ADM-TJ30

Integrated AI-ADAS ECU and cameras
for Large Commercial Vehicle

New

Introduction

To prevent accidents, commercial cars use a variety of ADAS features, including blind spot detection, lane departure warning, forward collision warning, and driver monitoring system, etc.
The integrated AI-ADAS ECU is connected with 8 cameras and powered by the vision-AI algorithm. It can detect and classify different kinds of vehicles/ pedestrian/ two-wheeler riders/ lane marking and other objects to perform multiple ADAS functions.

Features

- All in one system for 360-degree and in-cabin ADAS solution with automotive-grade camera & ECU
- Support multiple ADAS functions including AVM, BSIS/BSD, DMS, LDW, FCW, etc.
- Comply with UN regulation for large commercial vehicle (UN R130, R131, R151)

Specifications

System Core	SoC	TI TDA4V MidEco
I/O Ports	Display	1 x Display port
	Ethernet	1 x Gigabit (RJ45), 1 x 100 Base-T1
	CAN	4 x CAN/CAN-FD
	USB	1 x 3.0 Type A
	GPIO	3
	Storage extension	Micro-SD card slot
Power Requirements	Operation Voltage	DC 9-32V
	Power Consumption	15W
Mechanical	Dimensions	200mm x 150mm x 56mm
Environmental	Operating Temperature	-40°C to +85°C
	Storage temperature Range	-40°C to +95°C
	Reliability	ISO 16750-4 / IEC 60068-2
	EMC	ISO 16750-2 / ISO 10605 / VSCC 56-3

Camera Specification

	oToCAM 206	oToCAM 222	oToCAM 251
Scenario	ADAS	ADAS	DMS
Image Sensor	Sony ISX 019	Sony ISX 021	ST VB56G4A
Number of Pixel	1M: 1280 (H)x 800 (V)	2.5M: 1920 (H)x 1280 (V)	1.2M: 1088x 1080
FOV	137 degree	103 degree	30.3 degree
Interface	FPD Link III	FPD Link III	FPD Link III
IR LED	-	-	Two IR (940nm) LEDs
Waterproof	IP67/ IP69K	IP67/ IP69K	-

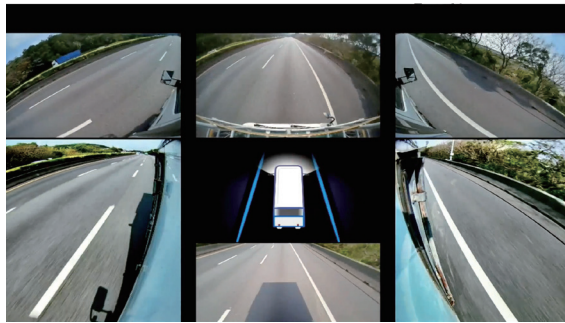# Comprehensive AI-ADAS solution powered by ADM-TJ30

Currently, it supports multiple features to achieve ADAS functions for heavy commercial vehicles. Depending on the vehicle's speed, it automatically switches between different ADAS functions to enhance vehicle safety in various driving scenarios.
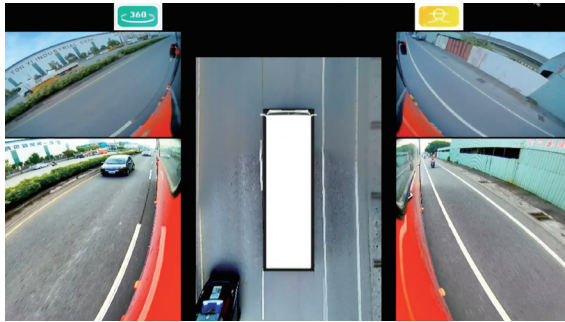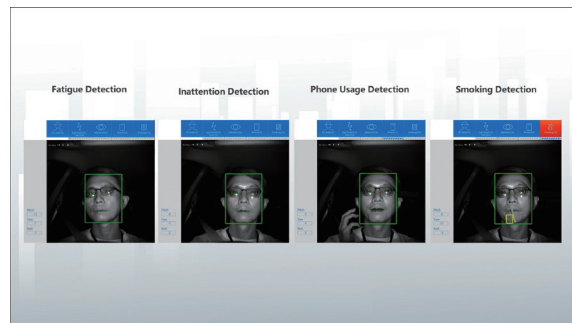

Low Speed Mode (≤ 20 kph)

Making Turns

High Speed Mode (≥ 20 kph)

Driver Monitoring System

Functions	Operating at	Note
AVM	≤ 20 kph	
BSIS/BSD	BSIS: ≤ 35 kph BSD: 40~150 kph	UN R151 、Switch function between 30~35 kph
DMS	≥30 kph	Face ID, fatigue, inattention & distraction
FCW	30~150 kph	UN R131
LDW	50~150 kph	UN R130

Ordering Information

ADM-TJ30/BSD/BSIS+AVM	Blind Spot Detection + 360 degree Around View Monitor
ADM-TJ30/BSD/BSIS+AVM +FCW/LDW+DMS	Blind Spot Detection + 360 degree Around View Monitor + Forward Collision Warning + Lane Departure Warning + Driver Monitoring System