halo
CONNECT

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 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

CONTENTS

CUSTOMER SUPPORT

Phone   +1 (650) 741-3231

Website   www.aperiatech.com

Sales   sales@aperiatech.com

Technical Support   support@aperiatech.com

CONTENTS

SYSTEM

HALO CONNECT WEB SERVICES

Web Services 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.

HALO CONNECT GATEWAY

The Halo Connect Gateway is 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, 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 CONNECT MOBILE APPLICATION

The Android mobile application makes installation and configuration of the Gateway and sensors seamless, requiring just two data matrix scans per install. The app allows you to choose between various truck configurations, register the vehicle in our system, and add or replace sensors.

INTRODUCTION

GETTING STARTED
SYSTEM COMPONENTS

HALO CONNECT GATEWAY
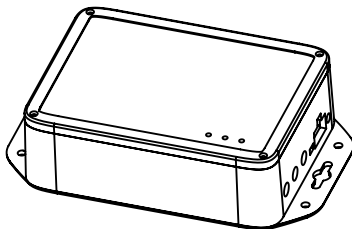
- Pack of Halo Connect sensors
- Power cable with mini fuse connector
- TPMS cable
- TPMS antenna
- Cellular antenna
- GPS antenna

INSTALLATION TOOLS
- 5/16" Hex Head Screwdriver
- Torx Screwdriver (or Other, as needed, to access fuse panel)
- Wire Crimper
- Cutters (for cutting zip ties)
- Isopropyl Alcohol and Wipes

MOUNTING PARTS
- #10 x 1" Hex Head Screws (5/16" Hex Head)
- UV Stabilized 6" Zipties
- 1" x 1" Velcro squares

START

HALO CONNECT INSTALLATION

1. DETERMINE WHERE TO PUT GATEWAY

Select a location to permanently attach the Gateway box 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 step 5 for further instructions on attaching the Gateway to the vehicle.

> ⚠ **CAUTION:**Before attaching the Gateway box to the vehicle review the entire install procuedure and ensure the antenna and power cables are safely routed to the recommended locations.

Other Gateway placement considerations include:
• Gateway should be accessible for maintenance.
• Does not interefere with passenger access or storage.
• Protected from spills and passenger movement in vehicle.
• Does not interfere with seatbelts.
• Allows for permanent attachment using self tapping screws or other secure attachment based on fleet preference.
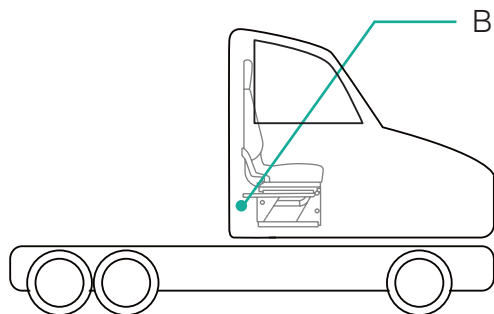
BEST **GATEWAY** LOCATION
Inside cab of vehicle.
Behind and below seat.
Should be installed with minimum distance of 20 cm away from driver and passenger.

INSTALL

HALO CONNECT INSTALLATION, CONT'D

2. LOCATE POWER SOURCE AND GROUND

In order for the vehicle's tires to be monitored 24 hours, the Gateway power cable should be connected to a 24 hour con-tinous 12-20V power source and be securely grounded to the vehicle chassis.

A mini add-a-fuse connector is included with the Gateway. If using this add-a-fuse, locate the vehicle's fuse box and select the power and ground locations.

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..

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

Fuse Rating: 1 Amp   1
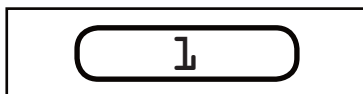
⚠ WARNING: The positive wire of the power cable must be fused. An un-fused power cable may over-heat and lead to a vehicle fire.

INSTALL

HALO CONNECT INSTALLATION, CONT'D

3. ATTACH TPMS ANTENNA TO VEHICLE

The TPMS antenna must be placed outside on the rear of the vehicle and the cable needs to be routed back to the Gateway.

Find an opening in the cab to route the antenna cable from the Gateway to the outside of the vehicle.

Once the cable is routed, attach the TPMS antenna to the end of the TPMS antenna cable and securely attach the TPMS antenna to the outside of the vehicle using at least two zip ties.

> **NOTICE:** Expected vehicle operation must be considered when routing the TPMS 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 when routing.

> ⚠ **WARNING:** Avoid creating a tripping hazard when routing the TPMS antenna on the exterior of the vehicle.

4. ATTACH GPS ANTENNA TO VEHICLE

The GPS antenna must have a clear view of the sky to operate properly. Remove adhesive protector from GPS antenna, and place the antenna on the dashboard inside the cab. Route the cable back to the Gateway.

BEST **GPS** LOCATION
On the dashboard with a view of the sky

BEST **TPMS ANTENNA** LOCATION
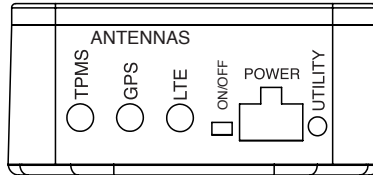On rear of exterior of vehicle, pointing downward
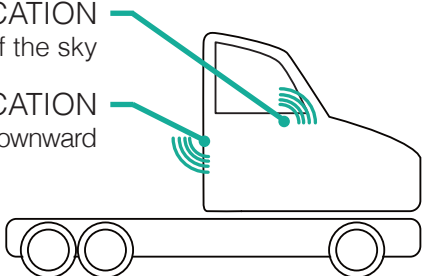
INSTALL

HALO CONNECT INSTALLATION, CONT'D

5. 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.
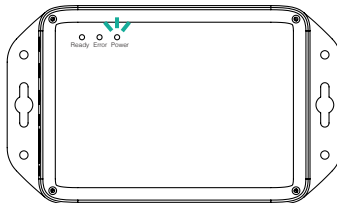
6. ATTACH GATEWAY TO VEHICLE

Use the included mounting screws and a 5/16" socket to securely attach the Gateway in the location selected in step 1. It may be necessary to increase the size of the holes on the Gateway to allow for the mounting screws to fit properly.
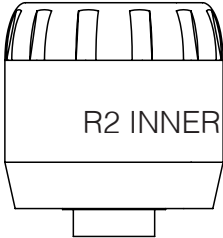

4x
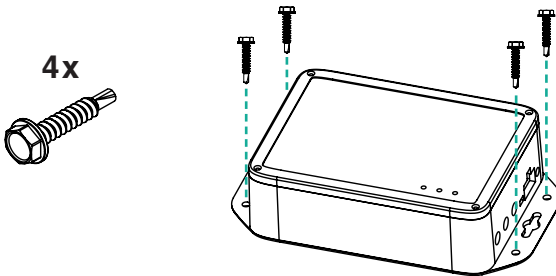
7. CONFIRM GATEWAY POWER

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

Ready Error Power

INSTALL

9. INSTALL TPMS SENSORS

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

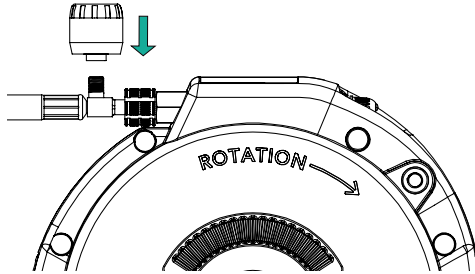

How to Read Tire Position Label
This sensor should be installed on:
R = Right side of vehicle (from driver perspective)
2 = 2nd Axle (steer tire is axle 1)
Inner = Inner tire position

Screw each sensor onto the correct valve stem. Sensors for Halo equipped tires should be attached to the Halo hose.
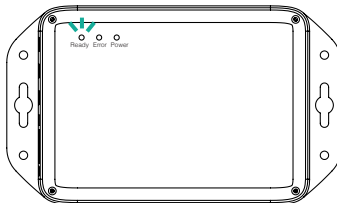

⚠ WARNING: A contaminated, corroded, or damaged valve stem or sensor seal may cause a poor seal between the sensor and valve stem resulting in a tire leak.

11. PAIR GATEWAY USING MOBILE APP

Download the Halo Connect mobile app to a compatible device, and complete the pairing process.

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

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."

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

Aperia
TECHNOLOGIES

QTY: 1

Part Number:
IN-100CM

Description:
User Manual, Halo Connect

Aperia
TECHNOLOGIES