Electronics & Microtechnology

Your Market for Next-Generation Technology

Germany boasts an unparalleled density of renowned R&D institutes and world-leading manufacturers and suppliers for electrical and electronic materials, components, and equipment across the value chain; ranging from microelectronic components to electrical household appliances, automation systems, electronic medical equipment, and automotive electronics.

Investment opportunities are many and varied. Plug in and find out why Germany satisfies the essential conditions for market success in one of the world's most dynamic industry sectors.

3D Printing Providing Quick Solutions to Covid-19 Crisis

Additive manufacturing technologies have an important role to play in the supply of materials in the corona crisis, with urgently needed components being produced in short lead times.

European Commission call for printed components

Around the world, innovative manufacturing solutions are in great demand to meet the medical challenges created by the global coronavirus pandemic. Significant shortages of personal protective equipment (PPE) including masks and glasses as well as prohibitive production times of life-saving respirator valves have led to 3D printing technologies being deployed to slow down this global emergency.

The European Commission has called for additive manufacturing companies, Fablabs, Makerspaces, and 3D printing users across Europe to make printed components available. More than 250 companies from all industries including the automotive and sportswear sectors have answered the request to date.

All proposals are currently being reviewed and validated by the European Commission, which is being supported in Germany by the Association of German Engineers (VDI).

Industry pledges support

An increasing number of additive manufacturing plant operators and the industrial 3D printing systems manufacturer EOS have also pledged their support.

The aim is to be able to provide fast and direct support for the expected – and in other countries already concrete – demand for spare and wear parts for medical devices using 3D printing processes.
"3D Printing Fights Corona"

3D Printing Fights Corona is an initiative of MGA - Medical Mobility goes Additive e.V. and its members as well as a number of additive manufacturing actors. Pooling resources from the additive manufacturing industry in Germany and beyond, the initiative aims to build the necessary infrastructure and help the general public through the ongoing crisis. Virtual sessions and a special website provide a platform for knowledge sharing and development of urgently needed medical equipment including PPE and spare parts for ventilators.

Siemens makes design services available

Siemens is making its Additive Manufacturing Network (AM Network) available to all who require medical device design or print services in order to address the growing shortage of medical devices needed to fight the COVID-19 pandemic. The goal of the Siemens initiative is to enable fast and uncomplicated 3D printing of spare parts such as fans. The AM Network connects users, designers and 3D printers.

German Institute for Standardization opens up standards

DIN, the German Institute for Standardization has, in agreement with all members of the European standards organization CEN and CENELEC, decided to make a series of European standards (ENs) for medical devices and PPE freely available in a concerted move to support the fight against the COVID-19 pandemic. The decision will help tackle the current shortage of PPE and other products in a number of European countries. By providing free access to the standards, companies will be able to reconvert their production lines to manufacture the urgently needed equipment. In Germany, DIN is making standards for breathing apparatus, eye and face protection equipment available free of charge to ensure that as many companies from as many industries as possible are able to participate.

For more information on additive manufacturing in Germany please contact our 3D printing industry specialists.

Latest Publications

Industry Overview: The Electronics & Microtechnology Industry in Germany | Issue 2019/2020

Germany is recognized the world over as an innovative microelectronics production and research location. The country is by some distance Europe’s leading production and sales market. One in three chips produced in Europe today is made in Germany.
Photonics in Germany 2019

The German Education and Research Ministry’s brochure “Photonics in Germany 2019” provides information about the latest innovations in research and industry, long-term trends and hot international topics in optical technologies. On pages 12-13, Germany Trade & Invest discusses the importance of the photonics industry for a variety of German economic sectors and opportunities for foreign investors in the country.

Foreign Direct Investment | July 17, 2018

The ZVEI and Germany Trade & Invest (GTAI) publish a joint paper on foreign direct investment once a year.
Microsystems Technology in Germany 2018

The publication outlines the current long-term trends in the area of microsystems technology. It informs about current developments and results from German science and industry.

Fact Sheet: Photonics in Germany | Issue 2017/2018

Germany is Europe’s leading photonics nation, with more than 41 percent of continental production.

Fact Sheet: Microelectronics in Germany | Issue 2017/2018

Germany is a major microelectronics force, securing its place at the top of the international table as Europe’s leading semiconductor production location.
Testimonials

Roberto Multineddu, Managing Director - DAIKIN Applied Germany GmbH

“We are an applied dedicated company, sales and service for large scale air-conditioning for commercial and industrial applications. In 2016, we decided to expand our business especially in Germany, because there is a big market for us. The reason why we chose Frankfurt is that it is a central location within Europe, an international environment, and a vibrant start-up scene. To reach this conclusion, we had big support from the GTAI team to study the market and German culture in a very short term, which we appreciate very, very much!” (2018)

Michael Sorkin, General Manager - Formlabs GmbH

"Formlabs, the leading manufacturer of accessible 3D printing solutions, chose Germany to establish its European operations. From our EU headquarters in Berlin we are able to work with leading engineering companies to implement 3D printing into their prototyping and digital manufacturing needs. Germany is the land of engineering and the perfect place to develop Formlabs' innovative 3D printing solutions." (2016)
Ed Nabrotzky, Chief Solutions Officer - Omni-ID Inc.

"Germany has long been a thought leader in manufacturing and automation. Most recently, the vision and investment in Industrie 4.0 has started bringing together some very interesting vendors and concepts that we are convinced will play a big part of the future of the plant floor. Being an engaged part of this ecosystem was a major factor in founding our new German subsidiary last year." (2016).

BAI Li, CEO - Julong Europe GmbH

"Germany is a high-tech country, one in which we treasure the professionalism, knowledge and high level of education among the workers. Talented workers are the most important conditions for the development of a company and the key element of Germany’s global competitiveness. That is a reason for us to select Germany as an investment location." (2013)

Our Industry in Numbers

- EUR 191.5 billion turnover
- 872,000 employees in Germany (+ 706,000 abroad)
- 29% of all R&D employees in Germany
- EUR 17.2 billion R&D expenses
- EUR 26.5 billion innovation expenditures
- 24% of total R&D expenditures of German industry
ELECTRONICS & MICROTECHNOLOGY

- 26% of total patent applications in Germany (12,000 per year)
- 1/6 of all “hidden champions” in Germany
- 22% of all Foreign Direct Investment in Germany
- 51% export share (13% of total German exports)

*Source: ZVEI 2018*

"Leadership in materials, equipment, and device manufacturing makes Germany an ideal place to bring next-generation electronics to market."

*Oliver Seiler, Director Mechanical & Electronic Technologies, Germany Trade & Invest*

**Market Opportunities: Internet of Things**

Internet of Things applications are of significant strategic importance for microelectronic manufacturers. According to McKinsey, IoT will create up to USD 11 billion in value added in 2025. This is equivalent to around 11 percent of global economic output; with the most lucrative application markets being the production (up to USD 3.7 billion), cities (USD 1.7 billion) and health economy sectors (USD 1.6 billion). Within Germany, IoT-generated turnover is expected to double in just two years from a forecast level of EUR 24.5 billion in 2018 to more than EUR 50 billion in 2020 according to Deloitte.
Market Opportunities: Internet of Things

IoT-generated turnover is expected to double in just two years from a forecast level of EUR 24.5 bn. in 2018 to more than EUR 50 bn. in 2020.

Internet of Things Turnover Forecast Germany
(in € bn.)

Source: Statista (Technavio, Deloitte) (2017)
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Market Opportunities: Automotive Electronics

The Internet of Things also gives rise to the age of the “connected car” and, ultimately, autonomous vehicles. The automobile sector is driving increased chip demand, with increased digitalization and electrification creating semiconductor growth of more than 100 percent over the last 18 years. Automotive electronics account for around 80 to 90 percent of innovations in modern vehicles and is the semiconductor sector’s main industry sector client, accounting for around 45 percent of domestic industry demand. Germany shows the highest growth rate forecasts in the usage of microelectronic for vehicles in Europe.
Market Opportunities: Automotive Electronics
Germany shows the highest growth rate in the usage of microelectronic for vehicles among well established automotive regions and countries

Usage of microelectronics for vehicles (in USD billion) and its compounded annual growth rates
Comparison across different world regions and countries in 2016 and 2021

Source: German Electrical and Electronic Manufacturers' Association (ZVEI) (2017)
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Features Markets Germany

Issue 02/2018

"Welcome to the Cluster Republic"
Issue 01/2018

• “The Secret Agents of Industry 4.0”

Issue 03/2017

• “The Power of Tiny”