

The entire world of electronics

A transparent structure for an optimum overview: electronica showcases the complete range of technologies, products and solutions in the entire electronics industry, broken down into the following exhibition sectors:

Exhibitors by application area

- Planning aid Artificial Intelligence
 - Planning aid Automotive
 - Planning aid Cyber Security
 - Planning aid e-mobility
 - Planning aid Embedded
 - Planning aid IoT
 - Planning aid LED/SSL
 - Planning aid Medical Electronics and Wearables/Healthcare
 - Planning aid Photovoltaics
 - Planning aid Smart Energy/Power Electronics
 - Planning aid Smart Home/Smart Cities
 - Planning aid Wireless
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- ➔ Fairgrounds map
 - ➔ Information about conferences
 - ➔ Information about forums
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Hybrid components

Manufacturing hybrid components has been one of the topics covered at electronica since 2014. Most of the companies in this sector present PCBs and other circuit carriers as well as EMS (Electronic Manufacturing Services).

Save the date

**electronica | World's leading trade fair
and conference for components, systems,
applications and solutions**

Date: Nov 10 - 13, 2020

Automotive

The automotive industry is looking for new growth opportunities by improving vehicle performance. Increasingly strict legal regulations are one reason for this trend. Add to that a leap in technology: New lightweight materials, miniaturization as well as digitalization and networking are making automotive electronics a rapidly growing market.

The most important topics:

- Power trains
- Active safety
- On-board power supply

→ Additional information about the Automotive focus area

Displays

A technology that makes its mark on our everyday lives: Whether in smartphones, so-called wearables or driver-assistance systems, displays are now used in a large number of applications. The demands they must meet are correspondingly diverse. For example, displays must be particularly sturdy in the industrial sector, but what counts in medicine is high resolution. And flexible displays are gaining ground in portable products.

The most important topics:

- LCDs
- LEDs
- OLEDs
- Display periphery

Electromechanics and system periphery

Whether it comes to switches, plug-in connectors or relays—this sector at electronica unites all the areas that deal with connections that conduct electricity. The topic of EMC (electromagnetic compatibility) also plays an important role here. This sector also has great deal of space devoted to casing technology. After all, a variety of housings are needed to effectively protect electronic components and PCBs from external influences.

The most important topics:

- Relays, switches, keyboards
- Interconnection components/systems
- Casing technology

Electronic design (ED/EDA)

Components are no longer created without computer-supported development tools. The necessary EDA software provides the foundation for developing other innovations in electrical engineering.

The most important topics:

- CAD/CAE tools

- Design/development systems
 - Software
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Embedded systems

Embedded systems are omnipresent: For instance, washing machines and refrigerators now also feature microprocessors and related software just like telephones, model trains and automobiles. They are just as much a matter of course in our professional lives as they are in our private lives.

The most important topics:

- Software and hardware development tools
 - System solutions
 - Memories and memory periphery
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→ Additional information about the Embedded focus sector

Electronic manufacturing services (EMS)

Until recently, providing electronic manufacturing services predominantly meant being a production-services provider that specialized in the mass production of electronic assemblies. Now these suppliers have expanded their expertise along the entire supply chain. Today it is all about securing one's ability to deliver by incorporating customers and suppliers into the process. In addition, more and more EMS specialists are performing obsolescence management. That way, when components are discontinued, they can provide suitable replacements early. Having your own automation concept as part of the company's process and workflow management is also standard.

The most important topics:

- Contract manufacturing
 - Prototyping
 - Hybrid components
 - Product development
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Semiconductors

The advent of affordable computers and integrated circuits has changed modern society. Today, integrated circuits are used in practically every electronic device, and they have revolutionized the world of electronics.

The most important topics:

- Power semiconductors
 - Microprocessors
 - Diodes
 - Transistors
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PCBs and other circuit carriers

Whether single-sided, double-sided or multilayer PCBs: With the exception of the simplest electronics products, PCBs are used nearly everywhere. A whole host of companies have specialized in contract manufacturing in this sector.

The most important topics:

- MID/3D-MID
 - Multiple-layer PCBs
 - Ceramic PCBs
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Test and measurement

Measuring techniques are becoming increasingly complex and require greater precision and increasingly higher resolutions. For this reason, the industry is placing more and more emphasis on software-based solutions that can perform functions such as simultaneously codifying, analyzing and organizing measured data.

The most important topics:

- Measuring various parameters
 - Image/pattern recognition
 - Specialized laboratory/test equipment
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Micro- and nanosystems

The use of microelectromechanical systems (MEMS) is resulting in pioneering improvements in the functionality of small microphones, cameras and signal filters. The use of MEMS is also making it possible to develop entirely new products such as affordable multiple-axis inertial sensors for measuring movement and digital optical micro-mirror arrays for industrial and medical applications.

The most important topics:

- MEMS
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Passive components

Passive components can be found in all electronic assemblies where they perform a number of tasks. Without these components such as resistors and capacitors, it would be impossible to solve many of the tasks performed by switching circuits.

The most important topics:

- Capacitors
 - Magnetic and electronic ceramic products
 - Radio-frequency and microwave components
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Sensor technology

Due to advances in micromechanics and user-friendly microcontroller platforms, sensors are used in sectors that go beyond traditional applications such as measuring temperature, pressure and flow rates. Among other things, they are used in manufacturing, to equip machines, in aviation and aerospace as well as in automobiles and in medicine and robotics.

The most important topics:

- Sensors for mechanical parameters

- Sensors for climate parameters
 - Sensors for optical and acoustic parameters
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Services

The industry's international media, from trade journals to online portals, are also represented at electronica. Beyond that, service providers round out the electronica portfolio in this sector with their exhibits, which cover everything from certification to business concepts.

The most important topics:

- Information
 - Institutions/Organizations
 - Business concepts
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Power supplies

The range of transformers, power supply solutions and power packs with AC or DC outputs as well as accessories and batteries is enormous. At electronica, you will find suppliers who can provide the right component for any application.

The most important topics:

- Transformers
 - Batteries
 - Power-management systems
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System components/Assemblies and subsystems

Increasing automation has brought about dramatic changes in drive technology. electronica showcases the latest solutions in the sector for assemblies and subsystems. This sector includes assemblies for control applications as well as servo-technology.

The most important topics:

- Assemblies
 - Multi-chip modules
 - Servo-technology/Drive elements
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Wireless

Whether it comes to Industry 4.0, the Internet of Things, location-based services or wireless payment: Solutions that are suitable for wireless communication are presented in the Wireless sector. This sector also features modules with low storage requirements such as high-frequency transceivers for use in wireless sensors or MEMS.

The most important topics:

- Cellular systems/Non-cellular systems
 - Wireless applications
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