

ICV: The global mmRadar installation is expected to reach 390 million units by 2026



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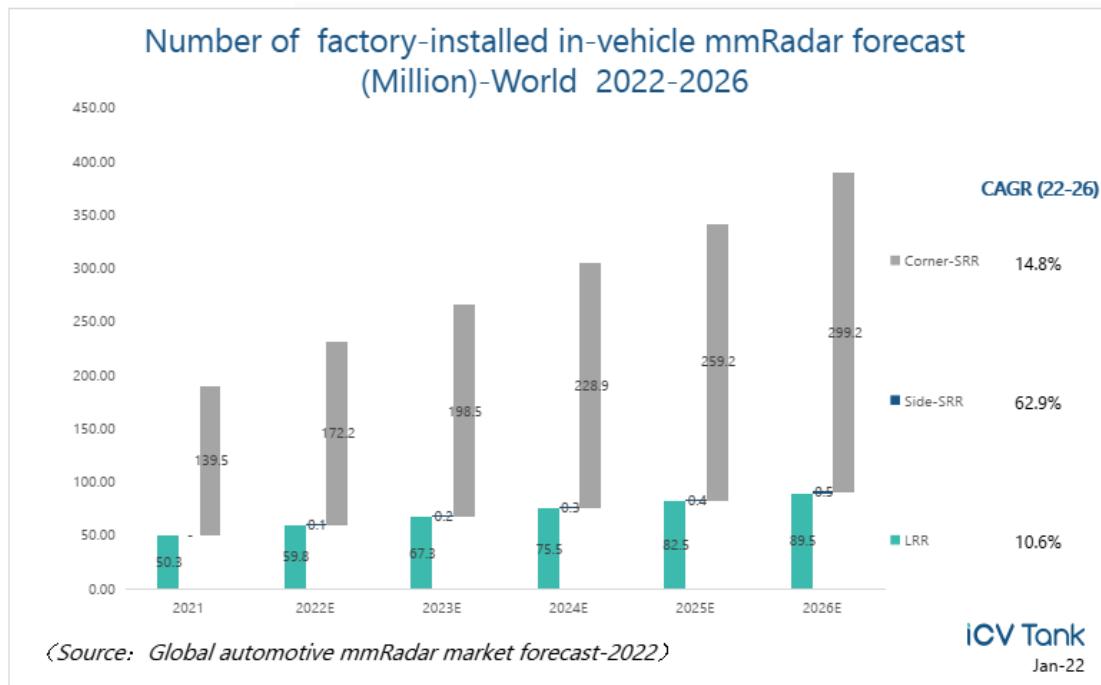
Tobey Maquire

At present, the development of vehicle-mounted mmRadar technology is mature, the industrial competition pattern is relatively stable, and the potential entry barrier is high, especially for patent technology.

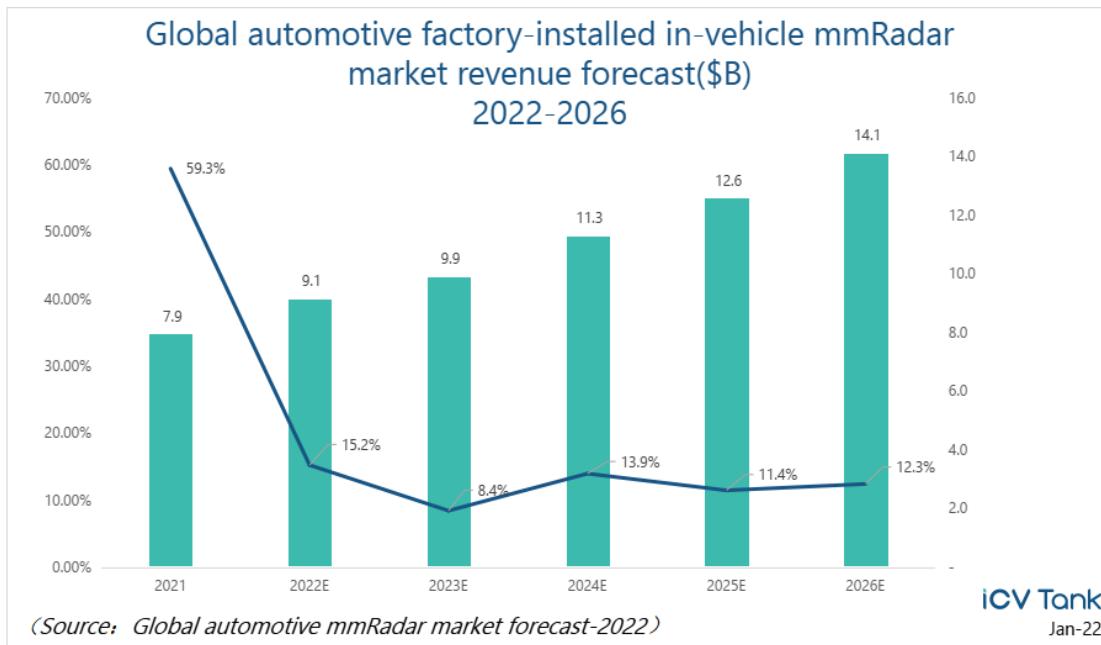
In terms of application, 24GHz and 77GHz mmRadar are installed and used on angle radar, side radar and long range radar according to their respective performance characteristics. The main changes of the market in the future come from three aspects: 1. The increase of mmRadar usage driven by the improvement of intelligent driving level and the growth of automobile sales; 2. Uncertainty of heterogeneous sensor fusion scheme; 3. Whether Chinese suppliers can rise to prominence.

ICV, the world-renowned cutting-edge technology consulting company, released a report named "Global Automotive mmRadar Market Forecast -2022", which made a forecast analysis of the Global automotive mmRadar industry.

In 2021, the installation of vehicle-mounted Mmradars in the world reached 190 million, with shipments of 24GHz and 77GHz accounting for 74% and 26% respectively. Angle of radar occupied the main market. ICV predicts that global shipments of mmRadar will reach 390 million units by 2026, and there will be room for market growth of 100 million units in the next five years.

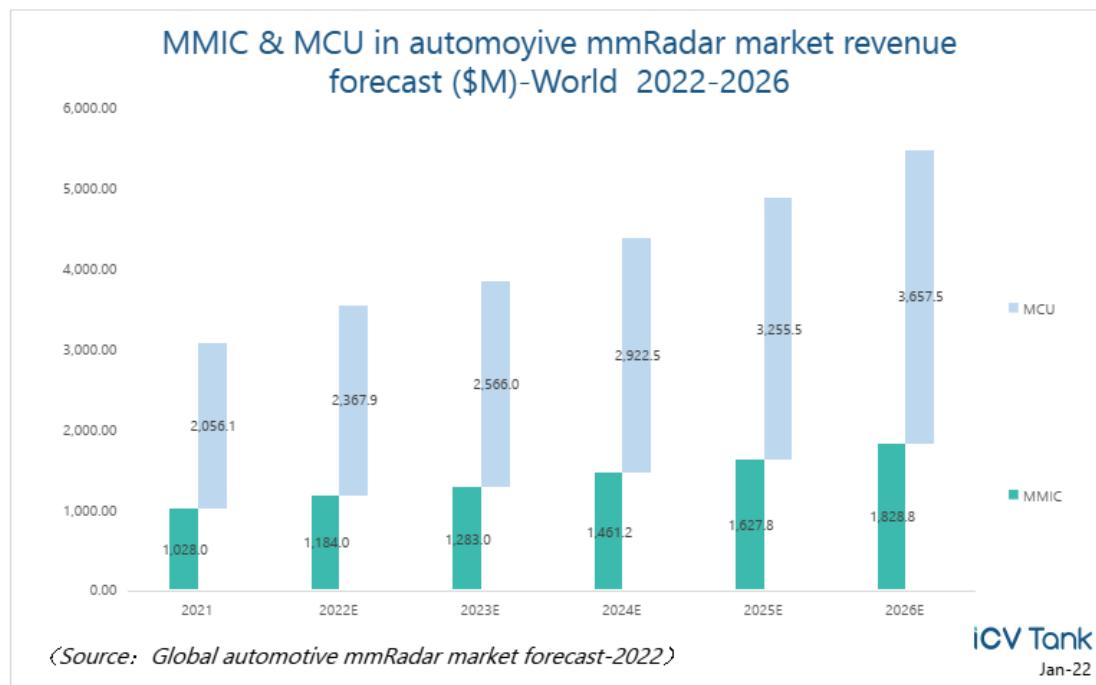


The global in-vehicle mmRadar market totaled \$7.9 billion in 2021. ICV predicts that the market size will grow to \$14.1 billion by 2026, with a compound growth rate of 11.5% from 2022-2026.



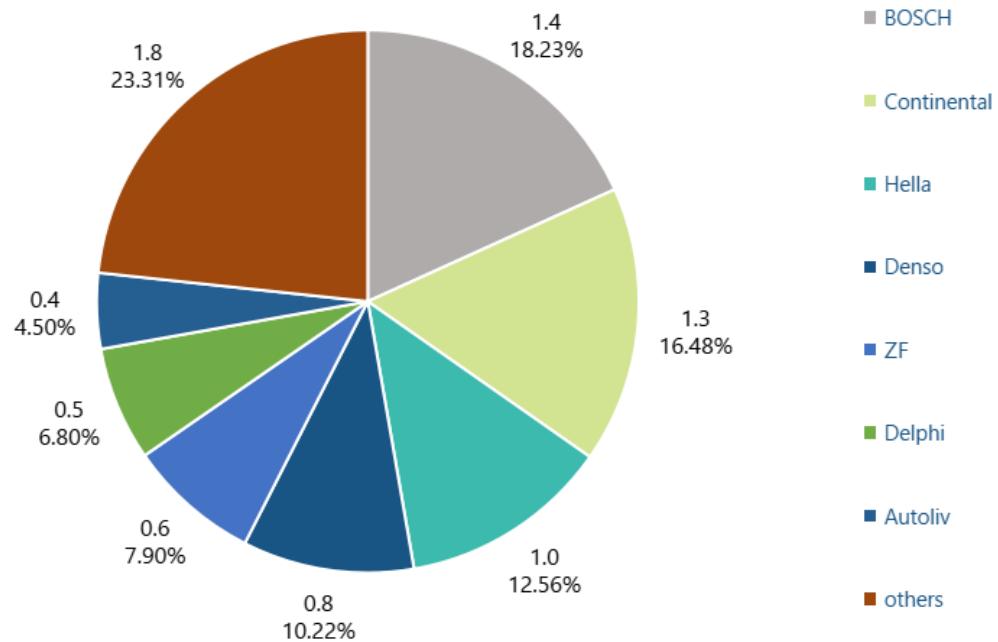
The main components of mmRadar, which also constitute the majority of the cost,

are monolithic microwave integrated circuit (MMIC) and baseband micro controller unit chip (MCU), in which MMIC accounts for about 13.0% of the total value and MCU accounts for 25.9%. In 2021, the global total value of MMIC used in vehicle-mounted mmRadar was \$1.028 billion, and that of MCU was \$2.056 billion.



ICV believes that the core of development of mmRadar in the future lies in solving the problem of heterogeneous fusion. From the perspective of technical development and application practice of various automotive sensors, the pure visual recognition of camera has made rapid progress, while the instability of input signal of mmRadar is still prominent. At present, data still cannot be fused to calculate and process in the fusion scheme of camera and mmRadar, which is a problem to be solved continuously in the future, requiring the technical stability of mmRadar.

Market landscape of global factory-installed in-vehicle mmRadar market -by final Sales revenue(\$B)-2021



(Source: Global automotive mmRadar market forecast-2022)

ICV Tank
Jan-22

The global market supply pattern of vehicular mmRadar modules is relatively stable. BOSCH and Continental still occupy the largest market in 2021, accounting for 34.71% of the total market. Hella, Denso and ZF rank 3-5 respectively, together with the top two accounting for 65.39% of the total market.

Is there an opportunity for Chinese manufacturers? ICV has made a thematic analysis. Due to the monopoly of global upstream chip manufacturers and intellectual property control at the module level, there is not much room for Chinese manufacturers to develop in the 77Ghz field at present. However, it is not

excluded that China's strong investment in the semiconductor industry will bring technological breakthroughs in this field. Overall, the competitive trend of Chinese manufacturers is neutral and pessimistic.

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