



DVS 2024

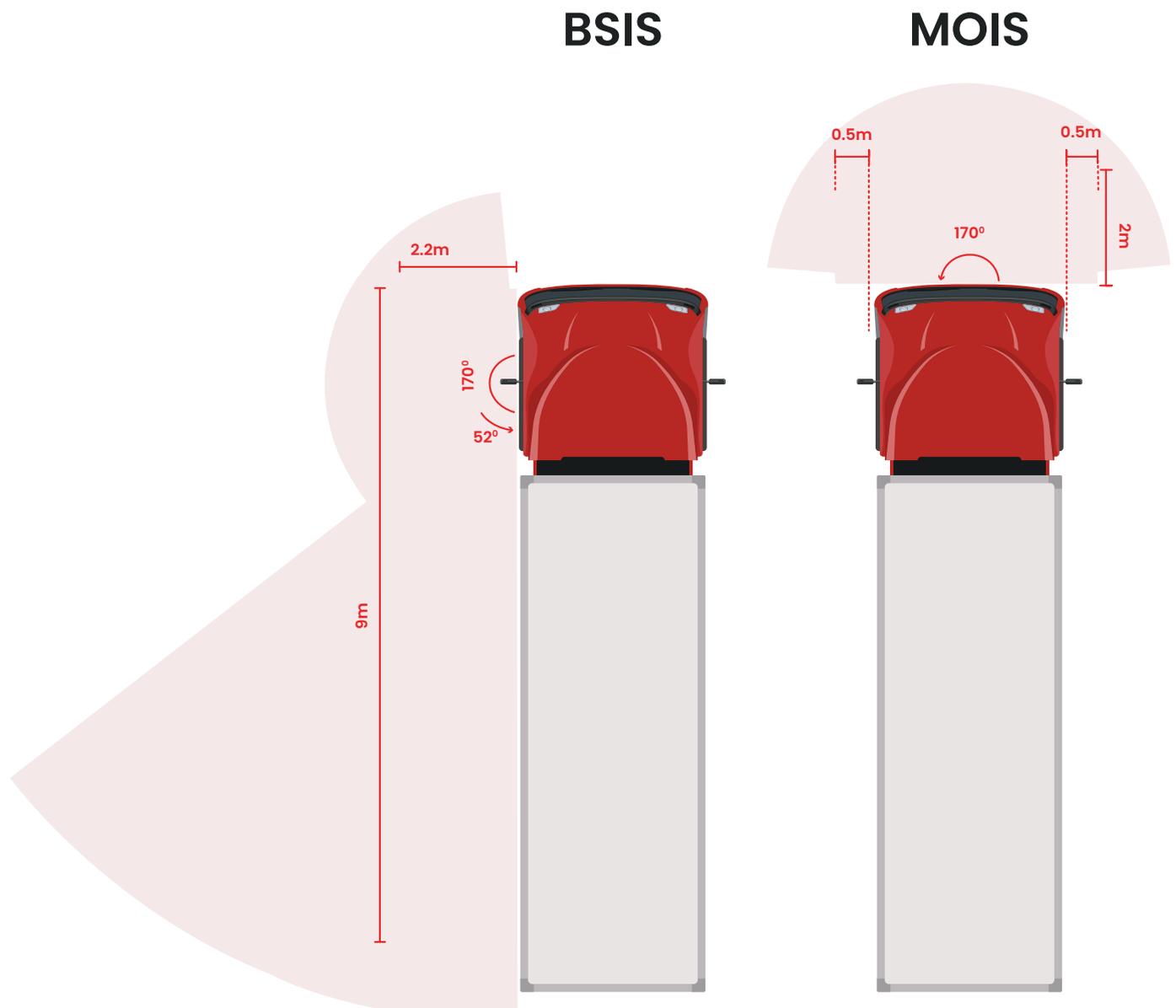
AI CAMERA SYSTEM



The Direct Vision Standard (2024 Update)

The Direct Vision Standard (2024 Update) implemented by Transport for London (TfL) is a legislation aimed at increasing the safety of HGVs (Heavy Goods Vehicles) weighing over 12 tonnes operating within Greater London.

From October 2024, this will be raised to a minimum **3-star rating**. MOIS and BSIS systems are must required.



COMMERCIAL VEHICLE AI CAMERA

BAT1001



Working Conditions

- ⦿ The BSIS sensor and radar work when the speed is under 30km/h, however the alarm will not sound when the speed is over 30km/h. Note, the Radar and Sensor are still active.
- ⦿ The MOIS camera gives the alarm when speed is 0~5km/h, still working but does not sound the alarm when speed is over 5km/h.

Product Feature

-  GPS with gyroscope to detect speed more accurately
-  Led and Audio Warning
-  Easy to Install
-  Perfect for Safety Driving
-  Algorithm ECU

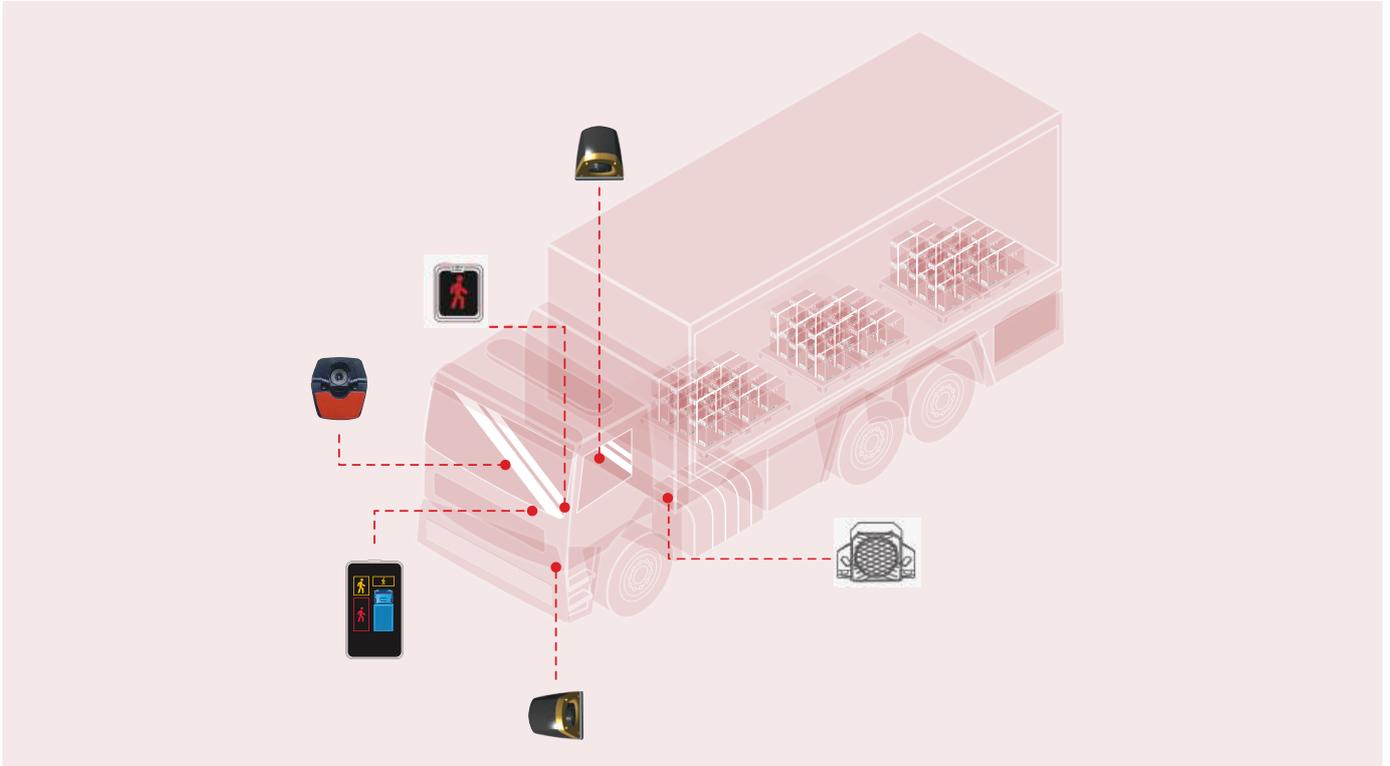
AI Camera Specification

Working Voltage:	12~36V
Working Current:	< 500mA
Operating Temperature:	-40~85 degrees
Temperature: Camera Angle:	MOIS front camera: 170 degrees near side camera : 140 degree BSIS rear view camera : 90 degree 1080P
Clarity:	30pfs
Detection Range:	Front 2 meters (l) * 3 meters (w) Side 9 meters (l) * 2.2 meters (w)

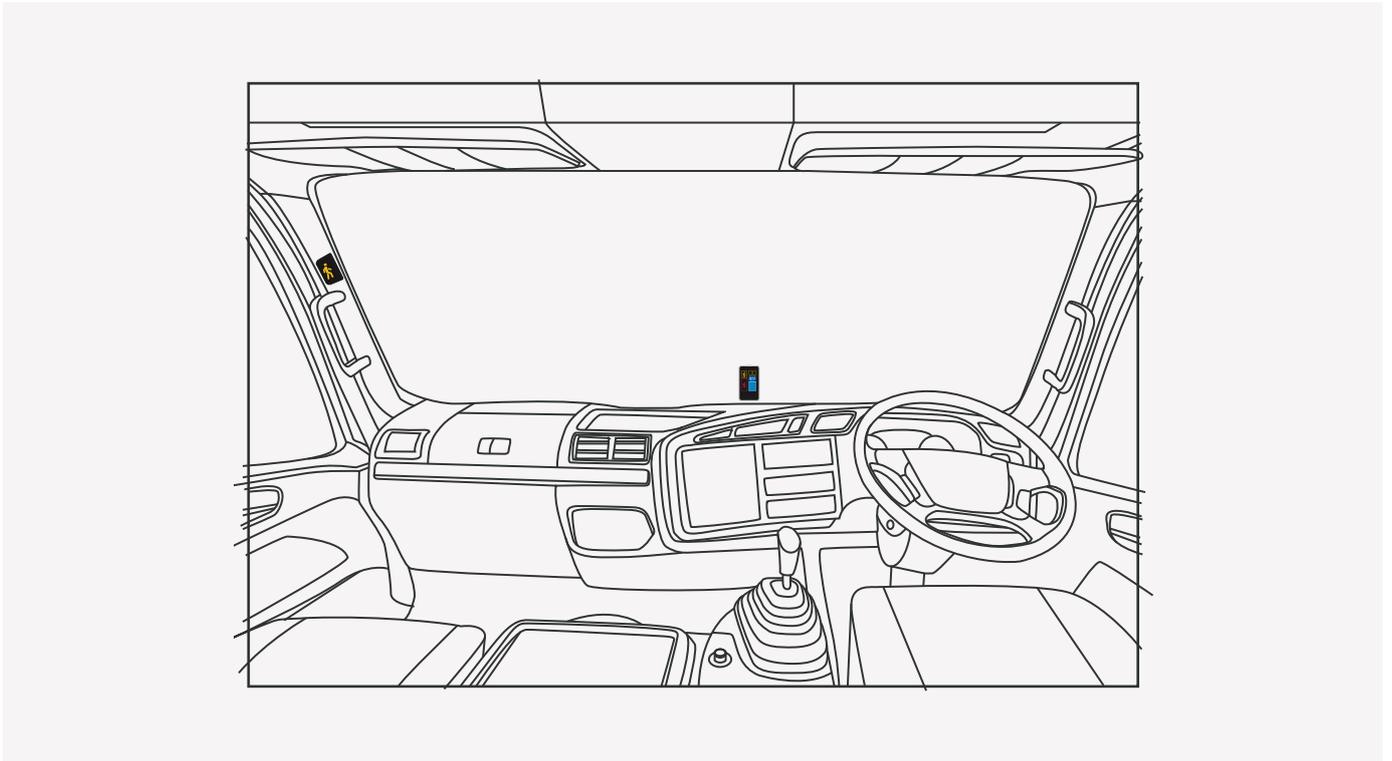
External Alarm Specification

Rated Voltage:	DC 12 / 24V
Working Voltage:	12 ~ 36V
Working Current:	< 500mA@24V
Operating Temperature:	- 40 ~ 85°C
Temperature: Storage	- 40 ~ 85°C
Temperature: Sound	500Hz ~ 7KHz
Frequency:	3.0S/T(Vocal Reverse Warning)
Duty Cycle:	3.3S/T(Vocal Left Turn Warning) 33S/T(Vocal Right Warning)
Waterproof IP	Turn Warning) IP69
Rating: Volume:	80-85 dB at 1m
Function:	With On/Off switch and mute function, mute time: at 23:30pm and 07:00am
Certification:	CE/E-mark

Product Diagram



Led Displays Install In The Cab



AI CAMERA

System Working Condition

The system starts working when speed is $<30\text{km/h}$ (18mph), the system stand by when speed is $>30\text{km/h}$, both led display and a pillar indicator show like the picture.



Led Display



A Pillar LED Indicator

BSIS Working Method

- ① If there are no VRU detected by left AI camera, there will be no visual and audio alarm.



- ② When VRU are detected, detection distance is from 1m to 2.2m, the display shows a yellow icon in the corresponding obstacle direction, and left A-Pillar led indicator shows a yellow icon warning, and no audio warning.



- ③ Speed at $0 < \text{speed} \leq 30\text{km/h}$, when VRU are detected by the left AI camera, the distance is between 1m and 2.2m. At this time, when the left turn signal is turned on or the steering wheel is turned, the display shows a yellow icon, the left A-pillar LED gives a yellow flashes, and the display emits an audible warning. Speed at 0km/h , no audio warning, but have information alarm



AI CAMERA

BSIS Working Method

- ④ When VRU are detected, detection distance is less than 1m, led display shows a red icon and A pillar led indicator shows a red warning.



- ⑤ Speed at $0 < \text{speed} \leq 30 \text{ km/h}$, when VRU are detected by the left AI camera, the distance is within 1m, At this time, when the left turn signal is turned on or the steering wheel is turned, the display shows a red icon, the left A-pillar LED gives a red flashes, and the display emits an audible warning. Speed at 0 km/h , no audio warning, but have information alarm.

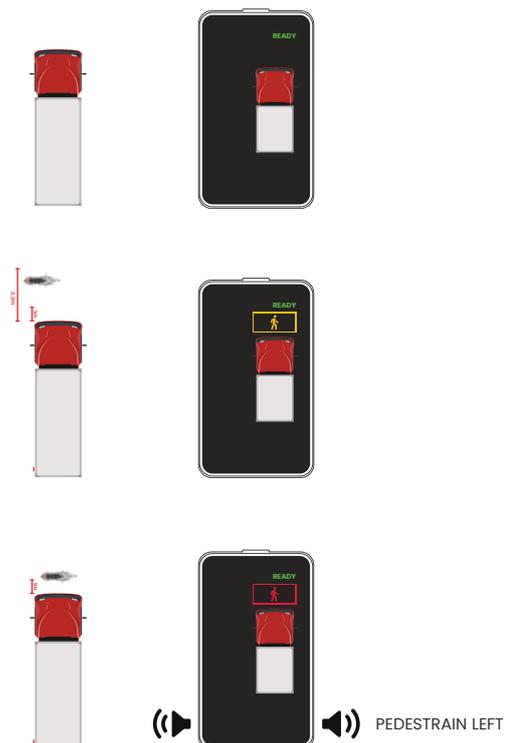


MOIS Working Method

System Working Condition

The MOIS camera gives the alarm when speed is $0 \sim 5 \text{ km/h}$, the MOIS camera still working but does not sound the alarm when speed is $> 5 \text{ km/h}$.

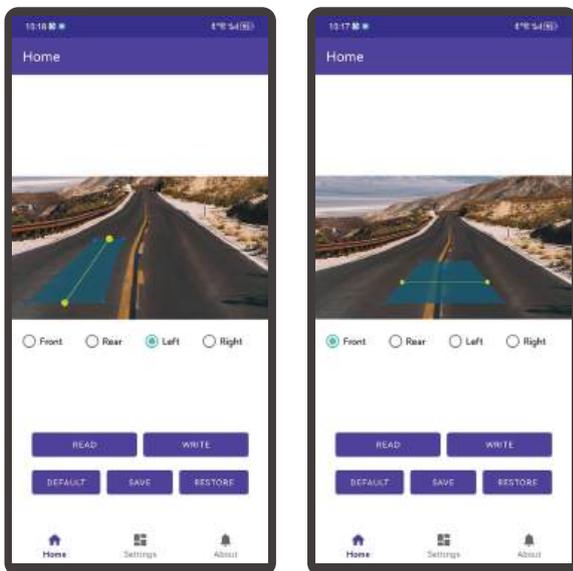
- ① When no vru are detected in front, led display shows like picture.
- ② Speed at 0 km/h , when VRU are detected in front of the vehicle, the display shows a yellow icon and no audio warning.
- ③ Speed at $0 < \text{speed} \leq 5 \text{ km/h}$, when VRU are detected in front of the vehicle, the display shows a red icon and gives audio warning.



AI CAMERA

Ai Camera Calibration

- ① Connect the camera with the calibration tool and turn on the power.
- ② Connect WIFI signal, WIFI signal name: XFD_ai camera calibration.
- ③ Select the corresponding camera to be calibrated: front, back, left, right.
- ④ Mark the alarm area on the ground.
- ⑤ Move the ruler line on the mobile app to coincide with the ground marking.
- ⑥ After clicking **WRITE**, check whether the ruler line on the test monitor is consistent with the position on the application app.
- ⑦ If consistent, the calibration is completed.

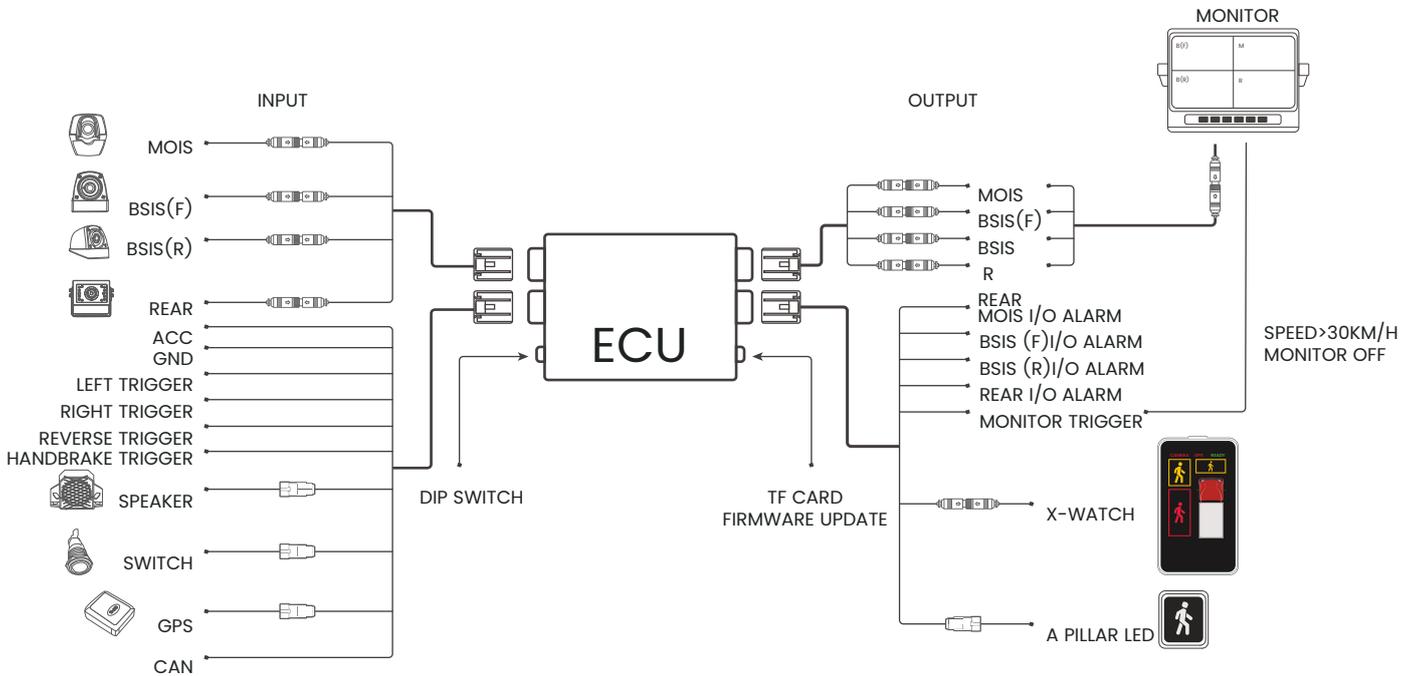


Self Test

When the system detects the camera blocked by an object, damaged, or poor connection, or crash. The LED display will show the red camera character and give a voice alert to remind the driver which camera has a problem.



Monitor Combined System Wiring



Mdvr Combined System Wiring

