+44 20 8123 2220
info@marketpublishers.com

Global and China Vision ADAS Industry Report, 2015-2020

https://marketpublishers.com/r/GB882E543CCEN.html
Date: February 2016
Pages: 147
Price: US$ 2,000.00 (Single User License)
ID: GB882E543CCEN

Abstracts

Global and China Vision ADAS Industry Report, 2015-2020 focuses on the followings:

1. Global vision ADAS system market and industry
2. Lane detection
3. Emergency braking (Anti-collision)
4. Night vision and adaptive high beam system
5. Parking Assist
6. Vision ADAS Companies

Camera-based vision ADAS systems can be divided into several categories of applications: 1) Lane Detection, i.e., LDW/LKA/LCA (Lane Centering Assist) to prevent the car from deviating in the working state of either ACC or TJA (Traffic Jam Assist); 2) Obstacles Detection and Recognition, i.e., FCW (Forward Collision Warning)/AEB (Autonomous Emergency Braking); 3) Surroundings Display, i.e., Parking Assist, including Rear View and 360°Surround View. 4) BSD (Blind Spot Detection); 5) HBA (High Beam Assist) and Night Vision.

In application field, warning-only ADASs will gradually exit market, while the ADASs with actuator represent the mainstream in the future. For example, it is hard for drivers to take prompt countermeasures, as the warning time of FCW is no more than 3 seconds. Moreover, AEB (Autonomous Emergency Braking) may become the most important ADAS application. AEB will be a mandatory safety function across the world during 2021-2025.

Future orientation of development will be stereo camera rather than mono camera, especially in AEB field. As AEB concerns human life, there must be as much

performance redundancy as possible, thus ensuring the safety of drivers to the utmost extent. Stereo camera has an overwhelming advantage over mono camera in the aspect of pedestrians recognition. However, the majority of companies (OEMs & Tier 1 suppliers) still adopt mono camera, as AEB is largely an optional component rather than a standard one, and the costs of stereo camera are much higher, resulting in higher price and low popularity.

Pedestrians Recognition will be a must of next-generation AEB, meaning that stereo camera has to be employed. Mercedes-Benz, Subrau, Jaguar, and Suzuki have adopted stereo camera from the very beginning, while VW, Toyota, Honda, and Nissan all employ stereo camera in their experimental models. As to Tier 1, Hitachi Automotive System has used stereo camera at the very start, while Continental, Bosch, Denso, and Fujitsu Ten see stereo camera as the priority of development. These companies are iconic ones in automobile industry and their moves represent the direction of automobile industry as a whole.

Global automotive camera module shipments approximated 50.3 million pieces in 2015 and are expected to reach 62.1 million pieces in 2016, 141 million pieces in 2020, and 246 million pieces in 2025. There are three cameras on each light vehicle on average, respectively for LKA, AEB, and Parking. Unlike mobile phone camera modules, automotive camera modules are highly demanding on reliability and range of operating temperature. Major vendors are Panasonic, Sony, Valeo, Fujitsu Ten, MCNEX, Magna, Gentex, Continental, and Hitachi. Panasonic ranks first globally in terms of market share and is far ahead of the second place.

Global automotive vision system market size was worth about USD3.1 billion in 2015 and is expected to hit USD6.1 billion in 2020. Magna, TRW (ZF), Hitachi Automotive System, and Continental are in the first camp, with Magna being the world’s largest, and Autoliv, Valeo, Denso, Fujitsu-ten, and Bosch are in the second camp. As the demand from carmakers varies greatly, the market concentration has been lower and this will continue for a considerable time.

+44 20 8123 2220
info@marketpublishers.com

Contents

1. GLOBAL VISION ADAS SYSTEM MARKET AND INDUSTRY

Global Automotive Camera Module Shipments, 2009-2020E
Front Camera Shipments, 2014-2020E
Global Rear View and Surround View System Shipments, 2014-2020E
Parking Assit System Shipment in the United States by Technology, 2015&2020E
Parking Assit System Shipment in EU by Technology, 2015&2020E
Parking Assit System Shipment in Asia-Pacific by Technology, 2015&2020E
Parking Assit System Shipment in China by Technology, 2015&2020E
Supply Relationship between Japanese Carmakers and Suppliers of ADAS Sensors
Supply Relationship between U.S./South Korean/Chinese Carmakers and Suppliers of ADAS Sensors
Supply Relationship between European Carmakers and Suppliers of ADAS Sensors
Market Share of Global Surround View Suppliers, 2015
Market Share of Global Rear View Suppliers, 2015
Market Share of Global Automotive CMOS Image Sensor Suppliers, 2015
Market Share of Global Automotive Camera Module Suppliers (by Turnover), 2015
Market Share of Global ADAS Vision System Suppliers, 2015
Number of Auto Models Equipped with ADASs Available in Chinese Market, 2015
Penetration of Main ADASs in Chinese Market, Jan-Dec 2015
Pre-installation of LDW in Domestic Passenger Car Brands, Jan-Dec 2015
Pre-installation of LKA in Domestic Passenger Car Brands, Jan-Dec 2015
Pre-installation of SV (Surround View) in Domestic Passenger Car Brands, Jan-Dec 2015
Pre-installation of AEB in Domestic Passenger Car Brands, Jan-Dec 2015
Pre-installation of FCW in Domestic Passenger Car Brands Jan-Dec 2015

2. LANE DETECTION

Overview of LDW
Trend of Lane Assist
Difference of LDW/LKA/LCA
Principle of LDW
Block Diagram of LDW&ACC&TJA
Control Structure Diagram of Lane Keep Assist/Lane Centering Assist System
Control Structure Diagram of Conventional Hydraulic Brake System with Electronic Stability Control

Control Structure Diagram of Electric Power Steering System
Control Structure Diagram of Steer-by-Wire System
LKW Algorithm
Hough Transform
Lane Detection Camera

3. EMERGENCY BRAKING (COLLISION AVOIDANCE)

AEB: A Mandatory Standard Configuration Sooner or Later
Proportion of Models with Front Crash Prevention (with Data from IIHS), 2000-2015
Automotive Brand AEB Performance
Overview of AEB (Advanced/Autonomous Emergency Brake)
Sensor Fusion of AEB
Sensor Matching and Merging of AEB
Forward Crash Avoidance and Mitigation (FCAM) and AEB
Collision Mitigation: An Extended AEB
Emergency Steer Assist (ESA) of TRW
Nissan's Autonomous Emergency Steering System
Continental SRL
Low-cost Fixed-beam Infrared Lidar
Unique Design of Three-beam Light

4. NIGHT VISION AND HIGH BEAM ASSIST

Overview of Night Vision
Night Vision Static
BMW's Night Vision
Trend of Night Vision
Overview of HBA (High Beam Assist)/Smart Beam
LED Headlamp: A Must for HBA (High Beam Assist)
HBA (High Beam Assist) Image Sensor
Overview of Gentex's Smart Beam
HW-Architecture of SmartBeam

5. VISION FOR PARKING ASSIST

Comparison of Various Sensors
Overview of Rear Assist
Composition of Rear View Camera System at VW Touran

+44 20 8123 2220
info@marketpublishers.com

+44 20 8123 2220
info@marketpublishers.com

I would like to order

Product name: Global and China Vision ADAS Industry Report, 2015-2020

Product link: https://marketpublishers.com/r/GB882E543CCEN.html

Price: US$ 2,000.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/GB882E543CCEN.html

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:

Last name:

Email:

Company:

Address:

City:

Zip code:

Country:

Tel:

Fax:

Your message:

**All fields are required

Custumer signature ____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at https://marketpublishers.com/docs/terms.html

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970