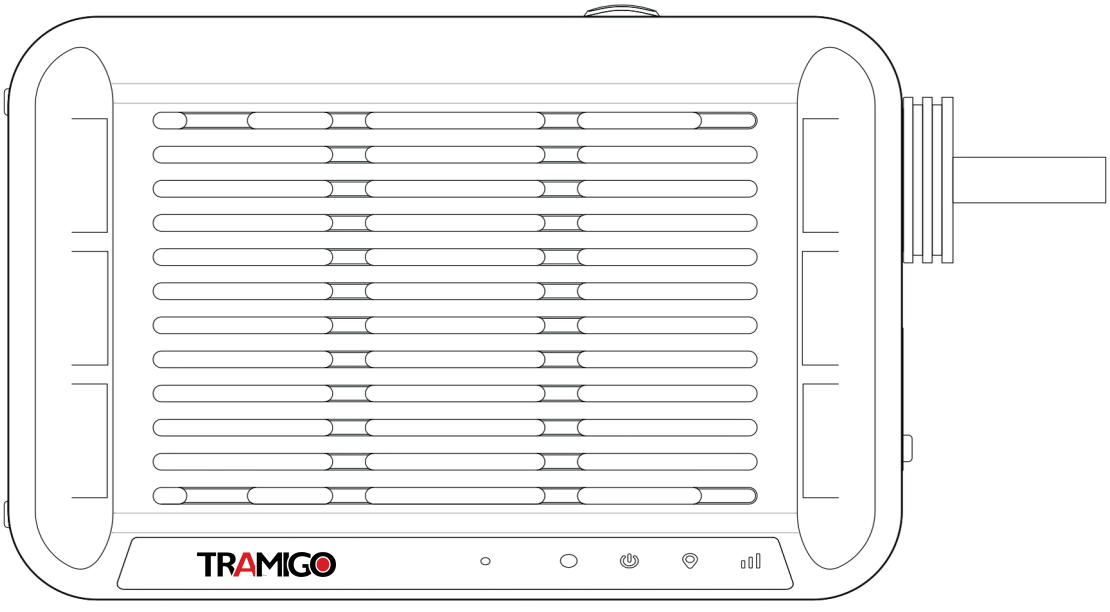
TRAMIGO

DC03-AI

Multi-Channel AI DashCam

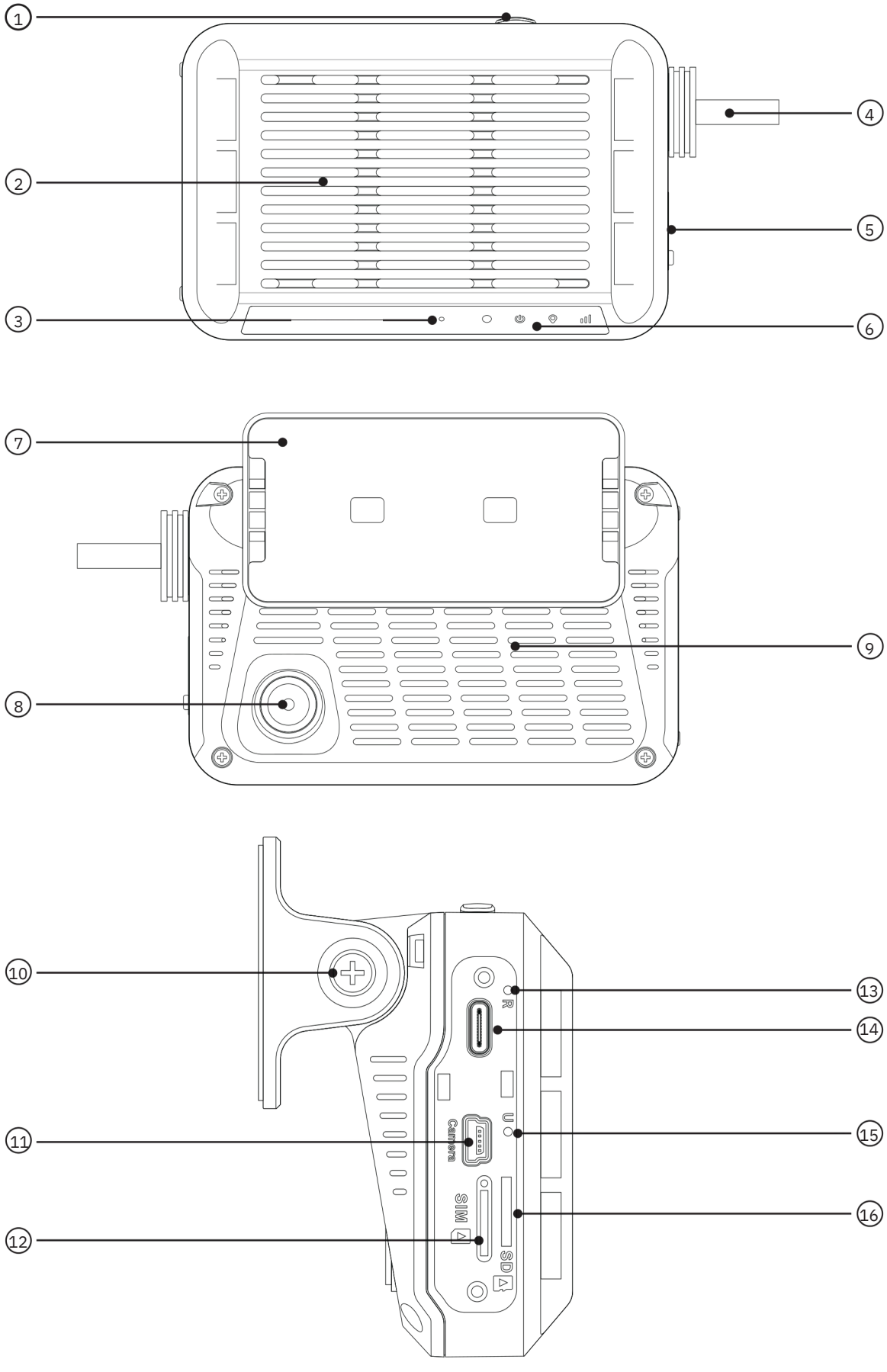
User Manual



Please read this manual thoroughly before use.

01 PRODUCT OVERVIEW

1.1 Appearance Description



Item	Function
1	Function button
2	Cooling window
3	Microphone
4	Power cable
5	Type-C (for function expansion)
6	LED indication
7	Mount base
8	Main camera

Item	Function
9	Speaker
10	Fastener screw
11	External camera interface
12	Reset hole
13	SIM card slot
14	Type-C (for upgrade)
15	Upgrade hole
16	SD card slot

1.2 LED Indication

RED (Recording Status)	Off		The device is shut down or in sleep mode.
	Solid on		The device is ACC (ignition) on and recording normally.
	Flashing		The device is ACC on but recording function is abnormal.
GREEN (Positioning Status)	Off		The device is shut down or in sleep mode.
	Solid on		The device is ACC on and pinpoints locations normally.
	Flashing		The device is ACC on but the positioning function is abnormal.
BLUE (Network Status)	Off		The device is shut down or in sleep mode.
	Solid on		The device is ACC on and has normal network access.
	Flashing		The device is ACC on but fails to access the network.
	Slow flashing		The device has network access, but fails to connect with the platform.
WHITE (AI Algorithm Status)	Off		The AI algorithm is not running.
	Solid on		The AI algorithm is in operation.
	Flashing		A DMS or ADAS event is triggered.

02 PACKAGING LIST

2.1 Standard

Item	Name	Qty
1	DC03-AI unit	1
2	Mount base	1
3	Card slot protective cover	1
4	Power cable	1
5	SOS button	1
6	T6 torx screwdriver	1
7	M2 screws	3

03 PRODUCT FUNCTIONS

The DC03-AI is a powerful remote video monitoring terminal designed specifically for commercial vehicles. It supports up to **3 additional cameras** and incorporates advanced **visual AI algorithms**, including **ADAS** (Advanced Driver Assistance System) and **DMS** (Driver Monitoring System).

Its **built-in antenna system** simplifies installation and wiring, delivering enhanced economy, convenience, visibility, and intelligence to fleet managers. The DC03-AI monitors key factors such as **following distance, lane keeping, and driver alertness**, providing instant **in-cab alerts** to both drivers and fleet managers about potential hazards, ensuring safer roads.

Additionally, the device includes **emergency alert features**, such as a **panic button**, and automatically uploads relevant video clips to the cloud for secure storage.

As a comprehensive fleet management solution, the DC03-AI is ideal for managing **commercial fleets** in industries like **public transportation, logistics, hazardous materials**, and **ride-sharing services.**

3.1 Product Features

- **Video Recording**

The DC03-AI supports up to 3 camera channels, providing a 360-degree view of the vehicle's interior and surroundings. It also enables cloud storage of key video footage for evidence and driver coaching.

- **Visual AI Algorithms**

The DC03-AI uses visual AI algorithms like DMS (fatigue, phone use, distraction) and ADAS (following distance, near collisions, lane-keeping) to monitor road conditions and driver alertness. It can identify risks and alert the driver for safety. Advanced features include facial recognition (Face ID) and seatbelt detection, offering deeper insights into driver behavior.

- **Multi-Source Positioning**

The DC03-AI combines GPS and BDS for accurate vehicle location and speed tracking. Fleet managers can monitor their fleet in real time and review trip history on a cloud-based platform like TramigoVideo, providing data-driven insights for route optimization.

- **4G Connectivity**

The DC03-AI offers 4G connectivity (with 2G fallback) for fast, stable data transmission, enabling real-time video streaming via a cloud-based platform, accessible anytime and anywhere.

- **Remote Management**

The DC03-AI enables fleet managers to remotely monitor and manage vehicles via an online platform. This includes live video feeds, vehicle status monitoring, and the option to immobilize the vehicle through an optional relay, enhancing management efficiency and theft prevention (with quick vehicle recovery).

- **Event Alerts**

The DC03-AI continuously monitors the vehicle. When events like overspeeding, harsh braking, harsh acceleration, or SOS button activation occur, it sends an alert to the platform, records relevant video footage, and/or triggers an in-cab voice prompt to notify the driver.

- **Extension Interfaces**

The DC03-AI features multiple interfaces to connect peripherals such as fuel and temperature sensors, offering a comprehensive solution tailored to various commercial applications.

- **Built-in eMMC**

The DC03-AI dashcam comes with a reliable 128GB eMMC memory and supports external memory cards, offering multiple storage options for enhanced efficiency and reliability.

3.2 Configurations and Parameters

Parameter	Value	Parameter	Value
Core	Dual-core	**NPU**	1 Tops
RAM	256MB	**No. of camera channels**	Up to 3
Internal memory	eMMC 128G	**GNSS**	GPS, BDS, AGPS
External memory	TF card (up to 128GB*1)	**G-sensor**	6-axis
Cellular	4G LTE	**Speaker**	Built-in
Wireless network	WiFi 2.4G 802.11 b/g/n	**Microphone**	Built-in
Function button	Built-in, Customizable features	**Weight**	292g
		Dimensions	118×77×38.5 (mm)
Frequency bands (vary with the model you purchase)	**DC03-AI-EU:** FDD-LTE: B1/B3/B5/B7/B8/B20/B28A TDD-LTE: B38/B40/B41 WCDMA: B1/B5/B8 GSM: B3/B8		

3.3 Product Performance

Configuration	Parameter	Configuration	Parameter
Operating voltage	DC 9-30V	**Undervoltage protection**	9V，Customizable voltage threshold for shutdown.
Operating temperature	-20°C-70°C	**Overvoltage protection**	36V
Storage temperature	-30˚C-85˚C	**Reversed connection protection**	Support
ESD protection	Air ±14KV; Contact ±7KV	**Flame retardant rating**	UL94 V-0

04 PRODUCT INSTALLATION

4.1 Note

This device is designed for use with gasoline-powered vehicles only and should not be used with all-electric or hybrid vehicles.

- Use only the supplied accessories for installation.
- Ensure the power supply is DC 9-30V, and correctly connect the positive and negative terminals of the power cable to avoid vehicle damage.
- Remove the protective film from the camera lens after installation for optimal video capture.
- Follow the guide's recommendations for the memory card and SIM card.
- It is advised to have the installation and testing carried out by your dealer or a professional agency as outlined in the guide.

4.2 Installation Preparation

1. **Check the Package:** Ensure the package contents match the packing list and confirm that all items are in good condition before starting the installation.
2. **Prepare Installation Tools:** Gather necessary tools such as insulation tape, assembly and disassembly tools, etc.
3. **Vehicle Condition**: Verify that all original functions of the vehicle are working correctly. If any issues are found, do not proceed with the installation.
4. **Vehicle Protection:** Take the necessary cleaning and protection measures for the vehicle prior to installation.

4.3 Product Pre-installation

Before beginning the installation, ensure the following preparations are made:

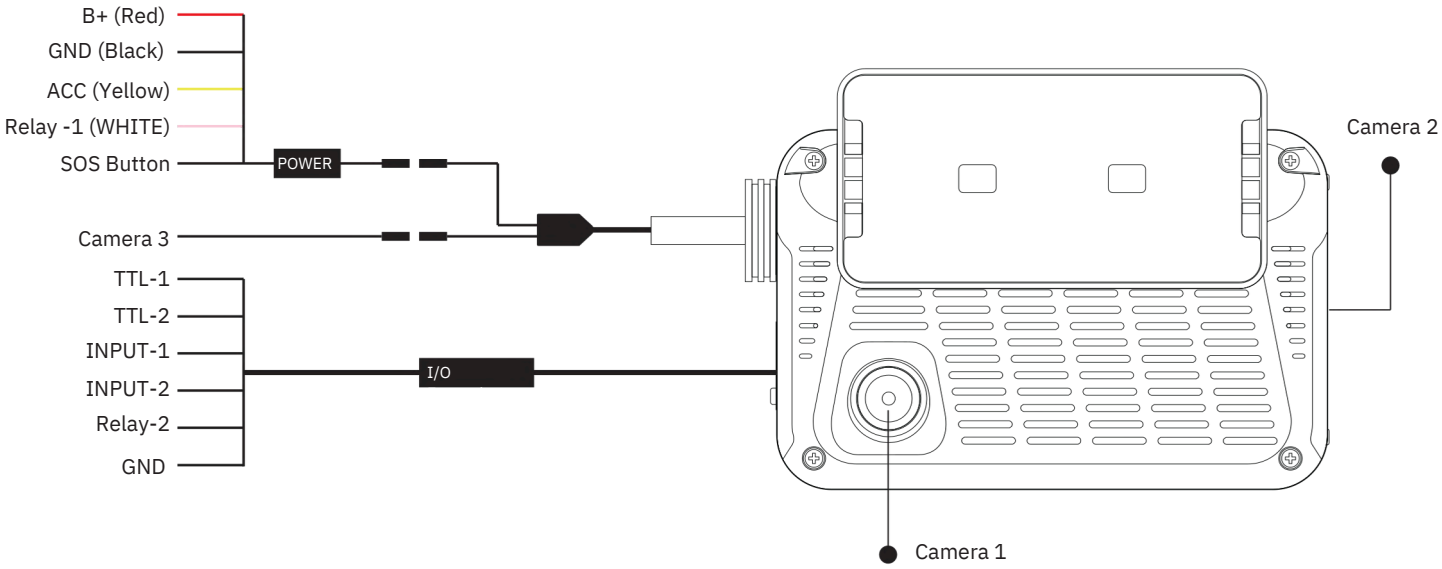
Install Necessary Accessories:

1. Insert a compatible memory card into the device correctly.
2. Place a valid SIM card into the card tray and insert it into the device.

Choose and Prepare Installation Position:

1. Select an appropriate installation position for the device.
2. Clean the selected area to ensure proper adhesion and functionality.

4.4 Product Wiring Diagram

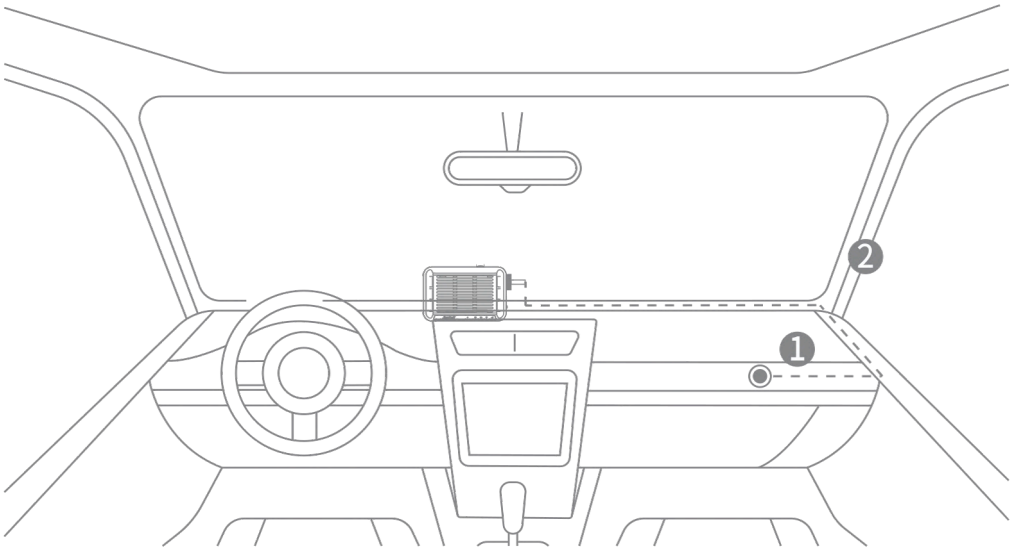


Installation description

1. **Harnesses and Accessories:** Check the diagram for harness descriptions and connect/install accessories as needed based on actual conditions.
2. **I/O Expansion:** Omit the I/O extension cable if the expansion function is not required to reduce installation complexity.
3. **Remote Installation:** Use a special extension cable for the pull-out camera during remote installations.

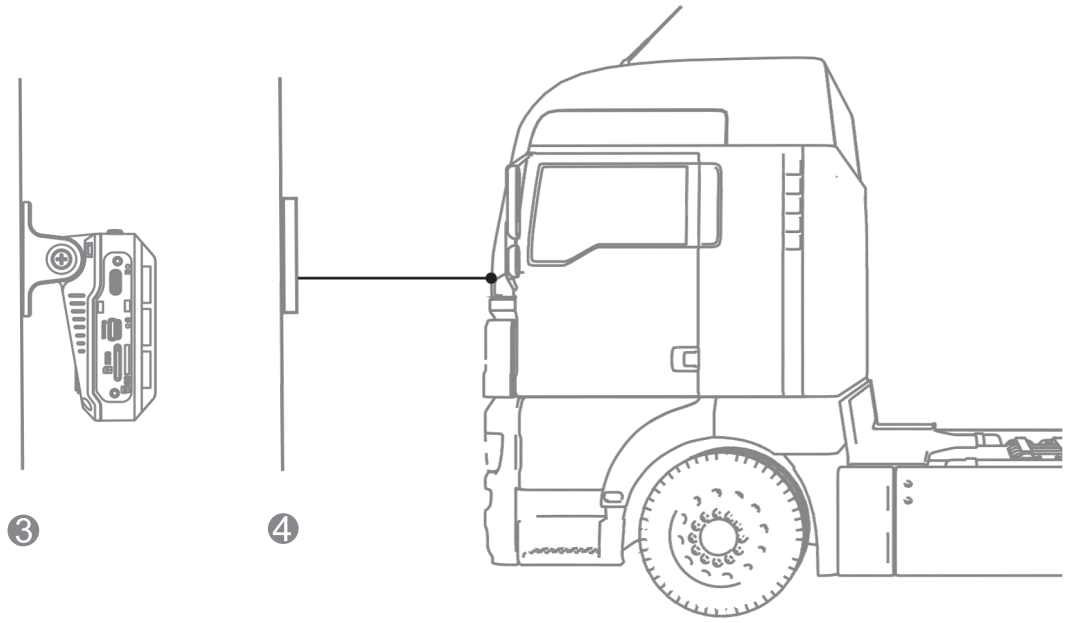
4.5 Installation

It is recommended to install the main unit of the device at the bottom center of the vehicle's windshield for optimal positioning. The installation process consists of securely mounting the unit and routing the power cable appropriately to ensure proper functionality.



Step 1: Connect the device's power cable to the B+, ACC, and GND wires from the vehicle's fuse box (see Figure ① for reference).

Step 2: Route the power cable along the edge of the dashboard to the bottom center of the front windshield, following the dotted line in Figure ②.



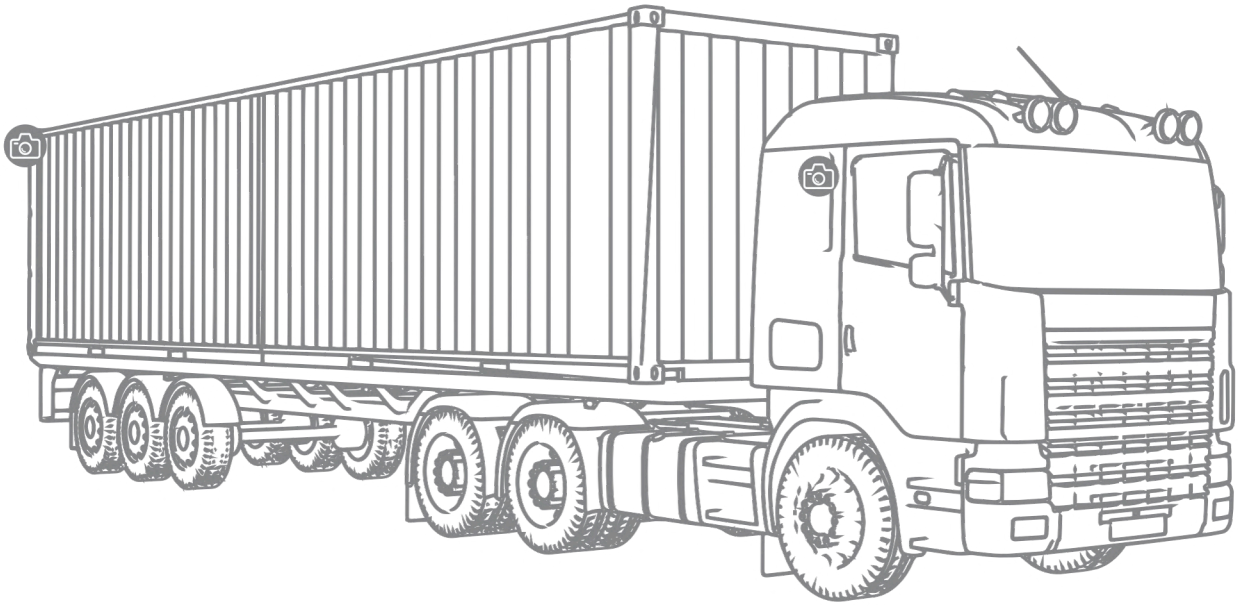
Step 3: Attach the mount base

- Select a suitable position on the front windshield, ideally near the bottom center on the driver's side.
- Clean the mounting position to remove any dust or smudges. Then, peel off the protective film from the 3M double-sided adhesive tape on the mount base and attach it securely to the cleaned position (see Figure ③).
- Apply moderate pressure to ensure a firm bond, squeezing out any air to keep the mount base securely in place.

Step 4: Mount the device onto the base and adjust the road-facing camera to ensure it is facing forward horizontally, as shown in Figure ④. Once the camera is properly positioned, tighten the adjustment screw on the base to secure the device in place. Finally, connect the power cable to complete the installation.

4.6 Camera Installation

The DC03-AI device supports connections for up to three cameras. The front camera is the built-in main lens, while the other two cameras can be selected and installed based on your specific needs, with installation positions determined according to the application scenario.



4.7 Installation of Other Accessories

SOS Button Installation

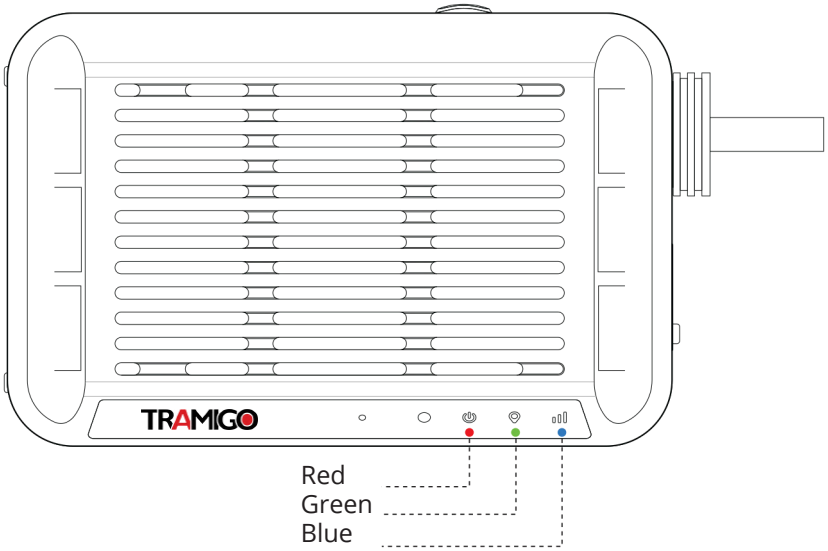
To install the SOS button, connect it to the corresponding wire of the device. Then, remove the protective film from the 3M adhesive tape and attach the button to a convenient location for easy access in emergency situations.

4.8 Device Testing

- **Power Cable Connection:** When the vehicle is in the ACC ON state, the power indicator (red) on the device should light up; otherwise, it will remain off.

- **GNSS Function:** With the ignition in the ON position, the GNSS indicator (green) will flash. After driving the vehicle to an open area for one minute, the GNSS indicator will turn solid on.

- **Data Communication Function:** With the ignition in the ON position, the cellular indicator (blue) will flash. Once you drive the vehicle to an area with good cellular signals, the cellular indicator will turn solid on.



- **Check the Cameras:** Log in to the designated mobile app and go to the live video interface. If you can switch between cameras, the cameras are functioning properly. You can also manually adjust the capture angle of the cameras based on the actual conditions.

05 MAIN FUNCTIONS

5.1 Basic Operation

- **Startup**

The device starts automatically when the B+, ACC, and GND wires are correctly connected to the vehicle’s power.

- **Shutdown**

The device shuts down automatically when the power source is disconnected.

- **Sleep**

The device enters sleep mode when the vehicle's ignition is turned off, disabling recording, GNSS, and other functions to save power.

5.2 Main Functions

- **Video recording**

The device starts recording automatically when the vehicle's ignition is on. It captures video and audio from the connected camera(s), storing it on the memory card through loop recording.

- **Tracking**

Upon ignition, the device activates its GNSS module to track the vehicle's location and upload the data to the cloud server.

- **Event monitoring**

The device monitors the vehicle's speed, gravity acceleration, and status. It issues alerts in case of abnormal conditions, and uploads event data with location and video evidence to the platform.

- **Visual AI**

When the vehicle reaches a preset speed, the device analyzes the driver’s face and driving conditions via the camera, detecting signs of fatigue or danger. It then issues in-cab alerts and sends alarm notifications to the platform.

5.3 Remote Management

- **Live video**

The device’s cellular capability allows real-time transmission of audio and video from the camera(s), enabling you to view the vehicle's status live through the platform.

- **History video**

You can access and push selected audio and video files, as well as history video files stored on the memory card, to the platform for further review.

- **Location query**

The platform allows you to check both live and historical locations of the vehicle, providing insights into its past trips.

5.4 Visual AI

- **ADAS (Advanced Driver Assistance System)**

The ADAS function is implemented via the front camera, which constantly monitor the road conditions. By judging the distance from the front vehicle and recognizing the lane marking, and based on the vehicle speed, it can detect near collisions and alert the driver to make the road safer and help protect drivers and other road users.

- **DMS (Driver Monitoring System)**

With an optional DMS camera, the system detects risky driver behaviors such as fatigue (e.g., yawning, eye closure) and distraction (e.g., phone use, fiddling with the stereo), issuing real-time alerts to improve driver safety.

- **Seatbelt Use Detection**

An inward-facing camera checks whether the driver has fastened their seatbelt, issuing an audible alert if not. This is crucial for safety in case of accidents.

- **Facial Recognition (Face ID)**

An optional camera with facial recognition verifies the identity of the driver by scanning their face and comparing it to a face library, preventing unauthorized personnel from operating the vehicle.

06 OTHER

6.1 FAQ

1. The device does not start and the LED indicators are off.

- Check the ignition status of the vehicle, as the device will operate only when the vehicle is started.
- Ensure the device is securely connected to the B+, ACC, and GND wires of the vehicle.
- Check if the fuse is blown or shorted.

2. The camera does not operate properly and the red indicator flashes.

- Check if the memory card is inserted correctly.
- Test the memory card on a computer to ensure it is functioning properly.
- Ensure the memory card format is FAT32; if not, format it to FAT32.

3. The device cannot access the network and the blue indicator flashes.

- Ensure the SIM card is correctly inserted and activated with the required mobile network services.
- If using an IoT card, you may need to manually configure the APN as the automatic adaptation might fail.

4. The device cannot perform positioning and the green indicator flashes.

- Drive your vehicle to an open area, as GNSS signals may be weak in underground garages or tunnels.
- If started under a high-rise building, signal search and positioning may be slow; drive to an open area to speed up positioning.

5. AI function (ADAS/DMS) fails to work.

- The default speed for ADAS activation is 60 km/h, and for DMS, it is 30 km/h. The corresponding AI function activates once the vehicle exceeds the speed threshold. You can adjust the thresholds to your needs.
- Check if the cameras are properly connected, unobstructed, and the capture angles are correct.

6. The platform fails to receive some alerts.

- Ensure that the alert switches are enabled on the platform.

7. The camera becomes loose easily after adjusting the capture angle.

- Adjust the camera to the optimal capture angle and ensure that the screws at the camera-mount joint are tightened each time the angle is adjusted.

8. The mount base falls off easily after attachment.

- The mount base uses a 3M double-sided adhesive tape. Its adhesiveness may be affected by dust or grease on the installation surface. Clean the surface thoroughly before attaching the mount base.

07 FCC COMPLIANCE AND DISCLAIMER

This device follows the rules set by Part 15 of the FCC. It operates under these two conditions:

1. **No Harmful Interference:** The device should not cause interference with other electronics, especially devices that use radio frequencies (e.g., radios, TVs, wireless devices).
2. **Acceptance of Interference:** The device should still work properly even if it experiences interference from other devices.

Caution: Any changes or modifications to the device that are not approved by the responsible party could remove the user's ability to operate the device. The device meets FCC radiation exposure limits for an uncontrolled environment. It should be installed and used with at least 20 cm of distance between the device's antenna and your body.

Disclaimer: This equipment has been tested and complies with Class B digital device limits according to Part 15 of the FCC Rules. These limits are designed to protect against harmful interference in residential settings. However, the device may still cause interference with radio communications if not installed and used as instructed.

If this device causes interference with radio or TV reception (you can check by turning it on and off), try one or more of these solutions:

- Reorient or move the antenna.
- Increase the distance between the device and the receiver.
- Plug the device into a different outlet.
- Contact the dealer or a professional technician for assistance.

08 WARRANTY INSTRUCTIONS

For more details, please refer to our Warranty Policy at the following link:
https://tramigo.com/warranty-policy/