

# RZ Ecosystem Partner Solution

## MOSCHIP ADAS Brake Alert with Distance Monitoring



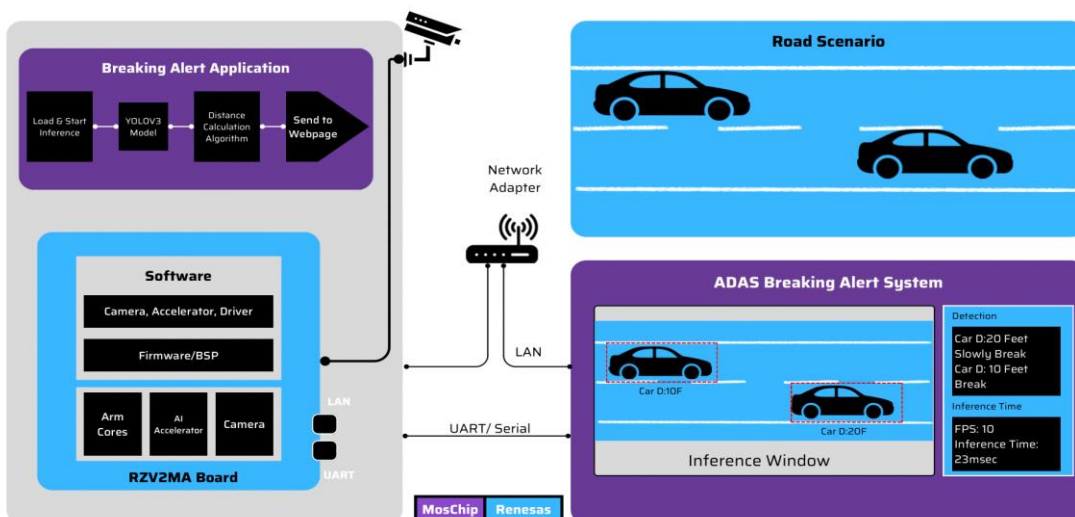
### Solution Summary

MosChip® solution for ADAS brake alert features distance monitoring and is tailored for deployment on [RZ/V series](#) vision MPUs with DRP-AI accelerators. This application offers a comprehensive solution for ADAS collision alert systems, focusing on detecting objects in the front view of a vehicle and monitoring the distance between the vehicle and detected objects. Inferred YOLOv3 architecture + distance monitoring algorithm and is now deployed on the [RZ/V2MA](#) edge AI accelerator.

### Features/Benefits

- Combination of pretrained YOLOv3 and TinyYolov3 and custom-trained algorithms for object detection
- Custom object detection models created using Pytorch framework, trained, validated and subsequently ported to ONNX format for compatibility and deployment purposes
- Pixel-based distance calculation algorithm developed and rigorously tested, demonstrating an accuracy rate of 60%
- For example, inference tasks on Edge AI accelerators achieve an impressive 23 ms inference time for TinyYolov3, delivering a corresponding speed of 10 frames per second (FPS) for detected classes

### Diagrams/Graphics



### Target Markets and Applications

- ADAS
- Distance measuring applications

[Contact – MosChip® Technologies](#)



We are MosChip® – A trusted technology partner for SILICON | SYSTEMS | SOFTWARE | PRODUCT DESIGN. With 1300+ engineers and domain experts across India and USA, MosChip® continues to bring in digital and product transformation for businesses across the industries. We offer engineering services comprising of systems and product design, IoT solution design, Artificial Intelligence and Machine Learning, FPGA design, Mixed Signal IP design, ASIC design, verification, and validation.

MosChip® is a publicly traded company headquartered in Hyderabad, India, with a vision to be a preferred partner for technology and excellence throughout the entire product/solution development cycle, designing comprehensive and best-in-class solutions on time to achieve business and operational goals. Our team of experts empower businesses, technology providers and manufacturers to deliver innovative, customized, and scalable solutions for the domains like Automotive, Media & Entertainment, Industrial and Home Automation, Consumer Electronics, Telecommunications, Computer Vision, Networking, Data Center, and Healthcare, etc.

## AI ENGINEERING SERVICES OFFERINGS

### COMPUTER VISION

- Machine & Computer Vision Algorithms
- Object Detection, Identification & Visual Perception
- Image Capture & Optimization
- Vision Analytics & Processing
- Optical Character Recognition

### ML LIFECYCLE MANAGEMENT

- MLOps - Automated ML Pipeline Deployment
- Model Designing, Optimization, Testing & Porting
- Inference Engines & Metrics
- ML Transfer Learning Framework
- Data Augmentation & Annotation

### COGNITIVE COMPUTING

- Deep Learning & Neural Networks
- AI/ML on Edge & Cloud
- ML Application Acceleration
- Cross Platform Porting & Integration
- Natural Language Processing (NLP)

### AI/FPGA ACCELERATION SOLUTIONS

- Scene Detection & Text Analytics
- Predictive Analytics
- Audio Analytics & Key-phrase Detection
- Face Recognition
- ML Reference Designs & POC

## INDUSTRIES

- Automotive
- Industrial Automation
- Consumer Electronics
- Telecommunications
- Multimedia
- Computer Vision
- Security & Surveillance
- Medical
- Networking
- Energy & Utility

[Contact@MosChip.com](mailto:Contact@MosChip.com)

[www.MosChip.com](http://www.MosChip.com)

**20+ years**  
Industrial Experience

**150+** Global Clients

**INDIA**

**USA**