

FACT SHEET

# The German Semiconductor Market

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The United States and Asia have dominated semiconductor production for decades. However, Germany is now seeking to become one of the leading chipmakers in Europe and the world. The country is the beating heart of the European semiconductor industry – ranking among the world's top semiconductor production locations.

Germany boasts an unparalleled density of world-leading device manufacturers and suppliers for materials, components, and equipment across the entire value chain. Demand for microchips and nanochips will grow exponentially as the transition to green energy and electric mobility progresses, and as big data and artificial intelligence become increasingly important.

Germany is investing significantly in its microelectronics sector to establish the country as an international semiconductor production force. The ambitious deployment and development of semiconductor-based applications in the automotive, energy and manufacturing sectors is critical to the country meeting its climate goals. The EU and Germany have reacted with rapid measures to boost domestic chip production capacity and develop supply and value chain resilience. The European Chips Act, announced in February 2022, sets the target of increasing EU production capacity to 20 percent of the global market by 2030.

This would require quadrupling production capacity. The European Commission has earmarked EUR 43 billion for this purpose. Around half of this sum will be provided by the German government. Germany's climate neutrality targets are creating attractive business opportunities and favourable market conditions for international companies.

→ For more information, please visit our website:  
[www.gtai.de/semiconductors](http://www.gtai.de/semiconductors)

## The Semiconductor Industry in Numbers

**More than 1 in 3**

chips produced in Europe is  
made in Germany

**EUR 43 billion**

funding to establish Europe as major  
semiconductor production hub by 2030

**20 percent**

of global semiconductor production  
from the EU by 2030

**EUR 12 billion**

**turnover**

in the semiconductor industry in  
Germany in 2023

**6% plus**

expected annual growth  
rate until 2027

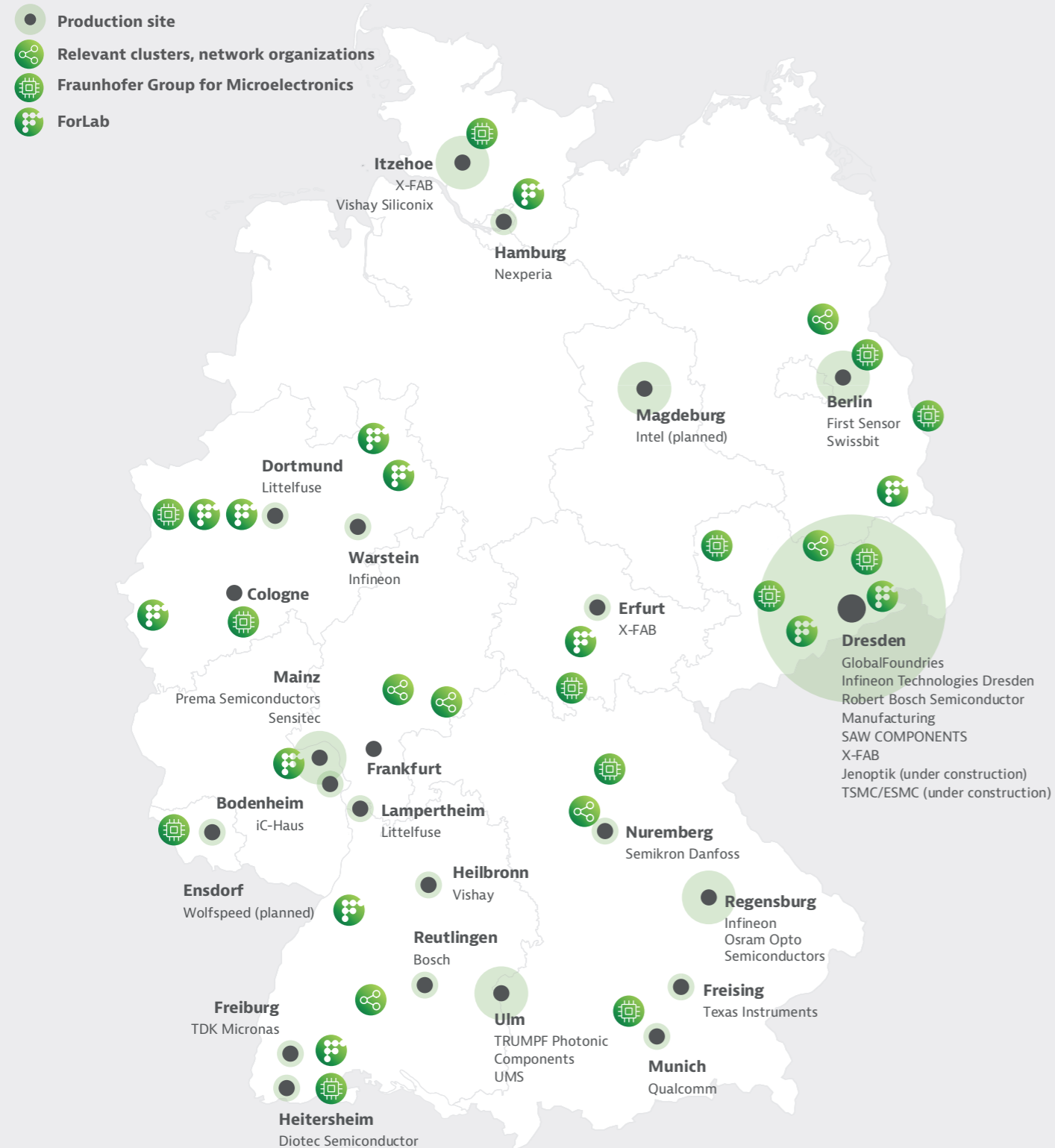
**60%**

of employees in the German semiconductor  
industry have an academic degree

## German Semiconductor Landscape

Germany's microelectronics sector forms a complete ecosystem representing the entire industry value chain network responsible for developing the smart, integrated systems required to meet industry's changing needs.

Internationally active companies, renowned research institutions, small and medium-sized enterprises, and start-ups are all at home in different industry clusters across the country.



## German Semiconductor Networks to know about

Germany is already home to several strong semiconductor and microelectronics sites including the states of Saxony, Bavaria and Baden-Württemberg. Here, companies and research institutions – specialists in areas including sensor technology, interconnection technology and system integration – find the ideal conditions to develop systems and technologies for tomorrow's needs.

### Silicon Saxony

Saxony is Europe's biggest microelectronics location, home to companies including GlobalFoundries, Infineon and Bosch. Silicon Saxony is a network for the microelectronics, smart systems, photovoltaic and software sectors.

➔ <https://silicon-saxony.de/en/>

### MicroTEC Südwest

The microTEC Südwest cluster in the southwestern regional state of Baden-Württemberg is a major European expertise and cooperation network for intelligent microsystem technology solutions in manufacturing and health. Oberkochen-based Zeiss is the world's only manufacturer of optics used in extreme ultraviolet lithography machines for high-end chip production.

➔ <https://www.microtec-suedwest.de/en/>

### Bavarian Chips Alliance

Bavaria is home to some of the world's leading semiconductor producers, including Infineon Technologies and Siltronic, who are all members of the Bavarian Chips Alliance. As the site of many leading actors in electrical engineering and electronics, the southern state plays a big role in the development of technologies for Industrie 4.0, big data solutions and the Internet of Things.

➔ <https://www.bayern-innovativ.de/en/services/digitization/bavarian-chips-alliance/>

### ForLab

The aim of this project is to consolidate the cooperation structures of the research laboratories and expand them by including additional university locations. The creation of uniform guidelines for cleanrooms and laboratories will simplify access, particularly for SMEs, start-ups and research groups, and thus their collaboration. In addition, cross-university formats for student training and recruiting young talent will be piloted as nationwide examples of best practice and networked with national and European training initiatives such as the Microelectronics Academy of the Research Fab Microelectronics Germany (FMD), ChipDesign Germany and skills4chips.

➔ <https://www.forlab.tech/en/>

## Semiconductor Success Stories in Germany

### TSMC/ESMC

TSMC, the world's largest chipmaker, is establishing its first European site in Dresden, Saxony. The new facility will specialize in chips produced for the automotive and industrial sectors. The new venture, known as the "European Semiconductor Manufacturing Company" (ESMC), is a joint effort between Taiwan Semiconductor Manufacturing Company (TSMC), Bosch, Infineon, and NXP. Dresden was announced as the planned site in August 2023.

The groundbreaking ceremony for the Saxony site took place in August 2024, and was attended by German Chancellor Olaf Scholz and the President of the European Commission, Ursula von der Leyen.

Germany's government is supporting the EUR 10 billion-plus investment with public subsidies of EUR 5 billion approved by the European Commission in line with EU state aid rules. This substantial support underscores the strategic importance of the project in strengthening Europe's semiconductor manufacturing ecosystem and reducing dependency on non-European suppliers.

## World-leading Research and Development

### Fraunhofer Group for Microelectronics

A number of institutes within the Fraunhofer Group for Microelectronics and the Leibniz Association are also playing a decisive role in consolidating Germany's role as a major international semiconductor and electronics research location. The Fraunhofer Group for Microelectronics is a research and development service provider in the areas of microelectronics and smart systems integration. Part of the Fraunhofer-Gesellschaft, Europe's largest application-oriented research organization, the group seeks to bridge the gap between fundamental research and product development in the fields of microelectronics/nanoelectronics and microsystem & communication technology in order to strengthen German innovativeness.

➔ <https://www.mikroelektronik.fraunhofer.de/en.html>

## Reasons to set up production in Germany

- Strongest semiconductor ecosystems in Saxony, Bavaria and Baden-Württemberg – biggest in Europe
- EU & Germany enabling large investments through European Chips Act and related funding programs
- Growing annual semiconductor turnover in Germany – with key customers & partners in chip design, 5G, automotive, industry throughout Germany and the EU



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