netradyne

Driver·i D-450 Quick Installation Guide

August 2024 Version 1.5

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D-450 Quick Installation Guide

This document serves as a Quick Installation Guide for Field Engineers to assist them with the installation of the Driver•i device.

Pre-Requisites

Various tools and parts are required to complete the installation. The Driver•i device box contains the following items:

USB Connector

Molex Connector

Cellular/GPS Module
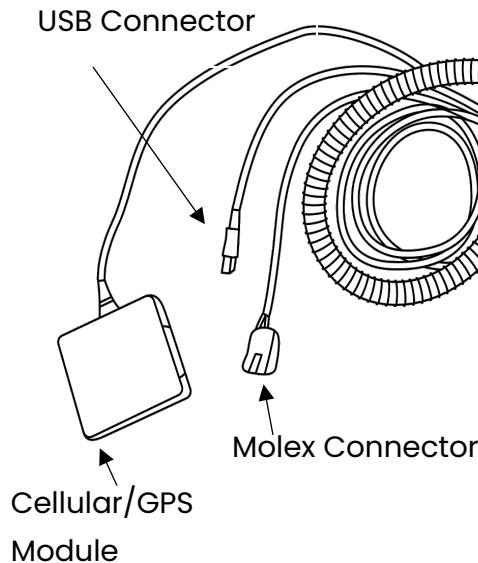
D-450 Driver•i Camera (QTY: 1)
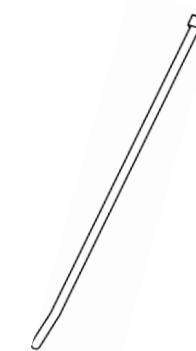
Zip Ties (QTY: 2)

99.9% Alcohol Wipes (QTY: 2)
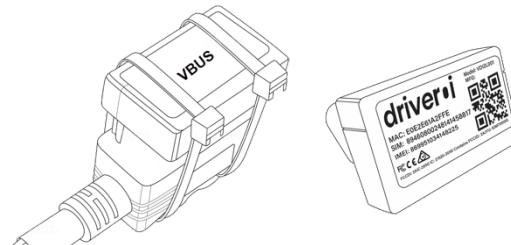
VBUS Device, (used for CAN data connection to vehicles) must be secured with 2 zip ties to OBDII port on vehicle specific cables.

Here are the examples of Vehicle Power Adapter Cables that might be needed:
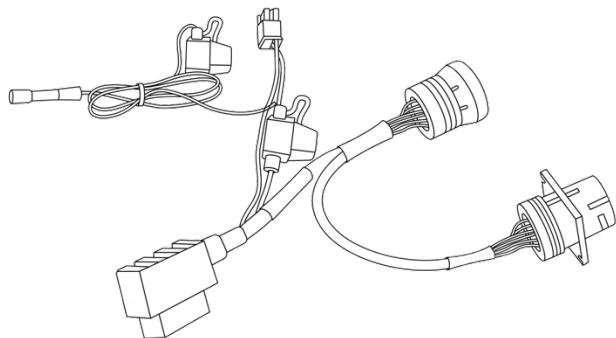
J1708 Power Adapter Cable - EZJ1708E01
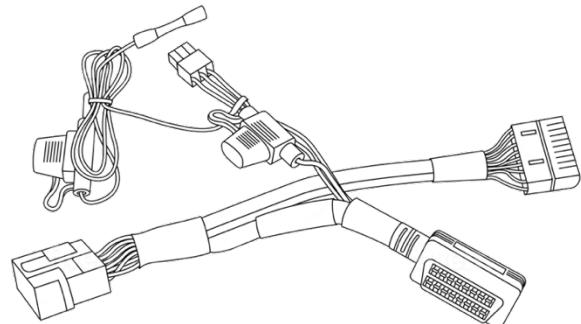
OBDII Power Adapter Cable - EZOBDIIE01
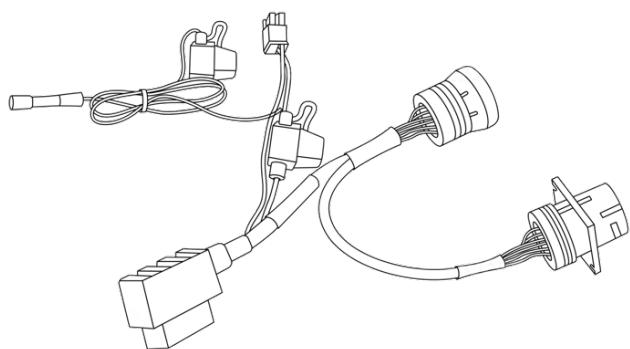
J1939 Power Adapter Cable –EZJ1939E01

Tools Required

- T-15 & T-20 Security Torx Bit.

Driver•i D-450 Connectivity Outline

The snapshot here details the connectivity of Driver•i device.

- D-450 Camera
- USB/Accessories
- Molex between D-450 and Vehicle Harness
- To Diagnostic Port
- GPS Cellular Module
- To Vehicle Dash
- To Vehicle Ignition
- VBUS Device attaches to 90-degree OBDII port on vehicle specific cable
- VBUS Adapter (used for CAN data connection to vehicles) must be secured with 2 Zip Ties to OBDII port on cable.
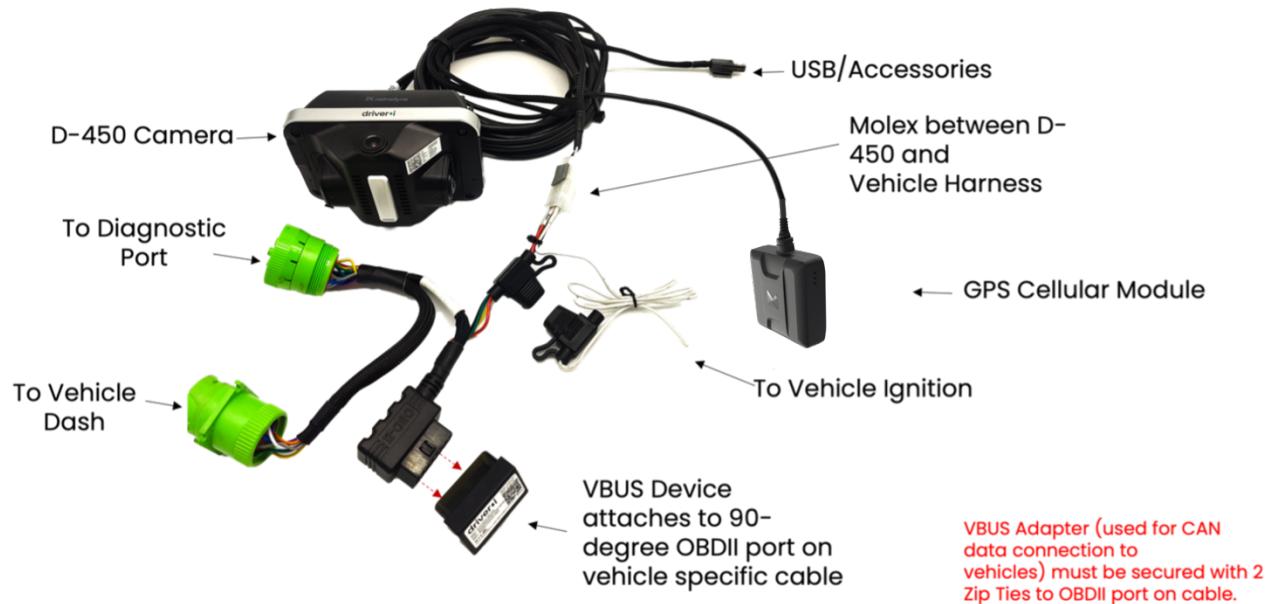
Step 1: Mount the Driver•i Camera

1. Select a mounting location and ensure the Driver•i device does not obstruct the driver's line of sight or vision of the road.
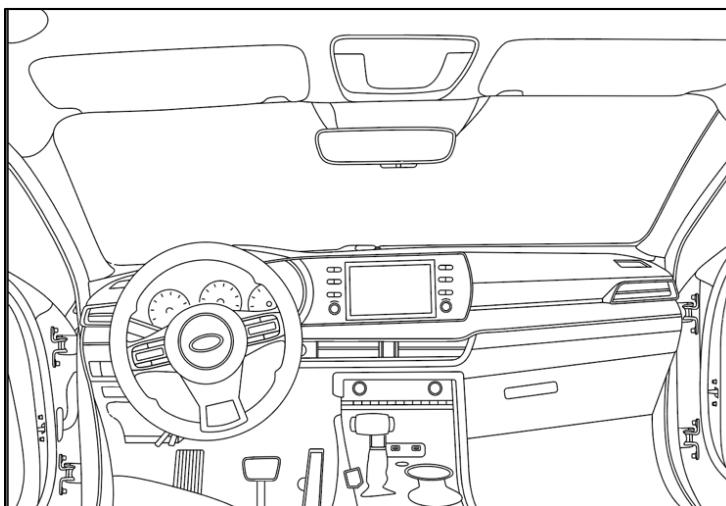
2. Ensure windshield is clean and dry on the inside of the cabin. Use a 91% or higher alcohol content wipe to clean the mounting area. Use a clean microfiber cloth to remove any additional residue.

   **Note:** Make sure the windshield is warm/at room temperature (approx. 72° F or above) and dry at the mounting location to provide optimal adhesion for the mounting bracket.
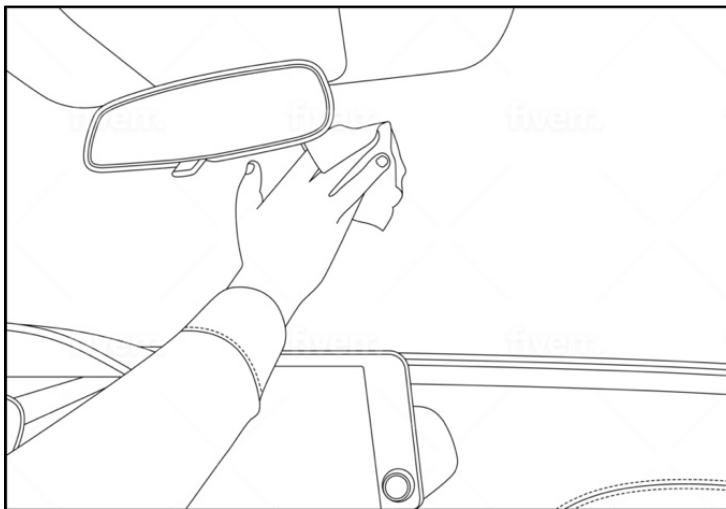
3. Remove the backing seal from two-way tape on the underside of mounting bracket. Attach the mounting bracket to windshield. Place the mounting bracket within the windshield wiper swipe zone. Ensure it is as close to the vehicle centerline as possible.

4. Use a **T-20 Security Torx Driver** to loosen Driver•i Device from the mounting bracket.
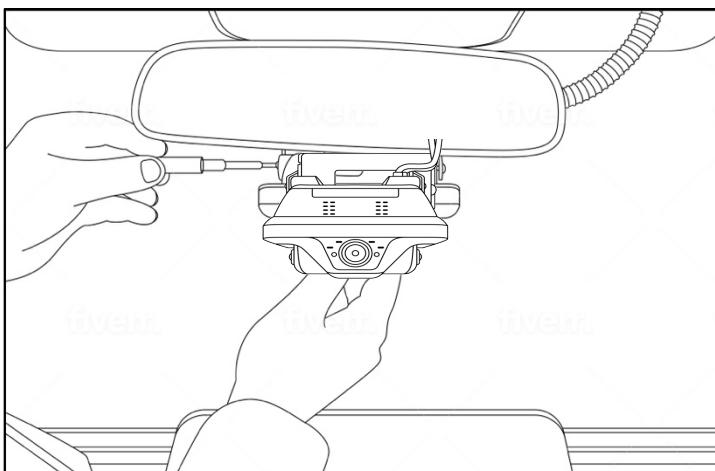
5. Remove the Driver•i Device and apply pressure to the back of the mounting bracket to secure it in place and to remove any air bubbles in between the mounting bracket tape and windshield. We recommend using a seam roller.
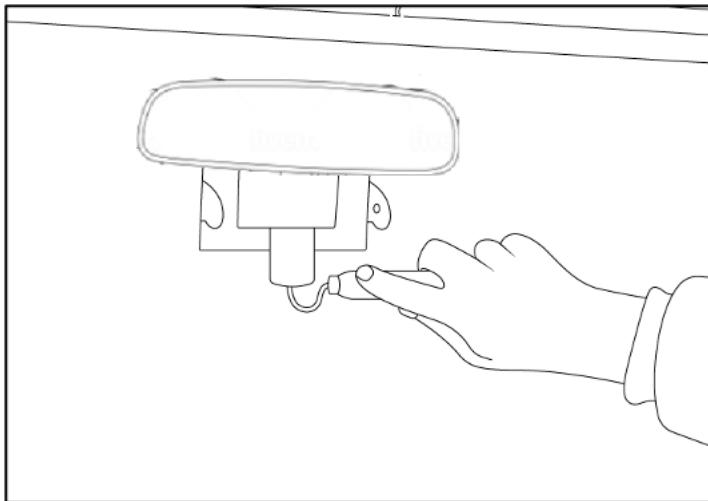
6. Picture below represents the preferred mount orientation on vehicles with no rear-view mirror or other obstructions. (mostly class 6 to 8, large vehicles)
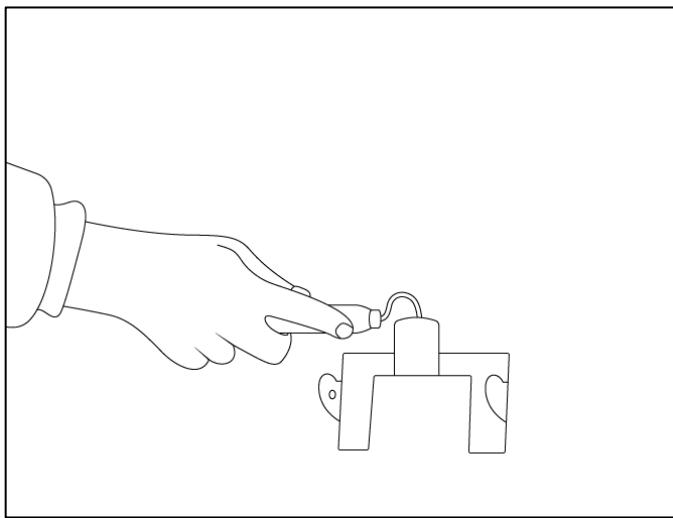
7. Reattach Driver•i Device to the mounting bracket using a **T-20 Security Torx Driver** and ensure the device is leveled with road horizon.
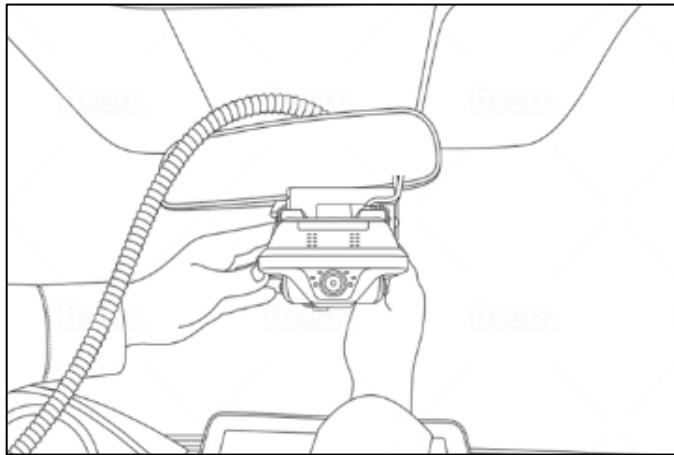

Step 2: Route Cables

Cable routing:

- Remove the A-pillar cover to route the cable across the top of the headliner and down the driver side A-pillar.
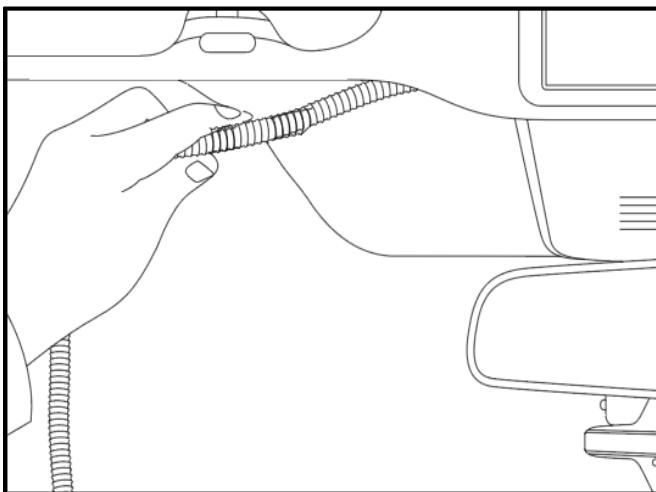
- Secure the cables using zip ties. Ensure the cables and zip ties do not Interfere with the deployment of any side airbags.
- From the bottom of windshield side pillar, run the power cable behind dash panels as needed toward the diagnostic port or connection point (example:

J1939 9-pin, J1708 6-pin, fuse panel, OEM-specific connection point).
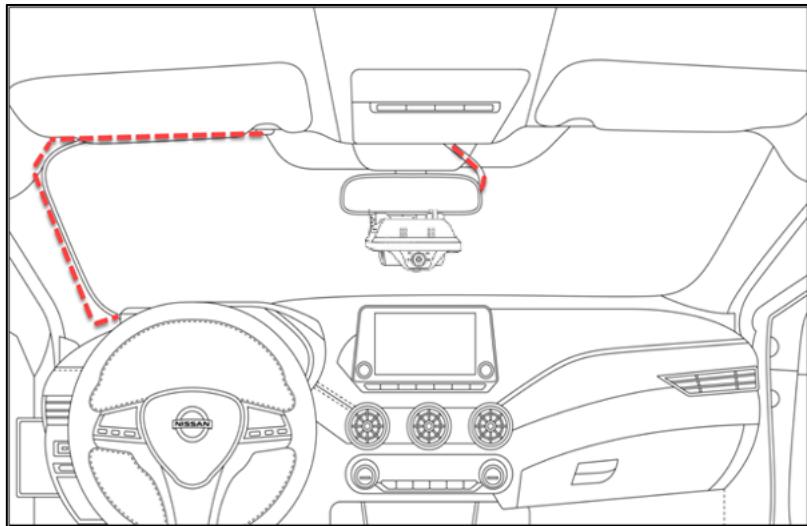
Step 3: Mounting the Cellular/GPS Module to the windshield

Cellular/GPS Module Placement:

- The preferred location of the Cellular/GPS module is on the windshield driver's side lower corner.
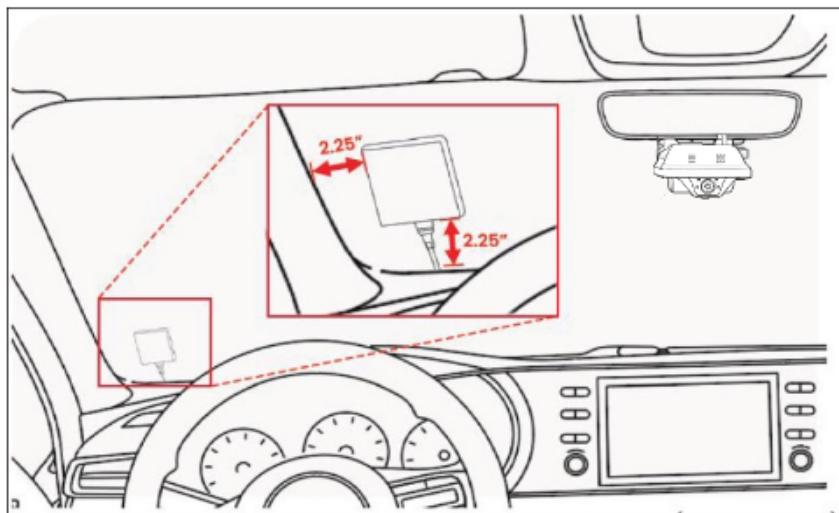
Prep Windshield:

- Ensure windshield is clean and dry on the inside of the cabin. Use a 91% or higher alcohol content wipe to clean the mounting area.
- Use a clean microfiber cloth to remove any additional residue.

In case of cold weather:

- It may be necessary to preheat the windshield by using the vehicles defroster.
- If needed, you can also gradually heat the mounting area with heat gun.

Note: Make sure the windshield is warm/at room temperature (approx. 72° F or above) and dry at the mounting location to provide optimal adhesion for the Cellular/GPS Module.

Mounting the Cellular/GPS Module
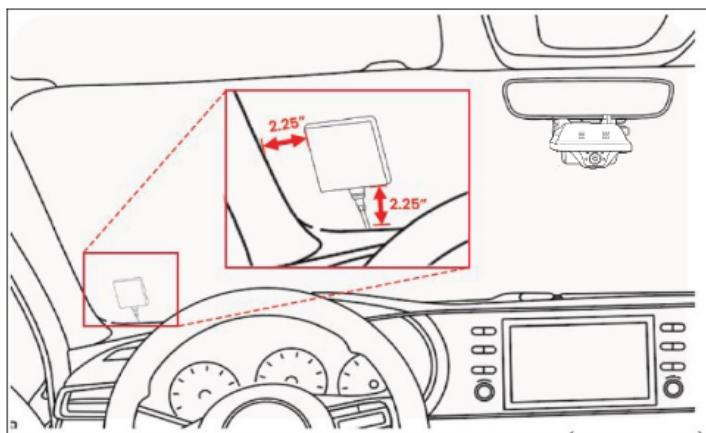
- Remove the backing seal from the two-way tape on the top of the Cellular/GPS Module.

- Place the **Cellular/GPS Module** on the lower driver side of the windshield, making sure the arrow marked "Skyward" is pointing outward and upward.

- Ensure that that VHB tape is on the top side of the Cellular GPS Module as shown in the illustration.

- Ensure the Cellular/GPS Module is positioned 2.25 inches up from the dash and 2.25 inches to the right of the driver side A pillar.

- In some cases, it may not be possible to mount the Cellular/GPS Module in the preferred location due to interference with other electronic devices or other obstacles.

- If the Cellular/GPS Module cannot be installed in the preferred location on the driver's side, it is acceptable to install it in the same location on the passenger's side or other locations, as long as it satisfies the view of the sky requirement.

Step 4: Connect Driver•i and VBUS Adapter

This section will use J1939 Vehicle Power Adapter Cable as an example.

1. Ensure **Driver•i Device (D-450)** Camera cable is connected to the Power Adapter.
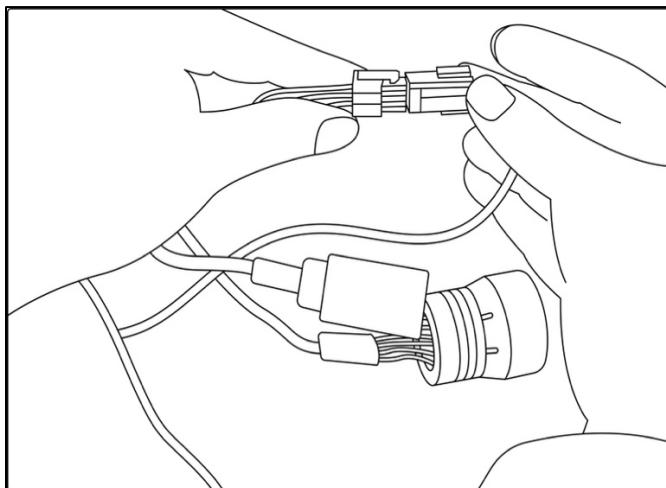
2. **For VBUS installations Only**, plug the VBUS device into the right angle OBDII port on the VBUS equipped Vehicle Power Adapter Cable and secure with zip ties. Remove the vehicle's diagnostic connector (example: J1939 9-pin) from the original mounting location (example: kick panel).
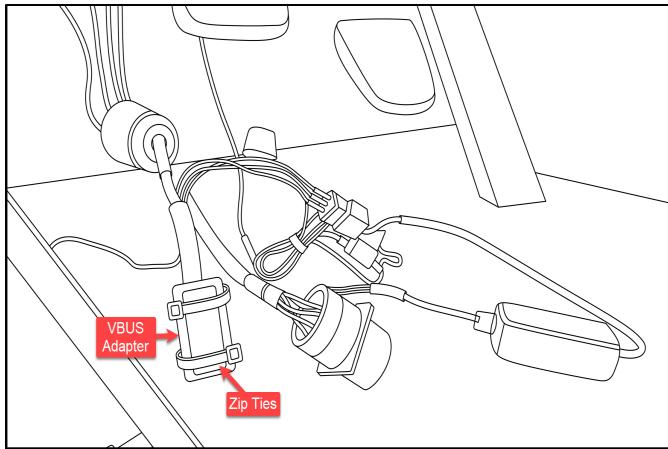
3. Connect the Driver•i Device 6-pin Molex plug to the Vehicle Power Adapter Cable, then plug the female diagnostic connector of the adapter cable to the vehicle's male diagnostic port (example: J1939 9-pin).
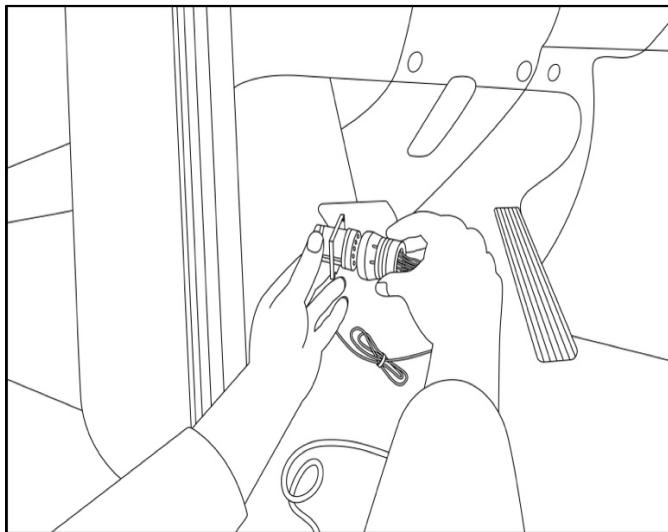
4. Install the male connector of the Vehicle Power Adapter Cable into the vehicle diagnostic port's original mounting location.
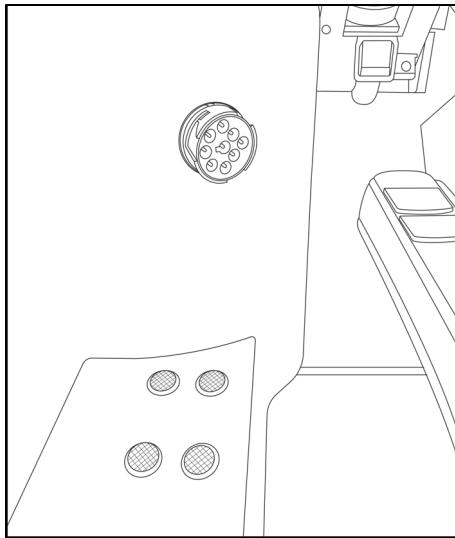
5. On WOM (Wake On Motion) installations with VBUS devices, a true Ignition source is required (Not ACC- power ONLY when the key is in the ON position).
6. Bundle the excess cabling with the supplied zip ties and store/secure, making sure to not interfere with vehicle pedals and other mechanical devices.

True Ignition (IGN)/Not Accessory (ACC) must be connected on all VBUS Installs
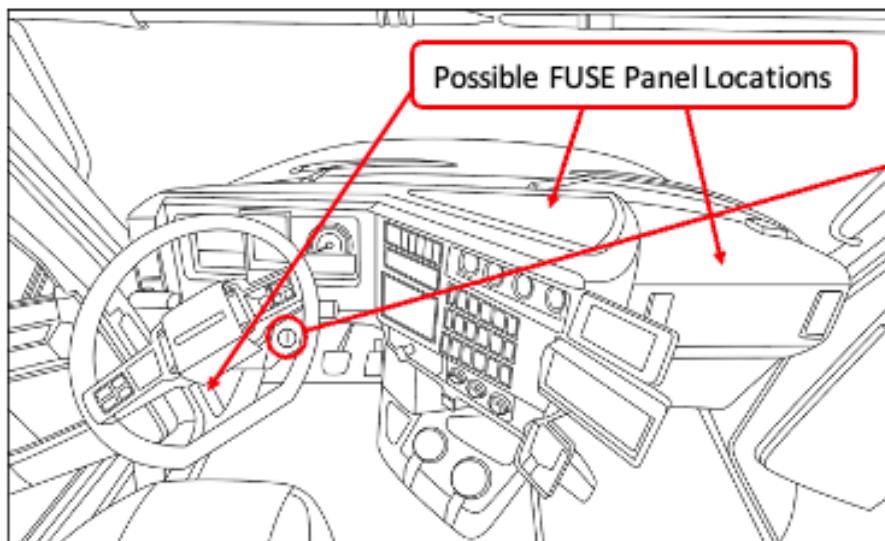
Example of the back side of a typical Ignition Switch.

A true Ignition signal (Not ACC) is usually available either on back of the Ignition Switch or in the fuse panel typically on the passenger side of the dash.

Note: Special cable connections such as RP1226 already have ignition internal to the cable so do not require an external IGN connection.

Step 5: Verify Driver•i /VBUS Installation

Note: Vehicle must be running to pair VBUS

Download the Netradyne "**Driver•i Installer App**" and login using credentials provided by Netradyne or its customer.

Turn the vehicle ignition ON with engine running, verify both Driver•i Device and VBUS LEDs are illuminated.

1. Select **Driver•i Device** (main device) and follow the on the screen instructions to connect. Ensure Diagnostics displays green check marks for the device. If a red **X** is shown for any components, tap the retry button. Please contact support if a red **X** persists. Otherwise, you may continue to pair the device.
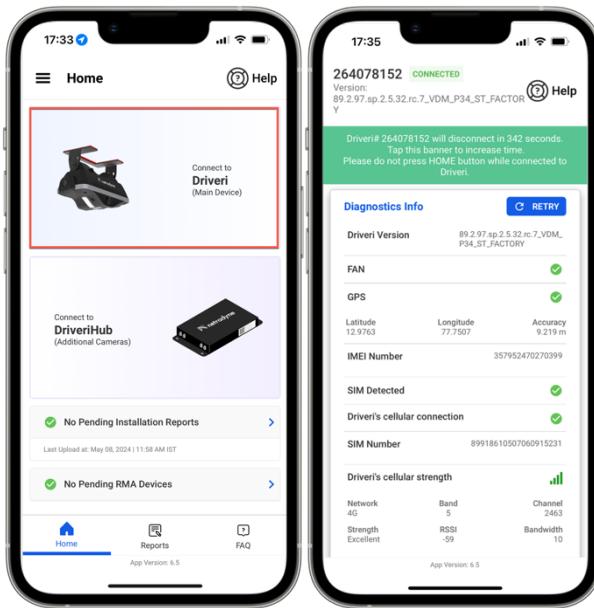
Note: Step 2-4 are for VBUS installs only. Proceed to step 5 if VBUS is not applicable.

2. Select **VBUS** under accessories and scan the QR code from the **VBUS** device and select pair **VBUS**. The pairing process is displayed on the screen.

3. If the **VBUS** pairs successfully you will see a green check mark along with the **VBUS** serial number.
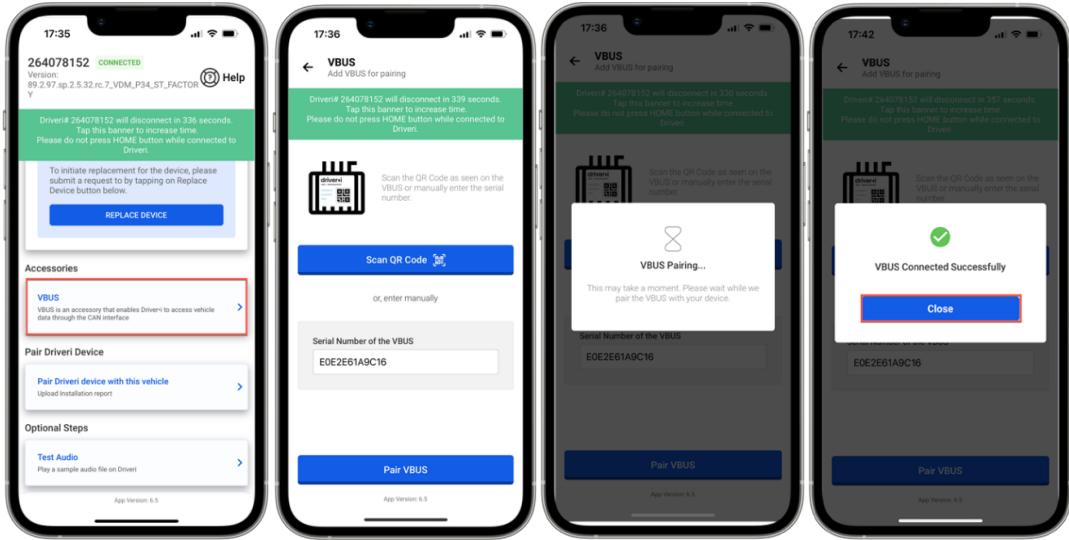
4. Press the back arrow to proceed with Vehicle association. Tap "**Pair Driver•i Device with this Vehicle**" button and fill in requested vehicle information.
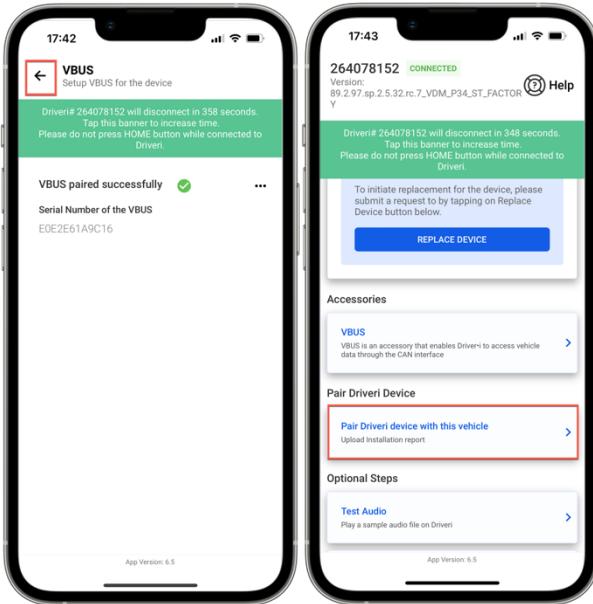
5. **This step is exclusively for VBUS installations.**
    a. Enter requested vehicle connection information and tap "**Verify CAN**".
    b. Verify VBUS CAN Data is being detected indicated by green checkmarks.
        i. A green checkmark in the ELD field indicates all ELD data is present.

ii. Verify displayed VIN matches Vehicle VIN. If they do not match you need to manually enter the vehicle VIN.
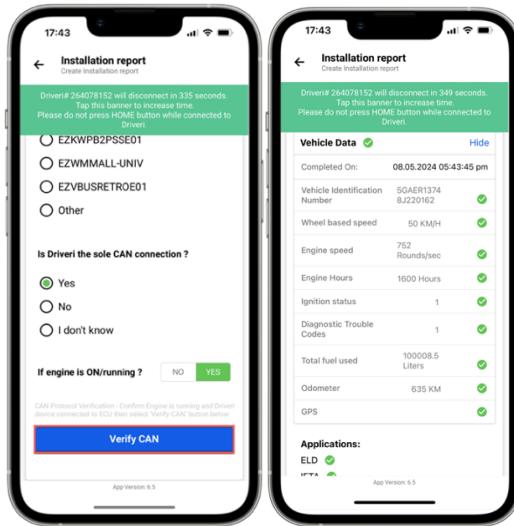
6. Fill out Vehicle information. Once complete, tap the "**Upload Report**" button.
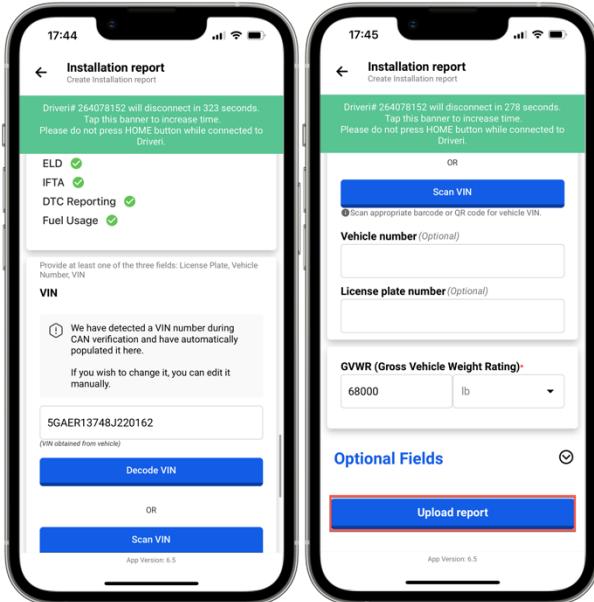
7. You may follow up by testing video feed and audio.
    a. When checking cameras with live feed, ensure the outward view captures no more than the upper edge of the vehicle hood. Then ensure inward camera captures the driver's head, left shoulder and lap area if possible.

b. To finalize tap "**Close Connection and Reboot Driver•i**" button.
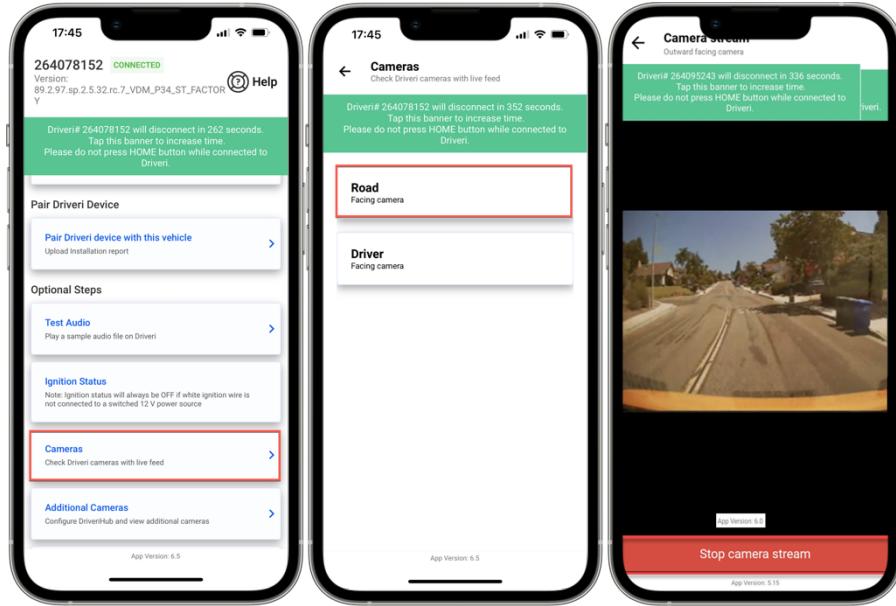
D-450 LED Indicators

| LED 1 Status (Left-side LED)	LED 2 Status (Right – side LED)	Description	Possible Solutions
Flashing **RED**	OFF	Device is booting up and flashing RED should last for 15 seconds.	N/A
OFF or solid **RED** or flashing **RED** for more than 15 seconds	OFF	There is an error	Please contact support
GREEN	**GREEN**	Privacy mode is OFF. Inward camera is ON and recording.	N/A
GREEN	RED	Privacy mode is ON. Inward camera is OFF and not recording.	N/A
GREEN	OFF for more than 15 seconds	There is an error	Please contact support

Note: If driver-facing camera is disabled, LED 2 will always be RED. Privacy Mode is activated when the vehicle speed is 0 MPH for 3 to 4 minutes. The Camera is ready to record after the 25 seconds boot-up time. After ignition key/vehicle is OFF, camera recording is based on "Recording Options" set by the Safety Manager.

VBUS LED Behavior

LED Behavior

During normal operation the combination of LED color and number of blinks indicates the data and cellular status as described below:

Color	Data Status
White	No vehicle data, time sync, or GPS fix
Cyan	Has vehicle data, no time sync or GPS fix
Blue	Has vehicle data and time sync, no GPS fix
Green	Has vehicle data, time sync, and GPS fix
Yellow	Has time sync and GPS fix, but no vehicle data
Red	Firmware update in progress

Number of Blinks	Cellular Status
7 blinks	Turning on modem
6 blinks	Searching for a network
5 blinks	Loading GPS ephemeris
4 blinks	Setting up cellular connection
3 blinks	Connecting to the server
2 blinks	Connected and sending data
1 blink	Sleep

While starting up, the LED on the V5 is solid blue.
If the LED stays solid blue for longer than a minute, the device may be damaged and needs to be repaired/replaced, contact us for options.

For questions or escalations, please visit Netradyne Support at www.netradyne.com/support

Email: support@netradyne.com Phone: (833) GRN-ZONE or 833-476-9663

FCC Compliance This device 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. 2.1 OPERATING REQUIREMENTS AND CONDITIONS The design of Netradyne DriverI/DCM complies with U.S. Federal Communications Commission (FCC) guidelines respecting safety levels of radio frequency (RF) exposure for Mobile devices. 2.2 RF Radiation Exposure Statement This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. 2.3 FCC PART 15 STATEMENT § 15.105 (Class B digital device) 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. REGULATORY INFORMATION Model Name: DriverI Contains FCC ID: 2AM8R-D450

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device. Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

RF exposure statement: The equipment complies with IC Radiation exposure limit set forth for uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. 5150-5250MHz is for indoor use only.

L"émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d"Innovation, Sciences et Développement économique 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;

2. L"appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d"en compromettre le fonctionnement.

Déclaration d'exposition RF: L'équipement est conforme à la limite d'exposition aux radiations de la IC établie pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.