



USER MANUAL

IN-100CM

Keep this manual in the vehicle for future reference.

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 maintained in accordance with the instructions in this manual. Proper installation of the Halo Connect 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 injury.

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 of 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

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INTRODUCTION

HALO CONNECT PORTAL

The Halo Connect Portal give 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.

Access the web portal at: <https://haloconnect.aperiatech.com>

HALO CONNECT GATEWAY

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

HALO CONNECT MOBILE APPLICATION

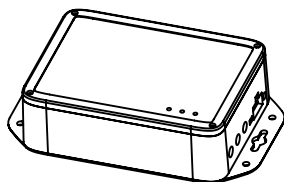
The mobile application makes installation and configuration of the Gateway and sensors seamless. The app allows you to choose between various truck configurations, register the vehicle in our system, and add or replace sensors.

Access the app at: <https://www.aperiatech.com/HC-app>

GETTING STARTED

SYSTEM COMPONENTS

HALO CONNECT GATEWAY



1. Pack of Halo Connect sensors
2. Power Harness
3. Sensor antenna
4. TPMS cable
5. Cellular antenna
6. GPS antenna

MOUNTING PARTS

7. #10 x 5/8" screws (5/16" hex head)
8. UV Stabilized 8" cable ties
9. 1" x 1" Velcro® squares

INSTALLATION TOOLS (NOT INCLUDED)

10. 5/16" Hex Head Socket
11. Tool necessary to access fuse panel
12. Wire Crimper
13. Cutters (for cutting cable ties)
14. Isopropyl Alcohol and Wipes
15. Multimeter
16. Mobile device

START

HALO CONNECT INSTALLATION

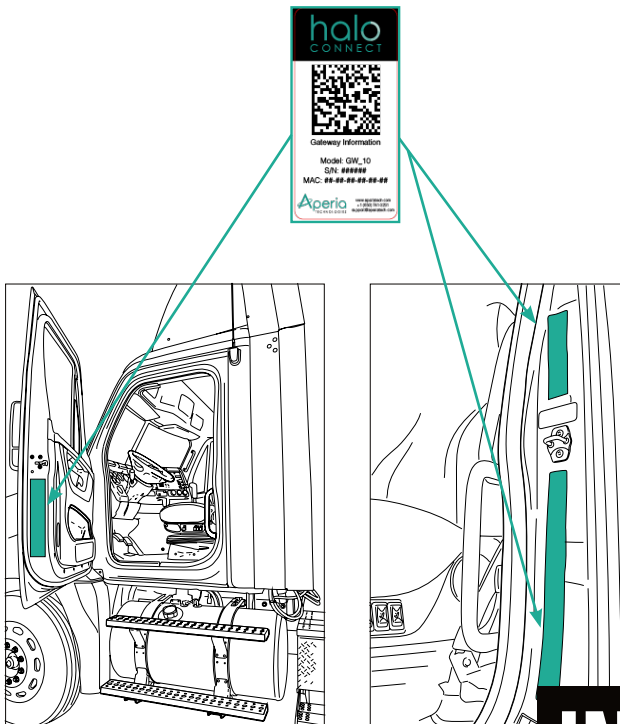
STEP 1. AFFIX GATEWAY ID STICKER TO VEHICLE

The gateway ID sticker is located on the bottom of the gateway. It contains information necessary for pairing and troubleshooting the gateway.

Before affixing the gateway ID sticker, make sure the vehicle configuration on the product box matches that of the vehicle.

Select an easy to access location to permanently attach the gateway ID sticker inside the vehicle. Aperia recommends the door jamb.

Clean the surface of the placement area to ensure that the sticker does not come off. Firmly place the sticker in the placement area.



HALO CONNECT INSTALLATION, CONT'D

STEP 2. DETERMINE WHERE TO PUT GATEWAY

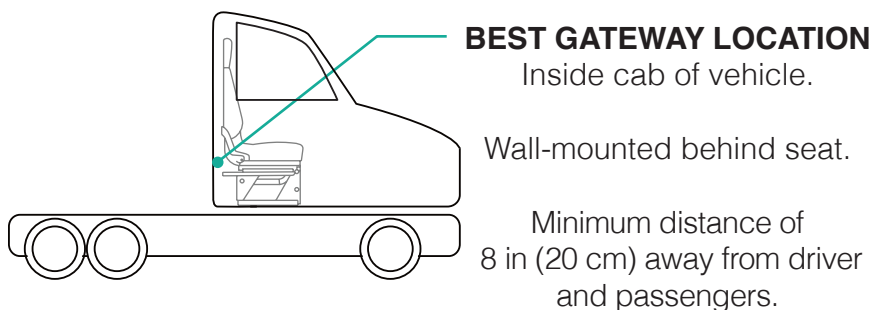
Select a location to permanently attach the gateway inside the cab of the vehicle.

Consider that the gateway will have power and antenna cables attached to it that need to be routed to locations specified in later steps. See **Installation, Step 7** for further instructions on attaching the gateway to the vehicle.

▲ CAUTION: Before attaching the gateway to the vehicle, review the entire install procedure, and ensure the antenna and power cables are safely routed to the recommended locations.

Other gateway placement considerations include:

- Should be accessible for maintenance.
- Should be wall-mounted, at least 8 in (20 cm) away from driver and passengers.
- LTE cellular antenna should not be obscured.
- Does not interfere with passenger access or storage.
- Protected from spills and passenger movement in vehicle.
- Does not interfere with seatbelt.
- Allows for permanent attachment using self tapping screws or other secure attachment based on fleet preference.



INSTALL

HALO CONNECT INSTALLATION, CONT'D

STEP 3. LOCATE POWER SOURCE AND GROUND

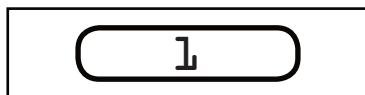
In order for the vehicle's tires to be monitored 24 hours, the Gateway power cable **must** be connected to a 24 hour continuous or unswitched 12 or 24V power source and be securely grounded to the vehicle chassis.

A power harness has been provided with the Gateway. If not using a standard vehicle port to power the gateway ensure that the ground connection is clean, tight, and metal-to-metal.

NOTICE: Use a multimeter 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.

If you are using a different power connection be sure to add a fuse to the positive power cable.

Fuse Rating: 1 Amp



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

If the gateway is connected to an ignition circuit, or if it is de-powered for any reason (such as activating a kill switch), the gateway will not operate, and it will lose data. Ensure that the gateway is connected to a battery circuit.

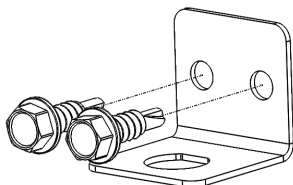
INSTALL

HALO CONNECT INSTALLATION, CONT'D

STEP 4. ATTACH SENSOR ANTENNA TO VEHICLE

The sensor antenna must be placed outside on the rear of the vehicle, and the cable needs to be routed back to the Gateway. Find or make an opening in the cab to route the cable from the Gateway to the outside of the vehicle.

Once the cable is routed, use the included TPMS antenna bracket to affix the bracket to the rear of the vehicle.

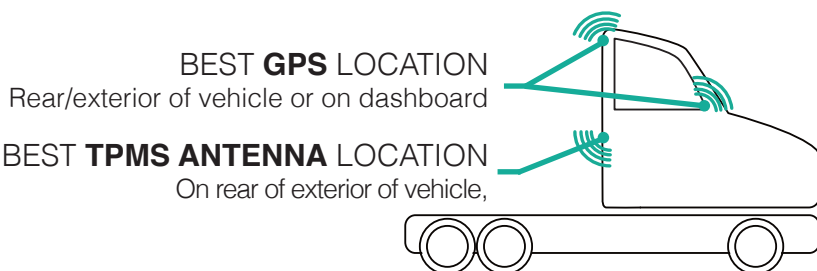


NOTICE: Expected vehicle operation must be considered when routing the sensor antenna to avoid damage to the antenna. Make sure the antenna is routed so it won't be excessively stretched or cut when the vehicle turns or when the suspension is compressed. Protect the antenna from heat sources, such as exhaust, when routing.

▲ WARNING: Avoid creating a tripping hazard when routing the TPMS cable on the exterior of the vehicle.

STEP 5. ATTACH GPS ANTENNA TO VEHICLE

The GPS antenna should be placed in a location with a clear view of the sky, and the cable needs to be routed back to the Gateway. Find or make an opening in the cab to route the cable from the Gateway to the outside of the vehicle.

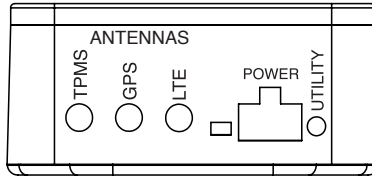


INSTALL

HALO CONNECT INSTALLATION, CONT'D

STEP 6. CONNECT CABLES TO GATEWAY

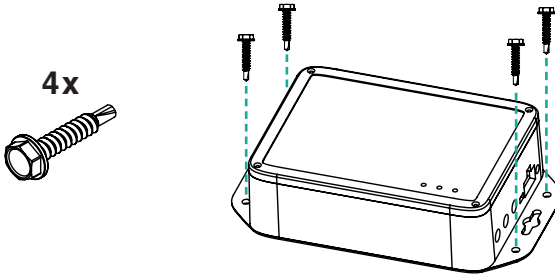
On the gateway, the side label marks the port for each of the cables, as seen below:



NOTICE: Ensure the cables are securely attached to the Gateway to avoid loosening due to vibration during vehicle operation.

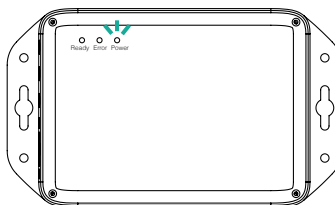
STEP 7. ATTACH GATEWAY TO VEHICLE

Use the included mounting screws and a 5/16" socket to securely attach the Gateway in the location selected in Step 1.



STEP 8. CONFIRM GATEWAY POWER

On the Gateway, ensure that the power LED is emitting green.

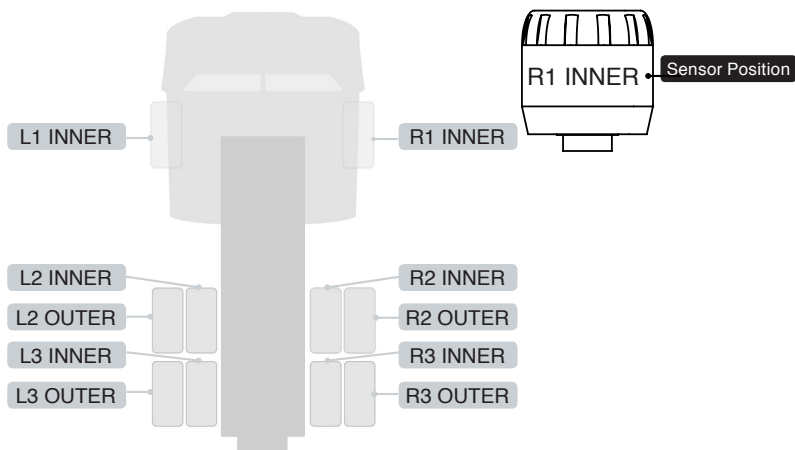


INSTALL

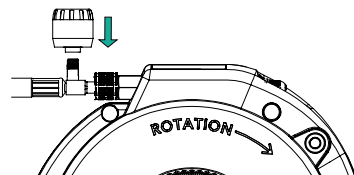
HALO CONNECT INSTALLATION, CONT'D

STEP 9. INSTALL HALO CONNECT SENSORS

Locate the sensor pack. Each sensor has a label that specifies which valve stem the sensor must be screwed onto.



Securely attach the sensor onto the valve stem on the hose. Do not use a tool to tighten as it may damage the sensor seal.



▲ WARNING: A contaminated, corroded, or damaged valve stem or sensor seal may cause a poor seal between the sensor and valve stem resulting in a tire leak.

STEP 10. DOWNLOAD MOBILE APP

On the Gateway, ensure that the Ready LED is emitting blue.

You must download the Halo Connect app onto a mobile or tablet device from the Google Play Store (Android 6.0 or later) or Apple App Store (iOS) to complete the pairing process.

App Link: <http://aperiatech.com/HC-app>

INSTALL

STEP 11. CONFIGURE MOBILE APP

In order to configure the gateway, you will need the following information:

- **Fleet Activation Code** - get this unique code from the primary Aperia account holder at your company or shop, typically a fleet manager or shop manager
- **Fleet Vehicle ID** - truck number typically found on either door
- **VIN** - 17-character vehicle identifier typically found on the driver-side door jamb

INSTALLATION CHECKLIST

- Power cable is connected to 24 hour, 12V power.
- Gateway is securely mounted in the cab.
- Gateway LEDs are emitting green and blue.
- All antennas and cables are tightly connected to the gateway.
- LTE antenna is not covered or obstructed.
- GPS and TPMS antennas are mounted securely.
- Cables are neatly routed.
- Crimps on the power cable are secure.
- Power cable is properly grounded.

TECHNICAL SPECIFICATIONS

Operating Voltage	9-28V DC
Operating Current	100-200 mA
Operating Temperature	-40° - 158° F (-40° - 70° C)
Storage Temperature	-40° - 185° F (-40° - 85° C)

INSTALL

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.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications 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. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help
- This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

"This radio transmitter 24637-HALOC has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device."

Cet émetteur radio 24637-HALOC a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci-dessous, avec le gain maximal autorisé indiqué. Les types d'antenne non inclus dans cette liste et dont le gain est supérieur au gain maximal indiqué pour l'un des types répertoriés ne sont strictement pas autorisés pour une utilisation avec cet appareil.

Antenna	Type	Max. Gain
LTE	Whip	3.0 dBi
ZigBee	PCB	1.0 dBi
Bluetooth (BLE)	PCB	-1.61 dBi

Supplier's Declaration of Conformity

Responsible party details

Company name: Aperia Technologies
 Address: 1616 Rollins Road, Burlingame, CA 94010
 Contact Person: Robert Lawson
 Email: robert.lawson@aperiatech.com
 Phone No.: 16507413231
 Fax No.: 4152734649

Product details

Product: Halo Connect Gateway
 Brand name: Aperia Technologies
 Model name: GW-10, GW-20
 Manufacturer: Volansys Technologies Pvt Ltd.
 Address: A-503, Mondeal Square, Near Crown Plaza Hotel, S. G Highway, Ahmedabad 380 015, Gujarat.

We hereby declare that the equipment bearing the trade name and model number specified above was tested confirming to the applicable FCC Rules under the most accurate measurement standards possible, and that all the necessary steps have been taken and are in force to assure that production units of the same equipment will continue to comply with the Commission's requirements.

Applied Standards	Report No.:
United states CFR 47 Part 15 Subpart B - Electromagnetic Emissions (Unintentional Radiators)	BL-HK18C0003-401

The product complies with Part 15 of the FCC Rules. 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.



Signature: Robert Lawson

Print name: Robert Lawson

Date of issue: 3/20/2019



QTY: 1



Part Number:

IN-100CM



Description:

User Manual, Halo Connect

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IN-100CM
91-00006672

PMN: Halo Connect Gateway
Model No.: GW-10 (for xBR type sub-1GHz Rx)
Model No.: GW-20 (for cc1310 type sub-1GHz Rx)

Printed in United States of America