



Blind Spot Information System & Moving Off Information System

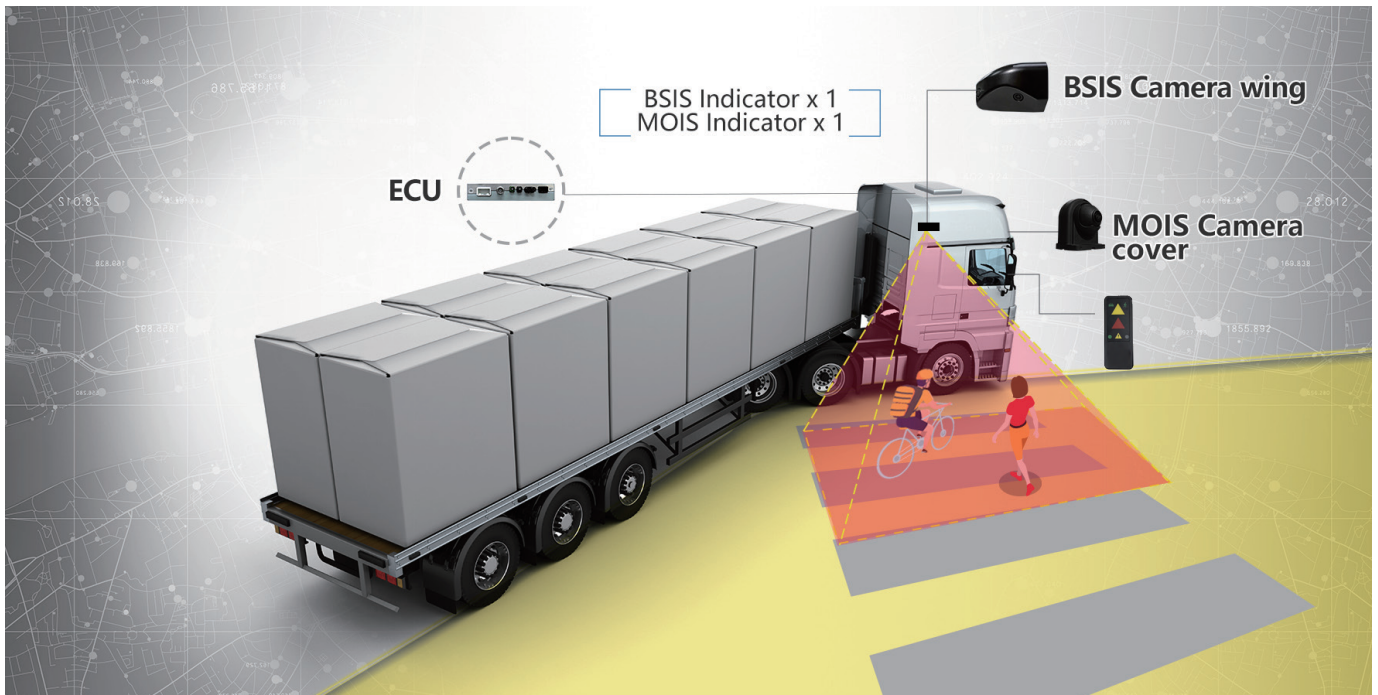
Product Description

oToBrite BSIS (Blind Spot Information System) is designed to comply with the requirement of UN R151 for commercial vehicle (M2, M3, N2, and N3). BSIS can provide drivers the information signal of cyclists and pedestrians within the blind spot area before making turn to reduce accidents. Besides, the product can expand MOIS (Moving Off Information System) functions by simply adding one additional camera to comply with UN R159 at the same time. The primary purpose of MOIS is to detect and notify the driver of the presence of pedestrians or cyclists in the blind spot area ahead of the vehicle. The whole system is the perfect solution to fulfill the regulation requirements of both UN R151 and UN R159.

Product Key Features

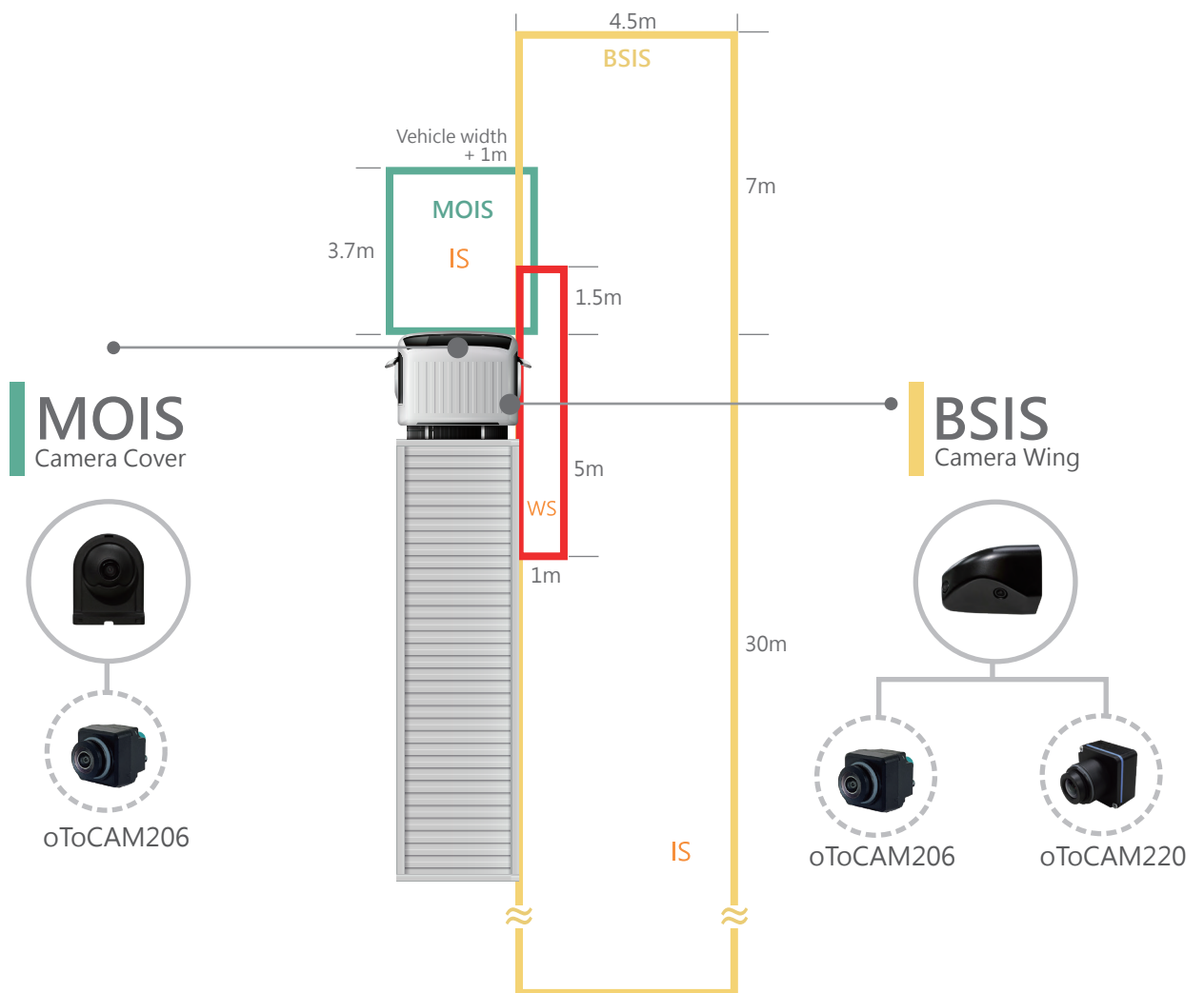
- Robust product quality with automotive-grade SoC and image sensors
- The first UN R151 certified pure vision-AI solution in Europe
- Add one camera for MOIS to comply with UN R159
- Manufactured in IATF 16949 certified factory
- Identify any stationary or moving pedestrians or cyclists with vision-AI technology to overcome real world scenario such as occlusion and various environments

System Configuration and Functions



Product Detection Range and Performance in Different Scenarios

MOIS: Through one camera in the camera cover, pedestrians and cyclists can be detected in the blind area in front of the vehicle in various scenarios.



BSIS: Through the front and rear cameras in the camera wing, pedestrians and cyclists can be detected in the vehicle's side blind area in different scenarios.



Detection Conditions

BSIS & MOIS	
Cyclist	Moving speed 5km/h ~ 20km/h
Pedestrian	Height of pedestrian 90cm and moving speed 1km/h~10km/h
Installation restriction	BSIS camera wing is installed at the right side of vehicle with height > 2m MOIS camera cover is installed in the center of the car's front end with height > 2.5m
Ambient light	≥ 15 Lux

System Signals Definition

Signal Type	Triggered criteria	LED Status
Information Signal (IS)	When vulnerable road users (pedestrians and cyclists) are detected in IS area, and the scenarios meet test case in UN R151 (BSIS) / R159 (MOIS)	Yellow LED flashing
Warning Signal (WS)	When vulnerable road users (pedestrians and cyclists) are detected in WS area and/or TTC criteria meets regulations of UN R151 (BSIS) / R159 (MOIS)	Red LED flashing
Failure Signal (FS)	<ul style="list-style-type: none"> When system failure is detected. When BSIS / MOIS cannot operate properly due to cameras being covered by ice, snow, mud, dirt, etc. or due to ambient light conditions. 	Yellow LED always on

Product SPEC.

ECU SPEC. (oToDAS306)	
Operation Voltage	DC 9-32V
Processor	TI TDA2SG
Camera Deserializer	TI DS90UB934-Q1 x2 TI DS90UB954-Q1 x1
Display	NTSC or LVDS (Serializer TI DS90UB913-Q1)
Power consumption	≤8W (exclude cameras)
Operating Temperature	-40°C ~ +85°C
Storage temperature Range	-40°C ~ +95°C
Waterproof	IP 52
Dimensions (mm)	145.4 x 96.9 x 30 (exclude connectors)
Weight (g)	330 (typ.)
Reliability	ISO 16750-4 / IEC 60068-2
EMC	UN R10 (VSCC56-3)

Camera SPEC. (oToCAM206 for MOIS / BSIS Forward)	
Sensor	CMOS (Sony ISX 019)
Output Format	LVDS / TI 913
Waterproof	IP67 and IP69K

Camera SPEC. (oToCAM220 for BSIS Backward)	
Sensor	CMOS (Sony IMX 390)
Output Format	LVDS / TI 953
Waterproof	IP67 and IP69K

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