

## Tomorrow's technologies Explore the possibilities

Developing an enhanced technological future together



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## Our purpose

Is to develop solutions with our customers that advance tomorrow's technologies.

Over the 12 countries we operate in, we're committed to working with customers to develop custom solutions that enhance our technological future, through a consultative, design-led approach. This approach works effectively by combining the following four core elements that set us apart.



## **Specialist technologies**

Our depth of expertise is within a specific group of technologies which enables us to really dedicate our focus on the technology characteristics and market applications.

### **Dedicated engineers**

Our highly trained, technical engineers work with you using a tried and tested approach to provide the right solution for our customers.





## **Technology Centres**

Working in conjunction with our field engineers, our Technology Centres provide dedicated technical excellence and support for our customers.

## **Strategic partners**

Specialising in enabling leading edge technology, our strong partnerships with suppliers ensures we are highly knowledgeable through in-depth training workshops and application expertise.



# Our range of specialist technologies

A carefully selected portfolio of specialist leading technologies to support our chosen markets. Offering you a choice of thousands of standard off-the-shelf products as well as custom solutions for complex designs, across many specialist technology areas. We'll have the solutions to fulfil your design requirements.

We'll work with you to ensure you always source the right technology for your solution – to meet both your time and budget requirements, along with providing any technical expertise for more challenging projects.

## Wireless connectivity

It's important to invest in the right wireless technology for applications, not only to meet requirements, but to future proof your designs.

As an end-to-end wireless connectivity solutions partner, we can complement your knowledge and enable you to create fully integrated solutions that will be able to solve challenges.

- Wi-Fi and Bluetooth modules
- LoRa modules
- Cellular and low power wide area (LPWA) modules
- Cellular modems and gateways
- ISM solutions
- GNSS and GPS
- SoP and SiP solutions
- Managed services and airtime



## Frequency control devices



We offer a comprehensive product range of frequency control products.

Our precision timing devices are Stratum compliant suitable for telecommunication and networking applications; such as 5G, small-cell and base stations, and high shock and vibration products for harsh environment applications; such as down-hole drilling, oil and gas, and outdoor wireless communications that endure severe conditions.

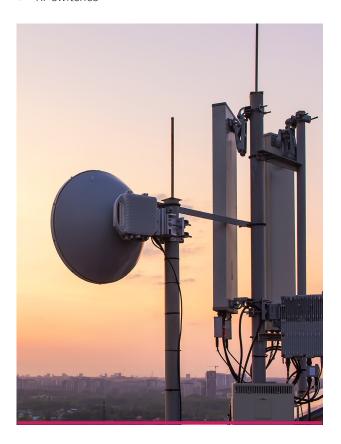
- Quartz crystals
- Real Time Clocks (RTCs)
- Oscillators
- Surface Acoustic Wave (SAW) devices

## **Radio frequency**

Our leading radio frequency products from top-tier manufacturing partners, covers all the main high-performance building blocks.

For radio frequency design including RF modules and FEMs, SOCs, mixers, filters, amplifiers, transceivers, attenuators, baluns, and diodes. We have the experience to support both established and emerging markets, matching our comprehensive product range to the continually evolving needs of the RF segment.

- Amplifiers
- Quartz crystals
- Antennas
- Filters
- Resistors
- Front-End Modules (FEMs)
- Thermal and shielding solutions
- RF switches



## Fibre optics



We partner with world-leading manufacturing brands and deliver state-of-the-art, high-reliability and innovative fibre optic solutions as part of our portfolio.

We cover all the main components of fibre optic communication technologies from devices including; optical fibres and cables, connectors, transceivers, splitters, FTTX through to fully-fledged, board level and speciality solutions for medical, aerospace, industrial networking or harsh environments.

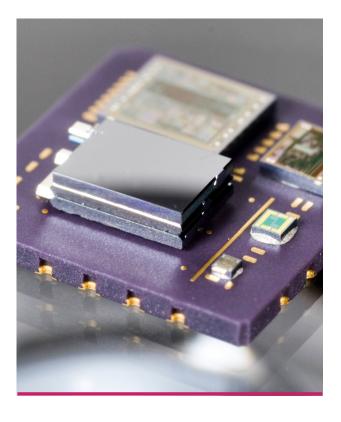
- Analogue
- Digital
- Speciality fibre
- Fibre optic cables, connectors and assemblies
- Passives
- Transceivers
- Systems

## **Sensors**

With the continuous advancement of our world, technologies are evolving and becoming more connected faster than ever. Sensors are now more essential for detecting, measuring, and monitoring just about anything.

Featuring a comprehensive range of high-quality sensors from some of the most established, innovative manufacturers offering enhanced repeatability, reliability, stability, and ruggedness across a range of demanding industries such as medical, industrial, oil and gas, automotive.

- Environmental and air quality
- Gas
- Temperature
- Position
- Speed and magnetic
- Laser
- Pressure and force



### Power



## Almost every application requires a power supply.

Our competitively priced power solutions support commercial, industrial, medical, and military markets, enabling us to deliver for all requirements, no matter how basic or stringent. We have an expansive portfolio of off-the-shelf standard power solutions including AC or DC input and DC to AC inverters ranging from 0.25W to 100kW+ for customised power units. Power mechanical form factors include embedded open frame, PCB mount and enclosed, and external AC-DC wall or desktop adapters. We also offer a range of modified and bespoke industrial power solutions.

- Internal and external low voltage
- PCB mount power supplies
- 19" rack mount/DIN rail power supplies
- Uninterruptable power supplies
- Power supply chargers
- High voltage power supplies
- IPC industrial computer power supplies

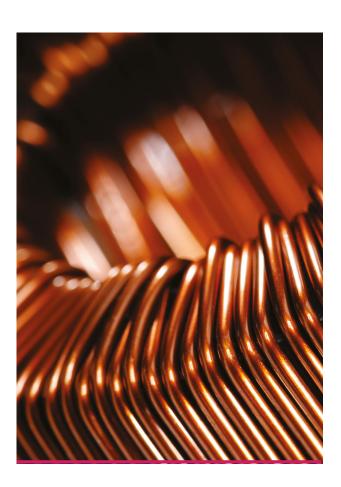
## **Magnetics**

Magnetic components are essential in any electronic application and the type used needs to be considered carefully in the early technical design stage.

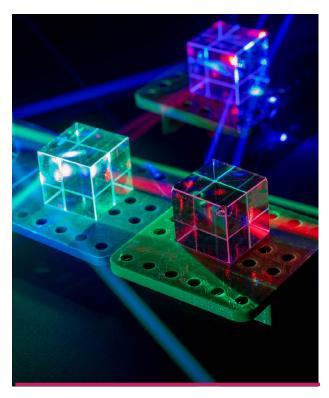
The right magnetic components for power electronics are key to robust, reliable performance. Our industrial magnetics team has a wealth of knowledge and expertise in the function of magnetic components and the materials used to build them.

Our unique collaborative approach means we can work with you to help you choose or custom design the best magnetic components for your application.

- Magnetic cores
- Magnetic components
- Thermal management/EMI shielding



## **Photonics**



We have been at the forefront of photonics solutions for over 40 years.

Working together with a partnership approach to meet technical needs, our experts have helped customers deliver photonics technology innovation across a wide range of industries. Our specialists work with engineers and scientists to understand the specific needs of their photonics systems and recommend the most suitable technology from world-class partners.

- Photonics test and measurement
- Laser and light sources
- Laser sensors
- Light modulation
- Photodetectors
- Optical components

## **Imaging**

Imaging technology is utilised around the globe to detect and act on virtually anything, whether you need to monitor an asset or use a thermal camera for predictive maintenance on an industrial process.

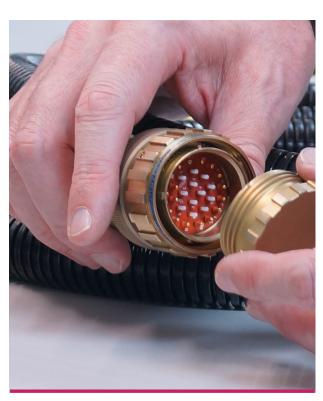
A vast range of industrial imaging tools can make your product selection process challenging. Selecting the best-suited industrial imaging technology for your application can be pivotal to the success of your project.

Our experience in imaging enables us to design and supply world-class technology for OEM manufacturer and system design and integrator providers for nearly half a century.

- Infrared imaging
- Visible light imaging



## Interconnect



Making the right connections with highperforming interconnect solutions.

From the most cost-effective components through to complete custom design services, we cover everything needed for next generation innovation and the rising demands of ever-increasing data and IoT applications that require more speed, performance, and design flexibility. We also cover high performance ranges for demanding and harsh applications: board-to-board, circular and rectangular, fibre optic cables and connectors, I/O connectors, modular, power supply, PCB, RF/coax, wire-to-board, and wire-to-wire.

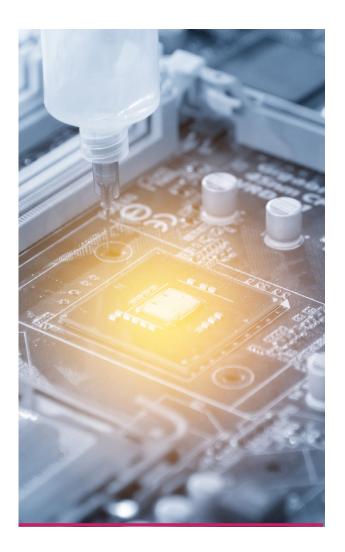
- Fibre optic solutions
- Circular connectors
- Custom cable assemblies
- PCB wire to board
- Industrial switches
- RF coax connectors

## **Embedded computing**

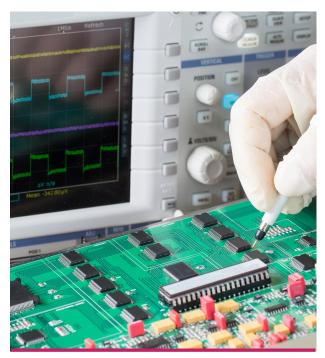
With over 30 years of experience in the embedded computing market, we understand the challenges faced by OEMs, application developers and system integrators.

That is why our world-class embedded computing technologies from our strategic partners are supported by an extensive range of services that reduce your time to market and lifetime project costs, whilst guiding you through the entirety of your project lifecycle.

- Single board computers
- Legacy
- Systems



## Electronic test and measurement



With our test and measurement portfolio, we are driven to deliver technology solutions in electronic design, test, and manufacturing.

We strive to help you overcome barriers to innovation and to transform your development processes, so you can be the first and best in your market.

**Measurement expertise:** our experts have strong technical knowledge and experience in the test and measurement industry.

**Application solutions:** we have a strong partner network of measurement technologies and services to provide you with desired application solutions.

**Service and support:** we can assist you with technical support and services, calibration, and repair.

- Electrostatic instruments
- High voltage power

## **BioImaging**\*

Acal BFi offers a unique combination of design expertise and cutting-edge technologies from its extensive imaging portfolio for life science products.

Thanks to close co-operation with our technical partners and world-leading manufacturers, we always offer the right solution for your design challenges. Our life science BioImaging portfolio includes products for bioimaging applications, EMCCD/sCMOS cameras, spectrographs, image splitters, illumination systems, confocal microscope units, TIRF and light sheet applications as well as appropriate software.

- Spectrographs
- Life science cameras
- Image splitters
- Active lighting systems
- Spinning disk confocal laser microscopy
- TIRF (Total Internal Reflection Fluorescence and Widefield Illumination)
- Light sheets





\*BioImaging technology range is only available in Germany

## Our approach

We bring experts together to advance tomorrow's technologies.

Through a consultative, design-led approach and support from our Technology Centres we're committed to working with our customers to develop semi-custom and custom solutions that enhance our technological future. Our approach to achieving this is simple: Consult. Design. Integrate.











We're focused on collaborating with our customers to meet the specific requirements of their application or component.

With a blend of curiosity and innovation, we focus on understanding and integrating the latest technological advances. Design is at the centre of our approach. Together, our technology and application-focused engineers are vastly experienced.

So, whether we're modifying or creating custom components, design is vital to any solution we create with our customers.

By successfully integrating people, products, and processes, we're sure to produce positive outcomes.

We're committed to supporting a component or application across their lifecycle. That's why we'll identify the right partners and components to meet the needs of a project.



## Our Technology Centres are a vital part of our consultative, design-led approach

We blend specialist expertise and state-of-the-art facilities to support semi-custom and custom designs.

They are driving our pursuit of continued excellence. By facilitating and developing both our expertise and capabilities in their respective technologies, they ensure we can deliver industry-leading technology solutions.

Our specialist field and Technology Centre-based engineers are committed to constantly evolving our collective expertise and capabilities. This ensures that we're able to effectively collaborate with our customers to design custom solutions that meet a project's specific requirements.





## We provide a wide scope of support in key markets

Whether the need is focused on one market or whether it spans across several markets, our expertise can provide custom support. By blending our vast market knowledge with our project understanding and technologies, we are always looking to innovate and offer creative solutions to challenges.





## **Transport**

The need for safe, sustainable and longlasting transportation systems drives our focus to develop custom solutions.

From cars and trains through to maritime vessels, we understand the challenges across the different industries and always seek to innovate.

#### Medical

Solutions in the medical sector need to be safe, long lasting, and most importantly reliable.

Through our custom and standard designs and thorough testing; we ensure all our solutions meet the strictest of medical standards.





### Renewable energy

We have extensive knowledge and experience of the renewable energy market.

Our ability to integrate a wide range of technologies enables us to develop custom solutions and support the new generation of cleaner, greener energy.



## Aerospace and defence

We have been developing aerospace and defence technology solutions for over 20 years.

In a market where products need to withstand extreme environmental conditions, we have a unique understanding of your needs and can deliver custom built solutions.



## **Security**

Accurately measure, analyse and test using a unique blend of cutting-edge test and measurement technologies.

We offer a portfolio of technology solutions across electrostatic instruments and high voltage power supplies.

## **Industrial and connectivity**

Changes taking place in the industrial market have had an impact on the structure of workspaces everywhere.

The increase in automation and connectivity focus on using advancements in technology to build resilience.



## Developing an enhanced technological future together

To benefit from our expertise and in-house capabilities, it's important that you contact us at the earliest stage possible within your project to ensure you don't needlessly spend or use resources, as well as identifying all hidden improvement potential from the start.

You can connect with our experts immediately online or face-to-face when initial project details are available. Design proposals, budget quotes and prototypes are available within a few days.

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