

**Automotive HUD Industry Research Report,  
2019-2020**

**Jul.2020**

## 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.

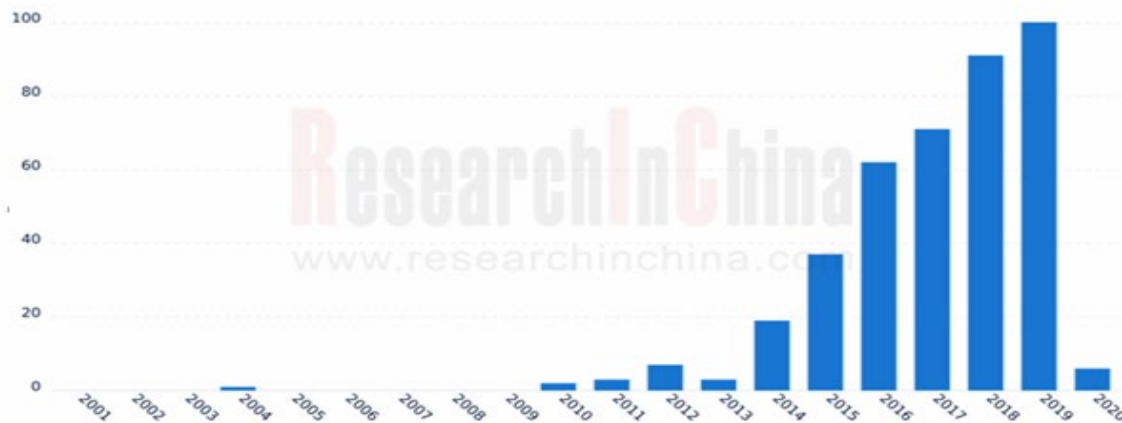
## Abstract

**HUD Industry Research: the HUD installations to passenger cars soared 19.1% year-on-year in 2020Q1 thanks to homegrown brands**

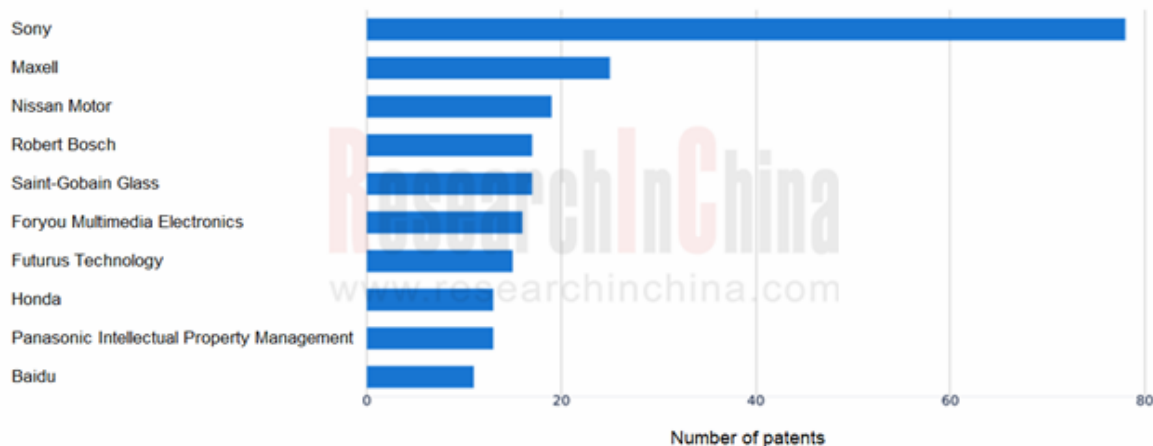
In contrast to the year-on-year nosedive of 41% in passenger car sales in Q1 2019, the HUD installations to passenger cars surged by 19.1% on an annualized basis and reached 72,500 units under the drive of Chinese brands.

AR-HUD patent filings keep increasing year by year. Among the top ten vendors, Chinese players include Foryou Multimedia Electronics, Futurus Technology, Honda, Panasonic Intellectual Property Management, and Baidu.

AR-HUD Patent Filings, 2010-2020



Ranking of AR-HUD Patent Applicants



Jiangsu New Vision Automotive Electronics Co., Ltd, a leading Chinese supplier of HUD, has signed more than 10 production and R&D contracts with NextEV, Geely, Changan Automobile, Great Wall Motor, Chery, BAIC BJEV, among others. New Vision completed Series A financing round with BAIC and BDStar Navigation in 2018, and fulfilled Series B financing from the investors GP Capital, Haitong and Ying Capital in 2019.

Foryou Multimedia Electronics set up a team in 2012 which is in possession of over 100 HUD related patents to date. With the parent company Foryou Corporation's expertise in smart cockpit electronics, Foryou Multimedia Electronics has built a full-fledged AR-HUD platform, encompassing the input of ADAS, instrumentation and navigation. It has won a number of production projects from domestic and overseas automakers.

Technically, AR-HUD needs to solve problems such as ghosting, resolution, and environmental fusion. Optical imaging, projection technology and system compute also limit the display effect and user experience of AR-HUD. Big footprint of optical modules and hardware is inconvenient for deployment in car interiors, which means AR-HUD awaits much optimization.

To miniaturize AR-HUD (over 20 liters), the industry is studying holographic optical waveguide technology solutions, which may downsize HUD to 2.4 liters.



In recent years, many vendors around the globe, including DigiLens, Lingxi AR, Lochn Optics, Magic Leap and traditional optical giants Sony and Schott, have set foot in optical waveguides successively.

In May 2018, Continental lavished huge in DigiLens. With its additional investment, Continental held close to 18% of DigiLens after Series C financing round. DigiLens has conducted five rounds of financing, totaling \$135 million from the investors including Sony, Panasonic, Samsung, Mitsubishi Chemical, Foxconn, Universal Display, Niantic, Dolby, etc.

DigiLens announced its expansion into China together with its first China-based licensee, Crystal Optech, which is a leading optical elements manufacturer in optical coating, AR optics and semiconductor optics. The partnership will bring DigiLens Crystal waveguides to the market in 2020.

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## 1.1.2 Classification

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