

# BSIS AND MOIS SOLUTIONS

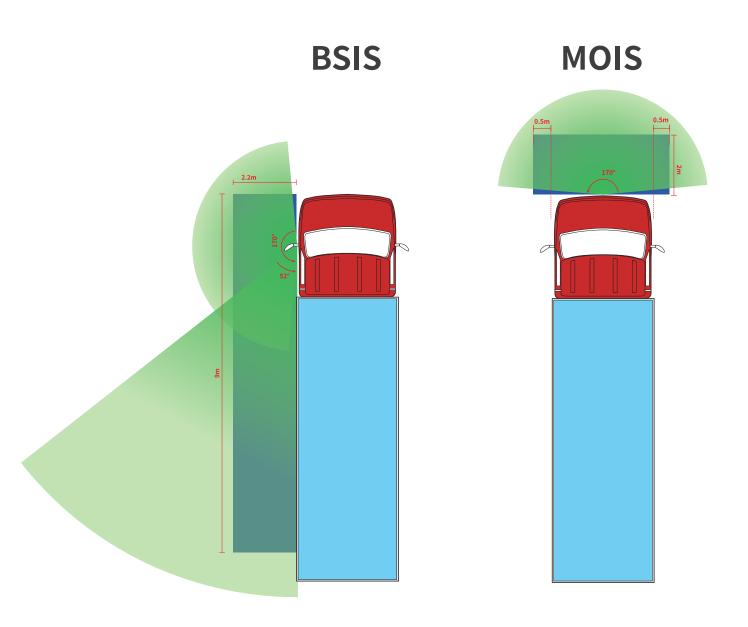
- 1 forward facing camera
- 1 dual-lens side camera





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 tones 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**



#### **Working Conditions**

- The BSIS camera work when speed under 30km/h, still working but not gives the alarm when speed is over 30km/h.
- The MOIS camera gives the alarm when speed is 0~5km/h, still working but not gives the alarm when speed is over 5km/h.

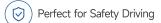
#### **Product Feature**



(Q) GPS with gyroscope to detect speed more accurate









#### Al Camera Specification

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

#### **External Alarm Specification**

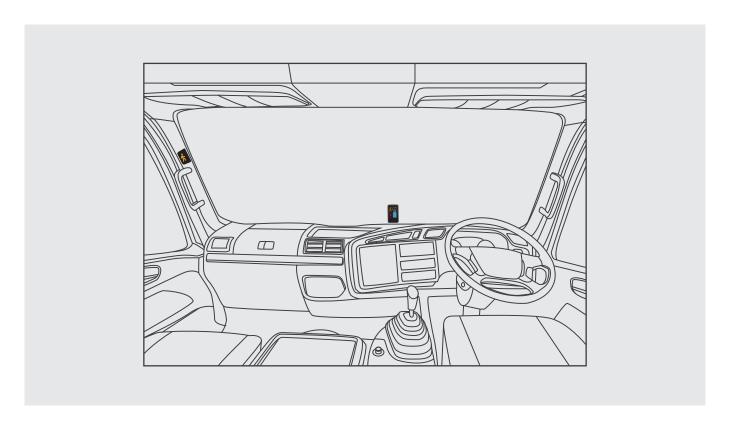
| Rated Voltage:         | DC 12 / 24V                     |
|------------------------|---------------------------------|
| Working Voltage:       | 12 ~ 36V                        |
| Working Current:       | < 500mA@24V                     |
| Operating Temperature: | - 40 ~ 85°C                     |
| Storage Temperature:   | - 40 ~ 85°C                     |
| Sound Frequency:       | 500Hz ~ 7KHz                    |
| Duty Cycle:            | 3.0S/T(Vocal Reverse Warning)   |
|                        | 3.3S/T(Vocal Left Turn Warning) |
|                        | 33S/T(Vocal Right Turn Warning) |
| Waterproof IP Rating:  | IP69                            |
| 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



# Al Camera



#### System Working Condition

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





Led Display

A Pillar LED Indicator

#### SIS 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) When VRU are detected, detection distance is from 1m to 2.2m, and left turn signal are turned on, the display shows a yellow icon in the corresponding obstacle direction, and left A-Pillar led indicator gives a yellow flashing and audio warning.













# Al Camera

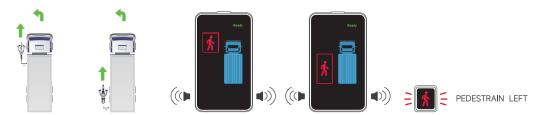


#### SIS Working Method

(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) When VRU are detected, detection distance is less than 1m, and left turn signal are turned on, the led display shows a red icon and audio warning, A pillar LED gives a red flashing warning.

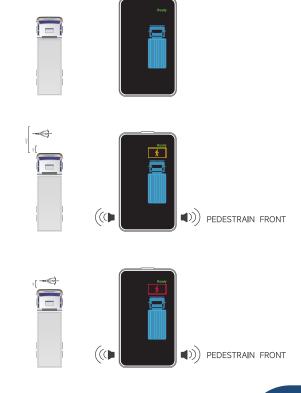


#### MOIS Working Method

#### **System Working Condition**

The MOIS camera gives the alarm when speed is  $0\sim5$ km/h, the MOIS camera still working but not gives the alarm when speed is >5km/h.

- When no vru are detected in front, led display shows like picture.
- When vru are detected in front of the vehicle, and detection distance is 1-2.2m. Led display gives a yellow warning and audio warning.
- (3) When vru are detected in front of the vehicle, and detection distance is less than 1m. Led display gives a red warning and audio warning.



# Al 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

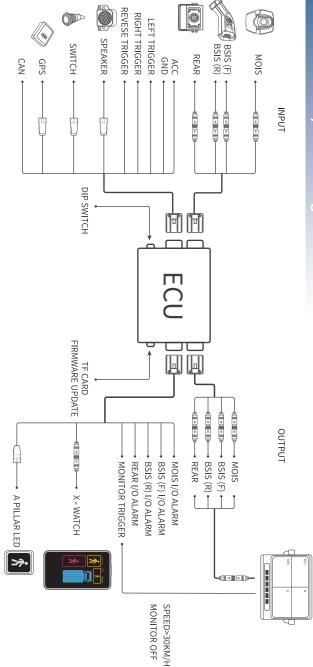
When the system detects the camera blocked by an object, damaged, or poor connection, or crash. The LED display will show the red camera character and give a voice alert to remind the driver which camera has a problem.



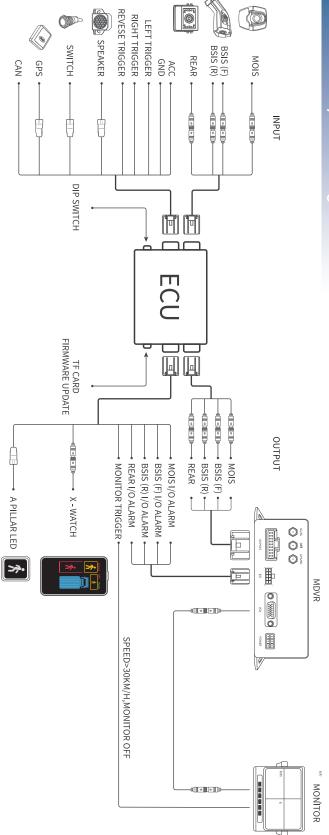


MOIS CAMERA MALFUNCTION BSIS(FRONT) CAMERA MALFUNCTION BSIS(REAR) CAMERA MALFUNCTION REAR CAMERA MALFUNCTION

# Monitor Combined System Wiring



# Mdvr Combined System Wiring





MONITOR