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Smart Rear View System

2023

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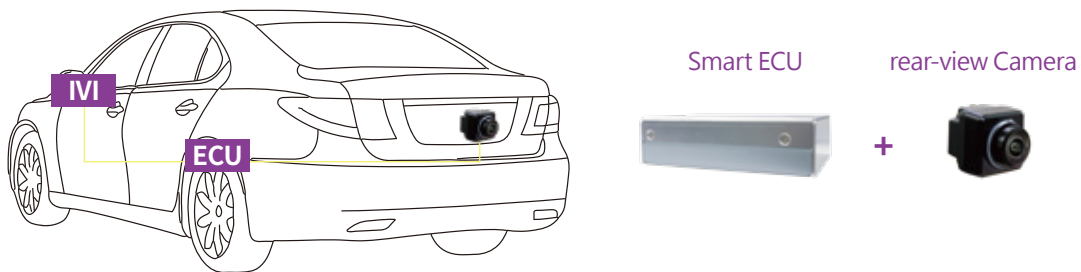## Product Description

The smart rear view system enhance the existing rear camera's capabilities to support four major functions: rear view image display, multi-angle view display (including corner view, or top view), static and moving object detection, and rear cross traffic alert (RCTA).
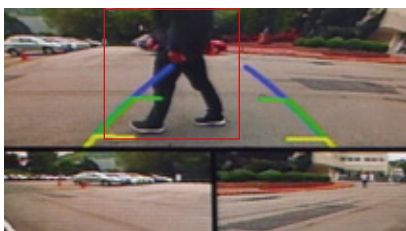
Through vision-AI technology, it can enable rear view image with static and moving object detection and RCTA (Rear Cross-Traffic Alert) functions. In terms of static and moving object detection, this technology focuses on detecting both vehicles and vulnerable road users(VRU), including children, pedestrians, and two-wheelers rider, within a range of 5 meters in length and 4 meters in width behind the vehicle. Meanwhile, the RCTA function has a detection range of up to 6 meters in length and 20 meters in width, ensuring safety during reverse maneuvers.

Furthermore, the megapixels automotive-grade camera features an ultra-wide-angle design which provides a clear view while reversing.
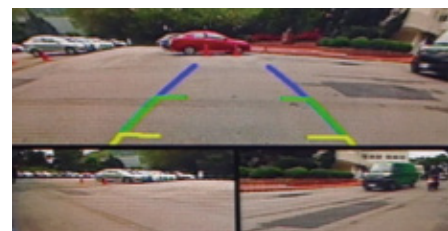

Product Features

- Support multiple smart functions with only rear-view image and vision-AI technology including multi-angle view, static and moving object detection, and rear cross traffic alert (RCTA)
- Detection range for RCTA is up to 6m behind the rear of vehicle and 20m in width
- Static and moving object detection can support vehicles and vulnerable road users (VRU) including children, pedestrians, and two-wheelers riders
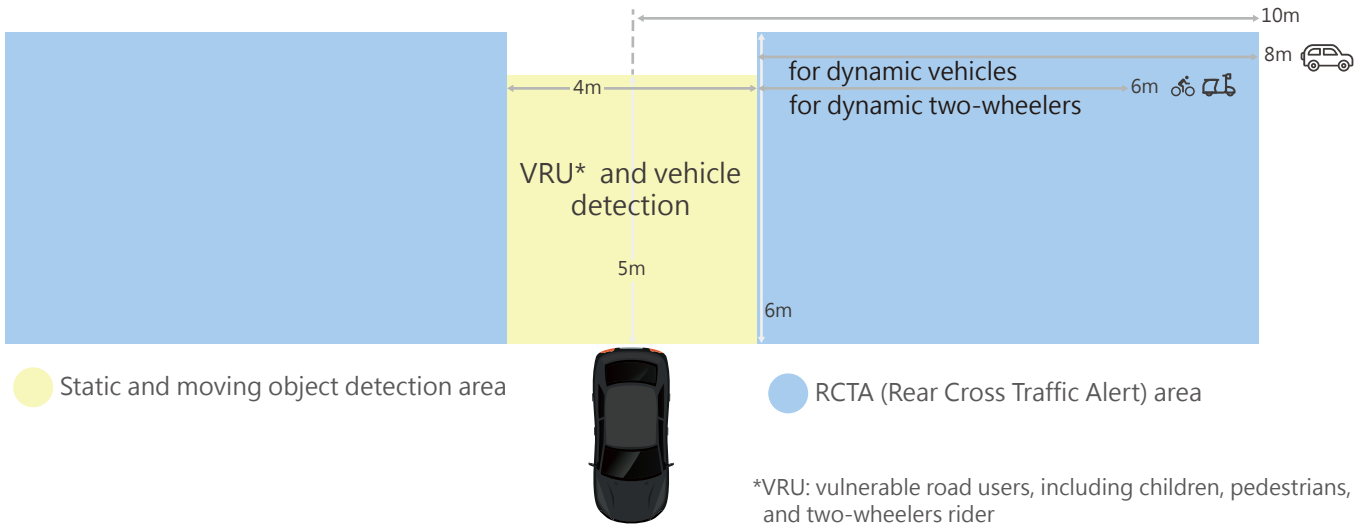

Multi-angle view & VRU detection

Muli-angle view & RCTA

* UI interface can be customized.

Product Detection Area

● Static and moving object detection area	● RCTA (Rear Cross Traffic Alert) area

*VRU: vulnerable road users, including children, pedestrians, and two-wheelers rider

Four Major Functions

Function	Content
Rear view display	Rear view with static parking guidance lines
Multi-angle view display	Rear view with static parking guidance lines + corner view/ bird view
Static and moving object detection (VRU/Vehicle)	Host vehicle speed: 0~5km/h • Detection area (rear of the host vehicle): 2 meters (Width: Calculated from the vehicle's roll axis) x 5 meters (Length) • Detectable static and moving objects: bicycles, children, motorcycles, pedestrians, two-wheelers rider, vehicles • Object's relative velocity to the host vehicle: < 10 km/h • Illuminance requirement: > 10 lux

Rear cross traffic alert (RCTA)	• Host Vehicle Speed: 0~5km/h
	• Detection area (rear of the host vehicle): 10 meters (Width: Calculated from the vehicle's roll axis) x 6 meters (Length)
	• Detectable objects: two-wheelers rider, vehicle
	   • Vehicle and motorcyclist: Illuminance > 10 lux or light on.
	   • Bicycle: Illuminance > 10 lux
	• Target Object Speed (moving toward to the host vehicle):
	  1 km/h ~ 36 km/h (< = 10 km/h: warning may occur within 2 meters behind the host vehicle)

Product Spec.

ECU	
Voltage range	9V~16V
Video input format	TVI
Video output format	TVI
Size(L*W*H)	80 * 100 *27mm

1MP Camera (oToCAM163)	
Sensor	OV9716
HDR	120dB
View Angle(H/V)	183.6°/ 117.5°
Output Format	TVI
Frame rate	30 fps (default setting)
Size	23 x 23 x 27.7mm (w/o Bracket)

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