

Automotive Ultrasonic Radar

Market Research Report (2022 H1)

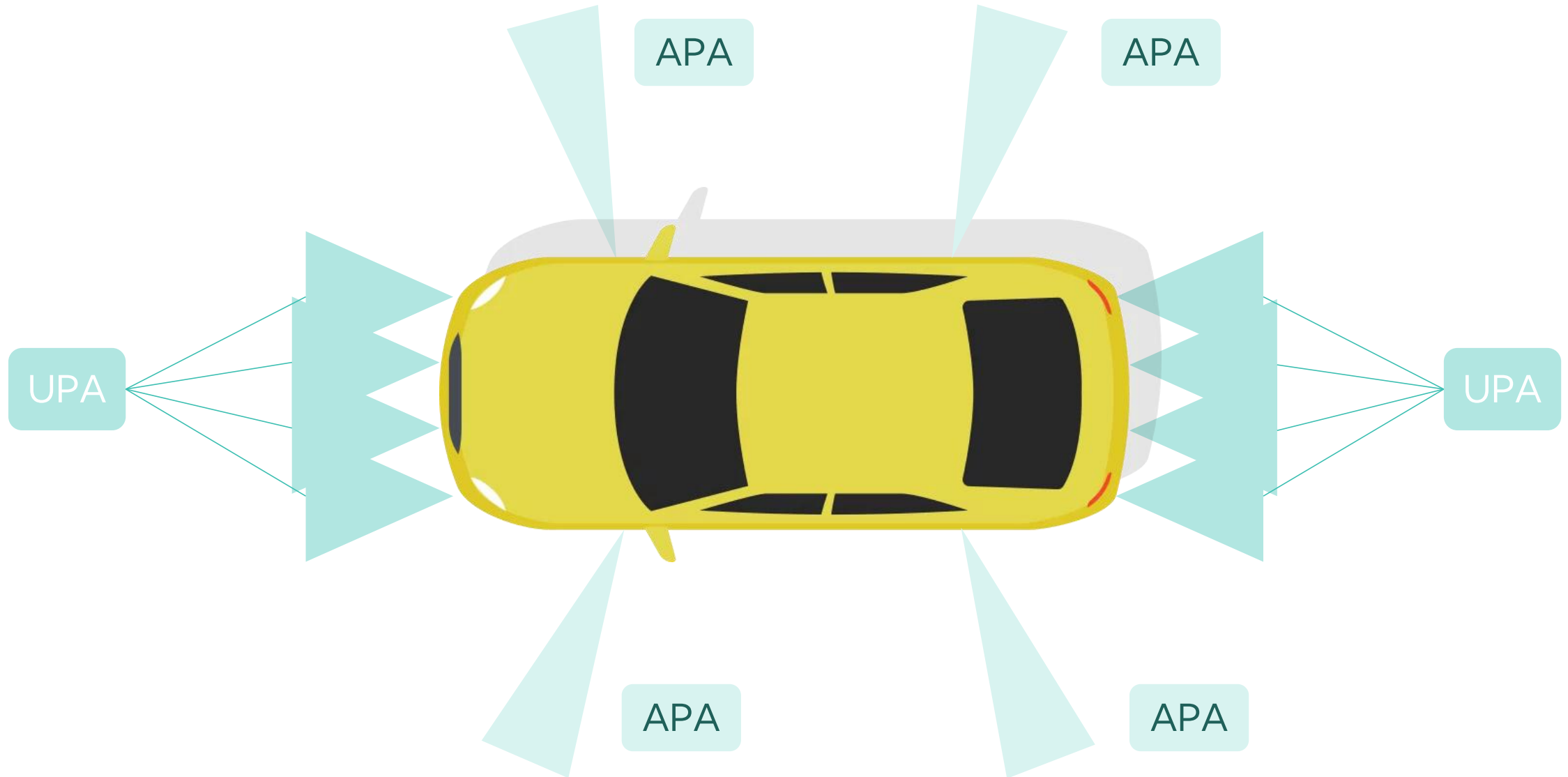
Introduction

The aim of this report is to evaluate the **Automotive Ultrasonic Radar market**. The market is segmented by type, automation level of passenger vehicle, and geography. This report will offer market size analysis and forecast for each of segments mentioned above.

The automation-driving system consists of three main departments who are respectively responsible for: **perception sensing**, decision-making, and executing

Generally, vision system, **radar system**, and LiDAR system are main types of sensors for perception sensing department. At present, the fusion of multi-sensors is the choice for most automobile manufacturers who are on the track of driving automation.

Classifications of Ultrasonic Radar



Configuration Assumptions

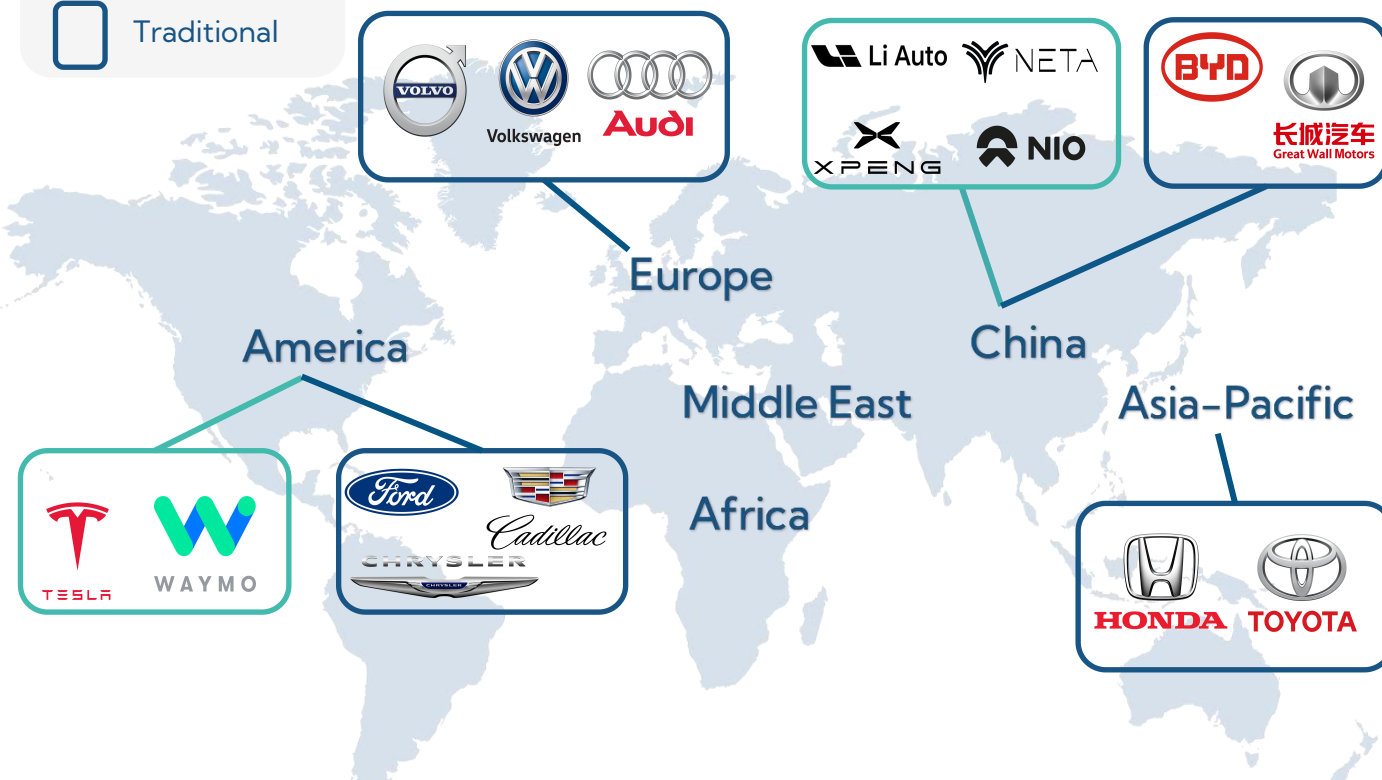
Vision System: number of ultrasonic radars

	UPA Sensor	APA Sensor
L0	4	0
L1	8	0
L2/L2+	8	4
L3	8	4
L4/L5	8	4

With considering about the existing automobiles' configurations and the developing ADAS technologies, ICV generated more reasonable assumptions about the number of ultrasonic radars for each level of automation (as above table shows), which are used for the following analysis.

The Automotive Ultrasonic Radar can be classified into two types: Ultrasonic Parking Assistant (UPA) and Automatic Parking Assistant (APA). UPA sensors usually located at the front and rear bumpers of the car. APA sensors are generally installed on the side of the car.

Regions & Automobile Manufacturers



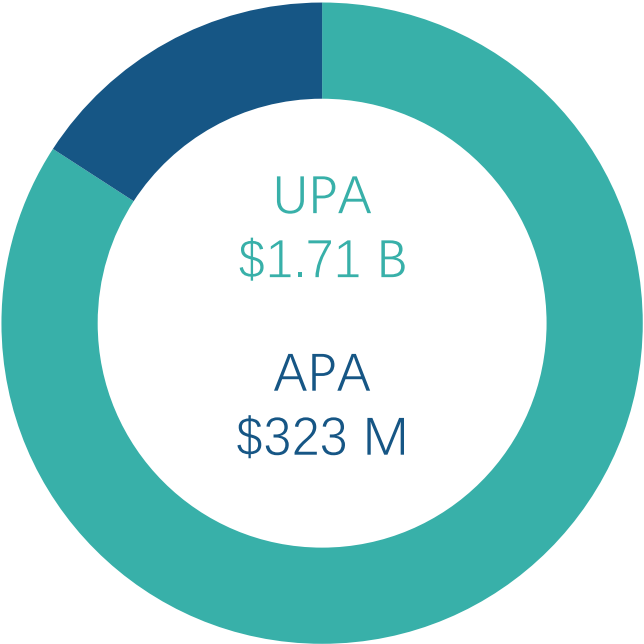
As the developing stages of automation-driving are different between countries/regions, this report will divide the whole market into five sub-markets:

1. China
2. Europe
3. America
4. Asia (exclude China), Oceania, and Middle East Region (hereinafter referred to as "AOME" region)
5. Africa

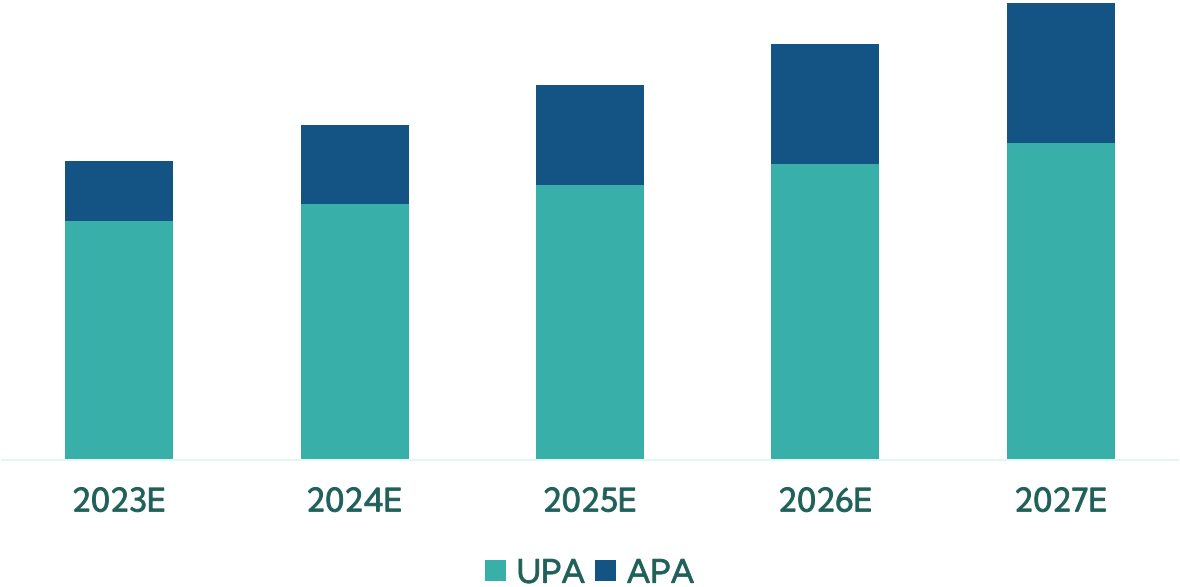
In this report, ICV classified the automobile manufacturer into two types, the new car-making forces and the traditional carmakers.

Market Segments – by Radar Types

Market Size – Segments (2022 H1)



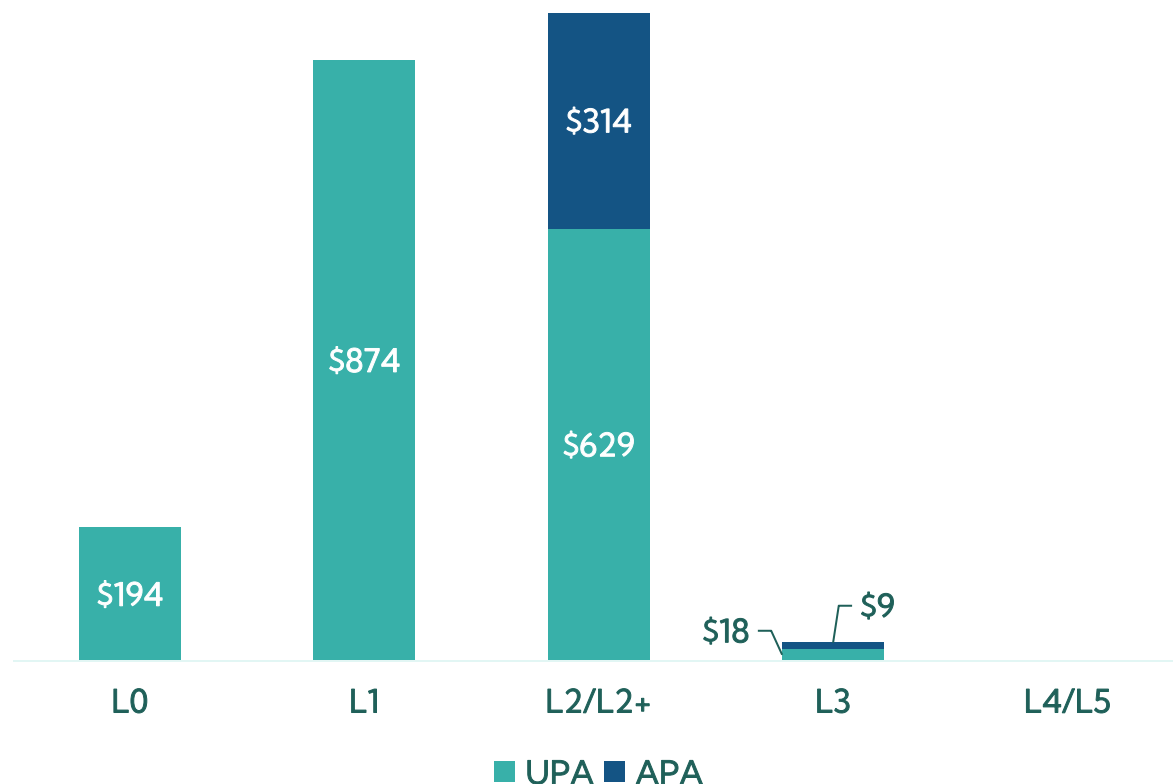
Market Size Forecasts– Segments (23'~27')



The market size of **UPA** was estimated to be **\$3.7 billion** in 2023, it could grow to **\$4.9 billion** in 2027. The market of **APA** was estimated to be worth **\$924 million** in 2023 and get to **\$2168 million** in 2027. The market of APA was expected to grow faster than UPA market.

Market Segments – by Automation Levels

Market Size – Segments (2022 H1)
(USD in millions)

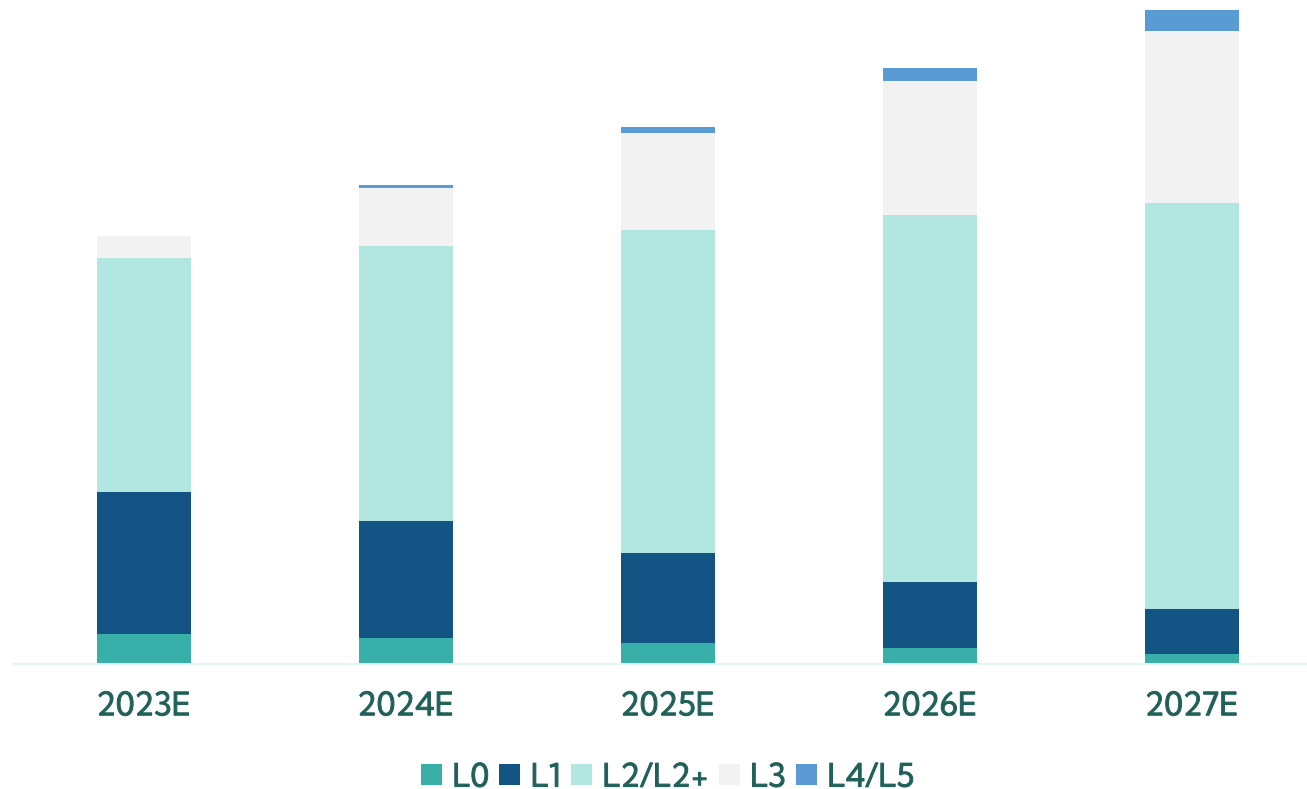


The vehicles in L0 and L1 usually don't equip the fully automatic parking system, therefore, for these two levels, accounted the sales of UPA only.

For the first half of 2022, sales of ultrasonic sensors installed in the vehicles with L2/ L2+ were total of \$943 million, which is the highest among all five levels of automation.

Market Segments – by Automation Levels

Market Size Forecasts– Segments (23'~27')

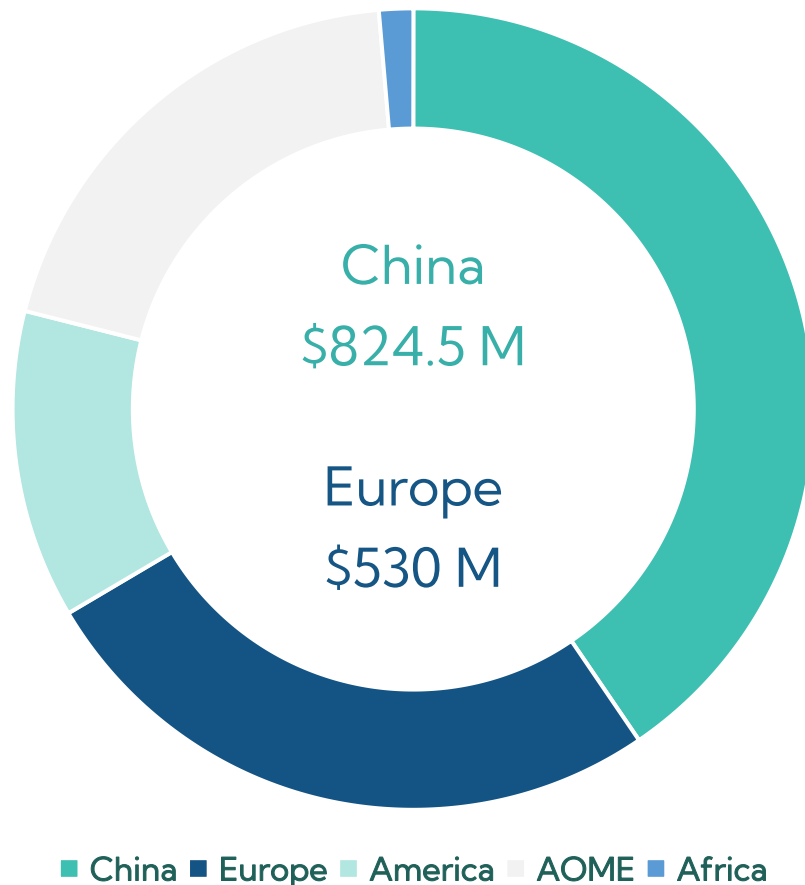


The sales of ultrasonic sensors installed in the vehicles with L0 and L1 automation-driving system have decreasing trends over the future five years.

The market shares of ultrasonic sensor installed in vehicles with automation level of L2/ L2+ were estimated to be the highest in the future, with dollar value of \$4.4 billion in 2027.

Market Segments – by Geography

Market Size – Segments (2022 H1)

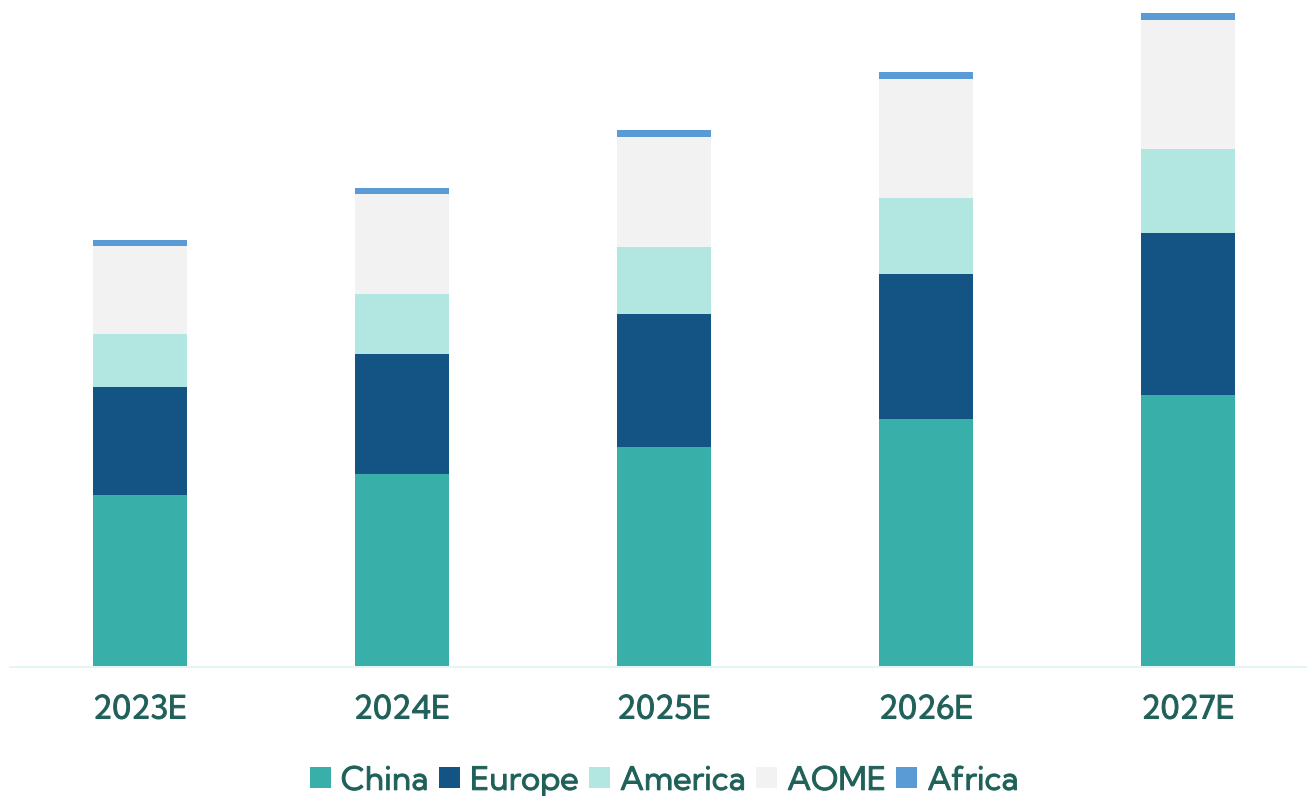


Asia & Oceania & Middle East ranked third with sales of \$400 million for the first half of 2022. The sales of America and Africa were \$250 million and \$56 million respectively.

For the first half of 2022, the global market was worth \$2.03 billion. China took the largest piece of the market with sales of \$824.5 million, followed by Europe with sales of \$530 million.

Market Segments – by Geography

Market Size Forecasts– Segments (23'~27')



The global market of ultrasonic sensor was estimated to worth \$4.6 billion in 2023, it could climb to \$7.1 billion in 2027.

China was expected to contribute most to the global market in the future five years. The growth rate of Chinese market, European market, and American market will be higher than the global market, while AOME and Africa have growth rates below the global market.

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