halo
CONNECT

SECOND GENERATION HALO CONNECT GATEWAY GW-35 USER MANUAL

IN-300CM-EN

⚠️ Read this manual before using this product. Failure to follow the instructions and safety precautions in this manual may result in serious injury or death.

IMPORTANT SAFETY INFORMATION

The Halo Connect Gateway and its components should be installed and in accordance with the instructions in this manual. Proper installation of the Halo Connect system is critical to ensure safe use of the device. Failure to do so may result in injury or death, damage to equipment, material or property. Carefully read, understand and follow all safety related information within this manual.

> ⚠ **WARNING:** Exercise caution when working with the vehicle power sources to avoid inury.

SAFETY WORDS AND SYMBOLS

Please pay attention to special symbols used through this manual to convey important information. Hazard signal words such as WARNING, CAUTION, or NOTICE are used throughout this manual. Information accented by these words indicates a point of emphasis and importance. The following definitions comply with ANSI Z535.6 and indicate the use of signal words as they appear within this manual.

⚠	This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
⚠ WARNING	WARNING indicates a hazardous situation that, if not avoided, could result in serious injury or death.
⚠ CAUTION	CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injuries.
NOTICE	NOTICE is used to address practices which could result in damage to equipment or property.

SAFETY

REGULATORY
RF EXPOSURE

This equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux radiations de la FCC et de l'IC définies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps. Cet émetteur ne doit pas être co-localisé ou fonctionner en conjonction avec une autre antenne ou un autre émetteur.

This device complies with part 15 of the FCC rules and RSS-247 of Industry Canada. 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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

FCC Part 15.21 Warning: You are cautioned that changes or modifications not expressly approved by the part responsible for complicance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

INTRODUCTION

The Halo Connect predictive tire maintenance platform includes a compact data Gateway and sensors, an intuitive installation application and a globally accessible web portal to deliver tire health, maintenance, and performance insights that bring tire management into the digital age, without overloading your fleet with raw data.

HALO CONNECT GATEWAY

The Halo Connect Gateway is comprised of a durable enclosure that is secured on the vehicle. It uses a built-in LTE cellular connection to send data to the cloud, TPMS to talk to the sensors, and a bluetooth connection to talk to mobile devices. It also has GPS, which notifies the location in which a vehicle issue transpired.

HALO TECH MOBILE APPLICATION

The Halo Tech mobile application makes installation and configuration of the Gateway and sensors seamless. The app allows you to choose between various truck configurations, register the vehicle in our system, and add or replace sensors and inflators.

HALO CONNECT WEB PORTAL

The Halo Connect Portal gives you full control over your data, alerts, and reports. All of the issues in the fleet, active and historical, are easily viewed and organized, using the systems that fleets are most comfortable with, such as email. For each vehicle issue, the portal gives recommended actions for resolution. For an understanding of the bigger picture, we distill the data into analytical reports to visualize the trends in the fleet.

INTRODUCTION

CONTENTS

CONTENTS

CUSTOMER SUPPORT

If any product issues arise please follow the troubleshooting steps found in the Halo Tech mobile app and/or contact Aperia customer support.

Phone	+1 (844) RUN-HALO
Website	www.aperiatech.com
Sales	sales@aperiatech.com
Technical Support	support@aperiatech.com

SUPPORT

CONNECT GATEWAY VEHICLE INSTALLATION

The Aperia Halo Connect kit consists of a Gateway, power harness, valve stem sensors, and miscellaneous hardware.

SYSTEM COMPONENTS
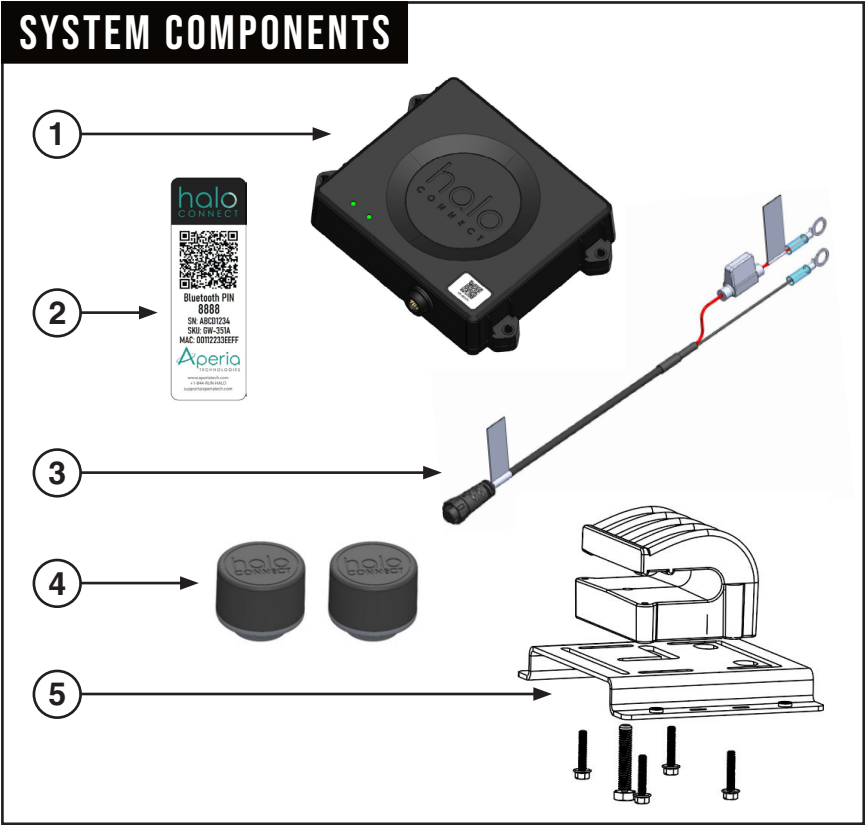
Item	Description	Qty	Kit SKU
1	Halo Connect Gateway	1	GW-351B
2	Gateway Label	1	GW-351B
3	Power Harness	1	PH-DC16A
4	Valve Stem TPMS Sensors	2	SP-702A
5	Gateway Mounting Bracket	1	BR-GTKCA

START

SYSTEM OVERVIEW

The Aperia Gateway is connected to a 12V or 24V vehicle power and has a variety of internal antennas to enable GPS and tire pressure monitoring and send data to the cloud for remote tire monitoring.
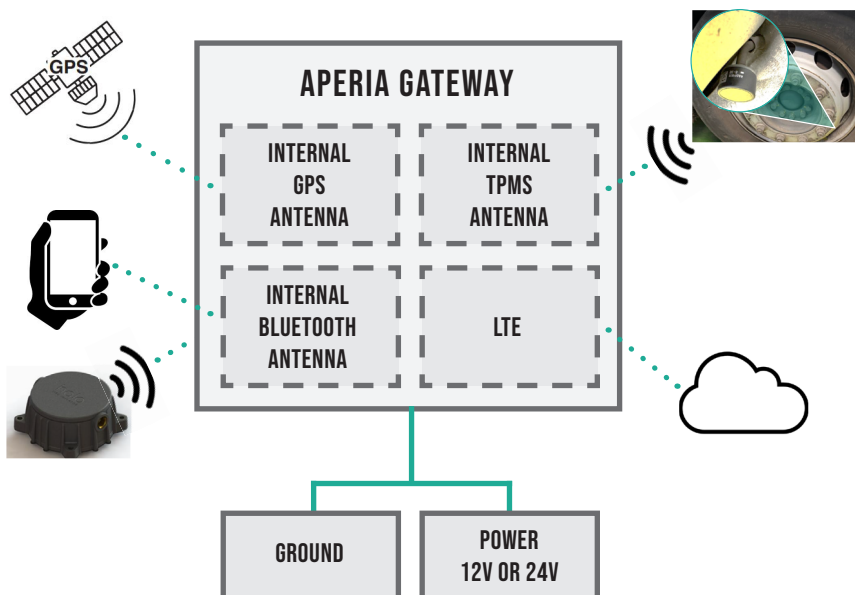
START

GETTING STARTED

INSTALLATION TOOLS

- 5/16" (8mm) Hex Head Screwdriver
- 1/2" or 13mm Ratchet wrench or socket wrench
- Assorted sockets and ratchet
- Torx Screwdriver (or Other, as needed, to access fuse panel)
- Wire Crimper
- Flush cutters (for cutting zip ties)
- NFC enabled mobile device (iOS 16.6 or Android 8.0 or later)
- Multimeter
- Isopropyl Alcohol and Wipes

CONSUMABLES

- 1/4 inch loom (HK-100LM or HK-15LM)
- UV Stabilized Zipties

START

1. PLAN THE INSTALLATION

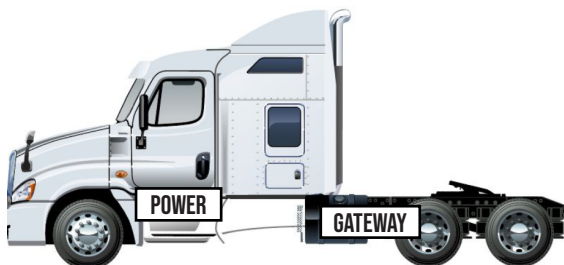Select a location to permanently attach the Gateway according to the following recommendations for your vehicle configuration. Consider that the Gateway will have a power harness attached to it that will need to be routed from a qualified power source.
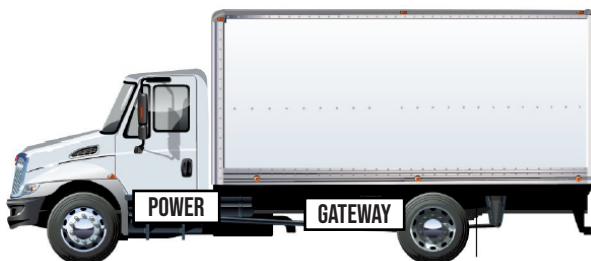
RECOMMENDED INSTALLATION LAYOUT

Placement for **Day Cab Tractor**:

Placement for **Sleeper Cab Tractor**:

Placement for **Straight Truck**:

START

1. PLAN THE INSTALLATION (CONT'D)

EVALUATING YOUR POWER SOURCE

Preferred Source: Direct to battery Gateway power source

• May be 12V or 24V continuous or ignition source

• Must be grounded

BATTERIES UNDER CAB

BATTERIES ON FRAME RAIL
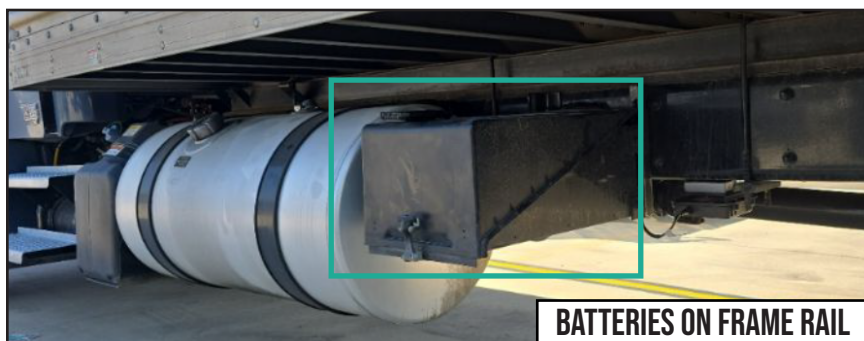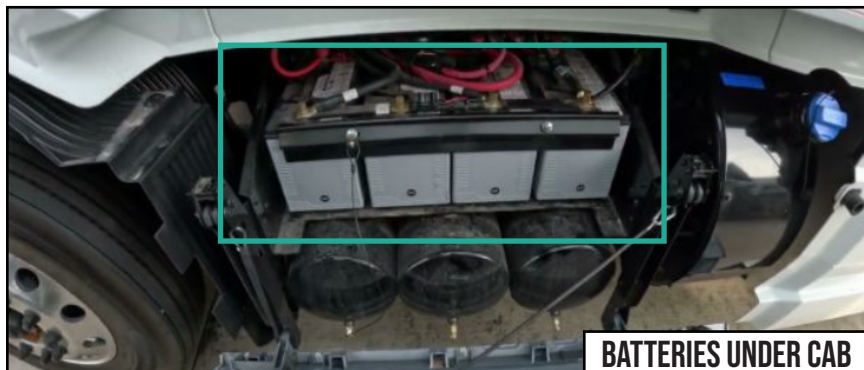
NOTES ON POWER SOURCES

The Halo Connect Gateway has intelligent battery protection to prevent batteries from draining below 24V or 12V. Below 24V or 12V the Gateway goes into low power mode checking and transmitting tire pressure and GPS position every 4 hours. The average amperage is 90mA on a 12V system and 45mA on a 24V system.

START

1. PLAN THE INSTALLATION (CONT'D)

CABLE ROUTING GUIDELINES

After determining your power connection, it is important to consider the following guidelines when planning your cable routing path to a selected Gateway location:

• All externally routed cables should be loomed

• UV rated 50 lb or greater tensile strength zip ties should be used to secure cabling every 12-18 inches

• Cable should be secured no further than 6 inches from connectors

• Connectors must be clean and dry when connected

• Cable routing should make every attempt to follow existing vehicle cable routes

• Minimum of 5 inches should be maintained between wires and high heat components

• Wire routing should avoid any-and-all rough or sharp edges to prevent abrasion

• There should be no tensile stress or static load on the cables or connectors

• Confirm cable routing accounts for moving parts of vehicle

• If connecting two wires with butt connector or adding a new wire terminal, adhesive lined heat shrink tube should be used

• Any holes should be deburred and grommeted if wire is passed through

• Avoid tight bends near connectors - Allow cables to follow natural path with free straight run of at least one connector length (approx 1 inch)

START

1. PLAN THE INSTALLATION (CONT'D)

SELECTING A GATEWAY LOCATION

When selecting a location to attach the Gateway, consider the following recommendations for your vehicle configuration:

Preferred Placement:

- Exterior of cab
- Forward of axles on main frame rail
- Driver or passenger side

Other Gateway placement considerations include:

- Should be accessible for maintenance
- Should be installed with minimum distance of 20 cm away from driver and passengers
- Should not interefere with passenger access or storage
- Should allow for permanent attachment using self tapping screws or other secure attachment based on preference
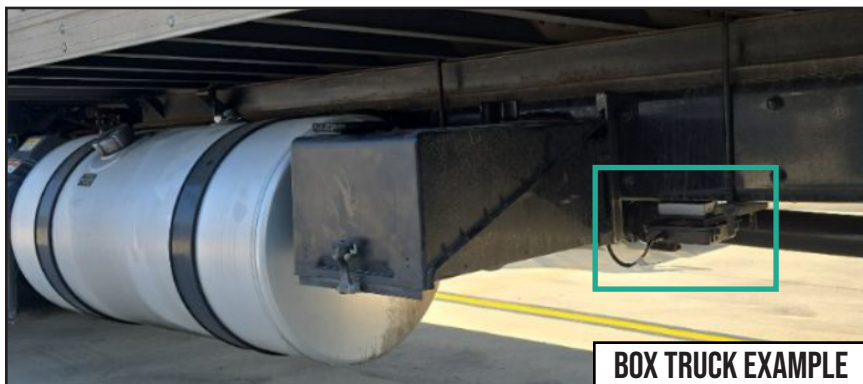
EXAMPLE MOUNTING LOCATIONS

TRACTOR EXAMPLE

START

1. PLAN THE INSTALLATION (CONT'D)

EXAMPLE MOUNTING LOCATIONS

BOX TRUCK EXAMPLE

⚠ **CAUTION:** Before attaching the Gateway box to the vehicle review the entire install procedure and ensure the power cables can be safely routed to the recommended locations.

THINGS TO AVOID

- Must not be placed under the catwalk - *This will degrade GPS reception*

- Must not be completely encased in metal - *This will degrade TPMS sensor and LTE reception*

- Must be placed in a location where it will not be damaged during typical vehicle use - *i.e. Drivers walking on catwalk, storing equipment on rear of vehicle*

- Must not be in a spot where it will be crushed when vehicle airbags are completely deflated.

- Must be more than 6" away from heat sources - *i.e. Engine or exhaust components*
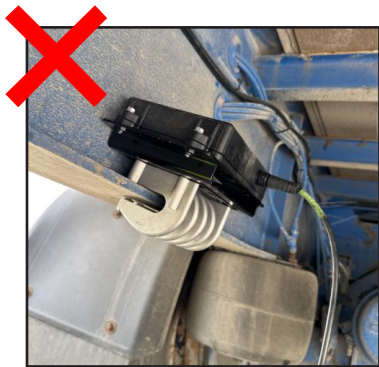
START

1. PLAN THE INSTALLATION (CONT'D)

SELECTING A GATEWAY LOCATION

THINGS TO AVOID:
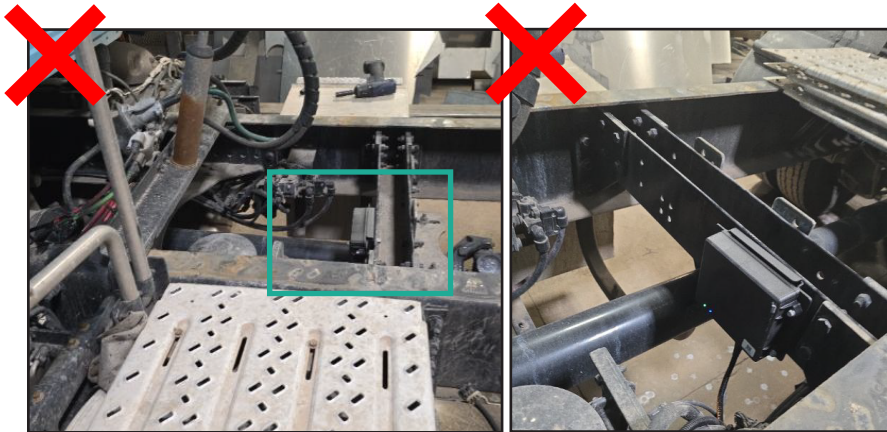
Do not Install directly under catwalk (shown here with a section of the catwalk removed).

Do not install with Gateway directly next to frame rail.

This will obstruct TPMS reception.

START

2. CONNECT TO VEHICLE POWER SOURCE

In order for the vehicle's tires to be monitored 24 hours, the Gateway power cable should be connected to a 24 hour continuous voltage source between **12V-21V for 12V systems** or between **24V-28V for 24V systems** and be securely grounded to the vehicle chassis.
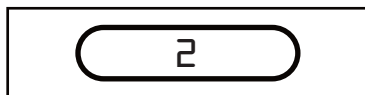
Always use an Aperia provided, fused, power harness.

Power harness part number: PH-DC16A
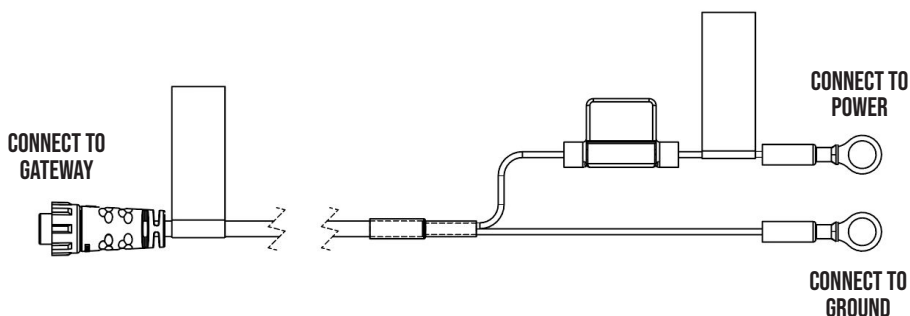
A 2 amp (32V DC) fuse rating is appropriate when adding or replacing a fuse to the Gateway power connection.

Fuse Rating: 2 Amp (32V DC)

⚠ **WARNING:** The positive wire of the power cable or vehicle power source must be fused. An un-fused power cable may over-heat and lead to a vehicle fire.

NOTICE: Use a voltmeter to test the power source and ground with the ignition on and off to ensure that the voltage of the chosen fuse slot is correct and continuous..

INSTALL

2. CONNECT TO VEHICLE POWER SOURCE (CONT'D)

a Attach 3/8" ring terminals directly to battery posts and secure with existing fasteners.

Common locations for battery banks

BATTERIES UNDER CAB

b After securing the fasteners, begin routing the harness along the planned path to your chosen Gateway location. Ensure that you are following each of the **Cable Routing Guidelines** located on page 13 and securing the harness with zip ties every 12-18 inches.
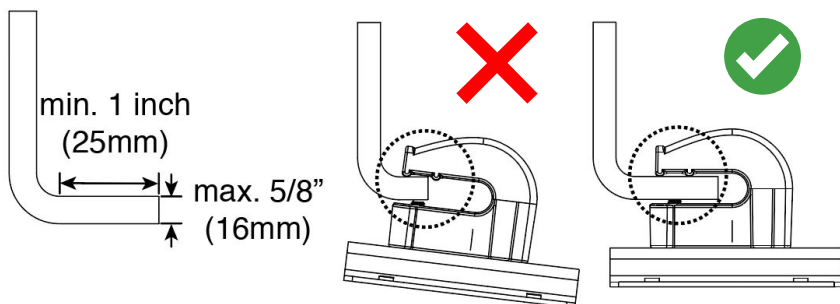
INSTALL

3. MOUNT THE GATEWAY

Before mounting the Gateway, verify that you have considered the following:

• Gateway must be mounted in a location where the power harness can reach

• **DO NOT** install Gateway enclosed in metal box as this will result in poor TPMS or GPS reception

• Gateway must not interfere with normal operation of the vehicle

• Gateway should be accessible by maintenance techs

(a)   The Gateway is attached to the frame rail using the **BR-GTKCA C-clamp bracket**. In your selected install location, confirm the beam is sized correctly to allow full attachment of clamp. If possible, avoid obstructions on the frame rail that may reduce GPS and/or TPMS signal (e.g. Fuel tanks, cat walk).
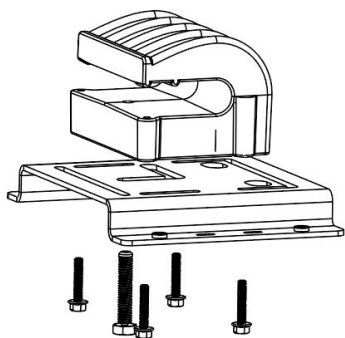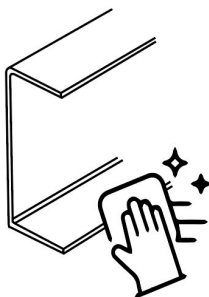

min. 1 inch (25mm)

max. 5/8" (16mm)

⚠ **WARNING:** Both clamp teeth must be fully engaged with the beam or product may detach during driving.

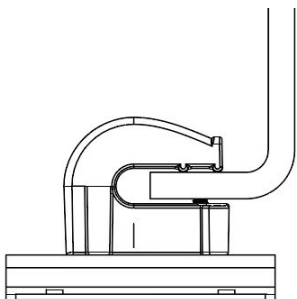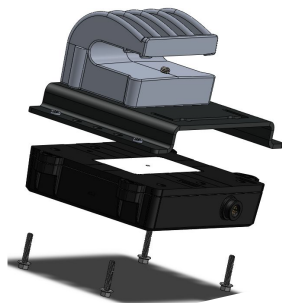# INSTALL

3. MOUNT THE GATEWAY (CONT'D)

b Ensure top and bottom of beam are clean where the clamp is applied.

> **⚠ WARNING:** Debris, dirt, or oil may compromise clamping ability and lead to device detachment.

c Prepare the bracket assembly:

- Attach base plate to clamp and begin threading clamp bolt.
- Tighten four base plate screws until snug.
- Finger tighten clamp screw, leaving space to slide clamp onto beam.

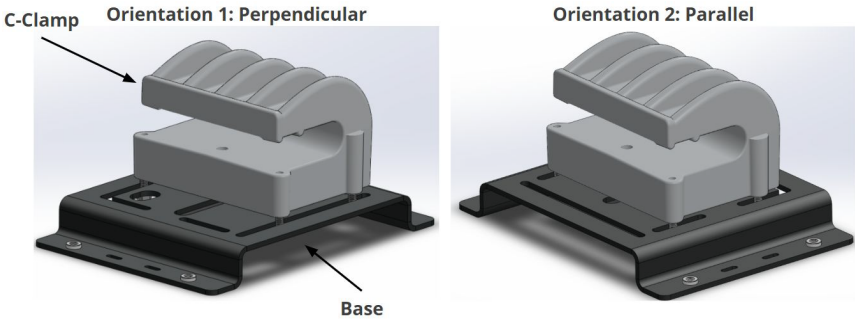**d** Attach the Gateway to the base bracket and tighten the four Gateway screws until snug.

e Attach the clamp to the beam

- Tighten the clamp bolt until snug + 1/2 rotation
- Confirm that the bracket is securely attached by pulling on it by hand
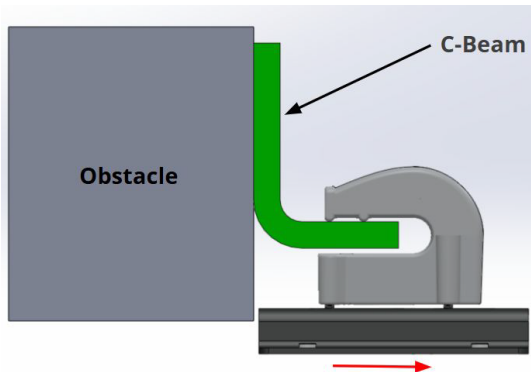
INSTALL

3. MOUNT THE GATEWAY (CONT'D)

BRACKET MOUNTING TIPS

• The c clamp can be installed in two orientations on the bracket to optimize fit and cable routing

C-Clamp   Orientation 1: Perpendicular   Orientation 2: Parallel

Base

• The clamp can be slid in the slots on the base bracket to avoid obstacles.

Obstacle   C-Beam

f When you have completed the mounting and verified that the Gateway is secure, connect the Power Harness to the rear port on the Gateway. You will see the green light on the face of the Gateway turn on. Making sure to follow the **Cable Routing Guidelines** located on page 13 and finalize the installation.

INSTALL

4. INSTALL THE TPMS SENSORS

External valve stem mounted TPMS sensors must be installed for the tire pressure to be monitored on tire positions that do not have Halos installed.

(a) Install valve stem sensors directly onto valve stems, bent valve stem extenders, or flexible hoses with valve stems. Tighten sensors until hand tight and leak test with soapy water.
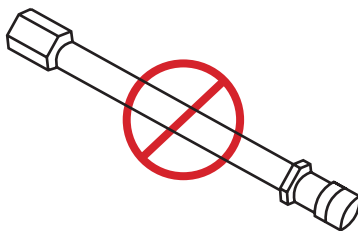

✅ Directly on valve stem

✅ Bent valve stem extenders

✅ Flexible valve stem extenders

⚠ **WARNING:** **DO NOT** add any type of thread sealer material when attaching the hose ends to either the Sensors or the Tire Valve Stems. Adding thread sealant to this interface increases the chances of a tire leak.

⚠ **WARNING:** **DO NOT** install valve stem mounted sensors onto straight valve stem extenders or on top of pass through-valve stem caps.

Valve stem sensors should not be installed onto rigid, straight valve stem extenders or pass-through valve stem caps as these greatly increase the risk of a tire leak.

INSTALL

5. AFFIX GATEWAY ID STICKER TO VEHICLE

Select an easy to access location to permanently attach the Gateway ID sticker inside the vehicle.

The Gateway ID sticker contains Gateway identification information used to pair the Gateway when using the phone app and during customer service calls.

Aperia recommends placing the sticker in the door jamb.

INSTALL

6. DOWNLOAD THE HALO TECH APP

In order to activate your Gateway, you must first download the **Halo Connect Tech App** using an NFC-enabled mobile device with iOS 16.6 or Android 8.0 or later.

a From the Google Play Store or the Apple App Store, search for "Halo Connect Halo Tech" or scan the QR code below and click "Install" to install the app on your device.
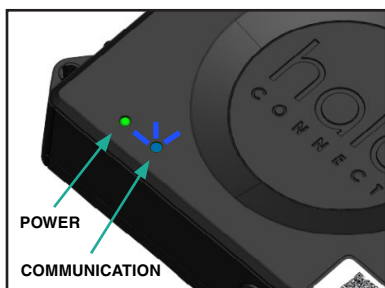

App Link:
https://aperiatech.com/halo-connect-application

IMPORTANT: A new Gateway will arrive in shipping mode and may require a minimum of 12.2V to wake up.

The activation voltage must not exceed 21.5V if the Gateway is being installed on a 12V vehicle system.

If the power source drops outside of the 12v-21v or 24v-28v ranges the Gateway will go into a low power state during activation and disrupt the activation process.

POWER

COMMUNICATION

b Verify that the Power light on the Gateway is lit and solid red, yellow or green.

c Verify the Communication LED is a blinking blue to indicate the Gateway is prepared to connect to bluetooth

d Launch the **Halo Tech App**

INSTALL

7. ACTIVATE THE GATEWAY

To activate your Gateway and pair the installed Sensors and/or Halos, follow the steps outlined below.

For illustration purposes, this example includes instructions for a *Single axle, Dual Tire Tractor.* If installing on a different vehicle configuration, make sure to select the appropriate configuration when asked. In this example, instructions are also included for pairing the 2nd Generation (HA-5 Model) Halo Tire Inflators. If you are not currently installing inflators, simply select "*I'm not installing inflators*" when prompted.

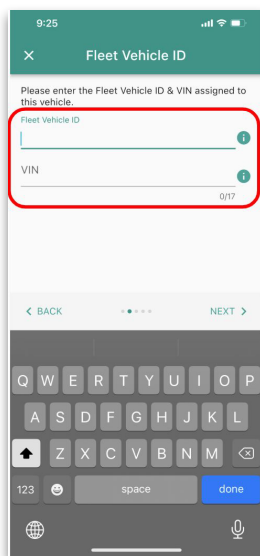ⓐ Open the Halo Tech App and choose: "Set Up a New Vehicle"
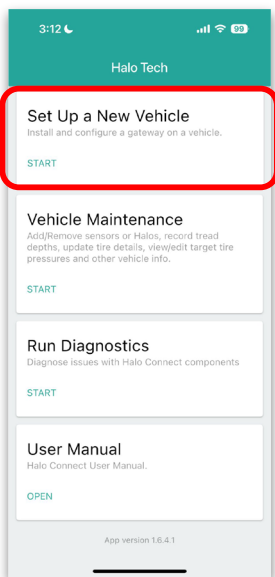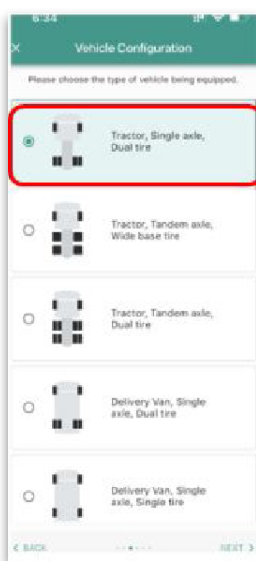

ⓑ Scan the QR code on the door label.

INSTALL

7. ACTIVATE THE GATEWAY (CONT'D)

c Scan QR code on Connect kit or type Fleet Activation Code

**d** Enter the Fleet Vehicle ID and full 17-digit VIN, then choose "NEXT"

e Select the vehicle axle configuration and Choose "NEXT"

**f** If installing Halos, select the appropriate model or select "I'm not installing inflators"

INSTALL

7. ACTIVATE THE GATEWAY (CONT'D)

g Select or manually set the correct tire pressure configuration for the application

h If installing an from an Aperia Sensor Pack, select "Pair All Sensors at Once"
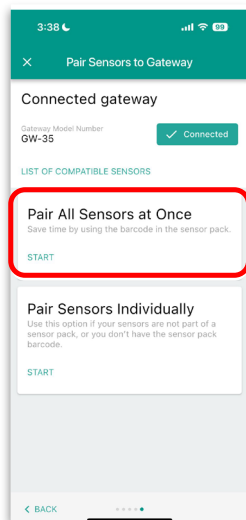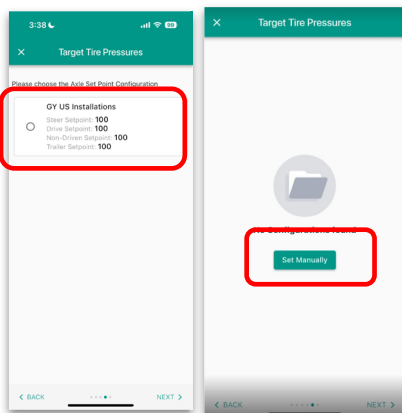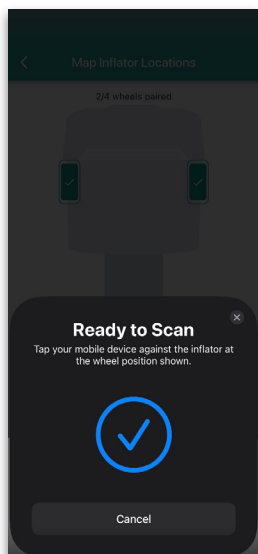

i Scan the QR code on the sensor pack label - this will assign all sensors to the labeled positions

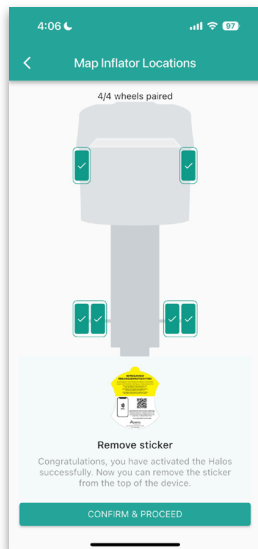**j** After the approriate sensors have registered, select the tire position to pair a Halo
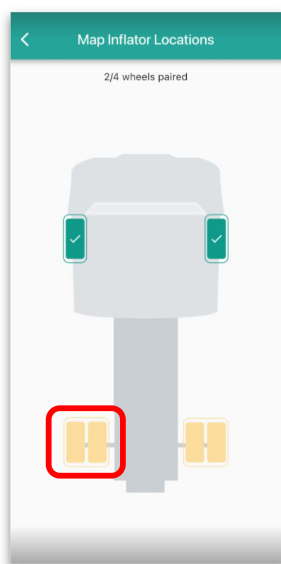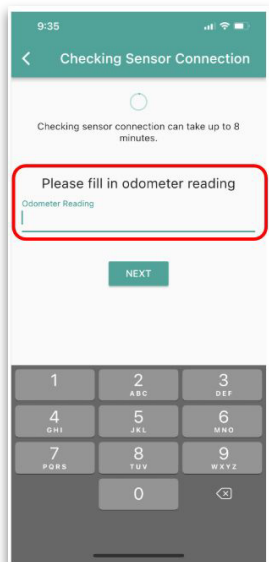

INSTALL

7. ACTIVATE THE GATEWAY (CONT'D)

k Place the NFC enabled mobile device near the NFC logo on the Halo

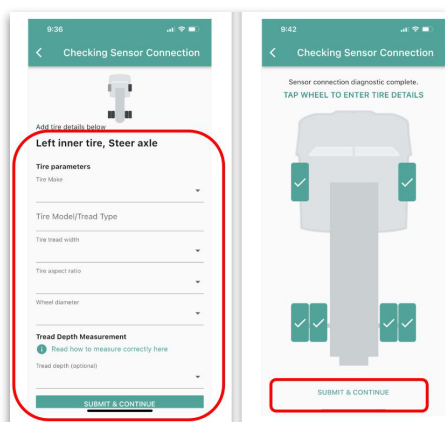**l** After all sensors are paired select "CONFIRM & PROCEED"

m Enter the vehicle odometer reading and Choose "NEXT"
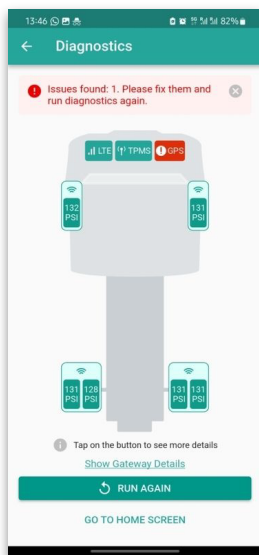

n Enter required tire details for each tire, then tap "Submit & Continue"

INSTALL

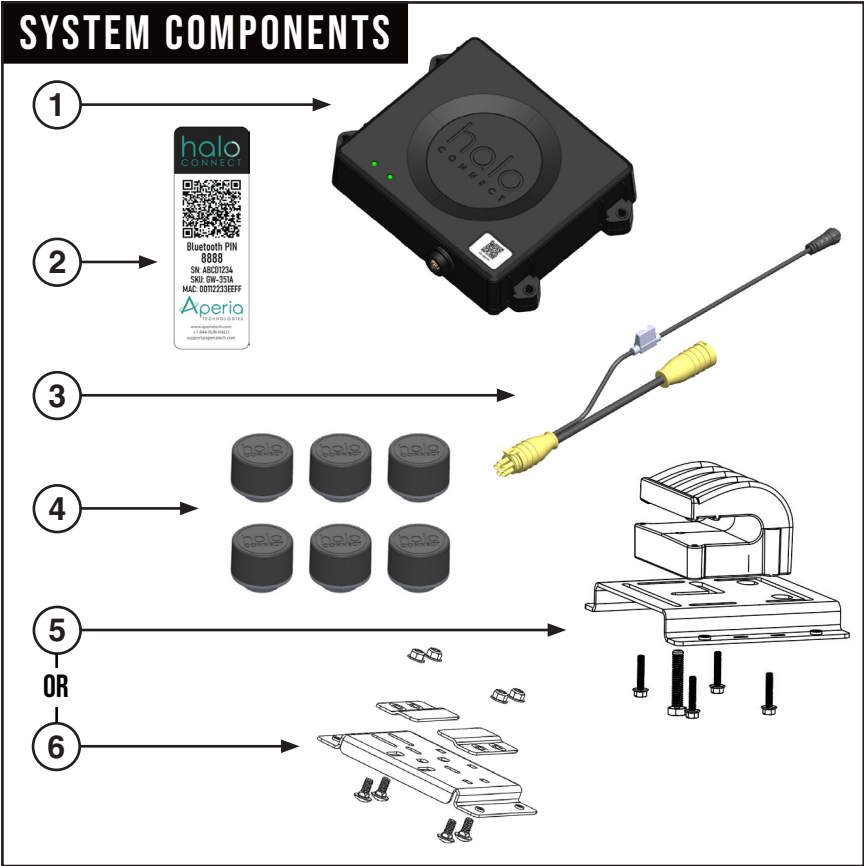# 7. ACTIVATE THE GATEWAY (CONT'D)

o Review diagnostic screen Green is good, Red needs attention. Tap on the red to get troubleshooting information.

INSTALL

CONNECT GATEWAY TRAILER INSTALLATION

The Aperia Halo Connect kit consists of a Gateway, power harness, valve stem sensors, and miscellaneous hardware.

SYSTEM COMPONENTS

Item	Description	Qty	Kit SKU
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3	Power Harness	1	PH-DC16A
4	Valve Stem TPMS Sensors	6	SP-702A
5	Gateway Mounting Bracket	1	BR-GTKCA
6	I Beam Bracket	1	BR-GWA

START

SYSTEM OVERVIEW

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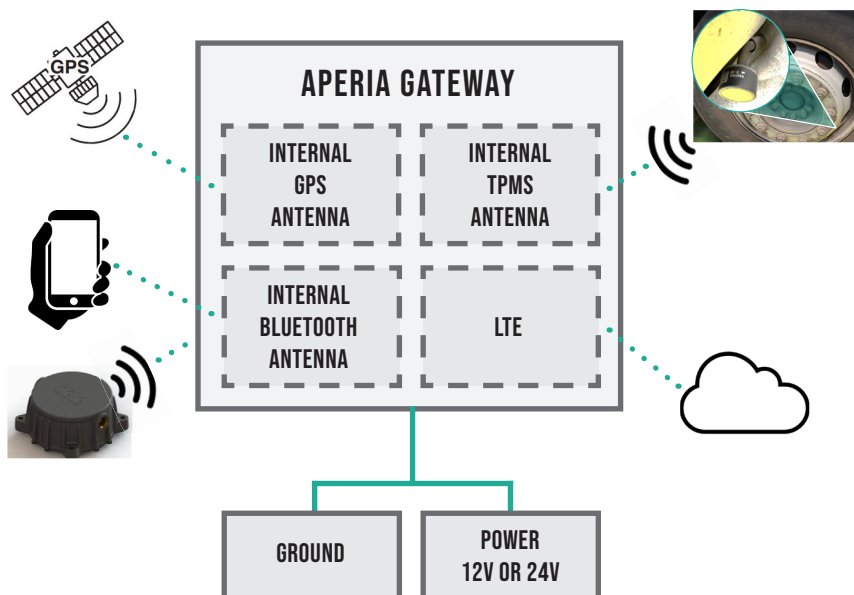
START

GETTING STARTED

INSTALLATION TOOLS

- 5/16" (8mm) Hex Head Screwdriver
- 1/2" or 13mm Ratchet wrench or socket wrench
- Assorted sockets and ratchet
- Torx Screwdriver (or Other, as needed, to access fuse panel)
- Debur Tool (for Deburring the cab access hole)
- Flush cutters (for cutting zip ties)
- NFC enabled mobile device (iOS 16.6 or Android 8.0 or later)
- Multimeter
- Isopropyl Alcohol and Wipes

CONSUMABLES

- 1/4 inch loom (HK-100LM or HK-15LM)
- UV Stabilized Zipties

START

1. PLAN THE INSTALLATION

Select a location to permanently attach the Gateway according to the following recommendations for your vehicle configuration. Consider that the Gateway will have a power harness attached to it that will need to be routed to a qualified power source.
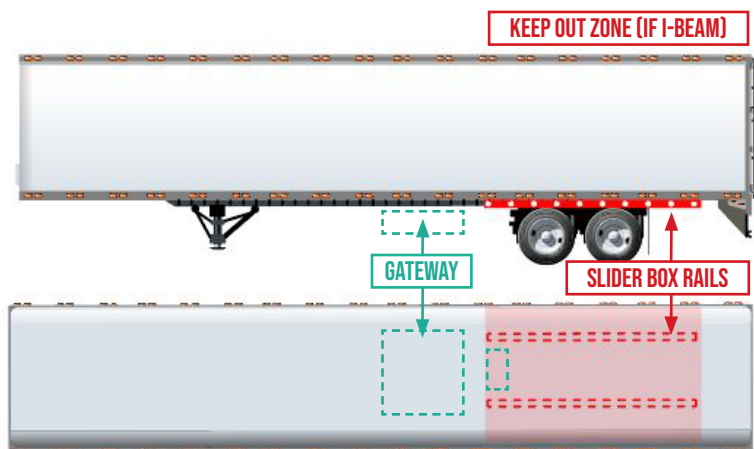
FOR DRY VAN/REEFER TRAILERS

PRIMARY POSITION GUIDELINES

• Attached to an I-beam on underside of trailer or trailer bogey on front horizontal cross member

• If on I-beam put in front of or behind slider box rails

• Power harness must reach from power source to Gateway (the 5 PIN ABS harness is 25ft)

RECOMMENDED ZONES

The following locations specified in **Green** indicate the the optimal locations for placement of the Gateway. **Do not** mount Gateway on an I-beam in **"Keep Out"** zones as this may result in contact when axles are moved.
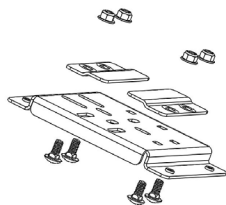

KEEP OUT ZONE (IF I-BEAM)
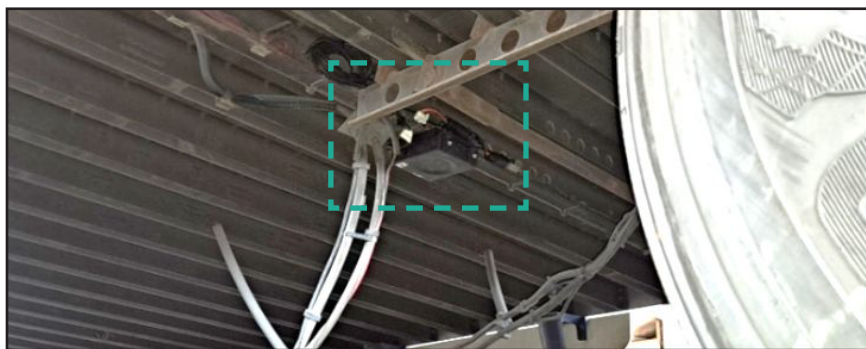
GATEWAY

SLIDER BOX RAILS

START

1. PLAN THE INSTALLATION (CONT'D)
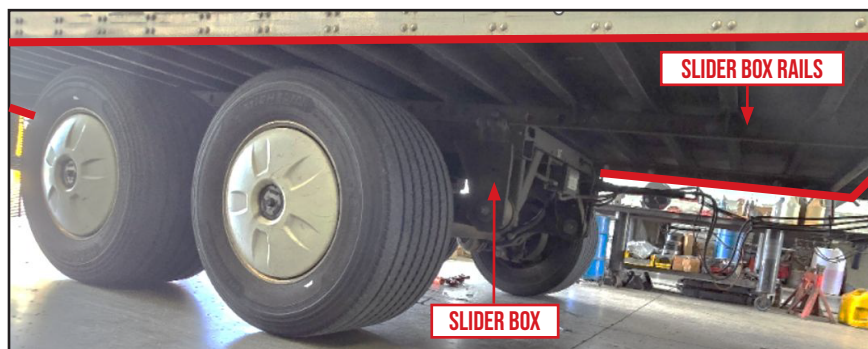
FOR DRY VAN/REEFER TRAILERS (CONT'D)

When mounting the Gateway, use the recommended **I-beam Bracket** (Aperia Part Number: BR-GWA) following the mounting instructions on page 40.

I-BEAM INSTALL POSITION EXAMPLE

I-BEAM INSTALL KEEP OUT ZONES

SLIDER BOX RAILS

SLIDER BOX

Keep Out Zone - Do not install on i beam that is crossing the slider box rail
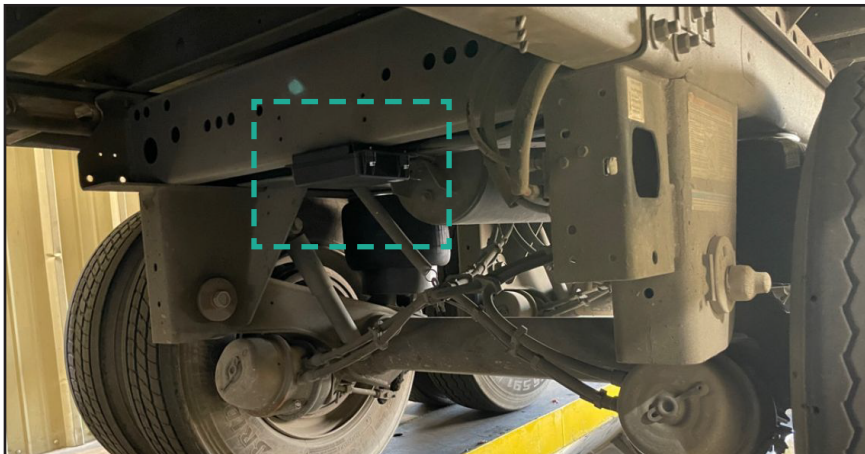
⚠ **WARNING:** Installing the Gateway on an I-beam in keep out zones may result in contact when axles are moved. This may result in device detachment during driving and impact the trailer ABS power supply.

START

1. PLAN THE INSTALLATION (CONT'D)

FOR DRY VAN/REEFER TRAILERS (CONT'D)

SLIDER BOX INSTALL EXAMPLE

Attaching the Gateway to the front cross member of the slider box is the exception to the keep out zones shown above.

THINGS TO AVOID

- **DO NOT** install Gateway where it might be contacted when the axles are moved
- **DO NOT** install Gateway in spot where it will be immediately above the tires, paying attention to the entire range of positions for the slider box
- **DO NOT** install Gateway behind side skirt

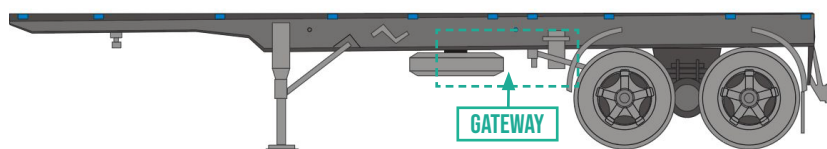# START

1. PLAN THE INSTALLATION (CONT'D)

FOR TRAILERS WITH MAIN FRAME RAILS
(FLAT BED, CHASSIS, DUMP AND MORE)
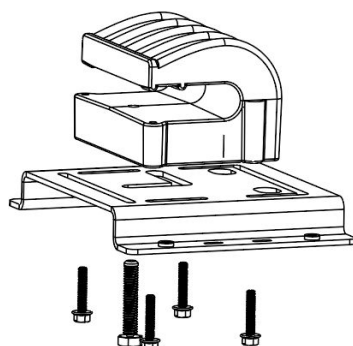
PRIMARY POSITION GUIDELINES

- Attached to frame rail on underside of trailer
- Not hidden behind wheels on frame rail
- Power harness must reach from power source to Gateway (the 5 PIN ABS harness is 10 or 25ft)

RECOMMENDED ZONES

The following location specified in **Green** indicate the the optimal location for placement of the Gateway.

When mounting the Gateway, use the recommended **C-Clamp Bracket** (Aperia Part Number: BR-GTKCA) following the mounting instructions on page 42.
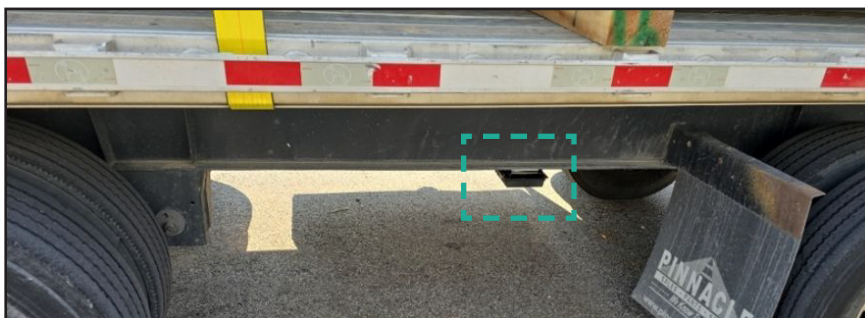

START

1. PLAN THE INSTALLATION (CONT'D)

FOR TRAILERS WITH MAIN FRAME RAILS (CONT'D)

MAIN FRAME RAIL BEAM INSTALL

Main frame rail on open spot not blocked by wheels.

THINGS TO AVOID

- **DO NOT** install Gateway where it might be contacted when the axles are moved
- **DO NOT** install Gateway in spot where it will be immediately above or behind the tires
- **DO NOT** install Gateway behind side skirt

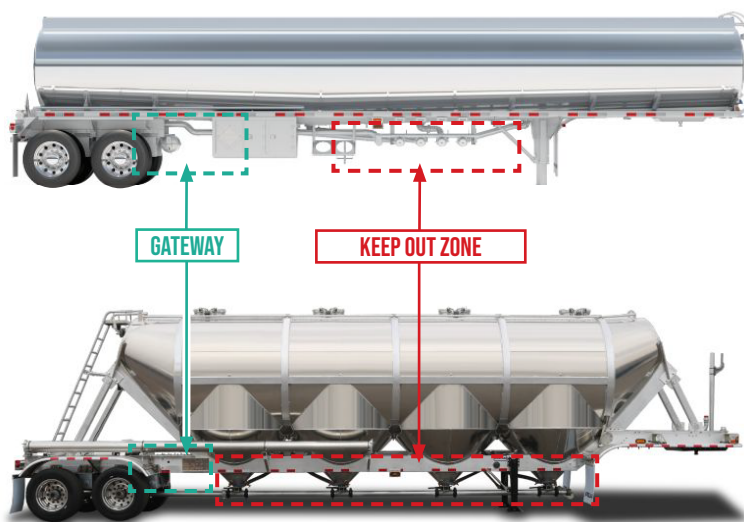# START

1. PLAN THE INSTALLATION (CONT'D)
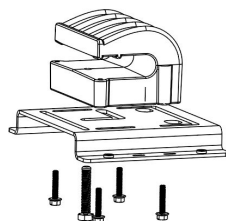
FOR TANKER TRAILERS

PRIMARY POSITION GUIDELINES

• Attached to flat piece of metal, i-beam or c-beam near axles

• Power harness must reach from power source to Gateway (the 5 PIN ABS harness is 10 or 25ft)

RECOMMENDED ZONES

The following locations specified in **Green** indicate the the optimal locations for placement of the Gateway. **Do not** mount Gateway within **"Keep Out"** zones.

GATEWAY   KEEP OUT ZONE

When mounting the Gateway, use the recommended **C-Clamp Bracket** (Aperia Part Number: BR-GTKCA) following the mounting instructions on page 42.

START

1. PLAN THE INSTALLATION (CONT'D)

FOR TANKER TRAILERS (CONT'D)

MAIN FRAME RAIL BEAM INSTALL

HORIZONTAL FRAME RAIL BEAM INSTALL

Rail installations on open spots not blocked by wheels.

THINGS TO AVOID

- **DO NOT** install Gateway in an area where it is likely to be splashed or covered by the contents of trailer during loading or unloading - *This is especially important for chemical and fuel loads*

- **DO NOT** install Gateway inside of metal box as this will block TPMS and GPS signal

- **DO NOT** install Gateway in spot where it will be immediately above or behind the tires

START

1. PLAN THE INSTALLATION (CONT'D)

The standard power choice for North American Trailer is the 5 pin ABS connector. To find this connector locate the ABS ECU, typically near the rear axles, and follow the power cable to an intermediate connection, usually no more than 5 feet from the ECU.

PRIMARY INSTALL:

Use 5 Pin ABS Harness
(Aperia SKU: PH-5PIN25A)

7 Way Connector

5-PIN Connector

ABS ECU
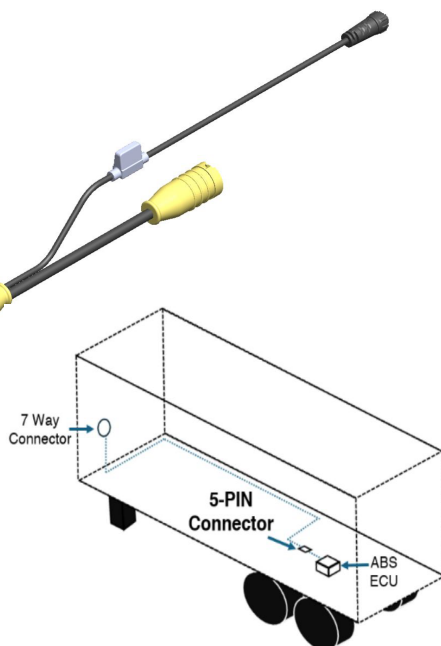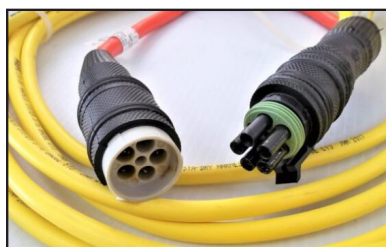
IMPORTANT: Confirm that the trailer wiring is functional by connecting a known good power source to the trailer 7 way connector to measure the voltage at the 5 pin connector connector. The 5 pin power harness uses the BLUE auxiliary/ABS power line for power.
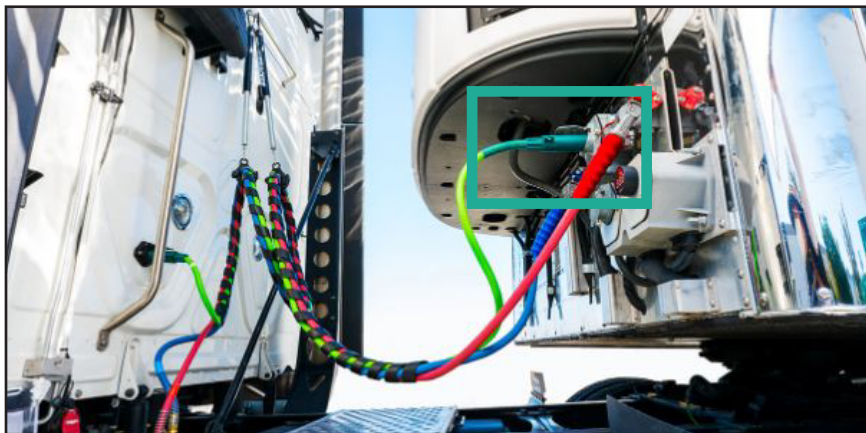
7-Way Plug (Heavy-Duty)
Commercial/Agricultural Trailers

White (Ground)
Brown (Tail/Running Lights)
Black (Clearance/Side Markers)
Auxiliary/ABS Power
Yellow (Left Turn/Hazard)
Green (Right Turn/Hazard)
Red (Stop Lamps)

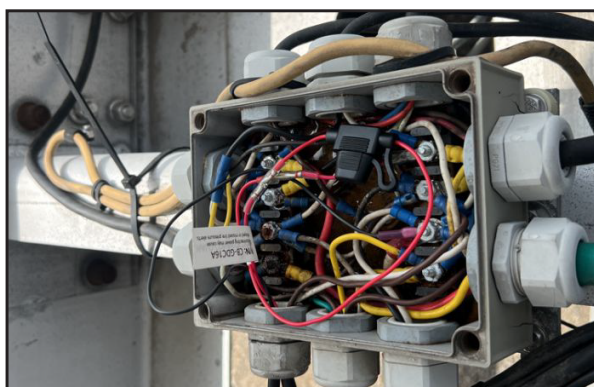# START

1. PLAN THE INSTALLATION (CONT'D)

TRAILER 7-WAY PLUG CONNECTOR

ALTERNATE INSTALL:

Use Flying lead to a junction box (Aperia SKU: PH-FL40A)

If there is not an ABS unit or a 5 Pin harness use a flying lead power harness to connect to a power source that is 12V constant when the truck is connected to the trailer. The blue wire on trailers is typically 12V constant when the truck is powered. The 7 way plug can be used to confirm you have connected to the blue wire.

If connecting to a junction box, confirm the selected power source is connected to the BLUE ABS/Auxiliary power pin at the 7 way connector that the tractor connects to.

START

1. PLAN THE INSTALLATION (CONT'D)

CABLE ROUTING GUIDELINES

After determining your power connection, it is important to consider the following guidelines when planning your cable routing path to a selected Gateway location:

- All externally routed cables should be loomed
- UV rated 50 lb or greater tensile strength zip ties should be used to secure cabling every 12-18 inches
- Cable should be secured no further than 6 inches from connectors
- Connectors must be clean and dry when connected
- Cable routing should make every attempt to follow existing vehicle cable routes
- Minimum of 5 inches should be maintained between wires and high heat components
- Wire routing should avoid any-and-all rough or sharp edges to prevent abrasion
- There should be no tensile stress or static load on the cables or connectors
- Confirm cable routing accounts for moving parts of vehicle
- If connecting two wires with butt connector or adding a new wire terminal, adhesive lined heat shrink tube should be used
- Any holes should be deburred and grommeted if wire is passed through
- Avoid tight bends near connectors - Allow cables to follow natural path with free straight run of at least one connector length (approx 1 inch)

START

2. CONNECT TO TRAILER POWER SOURCE (CONT'D)

ⓐ Install either the 5-Pin ABS Harness or Flying lead

ⓑ Begin routing the harness along the planned path to your chosen Gateway location. Ensure that you are following each of the **Cable Routing Guidelines** and securing the harness with zip ties every 12-18 inches.

THINGS TO AVOID

- Avoid tight bends near connectors - Allow cables to follow natural path with free straight run of at least one connector length (approx 1 inch)

- There should be no tensile stress or static load on the cables or connectors

GATEWAY

5 PIN POWER SOURCE

SLIDE AIR LINES & POWER HARNESS CABLE ROUTE
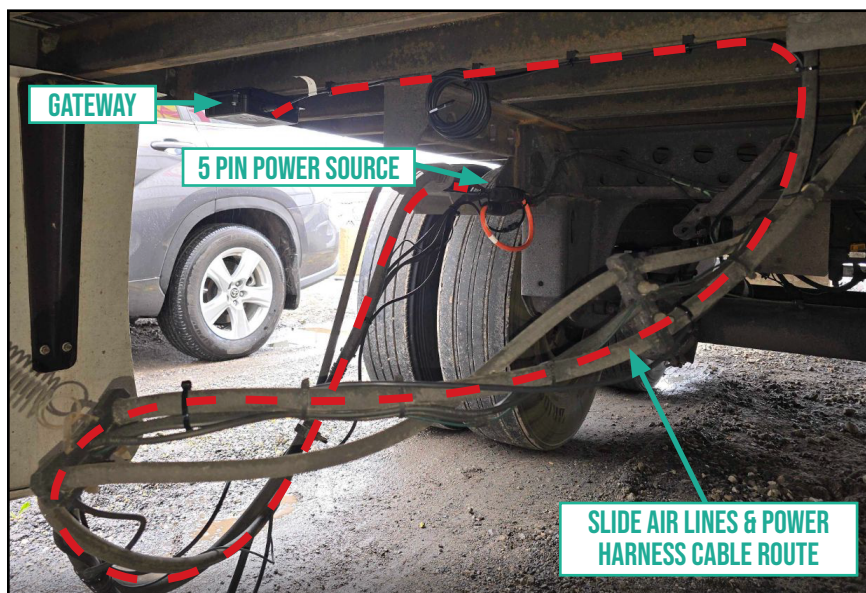
⚠ **WARNING:** If the trailer power harness is routed between the movable axle slider and trailer body the cables **MUST** follow the spring supported slider air lines to prevent cable damage when slider moves. Cable damage may impact vehicle ABS function.

INSTALL

3. MOUNT THE GATEWAY

Before mounting the Gateway, verify that you have considered the following:

- Gateway must be mounted in a location where the power harness can reach

- **DO NOT** install Gateway enclosed in metal box as this will result in poor TPMS or GPS reception

- Gateway must not interfere with normal operation of the vehicle

- Gateway should be accessible by maintenance techs

I-BEAM BRACKET INSTRUCTIONS

The I-beam bracket should be used when attaching the Gateway to a qualifying i-beam.

(a) Confirm the beam is sized correctly for secure attachment of clamp arms.
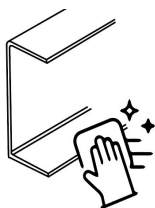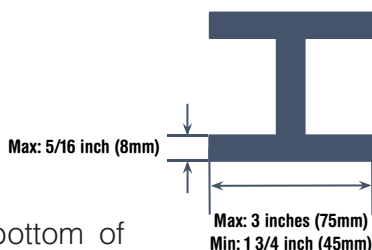
Max: 5/16 inch (8mm)

Max: 3 inches (75mm)
Min: 1 3/4 inch (45mm)

(b) Ensure top and bottom of beam are clean where the clamp is applied.

⚠ **WARNING:** Debris, dirt, or oil may compromise clamping ability and lead to device detachment.

(c) Attach base bracket to I-beam. Tighten four carriage bolts and lock nuts until snug.

The included hardware can also be used to attach the bracket to existing holes on the vehicle frame.
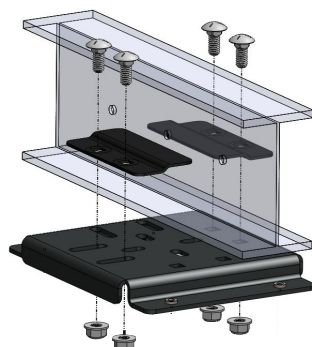
INSTALL

3. MOUNT THE GATEWAY (CONT'D)

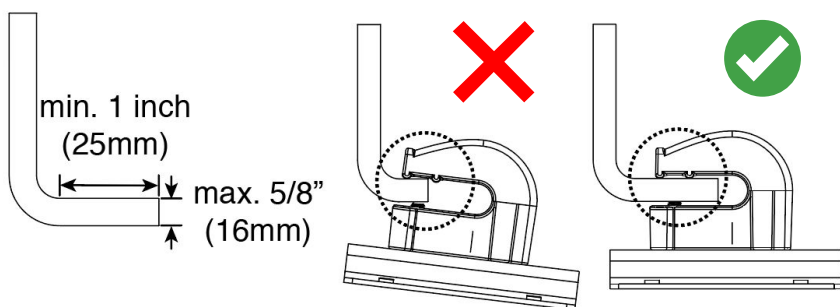(d) Attach Gateway to base bracket. Tighten four Gateway screws until snug.

(e) When you have completed the mounting and verified that the Gateway is secure, connect the Power Harness to the rear port on the Gateway. You will see the green light on the face of the Gateway turn on. If needed, complete the securing of the power harness.

C-CLAMP BRACKET INSTRUCTIONS

The c clamp bracket should be used when attaching the Gateway to a flat piece of metal on the trailer.

(a) The Gateway is attached to the frame rail using the **BR-GTKCA C-clamp bracket**. In your selected install location, confirm the beam is sized correctly to allow full attachment of clamp. If possible, avoid obstructions on the frame rail that may reduce GPS and/or TPMS signal (e.g. Fuel tanks, cat walk).
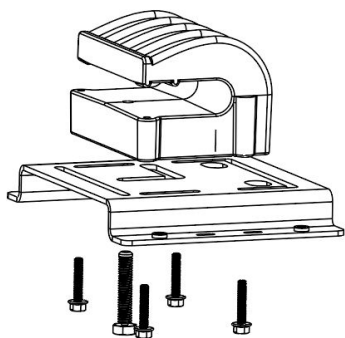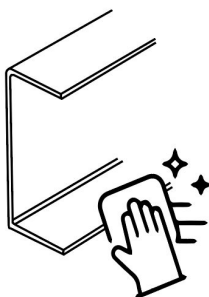
min. 1 inch (25mm)

max. 5/8" (16mm)

⚠ **WARNING:** Both clamp teeth must be fully engaged with the beam or product may detach during driving.

INSTALL

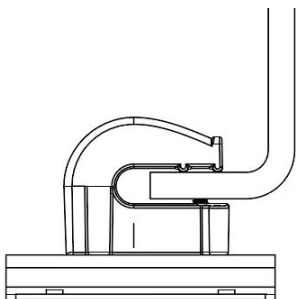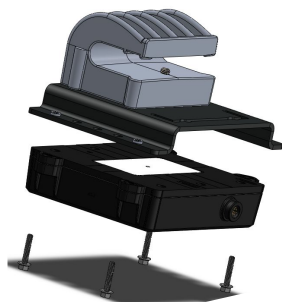# 3. MOUNT THE GATEWAY (CONT'D)

b Ensure top and bottom of beam are clean where the clamp is applied.

> ⚠ **WARNING:** Debris, dirt, or oil may compromise clamping ability and lead to device detachment.

c Prepare the bracket assembly:

- Attach base plate to clamp and begin threading clamp bolt.

- Tighten four base plate screws until snug.

- Finger tighten clamp screw, leaving space to slide clamp onto beam.

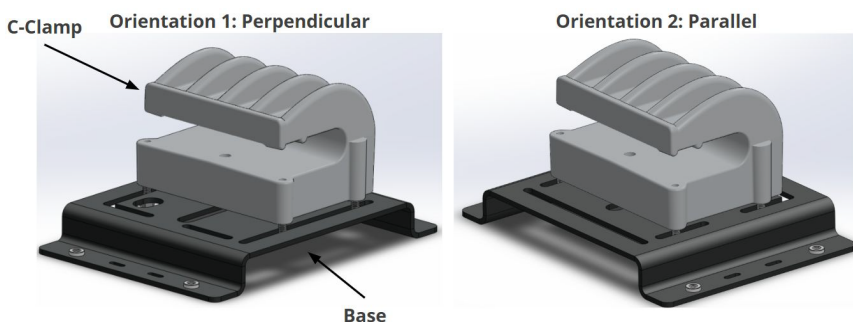**d** Attach the Gateway to the base bracket and tighten the four Gateway screws until snug.

e Attach the clamp to the beam

- Tighten the clamp bolt until snug + 1/2 rotation

- Confirm that the bracket is securely attached by pulling on it by hand
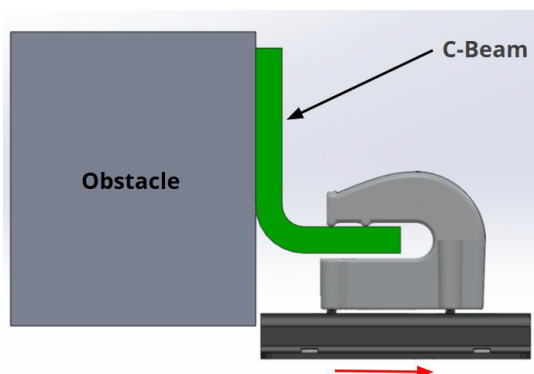
INSTALL

3. MOUNT THE GATEWAY (CONT'D)

BRACKET MOUNTING TIPS

• The c clamp can be installed in two orientations on the bracket to optimize fit and cable routing

C-Clamp   Orientation 1: Perpendicular   Orientation 2: Parallel

Base

• The clamp can be slid in the slots on the base bracket to avoid obstacles.

C-Beam

Obstacle

ⓕ When you have completed the mounting and verified that the Gateway is secure, connect the Power Harness to the rear port on the Gateway. You will see the green light on the face of the Gateway turn on. Making sure to follow the **Cable Routing Guidelines** located on page 42 and finalize the installation.

INSTALL

4. INSTALL THE TPMS SENSORS

External valve stem mounted TPMS sensors must be installed for the tire pressure to be monitored on tire positions that do not have Halos installed.

(a) Install valve stem sensors directly onto valve stems, bent valve stem extenders, or flexible hoses with valve stems. Tighten sensors until hand tight and leak test with soapy water.
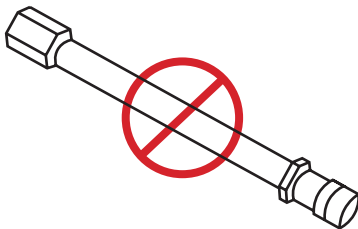

✅ Directly on valve stem   ✅ Bent valve stem extenders   ✅ Flexible valve stem extenders

⚠ **WARNING: DO NOT** add any type of thread sealer material when attaching the hose ends to either the Sensors or the Tire Valve Stems. Adding thread sealant to this interface increases the chances of a tire leak.

⚠ **WARNING: DO NOT** install valve stem mounted sensors onto straight valve stem extenders or on top of pass through-valve stem caps.

Valve stem sensors should not be installed onto rigid, straight valve stem extenders or pass-through valve stem caps as these greatly increase the risk of a tire leak.

INSTALL

5. AFFIX GATEWAY ID STICKER TO VEHICLE

Select an easy to access location to permanently attach the Gateway ID sticker inside the vehicle.

The Gateway ID sticker contains Gateway identification information used to pair the Gateway when using the phone app and during customer service calls.

Aperia recommends placing the sticker on the nose of the trailer near the trailer power assemblies in an inconspicuous location that iss accessible by technicians.

INSTALL

6. DOWNLOAD THE HALO TECH APP

In order to activate your Gateway, you must first download the **Halo Connect Tech App** using an NFC-enabled mobile device with iOS 16.6 or Android 8.0 or later.

a From the Google Play Store or the Apple App Store, search for "Halo Connect Halo Tech" or scan the QR code below and click "Install" to install the app on your device.
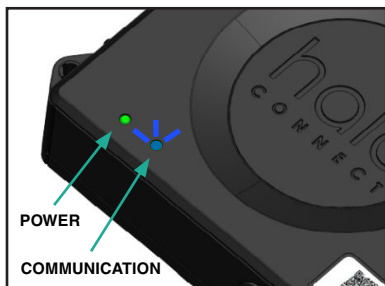

App Link:
https://aperiatech.com/halo-connect-application

IMPORTANT: A new Gateway will arrive in shipping mode and may require a minimum of 12.2V to wake up.

The activation voltage must not exceed 21.5V if the Gateway is being installed on a 12V vehicle system.

If the power source drops outside of the 12v-21v or 24v-28v ranges the Gateway will go into a low power state during activation and disrupt the activation process.

POWER

COMMUNICATION

b Verify that the Power light on the Gateway is lit and solid red, yellow or green.

c Verify the Communication LED is a blinking blue to indicate the Gateway is prepared to connect to bluetooth

d Launch the **Halo Tech App**

INSTALL

7. ACTIVATE THE GATEWAY

To activate your Gateway and pair the installed Sensors or Halos, follow the steps outlined below.

For illustration purposes, this example includes instructions for a *Single axle, Dual Tire Trailer*. If installing on a different vehicle configuration, make sure to select the appropriate configuration when asked. The example below includes instructions for pairing the 2nd Generation (HA-5 Model) Halo Tire Inflators. If you are not currently installing inflators, simply select "*I'm not installing inflators*" when prompted at Step "f" and follow the screen prompts to scan the QR codes on the individual sensors or sensor pack.

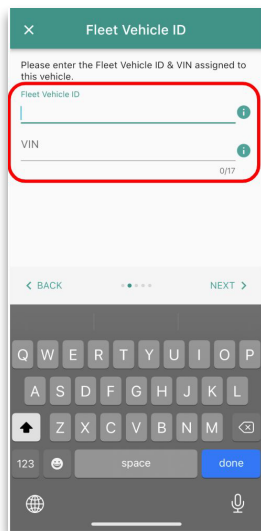ⓐ Open the Halo Tech App and choose: "Set Up a New Vehicle"
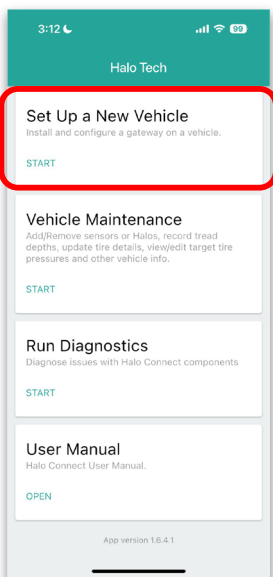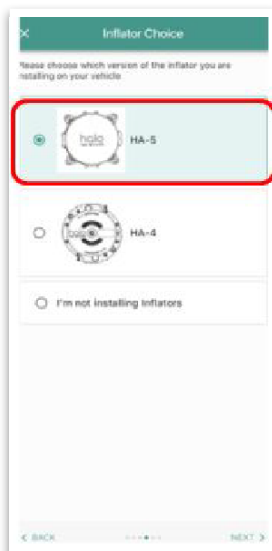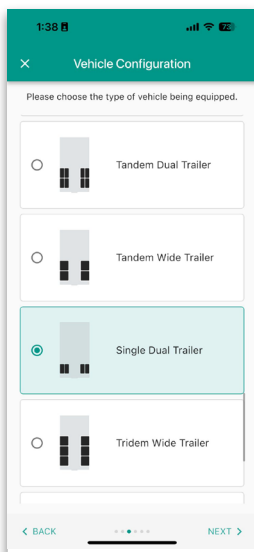
ⓑ Scan the QR code on the panel label.

INSTALL

7. ACTIVATE THE GATEWAY (CONT'D)

c Scan QR code on Connect kit or type Fleet Activation Code

**d** Enter the Fleet Vehicle ID and full 17-digit VIN, then choose "NEXT"

e Select the vehicle axle configuration and Choose "NEXT"

f If installing Halos, select the appropriate model or select "I'm not installing inflators"
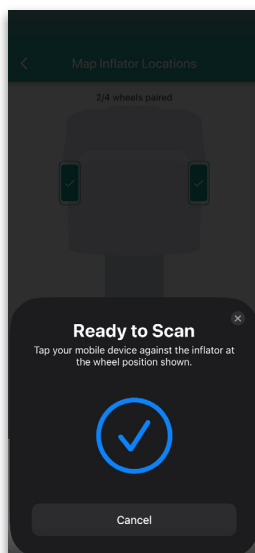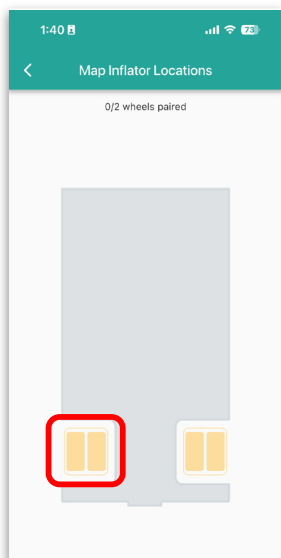
INSTALL

7. ACTIVATE THE GATEWAY (CONT'D)

g Select or manually set the correct tire pressure configuration for the application
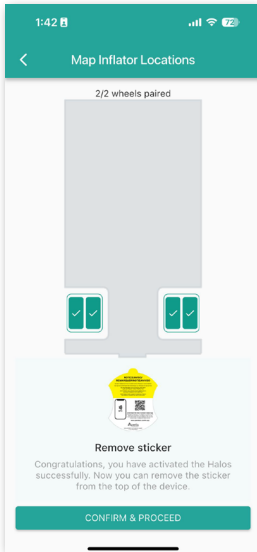

h Select "Pair Sensors Individually"
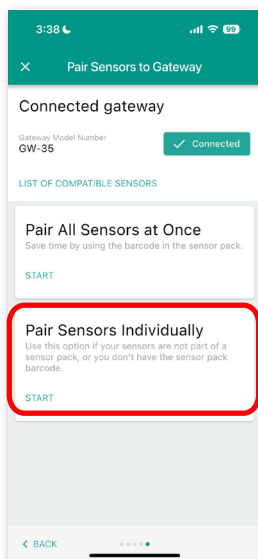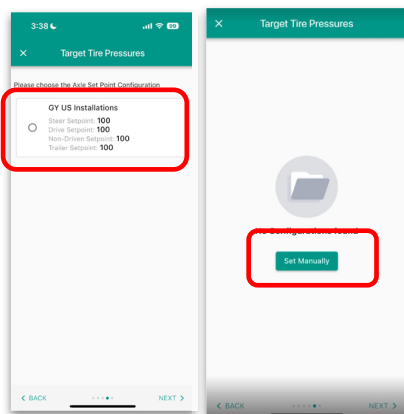
i Tap tire position to pair a Halo

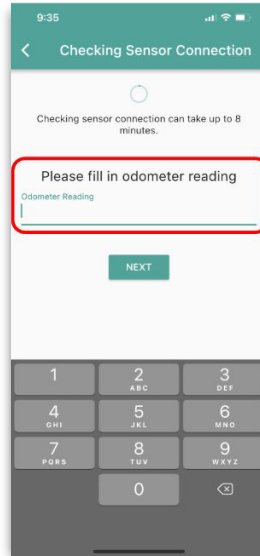**j** Place the NFC enabled mobile device near the NFC logo on the Halo

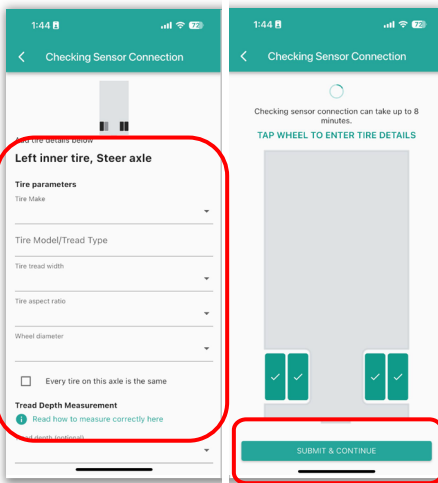**INSTALL**

7. ACTIVATE THE GATEWAY (CONT'D)

k After all Halos or Sensors are paired select "CONFIRM & PROCEED"
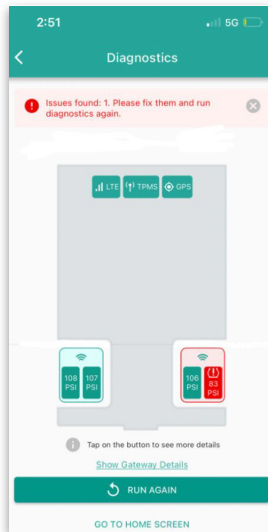

l Enter the vehicle odometer reading and Choose "NEXT"

m Enter required tire details for each tire, then tap "Submit & Continue"

n Review diagnostic screen Green is good, Red needs attention. Tap on the red to get troubleshooting information.


INSTALL

SECOND GEN GATEWAY LED REFERENCE

There are two LEDs on the Gateway along the bottom left corner of the unit. The left is the power LED and the right is the Communication LED. Both show different patterns and colors to indicate various statuses and activities of the Gateway.

• Upon powering the Gateway, both LEDs will flash at 250 ms showing a rainbow color.

POWER LED

COMMUNICATION LED
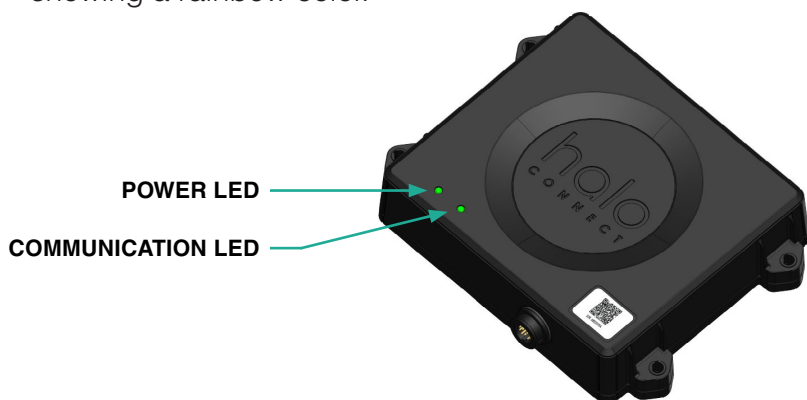
The following table describes activity for the Power LED:

Power LED Pattern	Power Status	Gateway Operating Mode
Solid	External Power	Actively running normal mode
Solid	Internal Battery	Less than 30 minutes after external power disconnect
Blinks once for 25 ms, every 15 seconds	Internal Battery	Actively running normal mode
Blinks once for 25 ms, every 30 seconds	Internal Battery	Sleep mode / Hibernate mode

Power LED Color	Battery Voltage Level	Operating Level
Green	3.5 V <= Vbat	25 - 100%
Yellow	3.2 V <= Vbat < 3.5 V	5 - 25%
Red	Vbat < 3.2 V	0 - 5%

DIAGNOSTICS

SECOND GEN GATEWAY LED REFERENCE (CONT'D)

The following table describes LED activity for Communications operations:

Comm LED Color	Comm LED Pattern	Comm Status
White	Blinks once for 10ms	TPMS packet received from paired screw on sensor
Green	Blinks once for 50ms, every 4210ms	Connecting or Connected to GPS
Green	Blinks once for 1000ms, every 4210ms	Connected to Cellular Network
Red	Blinks once for 1000ms, every 4210ms	Modem cannot be activated
Blue	Blinks once for 200ms, every 4210ms	Bluetooth ready to Connect
Blue	Blinks once for 1000ms, every 4210ms	Bluetooth Connected
Violet	Blinks once for 1000ms, every 4210ms	Bluetooth Error

DIAGNOSTICS

Aperia
TECHNOLOGIES

QTY: 1

Part Number:
IN-300CM-EN

Description:
User Manual, Connect Gateway

Aperia®
TECHNOLOGIES