



**Global and China Automotive Head-up  
Display (HUD) and Instrument Cluster  
Industry Report, 2014-2015**

**Oct. 2015**

## STUDY GOAL AND OBJECTIVES

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

## REPORT OBJECTIVES

- ◆ To establish a comprehensive, factual, annually updated and cost-effective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- ◆ To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- ◆ To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- ◆ To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- ◆ To help company to succeed in a competitive market, and

## METHODOLOGY

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications.

Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

## INFORMATION SOURCES

The primary information sources include Company Reports, and National Bureau of Statistics of China etc.

## Abstract

Global and China Automotive Head-up Display (HUD) and Instrument Cluster Industry Report, 2014-2015 is primarily concerned with the following:

- 1 Global and China automobile market and industry
- 2 Global automotive display market and industry
- 3 Development trends in auto HUD
- 4 Auto HUD industry and market
- 5 Instrument cluster industry and market
- 6 Seven key auto HUD and instrument cluster manufacturers

Now that Head-up Display (HUD) manufacturers and instrument cluster manufacturers are completely coincident, we put and study them together. HUD is divided into two categories: one is display in Windshield (shortened to W-type), the other is Combiner (abbreviated as C type). The latter has poor display content and low practical value, thus leading to lower price and narrow profit. C type HUD market, as it were, has a bleak prospect, which did not appeal to both consumers and manufacturers.

W-type generally applies HB-LED as light source, and 1.5-3.1-inch TFT-LCD as picture source. Meanwhile, using complex optical engine, it projects pictures on the Windshield. Due to the large dynamic range of ambient brightness, extreme luminance and excellent brightness control are required for the HUD (depending on the brightness of the background of the virtual display) in order to produce an image that can be easily read.

Any optical distortions through the shield are electronically corrected on the display. W-type has so much higher technical threshold that enterprises are required to master the knowhow of both electronics and optics. At present, only Japanese and German producers have the manufacturing capabilities. W-type display has high contrast ratio and brightness, rich content, and good practicability, hence embracing broad market prospects.

It is expected that in 2015 the shipments of W-type HUD approximate 1.9 million units and C-type 700,000 units. By 2019, W-type will surge to 10.3 million units while C-type will total only 1 million units. In the future, HUD will adopt DLP projection + Laser Diode. Moreover, HUD, or the Augmented Reality-type HUD, can perfectly match up with ADAS, which is required to use Quad-core processor, whose master frequency is not less than 1.5 GHz. At the same time, it needs extremely complicated software system, whose price will probably exceed USD2,000. Even so, it has high practicability and technological content so much so that it can be accepted by manufacturers and consumers. Therefore, the market size will balloon. It is projected that the market size will reach USD431 million in 2015 and USD1.42 billion in 2019, being the fastest-growing product in automotive electronics.

At present, there are only a few key HUD suppliers, including Japan's Nippon Seiki and Denso and Germany's Continental and Bosch. Denso's major client is Toyota whereas Nippon's client is BMW, which accounted for 80% of BMW HUD orders. Continental's major clients consist of Benz, BMW, and Audi.

Up to 98% of HUD market is dominated by instrument cluster manufacturers, so HUD can be categorized in instrument cluster industry. HUD will also stimulate the development of instrument cluster industry.

## Revenue of Major Global Instrument Cluster Manufacturers, 2014-2015

<i>USD mln</i>	<b>2014</b>	<b>2015</b>
<b>Visteon</b>	1,010	1,160
<b>Denso</b>	1,260	1,220
<b>Continental</b>	1,810	2,180
<b>Nippon Seiki</b>	1,160	1,080
<b>Yazaki</b>	660	650
<b>Magneti Marelli</b>	510	550
<b>Others</b>	1,820	2,060

Source: ResearchInChina

### **1 Global and China Automobile Market**

- 1.1 Global Automotive Market
- 1.2 Overview of Chinese Automotive Market
- 1.3 Latest Development of Chinese Automotive Market

### **2 Automotive Display Industry and Market**

- 2.1 Trends in Automotive Display
- 2.2 Automotive Display Market
- 2.3 Automotive Display Industry
- 2.4 Infotainment LCD Panel
- 2.5 Automotive Instrument Market
- 2.6 Automotive Instrument Industry
- 2.7 China's Automotive Instrument Market

### **3 Head-up Display (HUD) Market and Industry**

- 3.1 Overview of HUD
- 3.2 Trend of HUD
- 3.3 Continental HUD
- 3.4 Augmented Reality Head-Up Display Overview
- 3.5 Continental Augmented Reality Head-Up Display
- 3.6 Head-Up Display Market Size
- 3.7 Head-Up Display Market Player


### **4 Automotive Instrument and HUD Manufacturers**

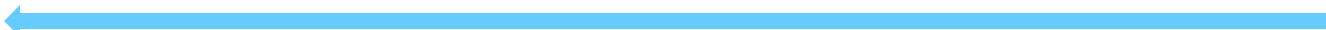
- 4.1 Continental
- 4.2 Nippon Seiki
- 4.3 Visteon
  - 4.3.1 Yanfeng Visteon (YFV)
- 4.4 Denso
- 4.5 Magneti Marelli
- 4.6 Shanghai Delco
- 4.7 Bosch

### **5 Automotive LCD Manufacturers**

- 5.1 Japan Display
- 5.2 Innolux
- 5.3 AUO

- 
- Global Automobile Sales Volume, 2010-2016E
  - Output of Global Light-duty Vehicles by Region, 2003-2015
  - China's Automobile Sales Volume, 2005-2015
  - China's Automobile Sales Volume (by Type) and YoY Growth, 2005-2014
  - Market Size of Automotive Display by Shipments, 2013-2019E
  - Market Size of Automotive Display by Revenue, 2013-2019E
  - Automotive Display Shipments by Application, 2015-2019E
  - Market Share of Major Global In-vehicle Display Screen Manufacturers by Shipments, 2015
  - Market Share of Major Global In-vehicle Display Screen Manufacturers by Revenue, 2015
  - Infotainment Vendors vs LCD Panel Suppliers
  - Market Share of Major Global Infotainment Display Screen Manufacturers, 2015
  - OEM-Infotainment Shipments by Size, 2015 vs 2019E
  - Instrument Cluster Shipments by Size, 2015 vs 2019E
  - Market Size of Instrument Cluster, 2013-2019E
  - TFT-LCD Instrument Cluster Shipments, 2015-2019E
  - Revenue of Major Global Instrument Cluster Manufacturers, 2014-2015
  - Key Customers of Instrument Cluster Manufacturers
  - Market Share of Chinese Instrument Cluster Manufacturers, 2015
  - Structure of HUD
  - Basic HUD Geometry
  - Structure of Audi A6 HUD
  - Trends in HUD
  - HUD Block Diagram w/ DLP
  - Structure of Continental HUD
  - Continental's HUD Application

- 
- Market Size of Automotive HUD, 2013-2019E
  - Automotive HUD Shipments, 2013-2019E
  - Market Share of Major Automotive HUD Manufacturers, 2015
  - Global Distribution of Continental's Automotive Interior
  - Revenue and Operating Margin of Continental's Automotive Interior, 2007-2015
  - Revenue Breakdown of Continental's Automotive Interior by Region, 2009-2014
  - Continental's Instrument Cluster Product List
  - Continental's OLED Instrument Cluster
  - Multi Viu Professional 12
  - Continental's Instrument Cluster Market Position
  - Continental's Combiner HUD
  - Revenue and Operating Income of Nippon Seiki, FY2008-FY2016
  - Revenue Breakdown of Nippon Seiki by Product, FY2010-FY2015
  - Revenue Breakdown of Nippon Seiki by Region, FY2012-FY2015
  - Global Location of Nippon Seiki
  - Sales Mix of Nippon Seiki by Customer, FY2015
  - Revenue and EBITDA of Visteon, 2013-2015
  - Visteon's Quarterly Revenue and Gross Margin, 1Q/2014-2Q/2015
  - Visteon's Quarterly EBITDA, 1Q/2014-2Q/2015
  - Revenue of Visteon's Automotive Electronics by Product, 2013-2014
  - Revenue of Visteon's Automotive Electronics by Product, 2015
  - Revenue of Visteon's Automotive Electronics by Region, 2013-2015
  - Revenue of Visteon's Automotive Electronics by Customer, 2013-2014
  - Visteon's 3D Instrument Cluster
  - YFV's Organization

- 
- Structure of YFV
  - Organization of Yanfeng Visteon Electronics
  - Distribution of YFVE Production Bases
  - Revenue Breakdown of Visteon Electronics in China by Customer, 2015
  - Revenue and Operating Margin of Denso, FY2006-FY2016
  - Distribution Proportion of Denso's OEM Customers, FY2008-FY2015
  - Revenue of DENSO by Product, FY2012-FY2015
  - Revenue and Operating Income of Denso by Region, FY2014 vs FY2015
  - Revenue and Operating Income of Denso by Region, FY2015 vs FY2016
  - Denso's ADAS
  - Revenue and EBIT Margin of Magneti Marelli, 2006-2015
  - Revenue Breakdown of Magneti Marelli by Product, 2013
  - Revenue and Operating Income of JDI, FY2013-FY2016
  - The JDI Group in Transition
  - Quarterly Revenue of JDI by Business, 2013Q2-2015Q2
  - Quarterly Operating Margin of JDI, 2013Q2-2015Q2
  - Revenue and Operating Margin of INNOLUX, 2010-2015
  - INNOLUX Area Shipments and TFT LCD ASP Trends, 3Q13-2Q15
  - INNOLUX's Small & Medium Size Unit Shipments and Sales Trends, 3Q13-2Q15
  - INNOLUX Sales Breakdown by Size, 3Q2013-2Q2015
  - Revenue Breakdown of INNOLUX by Application, 3Q2013-2Q2015
  - Overview of INNOLUX's TFT-LCD Fabs
  - Overview of Touch Sensor Fabs
  - Organization Structure of AUO
  - Revenue and Gross Margin of AUO, 2009-2015



- 
- Revenue of AUO by Region, 2012-2014
  - Revenue of AUO by Application, 2012-2014
  - Shipments of AUO by Application, 2012-2014
  - Major Suppliers of Key Raw Materials and Components
  - Revenue Breakdown of AUO Display by Application, 2Q14-2Q15
  - Revenue Breakdown of AUO Display by Size, 2Q14-2Q15
  - Shipments and ASP of AUO, 2Q14-2Q15
  - AUO's Small & Medium-sized Panel Shipments by Region & Revenue, 2Q14-2Q15
  - AUO's Production Line List
  - AUO's LCM Base AUO's Automotive Panel List

You can place your order in the following alternative ways:

1. Order online at [www.researchinchina.com](http://www.researchinchina.com)
2. Fax order sheet to us at fax number: +86 10 82601570
3. Email your order to: [report@researchinchina.com](mailto:report@researchinchina.com)
4. Phone us at +86 10 82600828/ 82601561

<b>Party A:</b>			
Name:			
Address:			
Contact Person:		Tel	
E-mail:		Fax	

<b>Party B:</b>			
Name:	Beijing Waterwood Technologies Co., Ltd (ResearchInChina)		
Address:	Room 502, Block 3, Tower C, Changyuan Tiandi Building, No. 18, Suzhou Street, Haidian District, Beijing, China 100080		
Contact Person:	Liao Yan	Phone:	86-10-82600828
E-mail:	<a href="mailto:report@researchinchina.com">report@researchinchina.com</a>	Fax:	86-10-82601570
Bank details:	Beneficial Name: Beijing Waterwood Technologies Co., Ltd Bank Name: Bank of Communications, Beijing Branch Bank Address: NO.1 jinxiyuan shijicheng, Landianchang, Haidian District, Beijing Bank Account No #: 110060668012015061217 Routing No #: 332906 Bank SWIFT Code: COMMCNSHBJG		

Title	Format	Cost
Total		

Choose type of format

PDF (Single user license) .....2,000 USD  
 Hard copy ..... 2,200 USD  
 PDF (Enterprisewide license)..... 3,200 USD

※ Reports will be dispatched immediately once full payment has been received.  
 Payment may be made by wire transfer or credit card via PayPal.

### About ResearchInChina

ResearchInChina ([www.researchinchina.com](http://www.researchinchina.com)) is a leading independent provider of China business intelligence. Our research is designed to meet the diverse planning and information needs of businesses, institutions, and professional investors worldwide. Our services are used in a variety of ways, including strategic planning, product and sales forecasting, risk and sensitivity management, and as investment research.

### Our Major Activities

- ❑ *Multi-users market reports*
- ❑ *Database-RICDB*
- ❑ *Custom Research*
- ❑ *Company Search*

**RICDB** (<http://www.researchinchina.com/data/database.html>), is a visible financial data base presented by map and graph covering global and China macroeconomic data, industry data, and company data. It has included nearly 500,000 indices (based on time series), and is continuing to update and increase. The most significant feature of this base is that the vast majority of indices (about 400,000) can be displayed in map.

After purchase of our report, you will be automatically granted to enjoy 2 weeks trial service of RICDB for free.

After trial, you can decide to become our formal member or not. We will try our best to meet your demand. For more information, please find at [www.researchinchina.com](http://www.researchinchina.com)

For any problems, please contact our service team at: