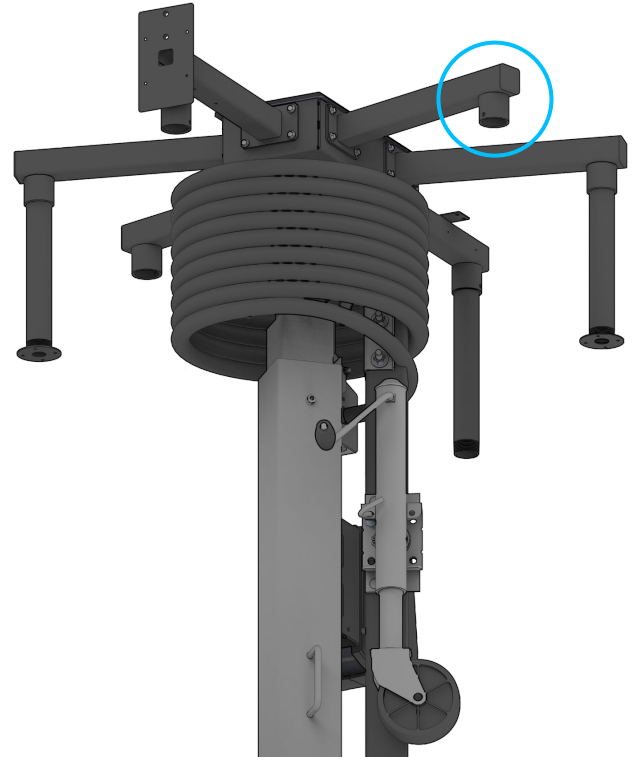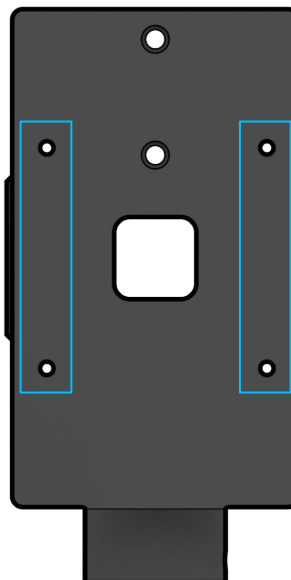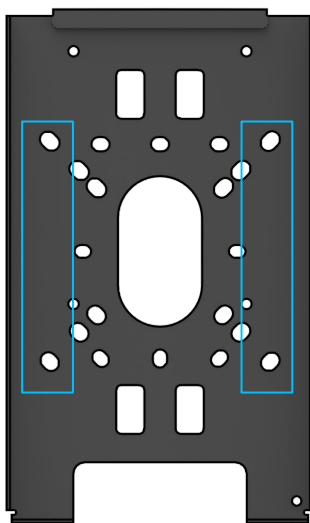
4.2 Mounting a Verkada Gateway

Internet connectivity can be provided by a Verkada gateway device or third-party device, such as a Starlink. This page describes how to mount a Verkada GC31-E or GW31-E. This step should happen prior to mounting any other Verkada devices.

Use the provided mount hole pattern on the gateway arm of the trailer to attach the mount plate of a Verkada gateway. The holes on the trailer arm correspond with Hole Pattern A on the gateway mount plate.

Follow the _Verkada gateway install guide_ (QR code in Appendix) to mount it using the M4 machine screws included with the trailer.

Ensure the Cat6 cable run to the gateway is sealed using the 7-9mm cable grommet included in the Verkada gateway box.

Important: The gateway's PoE In port must be _set to LAN mode_ (QR code in Appendix).


Verkada Gateway mount holes

4.3 Mounting Starlink Standard Kit

For Starlink Standard Kit with Starlink Standard Wall Mount.

Use the provided mount hole pattern on the gateway arm of the trailer to attach the arm of the Starlink Standard Wall Mount.

Follow the Starlink *Standard Wall Mount install guide* (QR code in Appendix) to mount it to the trailer arm using M8 machine screws and washers. Plug in the provided Cat6 cable into the Starlink*.

Place the Starlink Router inside the NEMA box. Use an available outlet on the power strip to provide AC power to the router's Power Supply.

Starlink Standard Wall Mount holes
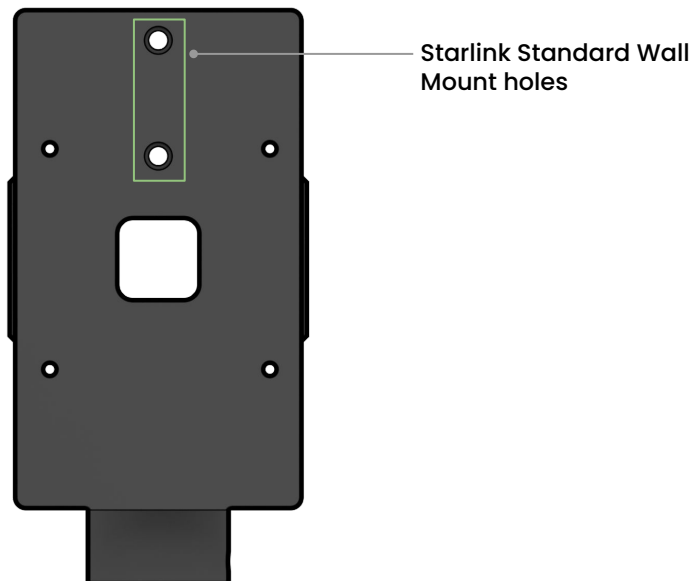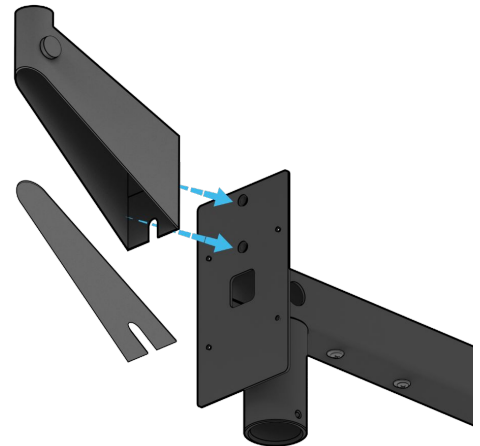
*Please note: Using Starlink with a non-OEM ethernet cable requires a weatherproof RJ45 adapter to maintain proper sealing, such L-Com, Inc's model no. TSLG3-ODKIT-1M. Please consult Starlink's official documentation for approved accessories and installation best practices.
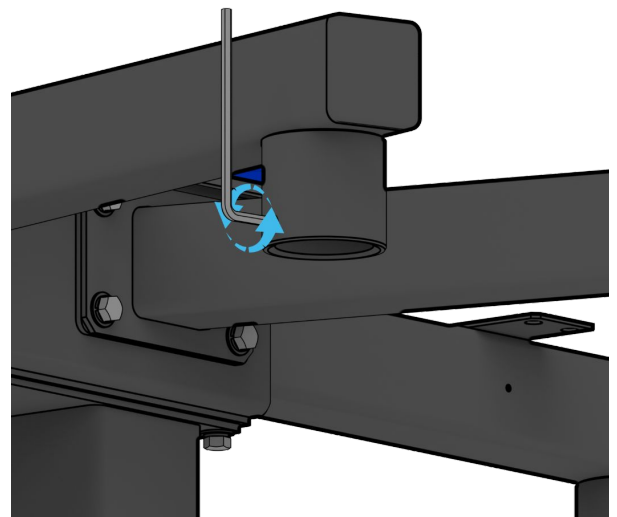
4.4 Mounting Bullet Cameras (1/2)

Unscrew the plastic NPT thread caps from the arms using an adjustable wrench to expose the PoE cable.
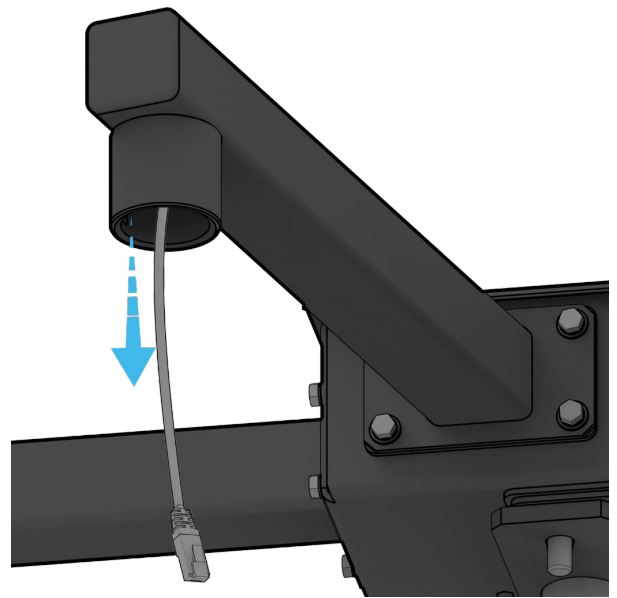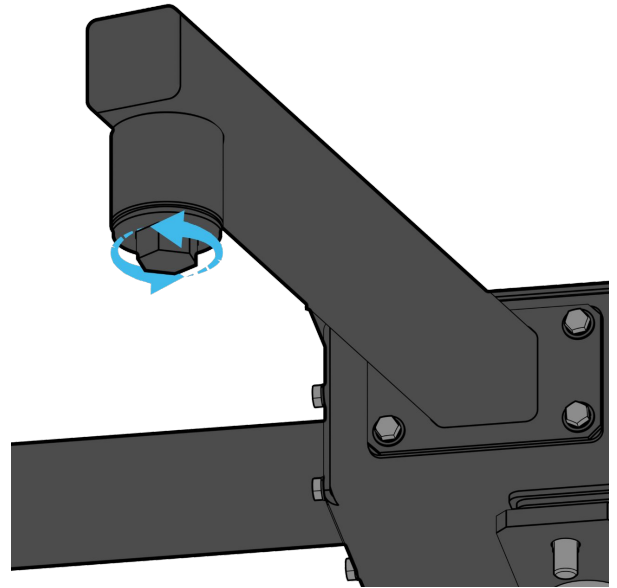
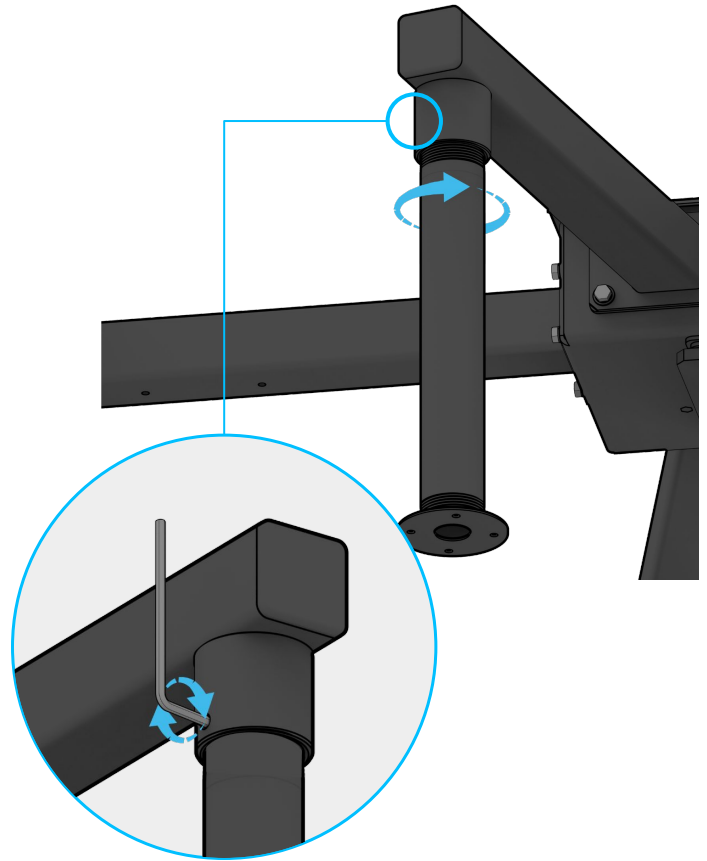Loosen the set screw with the included 3mm hex key.

4.4 Mounting Bullet Cameras (2/2)

Bullet Camera Drop Pipes can be found in the NEMA box.

Use the internal 1.5" NPT threads to screw a Bullet Camera Drop Pipe onto the arm.

Tighten the set screw to ensure the pendant cap does not loosen in transit.

Plug the PoE cable in the Bullet Camera Drop Pipe into the pigtail of the bullet camera.

Follow the *Verkada bullet camera install guide* (QR code in Appendix) to fasten its mount plate to the bullet drop pipe with M4 machine screws.

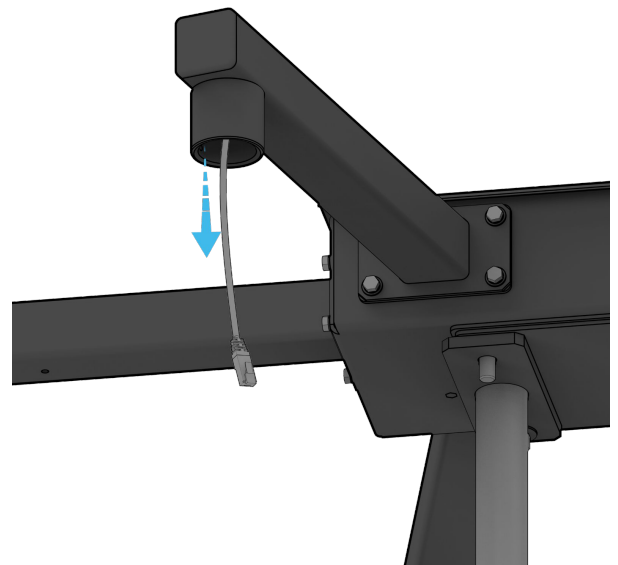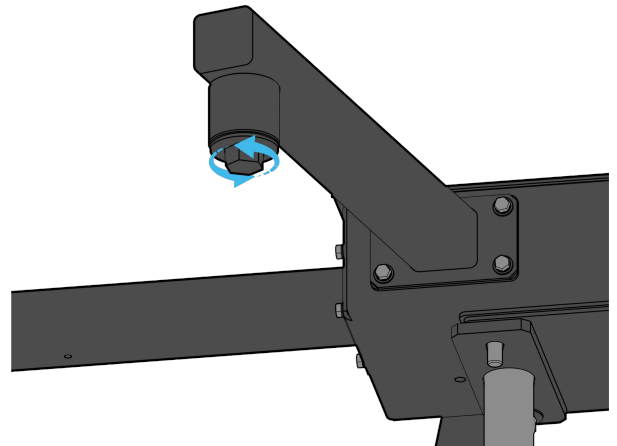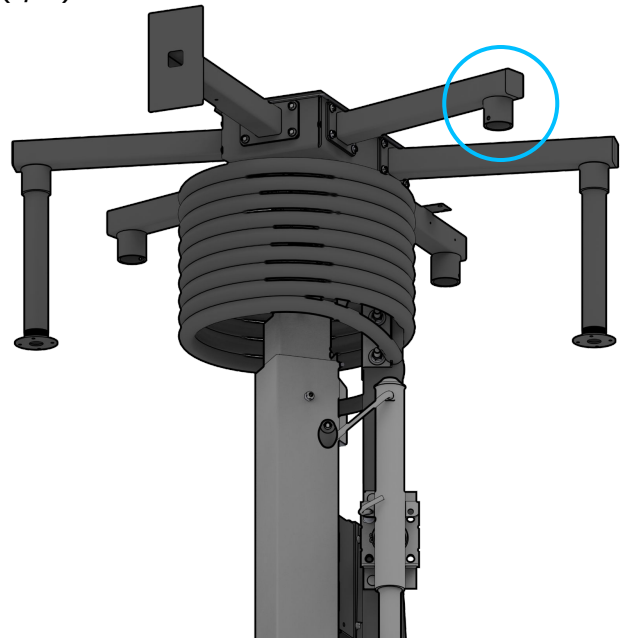## **4.5 Mounting Cameras using NPT Threads** (1/2)

Up to 6 Verkada cameras can be mounted using the 1.5" NPT threads on each of the 6 Camera Arms. Devices should be installed on the head unit with the mast fully lowered.

The head unit can support up to 150lbs and does not need to be removed or disassembled to install cameras.

Unscrew the plastic NPT thread caps from the arms using an adjustable wrench to expose the PoE cable.

All Cat5e cables are labeled 1-6 on both ends. These cables are pre-wired into the 8-port switch (inside the NEMA enclosure) that is capable of 90W PoE output through each port.

4.5 Mounting Cameras using NPT Threads (2/2)

Use the NPT threads on each arm to mount any Verkada pendant cap (ACC-MNT-PEND-1, ACC-MNT-UPEND-1, ACC-MNT-YPEND-1, ACC-MNT-HPEND-1, or the pendant cap included with a Verkada PTZ camera).

Loosen the set screw with the included 3mm hex key.

For a fisheye or a multisensor camera, using the included 14" NPT drop pipe is recommended to prevent IR interference.

Use the internal 1.5" NPT threads to screw a pendant cap onto the arm (or onto the 14" NPT drop pipe accessory).

Follow the respective pendant cap install guide to mount a Verkada camera.

Tighten the set screw to ensure the pendant cap does not loosen in transit.
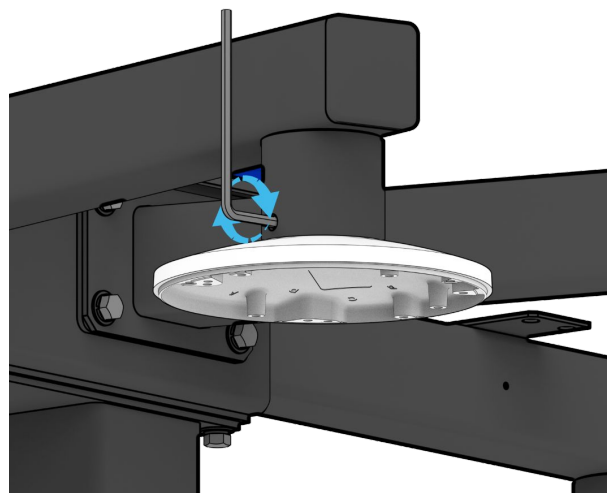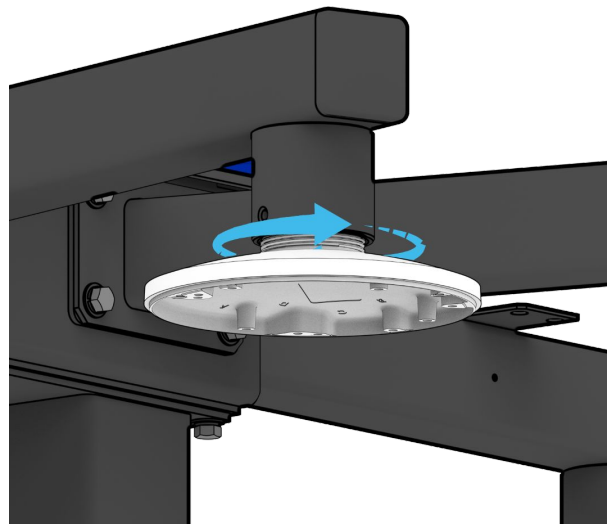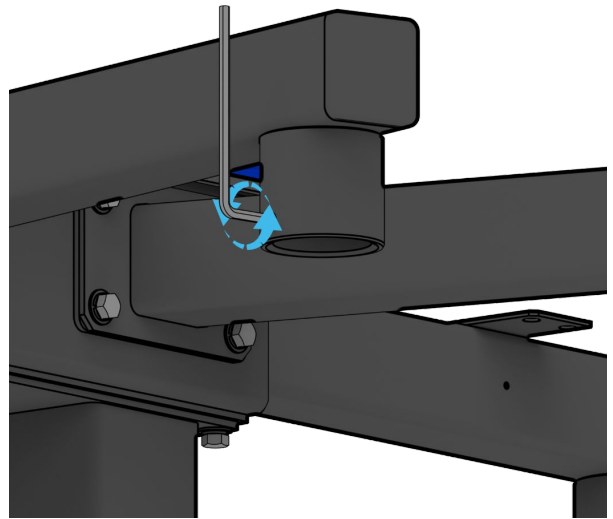
4.6 Mounting a BZ11 Horn Speaker

A BZ11 can be installed instead of a camera on the gateway arm for talk-down capability.

Unscrew the sealing screws from the BZ11 bracket hole pattern on the gateway arm.

Follow the *Verkada BZ11 install guide* (QR code in Appendix) to mount it using the sealing screws.

Use the Cat5e cable provided in the NPT mount to connect the BZ11.
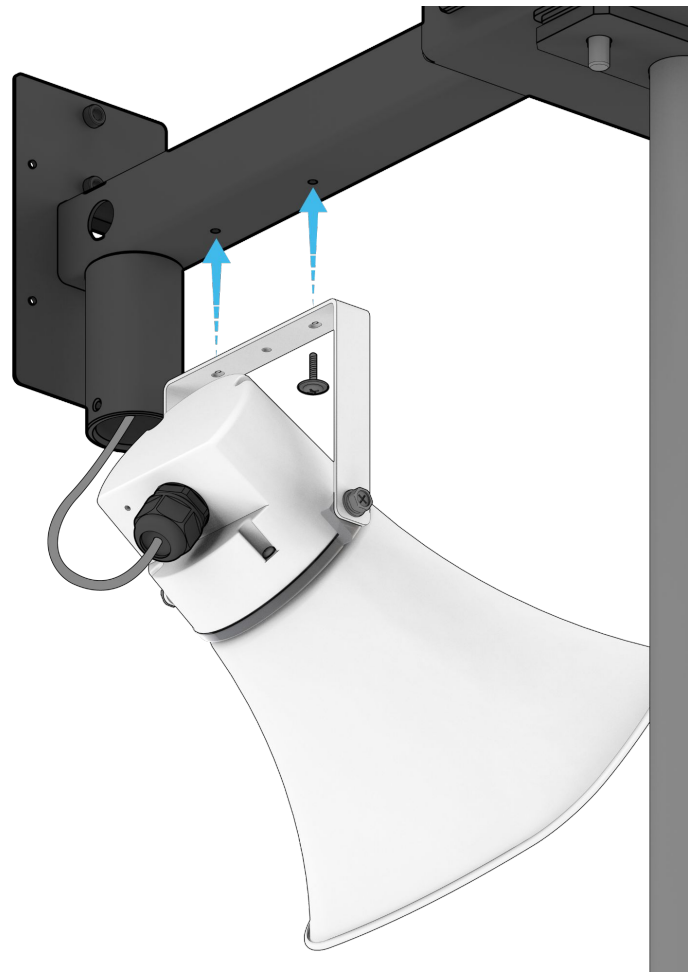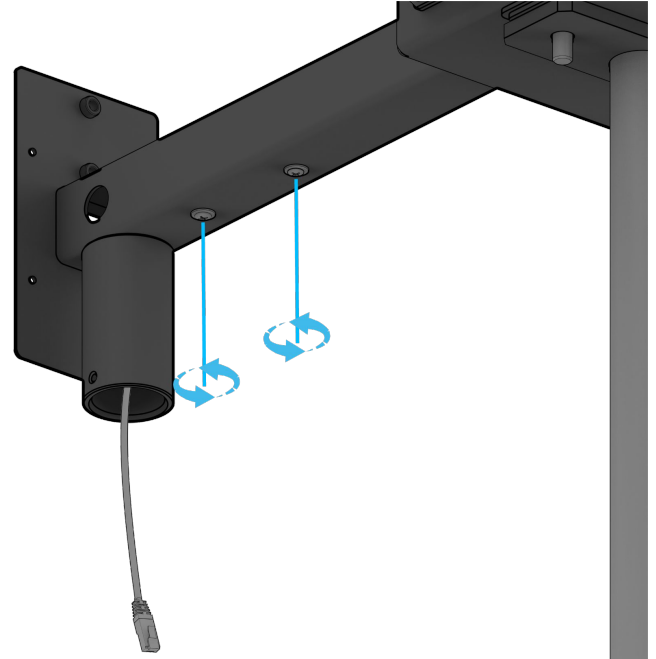
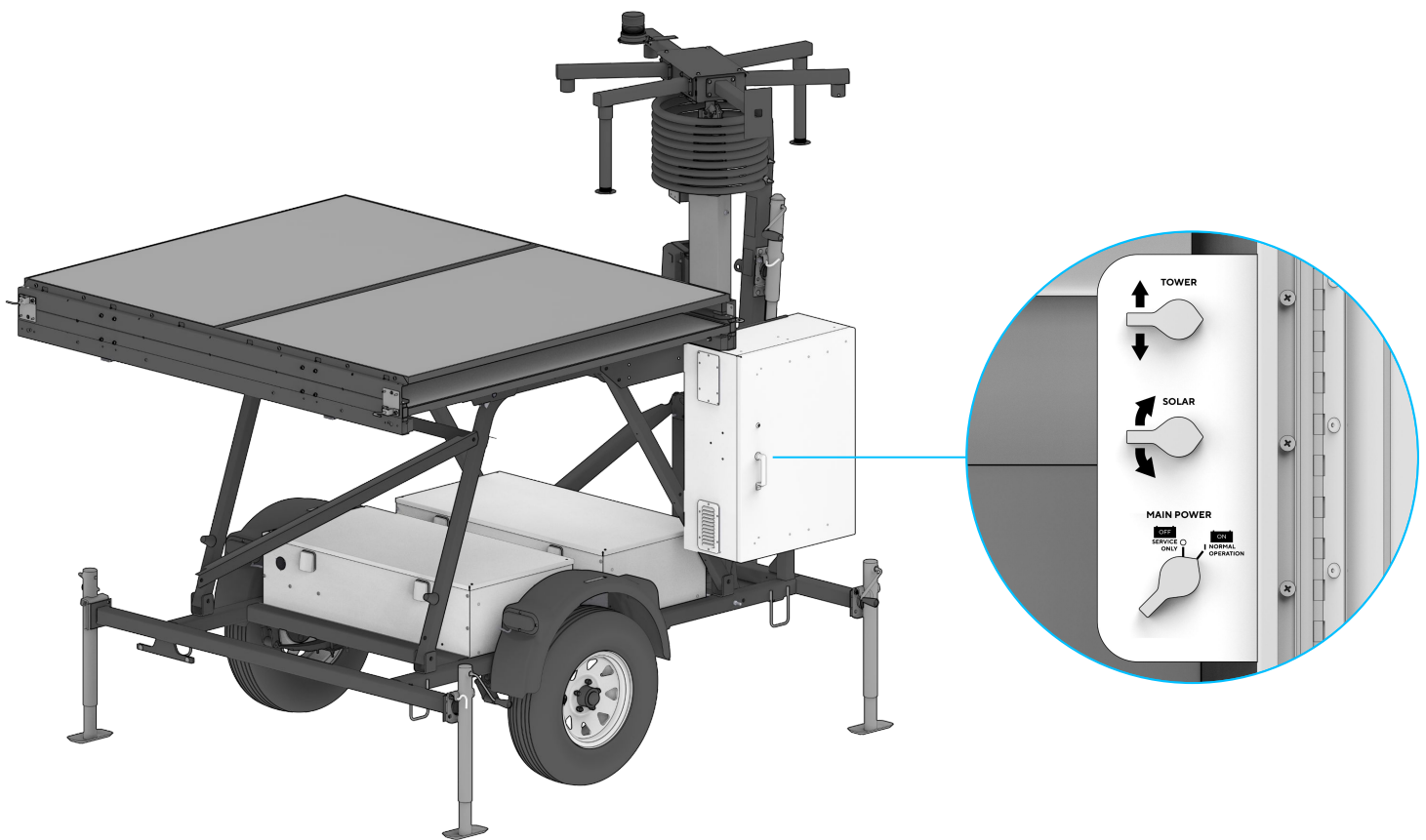## 4.7 On-Site Setup (1/6)

Controls for full system power, the electric mast winch and the panel tilt actuator are all located inside the NEMA box.

Ensure trailer is placed in direct sunlight and solar panels are clean and facing south to ensure maximum solar generation. A compass is included inside the NEMA box to help with panel orientation.

Depending on how much sun you get and how many devices you are attaching to your trailer, you may or may not expect downtime in a given year. To see how much downtime to expect in your specific location, please see our *calculator* (QR code in Appendix).
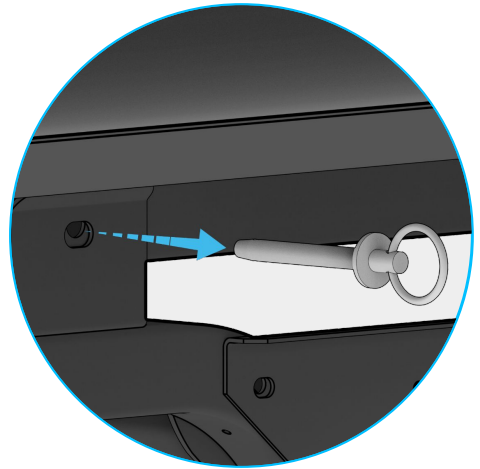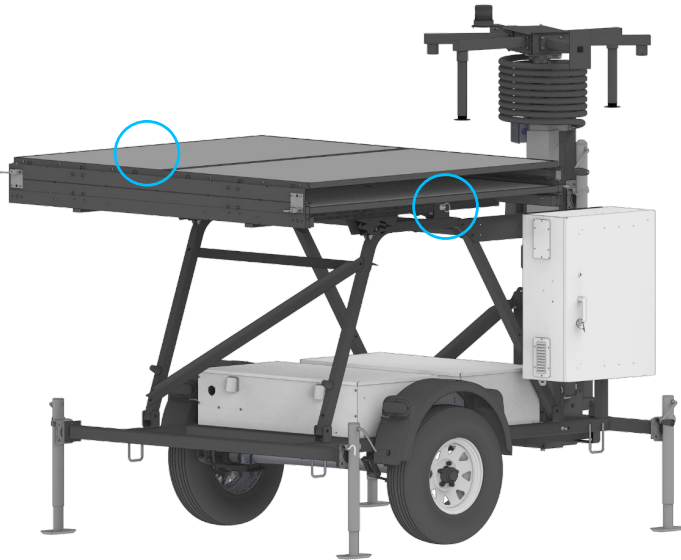
To deploy stabilizer legs

See section 3.1 for instructions on deploying stabilizer legs.

4.7 On-Site Setup (2/6)

To adjust panel tilt

Pull out the locking pins located on **both** sides under the panel.

Use the panel tilt switch to adjust tilt angle. An online calculator such as *this webpage* (QR code in Appendix) can be used to find the optimal solar panel angle for your deployment location. Tilt angle can be checked with a digital level.
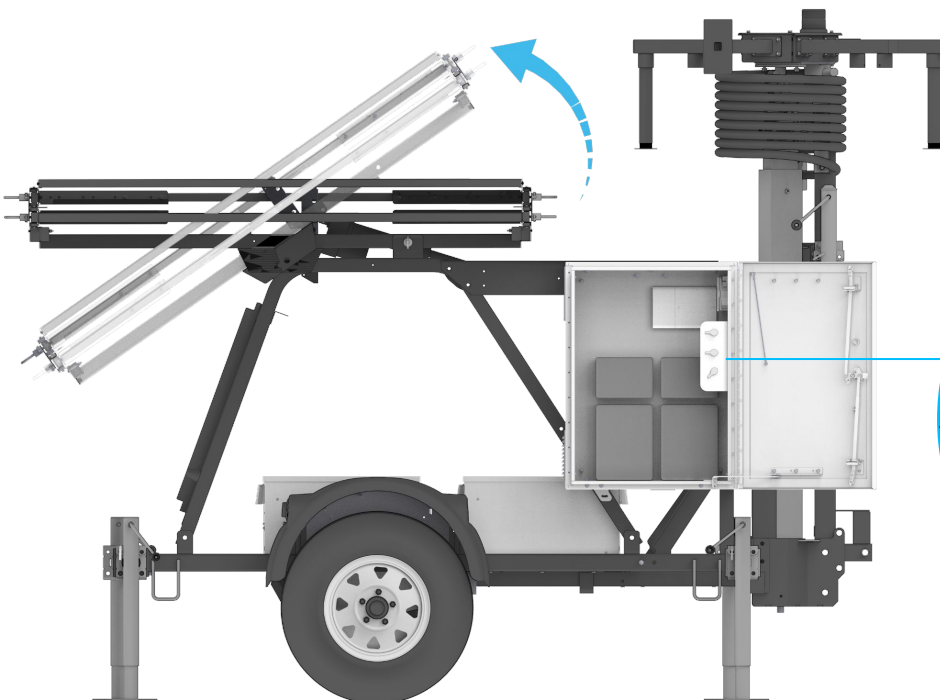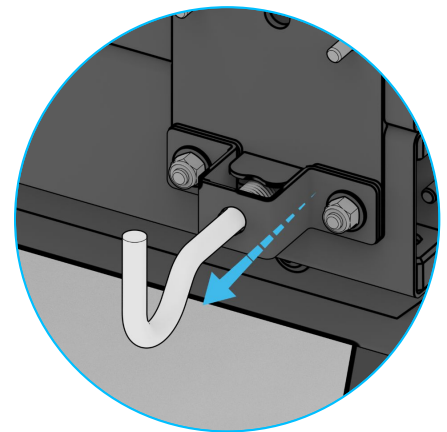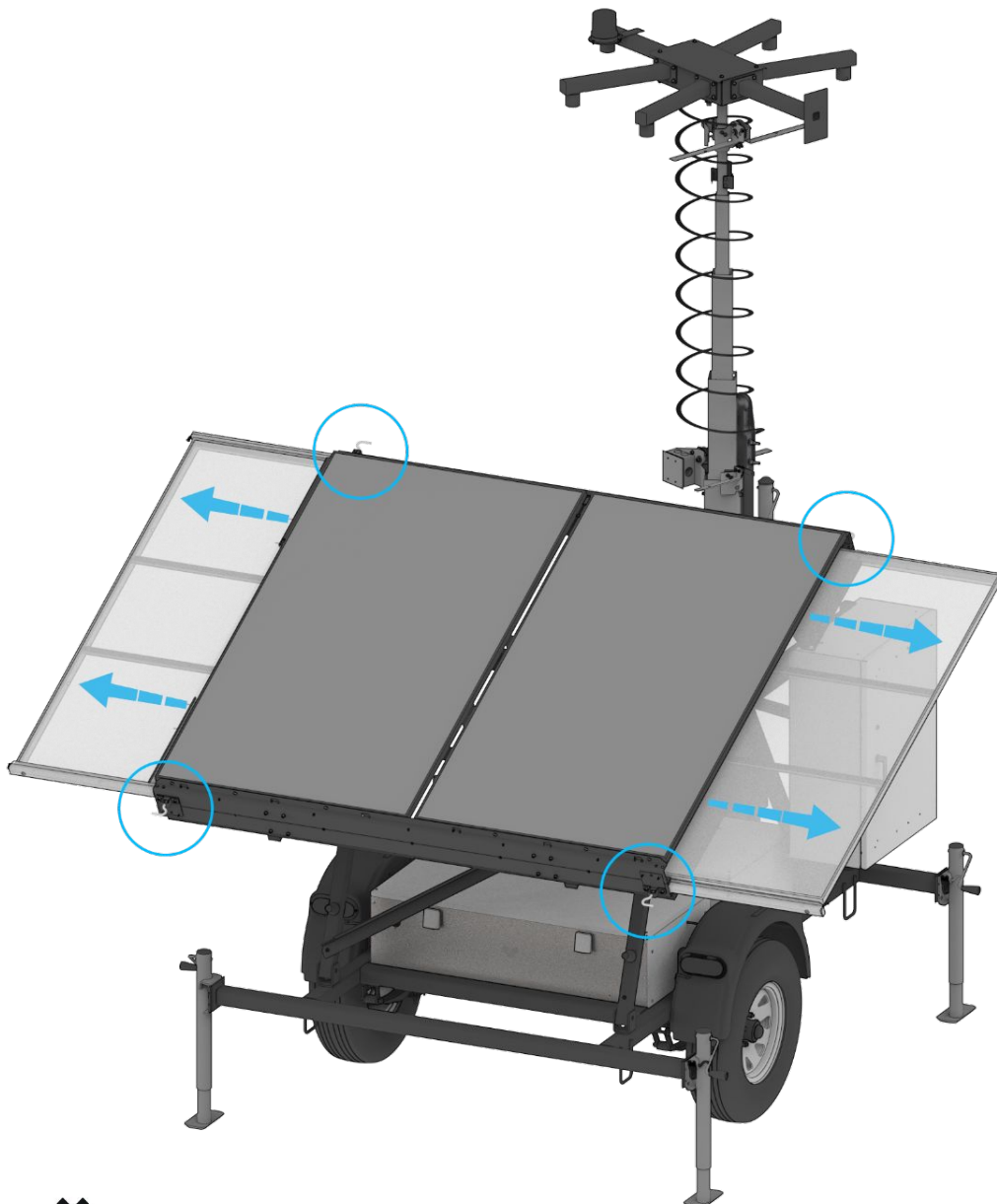
4.7 On-Site Setup (3/6)

**To pull out solar panels for maximum generation**

The permanently exposed top layer of solar panels provide 800W of solar power. When deploying, the bottom row of panels can be slid out to increase solar panel wattage to 1600W. Verkada recommends having all solar panels exposed at all times.

Pull out the spring-loaded locking pins on all four corners of the panels and rotate them 90º to keep retracted. Once all the pins are retracted, the panels can be fully slid out.

Once the panels are fully extended, rotate the locking pins 90º to lock the panels in the fully extended position.
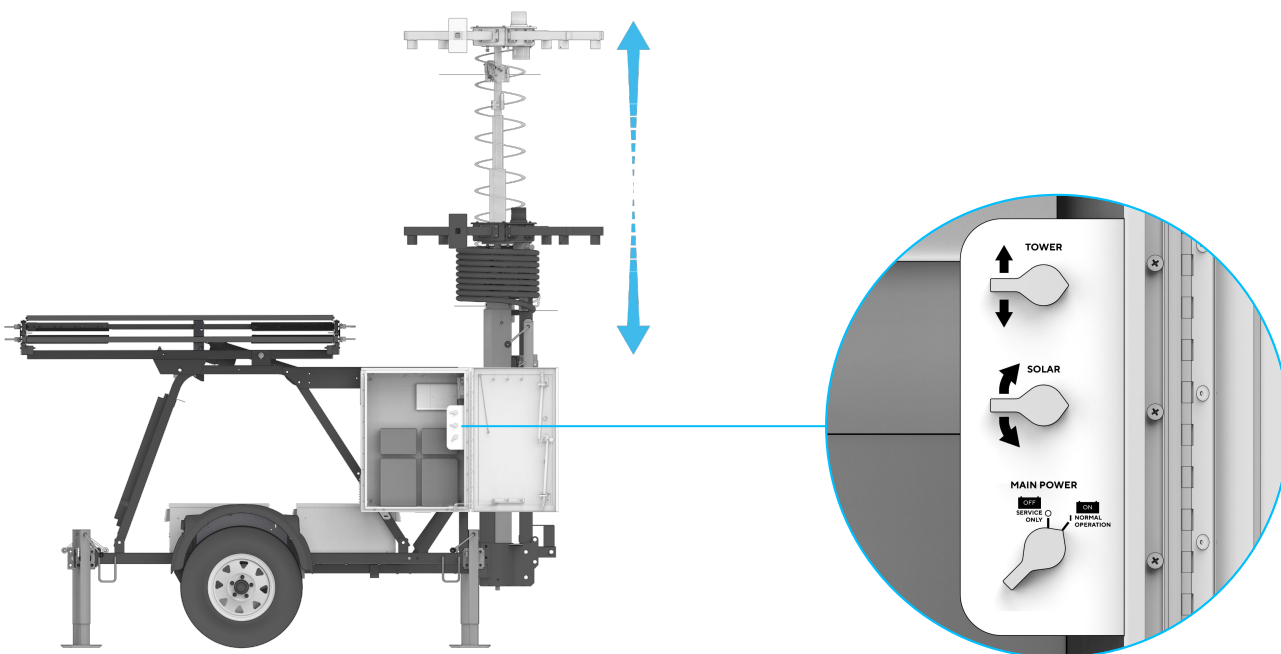

Locked Position
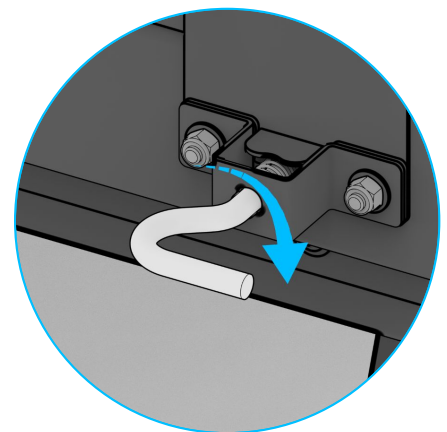
Unlocked Position
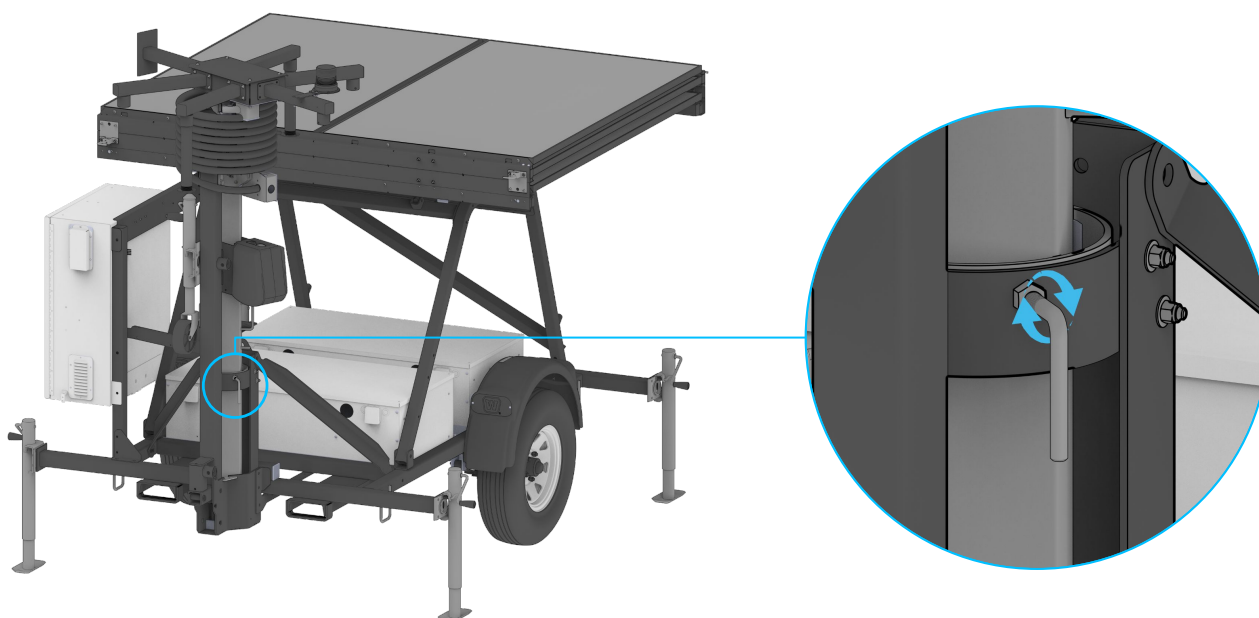
4.7 On-Site Setup (4/6)

To raise mast

Ensure there are no obstructions above the mast. Use the electric mast winch switch in the NEMA box to raise the mast to your desired height based on camera field of view. At full mast, the trailer has a sustained 65 mph wind rating.
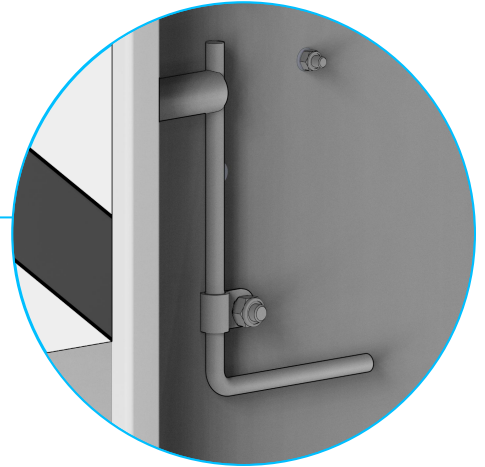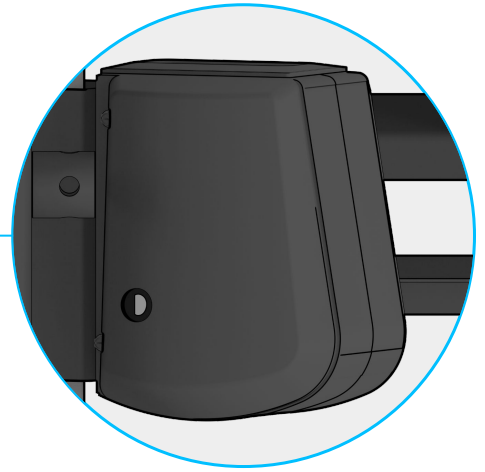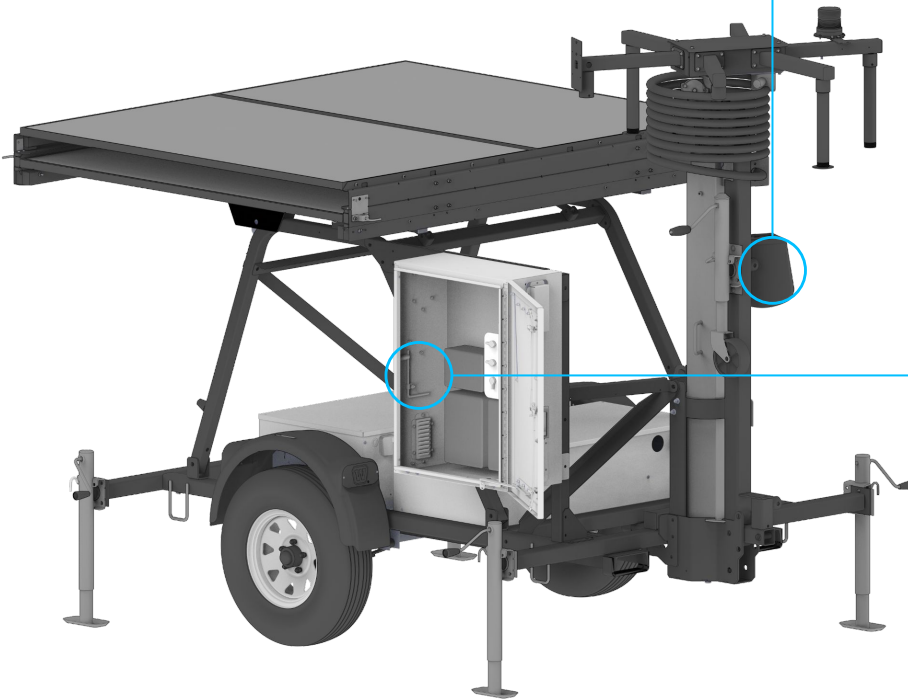

To lock mast rotation

Loosen the set screw to allow the mast to rotate. Once angle has been set, retighten the set screw to lock the mast.

4.7 On-Site Setup (5/6)

In the event of electric winch failure, the trailer's mast can be raised and lowered manually.

To manually operate the mast:

Remove the plastic cap on the side of the electric winch using a flathead screwdriver.

Retrieve the crank bar from the side wall of the NEMA enclosure using a 10mm socket.

Insert the crank bar into the winch opening.

Rotate the crank bar **clockwise** to lower the mast, or **counterclockwise** to raise the mast.
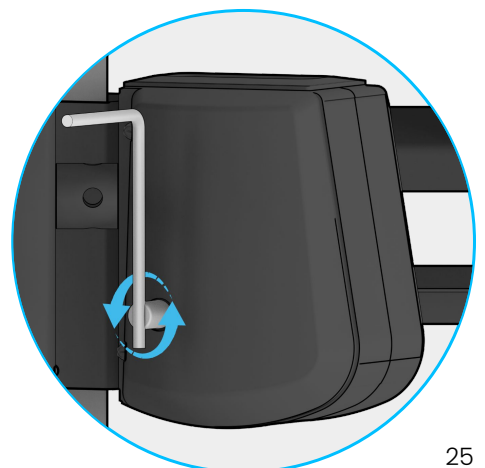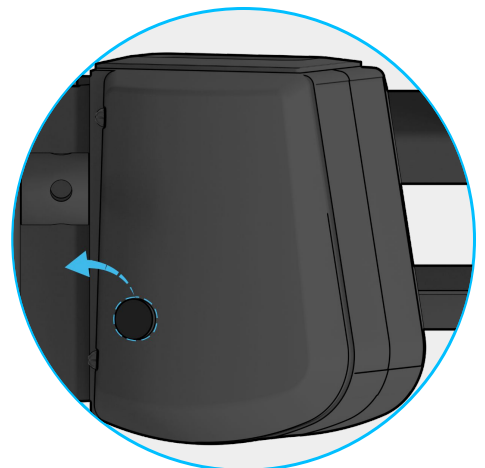
4.7 On-Site Setup (6/6)

To lock trailer

The trailer can be locked in multiple places to prevent tampering or theft.

Verkada includes two combination padlocks in the NEMA box for your convenience to secure the NEMA box handle and hitch pin with the hitch in the raised position. However, you should evaluate your security needs and use locks that meet your specific security requirements.

The MT81 is compatible with most common lock types appropriately sized, including padlocks, chain locks, hitch pin locks, hitch ball locks, and wheel boots.
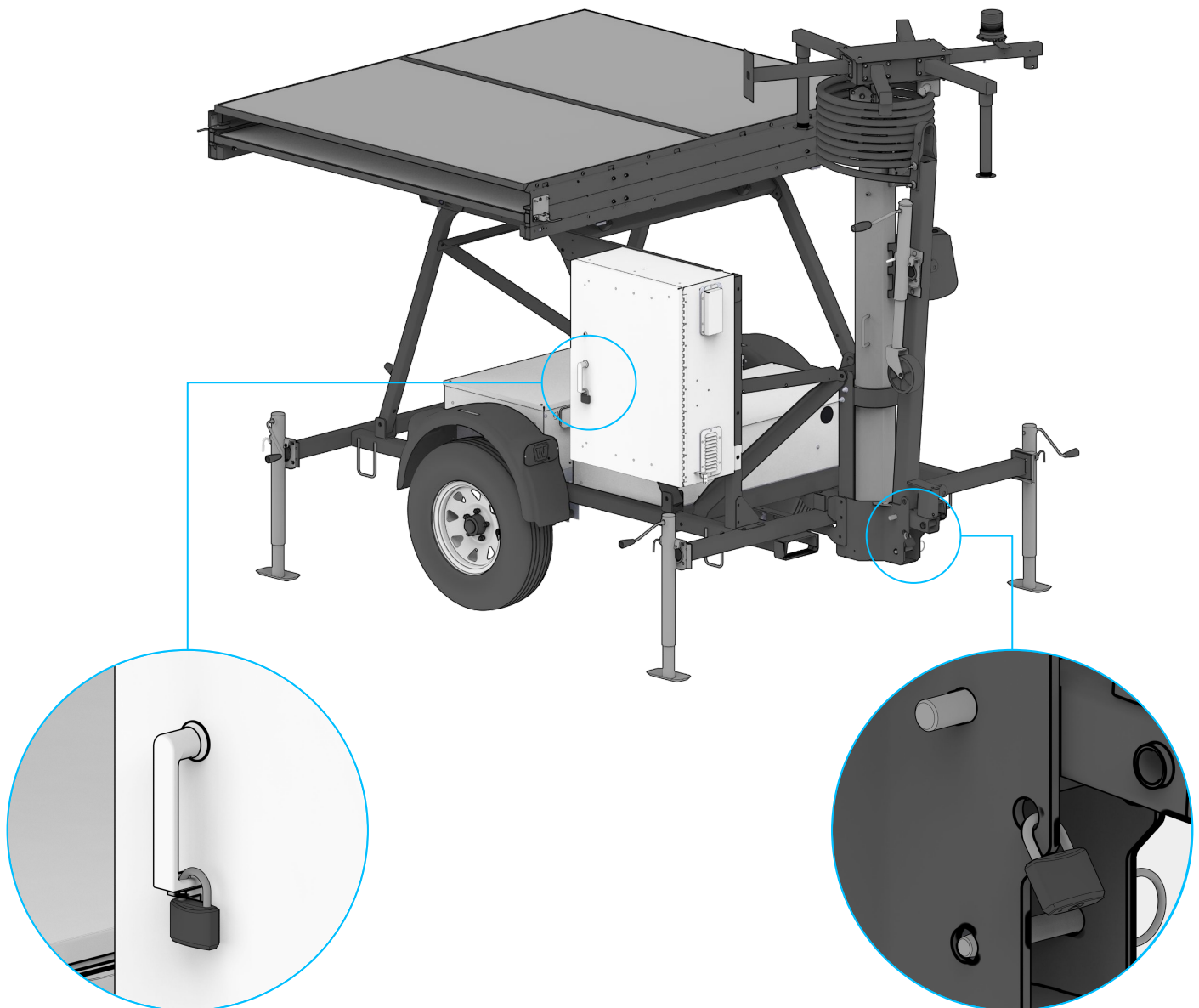
5.1 License Plate Mounting

Licensing and Registration Requirements

Before towing the trailer on public roads, you must obtain license plates and register the title with your local Department of Motor Vehicles (DMV).

License Plate Installation

The trailer includes a rear-mounted license plate bracket with Phillips head screws for attaching your license plate once obtained.

Title Registration

Verkada provides a Manufacturer's Certificate of Origin (MCO) with every trailer. Present this document to your local DMV to register and obtain the title for the trailer.

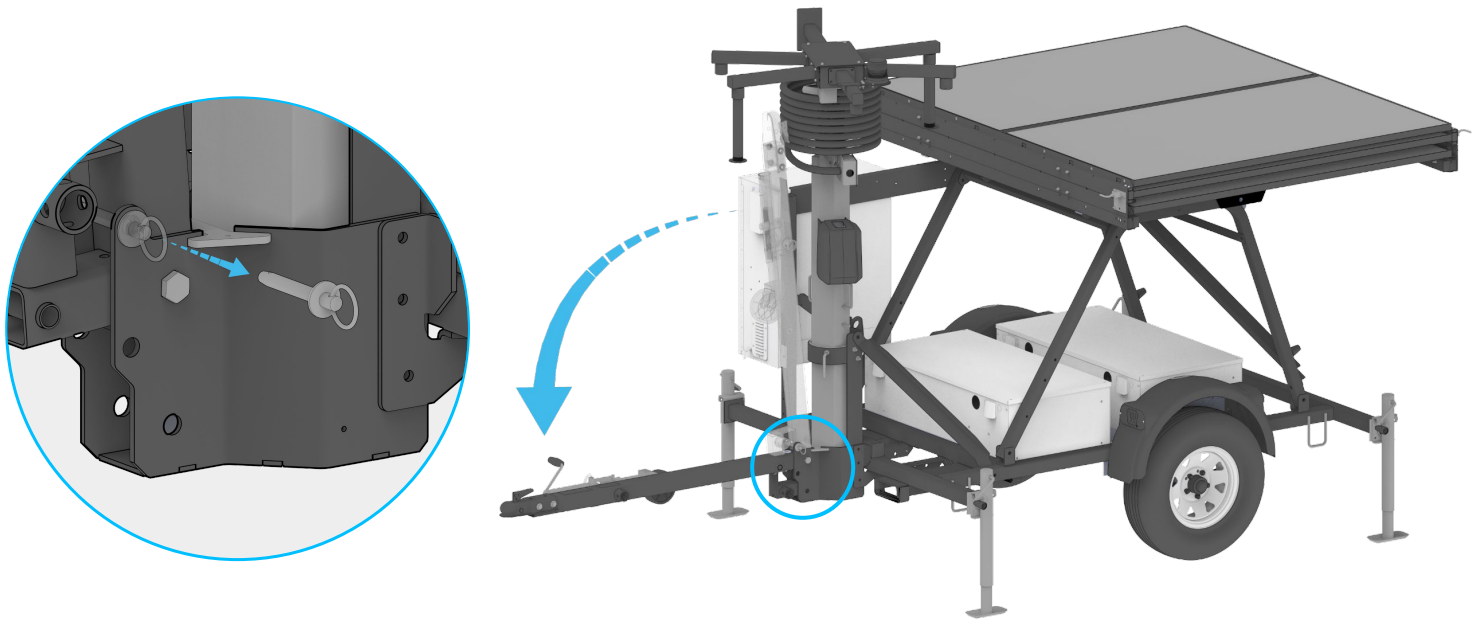Do not tow the trailer on public roads until proper registration and licensing is complete.
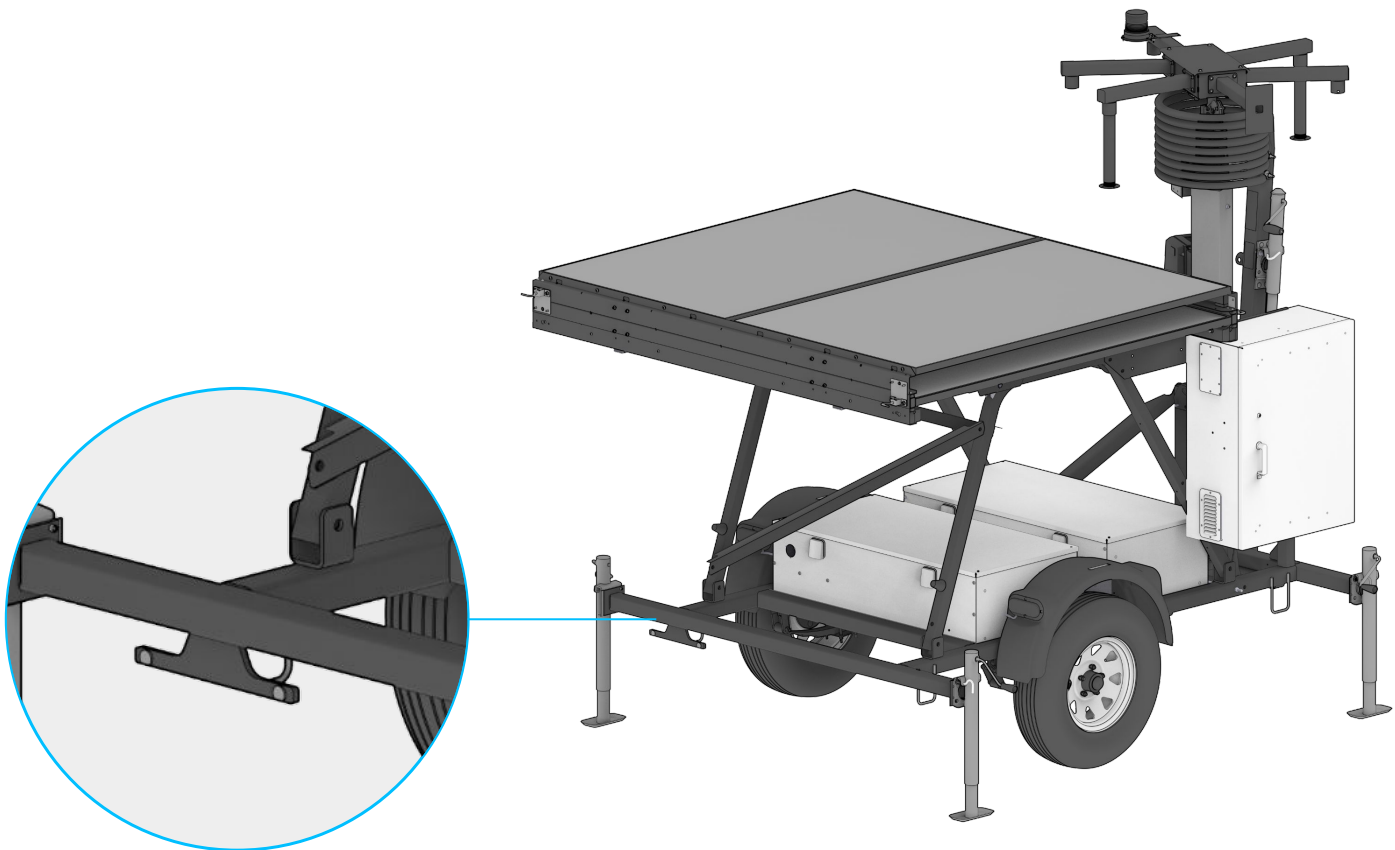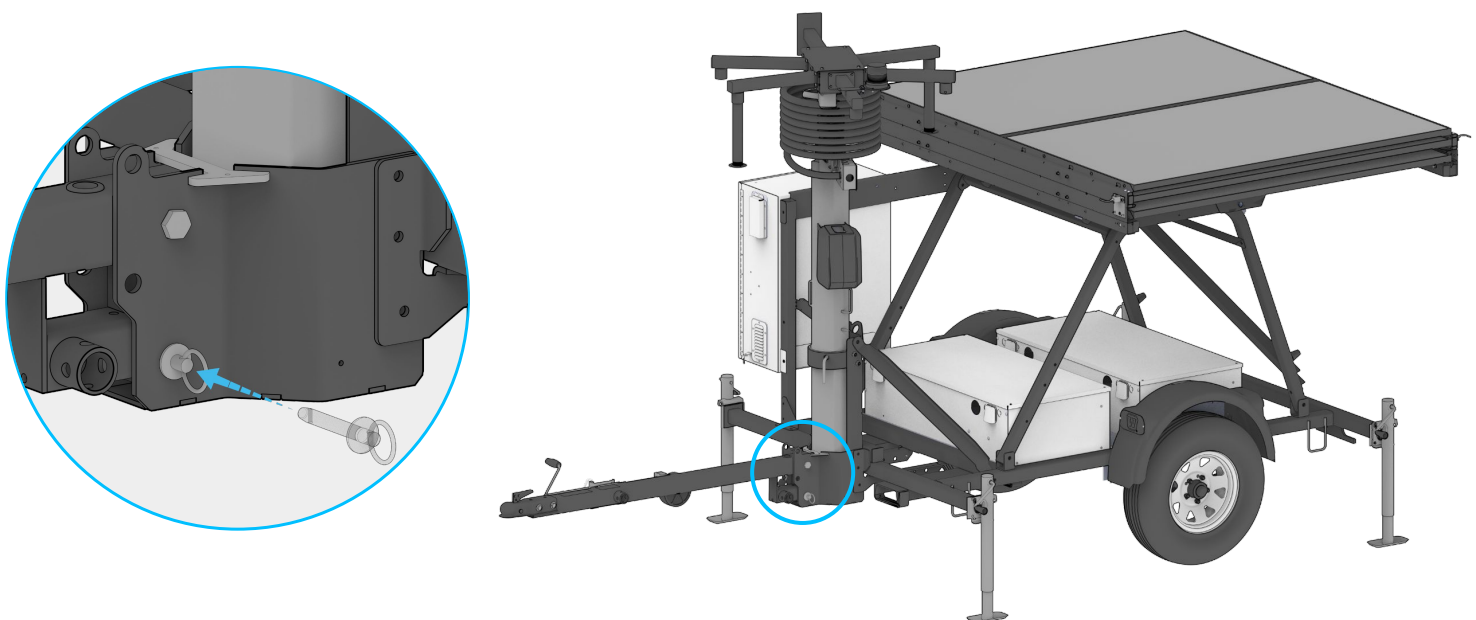

License Plate Mount

5.2 Towing the Trailer (1/3)

Ensure the trailer tires are at a cold inflation pressure of 35 psi before towing.

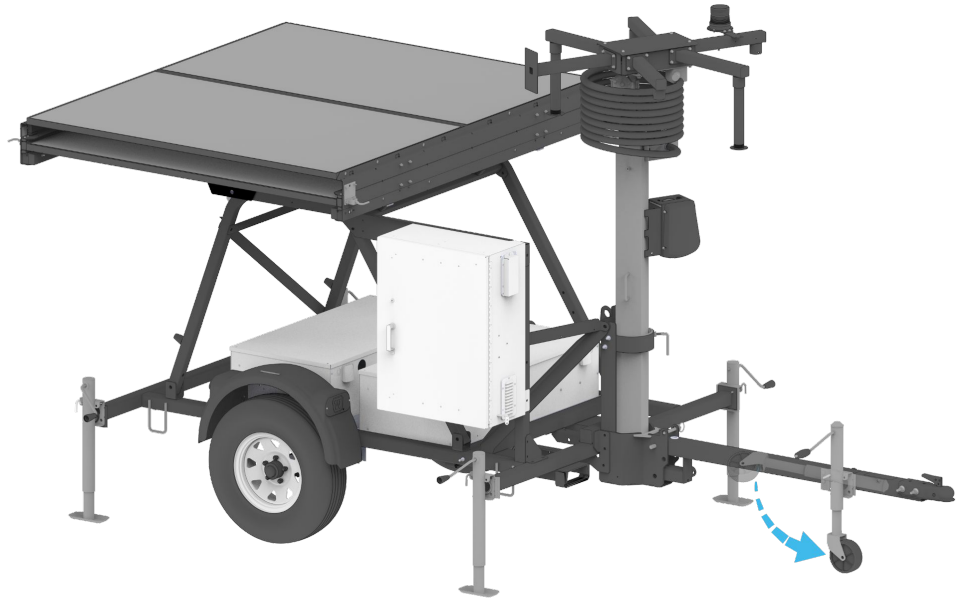Remove the trailer tongue pin and lower the trailer tongue.

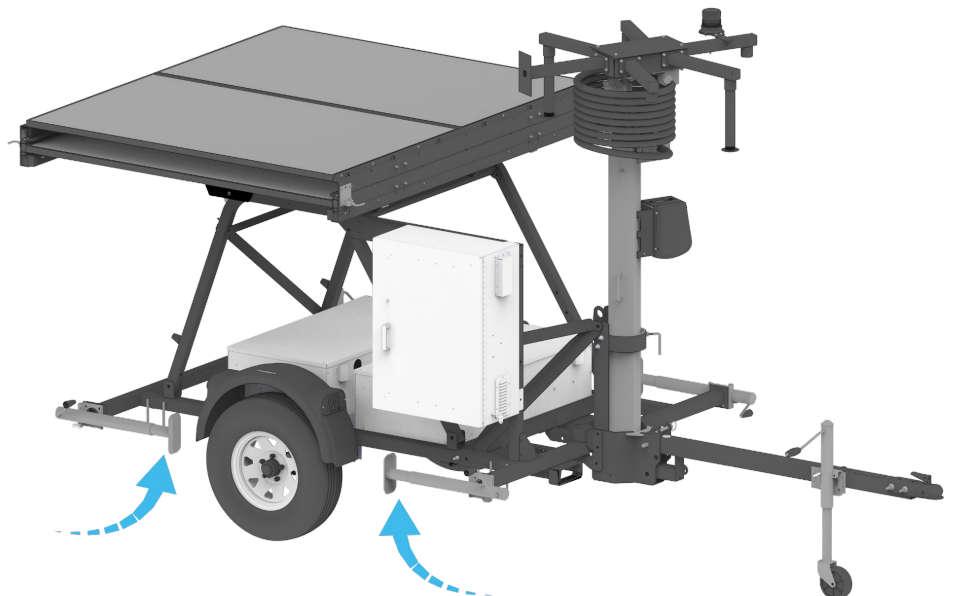Lock the tongue in the lowered position using the same pin.

5.2 Towing the Trailer (2/3)

Lower the stabilizer leg on the trailer tongue.

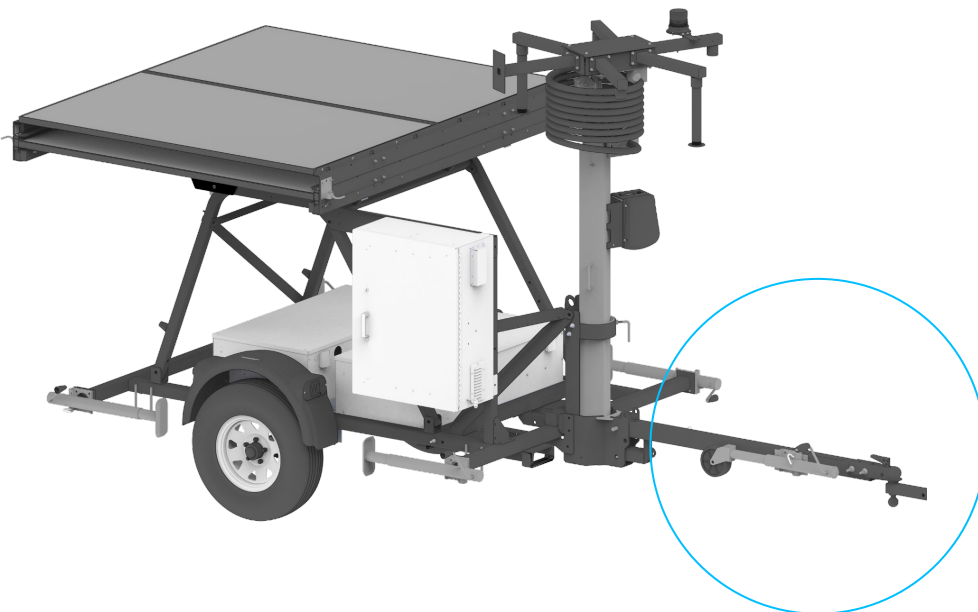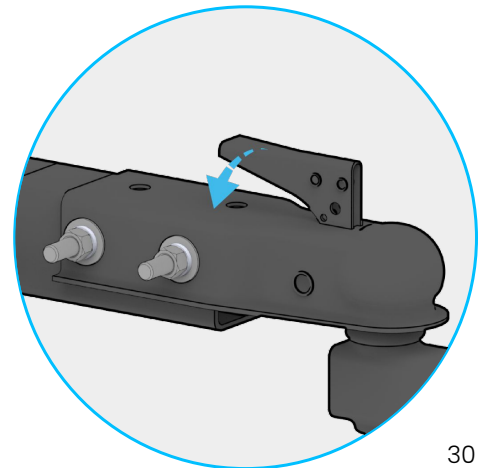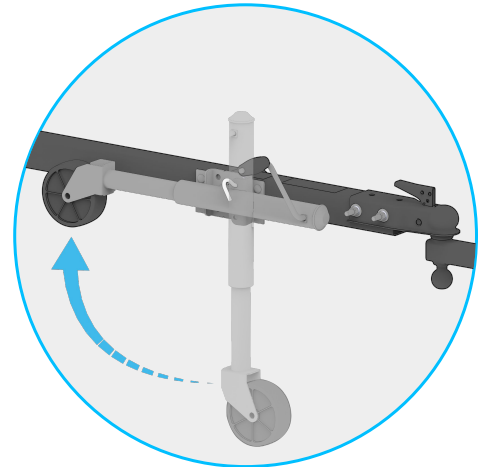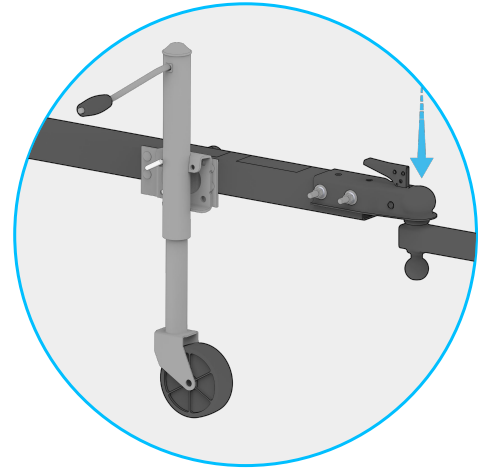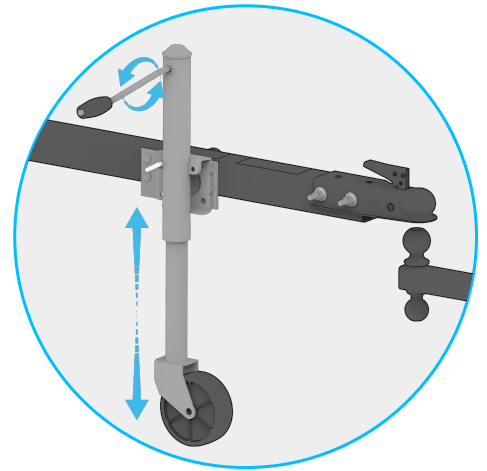Raise other four stabilizer legs on the trailer body.

5.2 Towing the Trailer (3/3)

Hitch the trailer to a 2" ball hitch on a towing vehicle rated for your trailer's total weight and tongue weight (see trailer datasheet for specifications). Adjust the trailer height using the stabilizer hand cranks if needed.

Once hitch is fully seated, raise the tongue stabilizer leg fully and lock in raised position.

Finally, lock the hitch in place using the hitch lever.

Fasten the trailer chains to the towing vehicle and connect the 4-way flat electrical connector to the vehicle's tow connector port.

5.3 Teardown Checklist

Prior to moving the trailer, ensure that:

① Slide-out solar panels are fully retracted and secured using the locking pins
② Solar panel is flat and restrained using the locking pins
③ Mast is retracted using the electric winch
④ Trailer tongue and front stabilizer leg are lowered and locked in place
⑤ Side stabilizer legs are fully raised and locked
⑥ NEMA box door is closed and locked shut
⑦ All set screws for NPT threads are fully tightened to secure Verkada cameras
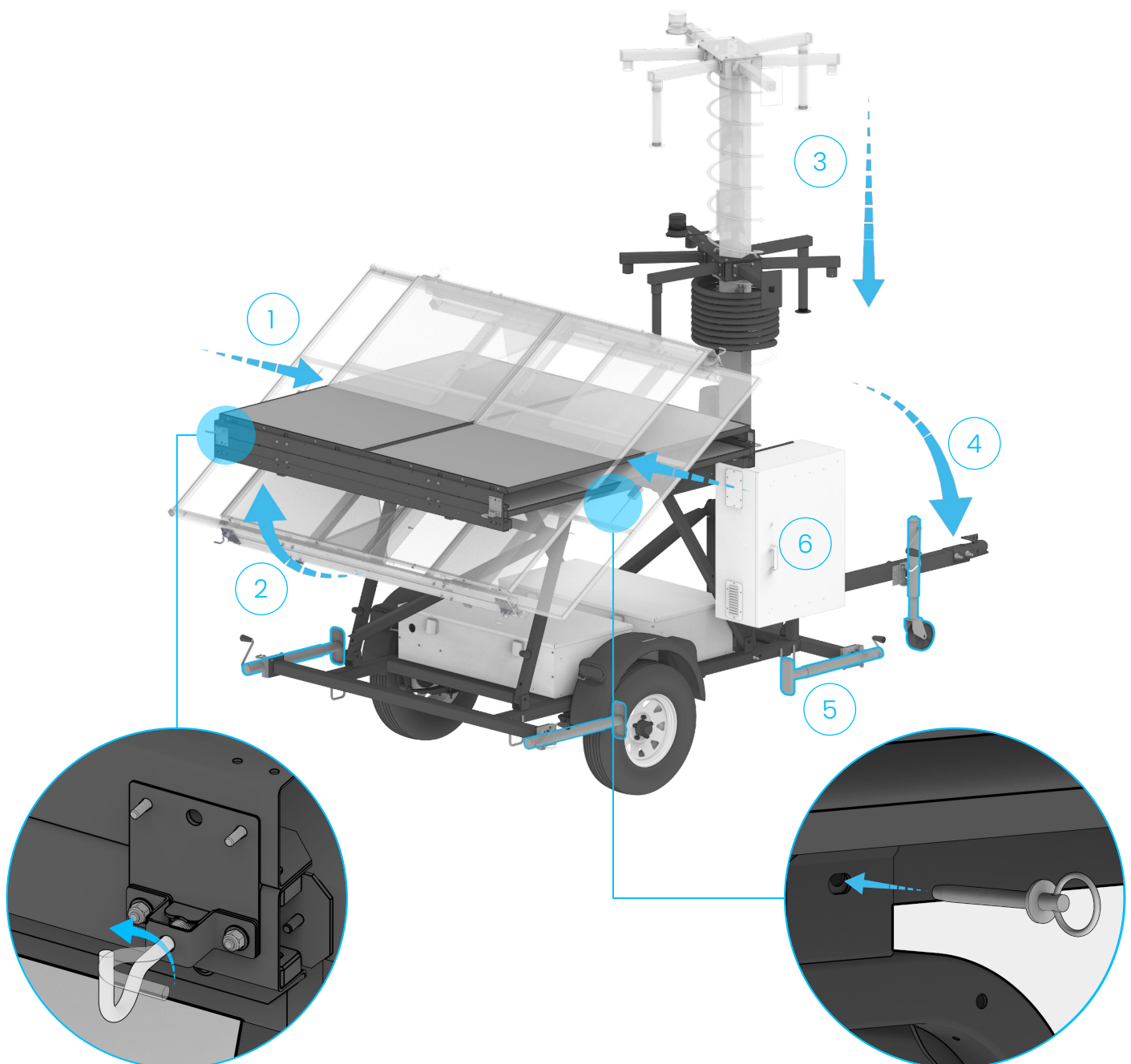
6 Appendix
6.1 QR Codes

The following QR codes navigate to all links mentioned in this document.

Install Guides

Verkada GC31-E	Verkada GW31-E	Verkada CBX2 Bullet Camera	Verkada BZ11

Webpages

Set Gateway PoE In Port to LAN Mode	Starlink Wall Mount Install Guide	Uptime and Cost Configuration	Solar Tilt Angle Calculator

Support

Thank you for purchasing this Verkada product. If for any reason you're experiencing issues or need assistance, please contact our 24/7 Technical Support Team immediately.

Sincerely,
The Verkada Team
verkada.com/support