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**RiderEye -
ADAS AI IP for Two-Wheelers**

RiderEye is a vision-AI based ADAS software designed for the two-wheeler market. Through the integration of software and DVR SoC, RiderEye can provide rear collision warnings and malicious driving behaviors tracking from images captured by the DVR. It is a cost-effective ADAS solution to enhancing rider safety without much hardware costs and complex installation efforts (by just installing two indicators near the rear-view mirrors). The cutting-edge AI algorithms facilitate classifying multiple objects and identifying real potential risks with low false alarms. They also make sure all ADAS functions work in challenging environments such as low-light, backlight, twilight, raining days, etc. Besides, RiderEye offers a dirty lens reminder to ensure riders are protected at every moment.

Product Features



Light-weight AI model compatible with mainstream DVR SoC



Cost-effective ADAS solution for riders



Cutting-edge AI model overcoming challenging environments



Classify and track multiple objects capability with low false alarm



2-level warning zones to identify the urgency

Light-weight AI Model Compatible with Mainstream DVR SoC

- Vision-AI model computation power requirement: <math><0.4</math> TOPS (15fps)
- RAM requirement: 30MB
- Storage requirement: 20MB

■ Existing hardware ■ oToBrite add-on values

oToBrite ADAS library to enable multiple functions with vision-AI technology

R-ADAS functions :
Rear collision warning
(2/3 computation power)

F-ADAS functions:
malicious driving behaviors tracking
(1/3 computation power)



Rear camera

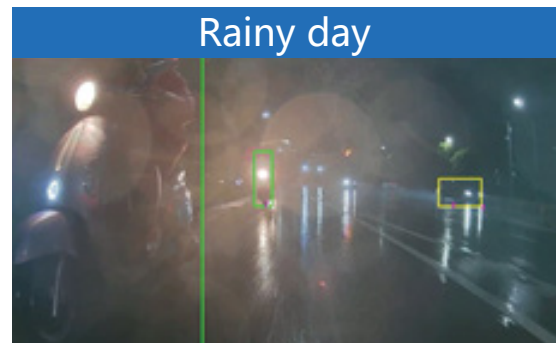
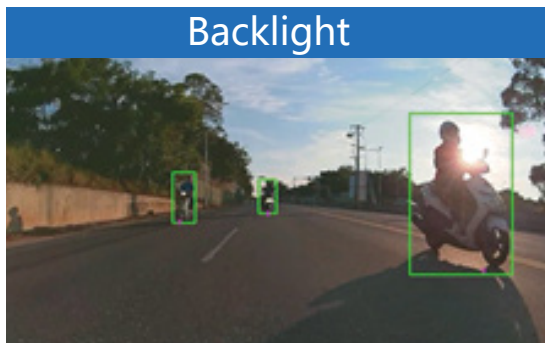
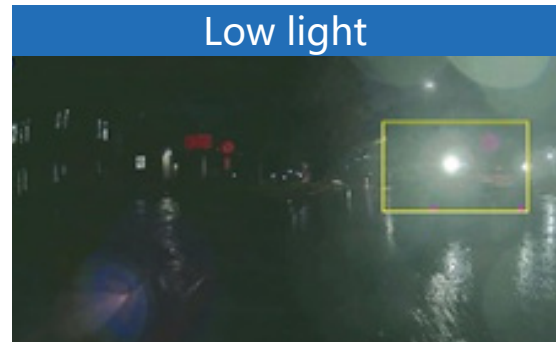
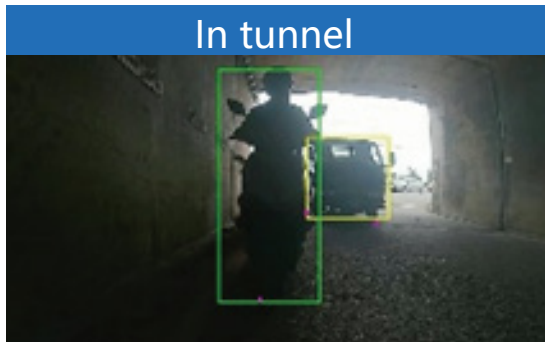
DVR box

(almost every DVR SoC has vision-AI computation power)



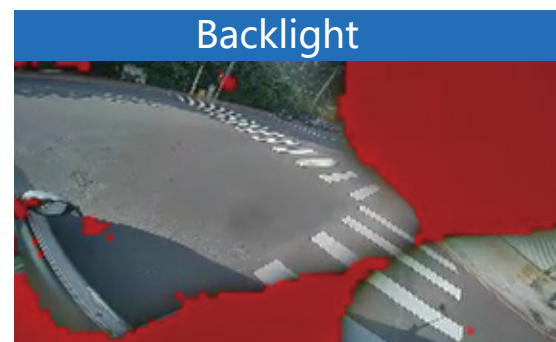
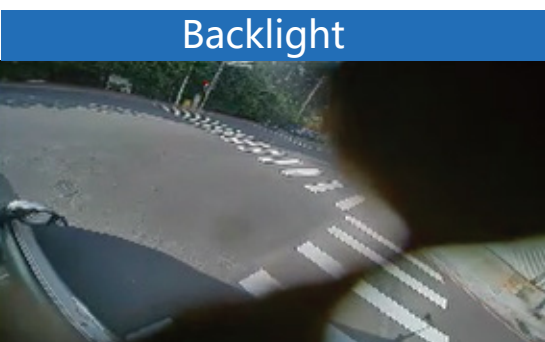
Front camera

Cutting-edge AI Model Overcoming Challenging Environments

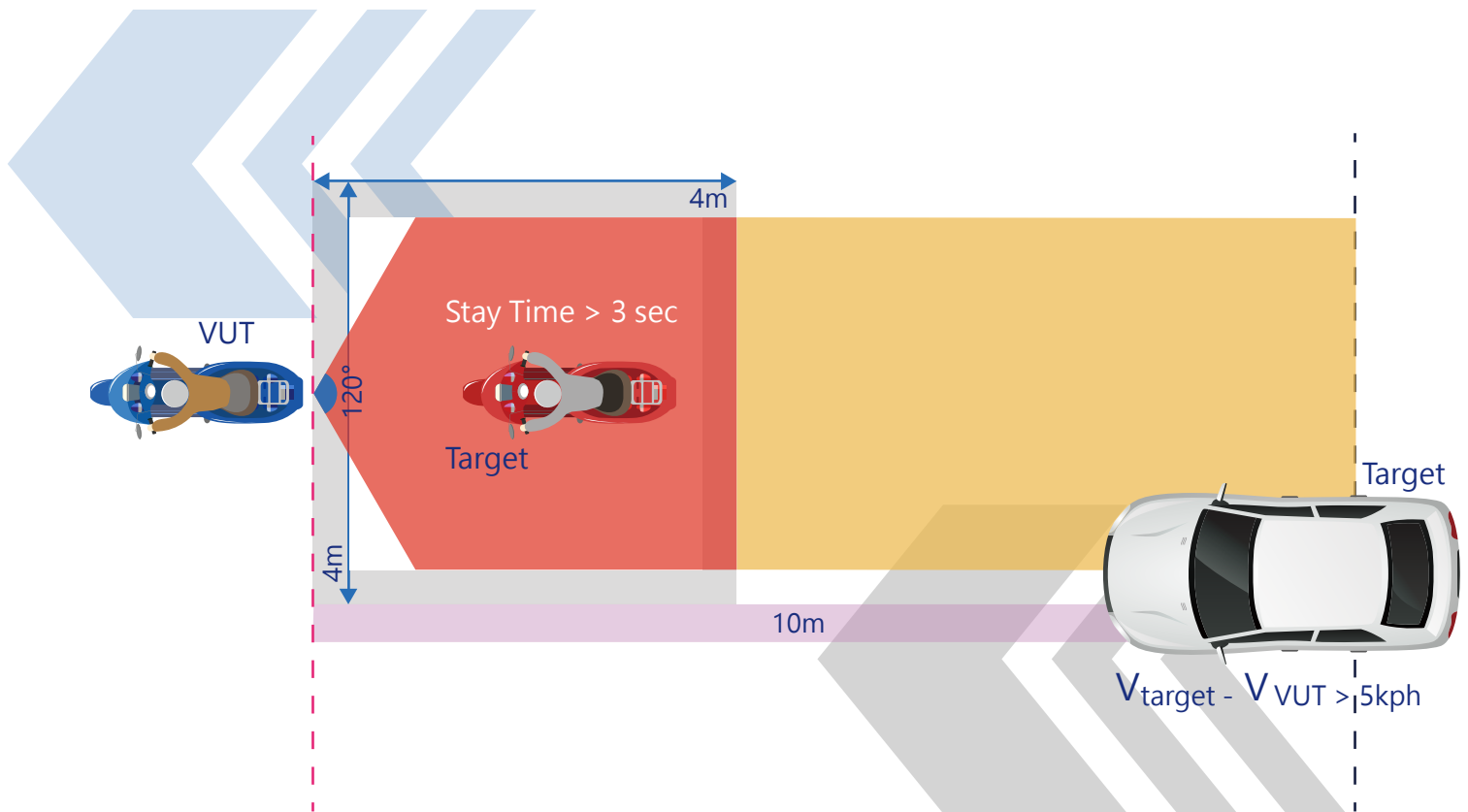


Enhance User Experiences with Vision-AI Technology

- Tracking malicious driving behaviors to lock critical footage with front camera
- Dirty lens reminder to ensure every second count



2-level Warning Zones to Identify the Urgency



Level 1 Warning Zone

- Lateral distance between VUT & Target $\leq 4\text{m}$
- Longitudinal distance between VUT & Target $\leq 4\text{m}$
- $V_{\text{target}} - V_{\text{VUT}} > 5\text{kph}$

Level 2 Warning Zone

- Lateral distance between VUT & Target $\leq 4\text{m}$
- Longitudinal distance between VUT & Target $\leq 10\text{m}$
- $V_{\text{target}} - V_{\text{VUT}} > 5\text{kph}$

Application

RiderEye aims at the two-wheeled market including motorcycles, scooters, and bicycles. Featuring high compatibility with mainstream DVR SoC, RiderEye is a flexible ADAS solution to two-wheeler manufacturers and riders.



driving easier and safer



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