RF Generator & RF Match Repair, Refurbishment, Sale

12 Month Warranty
2-3 Day Standard Repair
Genuine OEM Spare Parts
Online Customer Portal
500+ Sale Units Available for Immediate Delivery

www.rfglobalsolutions.co.uk    sales@rfglobalsolutions.co.uk

SEE OUR LISTING ON PAGE 95
Welcome to the latest edition of the NMI Directory, which promotes our current members.

NMI believe that maintaining a healthy and competitive infrastructure is critical to the success of the whole sector. For this reason, we are committed to producing and distributing this directory to provide effective linkages between customers and suppliers.

About the NMI

The NMI is the premier trade association representing Electronic Systems, Microelectronics and Semiconductor Communities. We are primarily focussed in the UK and Ireland. Its objective is to help build and support a strong electronics community by acting as a catalyst and facilitator for both commercial and technological development.

Our members benefit from their participation and collaboration with each other. The NMI has a membership that spans the supply chain and includes electronic systems, fabless semiconductor manufacturers, semiconductor manufacturers, suppliers, foundries, design services, IP providers, business associates, research and academic institutions.

Want to find out more?

If you are interested in finding out more about NMI and its activities - please visit our website www.nmi.org.uk

Contact Us

Jillian Hughes
NMI Manufacturing and Supplier Network Director
jillian.hughes@techworks.org.uk

Leesa Kingman
NMI Electronic Systems Network Director
leesa.kingman@techworks.org.uk
Innovative Products for Semiconductor Processes

**Wafer Mover**
- Small footprint
- Table top
- Mapping end effector

**Wafer Sorters**
- Up to 8” (200 mm)
- 1, 2 or 4 Cassettes
- Horizontal Handling

**Semitool®**
SPS-Europe offers full refurbishment of your existing Semitool® SAT, SST, SRD or Sirius tool.

www.spincoating.com - www.esproflow.com
INDEX

Adiuvo Engineering and Training...... 14
Altran........................................ 15
Angoka....................................... 16
Applus IDIADA .......................... 17
Arm ......................................... 18
AVL .......................................... 19
Bourns ........................................ 20
Broadex Technologies ................. 21
Busch ........................................ 22
Cadence ..................................... 23
CENSIS ...................................... 24
Charntec Electronics Ltd .............. 25
Compound Semiconductors .......... 26
Technology
Compugraphics ............................ 27
CPS Europe................................ 28
CS Clean Systems ...................... 29
DFT Solutions ............................ 30
Diodes Incorporated ................. 31
Doulos ....................................... 32
DSpace ....................................... 33
Dynex Semiconductor ............... 34
Embecosm .................................. 35
EMS Particle Solutions (EMS) ....... 36
Ensilica ...................................... 37
Epivalence .................................. 38
eVince technology ...................... 39
Exception PCB ............................ 40
Exida .......................................... 41
Fabrinet UK ............................... 42
Feabhas ..................................... 43
First EDA .................................... 44
Fourteen Technology ................. 45
Huawei ...................................... 46
IBS ........................................... 47
IC Resources ............................... 48
ICAM ........................................ 49
IceMOS Technology ................... 50
Ichor Systems ............................ 51
ICsense ..................................... 52
II-VI ........................................ 53
IMEC IC Link ............................. 54
Infineon ..................................... 55
Inseto ........................................ 56
IOETEC ...................................... 57
IQE ............................................ 58
ITDev ......................................... 59
ITDev ......................................... 60
Jaltek Systems ............................ 61
KMG Ultra Pure Chemicals ......... 62
Littlefuse .................................... 63
Logos Logistics .......................... 64
Lumentum ................................... 65
Lynbond 2000 ............................. 66
Magna Power .............................. 67
Maser Engineering ..................... 68
McLaren Applied Technologies .... 69
MegaTech .................................. 70
Memsstar .................................... 71
Mentor A Siemens Business ......... 72
Moortec Semiconductor ............. 73
Newport Wafer Fab ..................... 74
Nexperia ..................................... 75
NTEK litho .................................. 76
NXP Semiconductors ................. 77
ON Semiconductor .................... 78
Pegasus Chemicals .................... 79
Phaedrus Systems ...................... 80
Phasix ESD ................................ 81
Photronics .................................. 82
Plessey Semiconductors ............. 83
PPM ........................................... 84
Presto Engineering ..................... 85
Qualcomm .................................. 86
Quartztec Europe ....................... 87
RDM Group ................................ 88
Reltech ...................................... 89
Renesas ..................................... 90
Renishaw .................................... 91
Retronix ..................................... 92
RF Global Solutions ................... 93
RF Support ................................ 94
Ricardo ..................................... 95
Roke ......................................... 96
RoodMicrotec ............................. 97
Savantech ................................. 98
Scotech ..................................... 99
Seagate ..................................... 100
Search for the Next (SFN) ........... 101
Semefab .................................... 102
Semitech ................................... 103
Semtech .................................... 104
Shin-Etsu ................................... 105
Siemens .................................................. 106
Sistem Technology ................................. 107
Sofintsys ................................................. 108
Solid State Disks ................................. 109
Sondrel .................................................. 110
SPS .......................................................... 111
SPTS Technologies ................................. 112
STREM Chemicals UK Ltd ........................ 113
STS (Simple Technical Solutions)  .......... 114
Supply Design .......................................... 115
Synergie CAD ........................................... 116
Teledyne e2v ........................................... 117
Thermco Systems .................................... 119
TKS Partnerships ........................................ 120
U4 Global Solutions ................................. 121
Ultra Electronics ........................................ 122
Verax Limited ............................................ 123
Wafer Technology ................................. 124
WNC ........................................................ 125
yieldHUB .................................................. 126

ADVERTISING INDEX

RF Global Solutions 2
SPS 4
Angoka 6
Phasix ESD 7
NMI Conference 10
NMI Suppliers Group 58
Thermco Systems 118
IoTSF Conference 127
Semefab 128
Pegasus Chemicals 129

- Smart Cities and Homes
- Critical National Infrastructure
- Industry 4.0
- Connected and Autonomous Vehicles
We make ESD easy.
Efficient, effective ESD services from Phasix

If you’re involved in semiconductor design you’ll understand the headaches that device qualification can cause. So do we. And that’s why we're here, to help you achieve ESD qualification more easily. We’re a UKAS test lab specialising in ESD and Latch-up testing and qualification to the latest standards. But we go beyond that … delivering fixtures, repairs, calibration and hardware/software development solutions to maintain and enhance your ESD test capabilities.

Whether you perform some of your tests in-house or fully outsource your Q&R processes, we can help you make the qualification headache subside. And we recognise the importance of offering you a rapid and flexible service.

We provide ISO17025 accredited HBM, MM and CDM ESD testing, giving you the confidence we will comply precisely with MIL-STD, JEDEC, AEC and ESDA standards. We’re also active members of the JS-001 and JS-002 committees, helping to achieve greater alignment of these standards with cutting edge device technologies.

As a small company ourselves, we are flexible and responsive, able to work around your needs, specifications and timescales - efficiently and effectively. And, with more than 30 years of experience you can be assured that we are competent to test your devices and take care of your equipment exactly as you ask us to.

Phasix. ESD made Easy.

For more information check out: www.phasix.co.uk
Call: +44 (0) 1420 56 56 34 or email: sales@phasix.co.uk
TechWorks wish to congratulate these firms, who were voted by the manufacturing sites to be the top suppliers in 2019 within our sector.

Compugraphics came out on top and were named the Manufacturing Supplier of the Year. Maintaining a high performing infrastructure is essential to support a healthy electronics sector within the UK. The top suppliers were identified by asking our manufacturing sites to rate all TechWorks Supplier members in the following areas:

- Customer Responsiveness
- Quality of Products
- Criticality of Product to Business
- Continuous Improvement Activities to Improve Products or Services
R&D EXCELLENCE AWARD 2019

The R&D Excellence Award celebrates innovative R&D activity involving strong Industry and Academic collaboration and completed within the last two years.

Winners must demonstrate “World beating” technology development with very high potential of being adopted by industry. The judges also recognise the R&D life-cycle and appreciate the time from discovery to implementation of new technology.

CSA CATAPULT

CSA Catapult was established to help the UK become a global leader in compound semiconductors through collaboration with both large companies, and start-ups to develop and commercialise new applications utilising this technology.

The Compound Semiconductor Applications Catapult's purpose is to deliver long-term benefit to the UK economy and accelerate UK economic growth in industries where applying compound semiconductors creates a competitive advantage and enables new products or end markets. Compound semiconductors bring many advantages in size, weight and performance when used in systems. Typically they have a much wider bandgap compared to silicon which allows devices to operate at much higher voltages, frequencies and temperatures to power the essential technologies of the future.

NMI Conference 2021

Join us for the first combined NMI Manufacturing & NMI Electronic Systems Conference.

For more information please visit: www.nmiconference.com

WHERE?
University of Warwick

WHEN?
1st April 2021
SERVICES INDEX

ANALYTICAL TOOLS & SERVICES

Altran
AVL
Charntec Electronics
Compound Semiconductor Technologies
DSpace
EMS Particle Solutions (EMS)
Exida
Icsense
IMEC IC-Link
KMG Ultra Pure Chemicals
Maser Engineering
Mentor A Siemens Business
Presto Engineering
Renishaw
Roke
RoodMicrotec
Supply Design
yieldHUB

CLEANROOM CONSUMABLES

CS Clean Systems
EMS Particle Solutions
Lynbond 2000
Solid State Disks
WNC

CLEANROOM SERVICES & FACILITIES

CS Clean Systems
EMS Particle Solutions
Ichor Systems
Memsstar
Retronix Semiconductor
SiSTEM Technology
SPS
STS

CONSULTANCY SERVICES

Adiuvo Engineering & Training
Altran
Angoka
Applus Idiada

AVL
Compugraphics
CS Clean Systems
Delta
DFT Solutions
DSpace
Embecosm
EMS Particle Solutions
Ensilica
Exida
Feabhas
FirstEDA
IBS
ICAM Engineering
Icsense
IMEC IC-Link
ITDev
KMG Ultra Pure Chemicals
Marcus Webb
Maser Engineering
Megatech
Mentor A Siemens Business
Phaedrus Systems
Phasix ESD
Presto Engineering
Renishaw
Retronix Semiconductor
RF Global Solutions
RF Support
RoodMicrotec
Savantech
Search for the Next
Sofintsys
Sondrel
Supply Design
Synergie CAD
TKS Partnerships

ELECTRONICS COMPONENT MANUFACTURING

Angoka
Bourns
Diodes Incorporated
Evince Technology

Fabrinet UK
Jaltek
Littlefuse
Magna-Power
Newport Wafer Fab
Nexperia
ON Semiconductor
Plessey Semiconductors
Presto Engineering
RDM Group
Renishaw
Search for the Next
Semefab
Semtech
Solid State Disks
Sondrel
Supply Design
Ultra Electronics

EQUIPMENT SALES & REFURBISHMENT

Charntec Electronics
Compound Semiconductor Technologies
CPS Europe
CS Clean Systems
EMS Particle Solutions
IBS
ICAM Engineering
Ichor Systems
Megatech
Memsstar
NTEK litho
PPM
Quartztec Europe
Renishaw
Retronix Semiconductor
RF Global Solutions
RF Support
Scotech
SiSTEM Technology
Solid State Disks
SPS
SPTS Technologies
STS
Synergie-CAD
Thermco Systems
U4Global Solutions
Verax Limited
WNC
EQUIPMENT SPARES, INSTRUMENTATION & CONSUMABLES

Charntec Electronics
CPS Europe
EMS Particle Solutions
Fourteen Technology
IBS
ICAM Engineering
Ichor Systems
Inseto
Megatech
memsstar
NTEK litho
PPM
Quartztec Europe
Renshaw
RF Global Solutions
RF Support
Scotech
SiSTEM Technology
Solid State Disks
SPS
SPTS Technologies
STS
Thermco Systems
U4Global Solutions

MARKETING SERVICES

TKS

MATERIALS/CHEMICALS

Epivalence
ICAM Engineering
Inseto
IQE
KMG Ultra Pure Chemicals
Pegasus Chemicals
Quartztec Europe
Scotech
Shin-Etsu
Solid State Disks
SPS
STREM Chemicals UK
Wafer Technology

OUTSOURCED CLEANROOM SERVICES (STAFF, PROCESSES)

IMEC IC-Link
IQE
Retronix Semiconductor
RF Support
Verax Limited

PACKAGING

Ensilica
Exception PCB
ICAM Engineering
ICsense
IMEC IC-Link
Inseto
Maser Engineering
Pegasus Chemicals
RoodMicrotec
Synergie-CAD
Ensilica
Exception PCB
ICAM Engineering

PASSIVE COMPONENTS

Solids State Disks

PHOTOMASKS

Compugraphics
EMS Particle Solutions
IMEC IC-Link
Photronics

R&D SERVICES

Adiuvo Engineering and Training
Altran
Angoka
Applus Idiada
AVL
CENSIS
EMS Particle Solutions
Ensilica
Epivalence
Exida
Fabrinet UK
IBS
ICAM Engineering
IQE
ITDev
Jaltex Systems
KMG Ultra Pure Chemicals
Lumentum
Maser Engineering
Memsstar
Mentor A Siemens Business
Pegasus Chemicals
Presto Engineering
Quartztec Europe
RDM Group
Roke
RoodMicrotec
Search for the Next
Sistem Technology
Sondrel
Supply Design
WNC
RECRUITMENT SERVICES
IC Resources

RELIABILITY TEST
Charntec Electronics
Compound Semiconductor Technologies
EMS Particle Solutions
Exida
Fabrinet UK
ICsense
IMEC IC-Link
Jaltek Systems
Maser Engineering
Phasix ESD
Presto Engineering
Reltech
RoodMicrotec
Solid State Disks
Synergie-CAD
Ultra Electronics

RF RELATED SERVICES
EMS Particle Solutions
Ensilica
PPM
Presto Engineering
Retronix Semiconductor
RF Global Solutions
RF Support
RoodMicrotec
Synergie-CAD
WNC

SOFTWARE AND AUTOMATION
Altran
Applus Idiada
AVL
Charntec Electronics
Compound Semiconductor Technologies
DSpace
Embescosm
EMS Particle Solutions
Exida
Ioetec
ITDev

Mentor A Siemens Business
PPM
RDM Group
Renishaw
Roke
Savantech
Sistem Technology
Sofintsys
Solid State Disks
Supply Design
Synergie CAD
WNC

TESTING
Altran
Angoka
Applus Idiada
Charntec Electronics
Compound Semiconductor
Delta
DSpace
Embescosm
EMS Particle Solutions
Exida
ICAM Engineering
ICsense
IMEC IC-Link
Maser Engineering
PPM
Presto Engineering
Renishaw
RoodMicrotec
Sofintsys
Solid State Disks
Sondrel
Supply Design
Synergie CAD
Ultra Electronics
WNC

VACUUM EQUIPMENT & SERVICES
Busch
CS Clean Systems
ICAM Engineering
Ichor Systems
Megatech
Memsstar
Retronix Semiconductor
RF Global Solutions
RF Support
Scotech
SiSTEM Technology
Solid State Disks

TRAINING
Adiuvo Engineering & Training
Altran
AVL
DFT Solutions
Doulos
EMS Particle Solutions
Exida
Feabhas
FirstEDA
Adiuvo Engineering and Training is a premier engineering consultancy specialising in embedded systems. We are recognized globally for complex systems design, professional training delivery, and content creation.

With over 20 years of experience across a range of projects in both public and private sector, our embedded systems and FPGA expertise enables us to help clients simplify and navigate the engineering life cycle. From requirement and interface capture, to electronic design through FPGA design and embedded software implementation, we guide our clients each step of the development journey.

Adiuvo has supported some of the biggest names in automotive, defence and space applications creation. Projects include the design and development of electronic circuits cards and FPGA for a European satellite. In this instance, we provided a full turnkey solution that included all design analysis to demonstrate viability for the 15-year mission life. Adiuvo is also currently working with the European Space Agency to improve the quality of FPGA IP cores used to accelerate satellite FPGA development. Adiuvo has also partnered with leading defence and automotive clients to develop high-performance FPGA-based image processing systems.

Helping to build better systems is at the core of our values. Our belief is that better systems start with great engineers. As such, we put equal expertise and heart into delivering professional training. We specialise in high-reliability and mission-critical design and have delivered hundreds of hours' worth of professional training to clients, both virtually and in-person. We can customise our courses to engineering teams of any size, large or small, whilst thoroughly testing training materials and tailoring them to meet each organisation's unique requirements.

At Adiuvo, we also know how to engage engineering audiences through content. Our popular MicroZed Chronicles blog is read by followers all over the globe. No matter the medium, we aim to deliver content that speaks to technical audiences of all skill levels, drawing on our founder Adam Taylor's passions for teaching. Top technology clients like Xilinx have worked with us on their user adoption strategies, where we have created tutorials, whitepapers, workshops and more for their target audiences and personas. Whether it be product awareness, lead generation or technology adoption, we always work with our clients to find the best content strategy for their goals.
Altran is the undisputed world leader in engineering and R&D services. The Group offers its customers a unique value proposition to meet their transformation and innovation challenges.

Altran supports its customers, from concept to industrialization, to develop the products and services of tomorrow. Altran has been working for more than 35 years with major players in many sectors: Automotive, Aeronautics, Space, Defence & Naval, Rail, Infrastructure & Transport, Industry & Consumer Products, Life Sciences, Communications, Semiconductor & Electronics, Software & Internet, Finance & Public Sector.

In 2019, Capgemini, and Altran announced a merger project in the context of a friendly tender offer to create a global leader in “Intelligent Industry”. Altran generated €3.2 billion in revenue in 2019, with more than 50,000 employees in more than 30 countries.

<table>
<thead>
<tr>
<th>Telephone</th>
<th>Contact via the website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>Contact via the website</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.altran.com">www.altran.com</a></td>
</tr>
</tbody>
</table>
Angoka provides patented IoT Security solutions for managing the cybersecurity risks inherent in machine-to-machine communications:

- Smart Cities and Homes
- Critical National Infrastructure
- Industry 4.0
- Connected and Autonomous Vehicles

Angoka’s security solutions protect devices’ identities and create trust in the networks they communicate in, thereby blocking a range of hacking attacks that try to exploit hidden vulnerabilities.

<table>
<thead>
<tr>
<th>Telephone</th>
<th>Contact via website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td><a href="mailto:info@angoka.io">info@angoka.io</a></td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.angoka.io">www.angoka.io</a></td>
</tr>
</tbody>
</table>

CONSULTANCY SERVICES - ELECTRONICS COMPONENT MANUFACTURING
R&D SERVICES - TESTING
Applus IDIADA is a global partner to the automotive industry with over 30 years' experience supporting its clients in product development activities by providing design, engineering, testing and homologation services. IDIADA's success in product development is built on a unique blend of highly experienced engineers, state-of-the-art test and development facilities and the constant drive towards innovation.

The company has more than 2,750 professionals and an international network of subsidiaries and branch offices in 24 countries, ensuring its clients receive customized added-value solutions.

**Mission**: We support our clients in their product development activities by providing them with engineering, testing and homologation services that fit their needs.

**Strategic objective**: To be recognised as the most innovative and customer-focused company, among of all those providing design and homologation services for the automotive industry worldwide.

**Strengths**

- Professional team: An international team of over 2,450 engineers and technical experts qualified and experienced in the automotive product development.
- First class state-of-the-art testing facilities: Leading-edge laboratories in various locations and the most comprehensive proving ground in Europe.
- International presence: We work closely with our clients in 25 countries to perform projects locally and to better understand each market's requirements.
- Innovation: Continuously developing new services in a strategic, integrated and controlled manner.
- Development Integration: thorough knowledge of all major vehicle functionalities.
- Design led by functionality: We conduct vehicle development projects from the beginning towards functional excellence.
- Integration of CAD, CAE and testing.
Arm is a global leader in the development of microprocessor technology that is licensed to semiconductor companies, and defines the pervasive intelligence shaping today’s connected world, delivering solutions everywhere compute happens.

Arm is the foundation of a global ecosystem of 1,765+ technology innovators who partner with Arm in a distinct business model to design intelligent computing solutions on Arm’s advanced, energy-efficient architecture. To-date, Arm partners have shipped more than 180 billion chips and Arm technologies power products ranging from sensors to smartphones to supercomputers.

Arm's portfolio of products, augmented by its ecosystem of partners, helps meet a hugely diverse range of computing needs and devices. As a result Arm’s IP is found across billions of intelligent devices in many sectors including mobile, cloud computing, 5G networks, IoT and automotive.

Arm was founded 30 years ago and was acquired by SoftBank in 2016. Arm’s global headquarters are in Cambridge, England with 43 offices in 21 countries, and more than 6,500 employees worldwide, including 3,000 in the United Kingdom.

SEE THE WEBSITE FOR MORE INFORMATION
Adaptable to Change

With more than 10,400 employees, AVL List GmbH is the world’s largest independent company for the development, simulation and testing of all types of powertrain systems (hybrid, combustion engine, transmission, electric drive, batteries, fuel cell and control technology), their integration into the vehicle and is increasingly taking on new tasks in the field of assisted and autonomous driving as well as data intelligence.

The company was founded in 1948 with the headquarters in Graz, Austria. It provides industry-leading technologies and services based on the highest quality and innovation standards to help customers reduce complexity and add value.

Our Vision and Mission


We as AVL provide leading technologies and superior services to our customers to create a better world by driving mobility trends of tomorrow.
Bourns is a leading manufacturer and supplier of circuit protection solutions.

The facility in Bedford manufacture semiconductor components which serve the power conditioning and surge protection markets. Including battery management, medical device protection, office, mobile and communications infrastructure. Our products are found in a variety of applications including Electric Vehicles, 5G infrastructure, Power Networks, RS485 and LED protection.

This local facility hosts an excellent engineering team to be able to support growing innovation on new products.

The company, with worldwide headquarters in Riverside, California, USA and nine other facilities around the world has continued growing through acquisitions and start-ups. Product lines now include precision potentiometers, panel controls, encoders, resistor/capacitor networks, chip resistors/arrays, inductors, transformers, resettable fuses, thyristor-based overvoltage protectors, line feed resistors, gas discharge tubes, telephone station protectors, 5-pin protectors, industrial signal, irrigation and petroleum protectors, CATV coax protectors, signal data protectors, indoor and outdoor POT splitters, network interface devices, and integrated circuits. Bourns, Inc. serves a broad range of markets, including telecommunications, computer, industrial, instrumentation, automotive, consumer, audio, and medical.
Broadex Technologies focuses on the development, production and sales of integrated fiber optical components.

The company is dedicated to volume applications of PLC based integrated technologies and has developed core competency in areas of PLC chip design and post-processing, device packaging and optical testing for many high-end passive devices and active devices.

At present, the company mainly serves the worldwide fiber optical network, especially the fast growing fiber to the home (FTTH) access network and the internet data center (IDC) markets, with high-quality power and wavelength management devices as well as high-speed (40G、100G) active devices. In particular, optical power splitters and dense wavelength division multiplexing (DWDM) devices have leading market shares in the world.

The company has its R&D center and sales and marketing team in Shanghai, volume production bases in both Jiaxing, Zhejiang Province, and Chengdu, Sichuan Province, and customer service center in Shenzhen.
Busch (UK) Ltd is part of the global Busch Group – one of the largest manufacturers of vacuum pumps, blowers and low overpressure compressors in the world. Headquartered in Maulburg Germany, the Busch group was founded in 1963 and now has over 3500 employees, manufacturing plants across Europe, Asia and North America and over 60 sales and service companies worldwide.

Specifically for the Semiconductor market we offer a comprehensive level of support in the following key areas.

Service: Based in East Kilbride, Busch UK has a dedicated centre to service and repair of all the main manufacturers’ vacuum pumps and products that are found within semiconductor tools and processes. Starting with dedicated collection, through decontaminations, strip and assessment, through to rebuild, testing and leak detection, we utilise the latest technologies such as 3D CMM (coordinated measuring machine) measuring arms to ensure parts are within tolerance for re-use or replacement, for right first-time service support.

Service exchange programme: We stock most key products found within semiconductor processes from leading manufacturers to ensure seamless support in the case of unexpected pump failure.

Busch UK also has a field-based service team to provide local support and service for products typically found on central vacuum systems.

Stock: We maintain a comprehensive stock level of semiconductor vacuum pumps and pump sets, spare parts, and service kits, for our own and other manufacturers’ pumps, and the associated components and fittings to join pumps to installed systems.

Abatement Systems: Busch are now able to offer a range of technical solutions for processes requiring abatement systems.

Systemised Solutions: In addition to providing long term trails to prove the performance of our vacuum pumps as alternatives to those currently installed, we also have solutions based on complete vacuum systems such as those found in central vacuum applications like pick and place.

Busch UK is an ISO 9001:2015 registered company.
The automotive industry is working toward autonomous driving vehicles. As a result, future cars will be equipped with sensor clusters, more computing power, car-to-car and in-vehicle communication technology, high-bandwidth Ethernet networks, and multiple high-definition displays. These changes create new design challenges for automotive suppliers, such as more complex electronic systems, functional safety, lack of space, reduction of power and weight (emissions), and cost constraints.

These additional challenges will push suppliers to integrate much more functionality on a chip, rather than on a PCB. As a result, suppliers will need:

- High-performance processors for advanced driver assistance system (ADAS) solutions
- Complete automotive Ethernet IP portfolio
- Extensive software ecosystem for infotainment, such as via Cadence® Tensilica® HiFi cores
- A new class of SoCs and SiPs enabled by Cadence Design IP and packaging technology
- Automated functional safety solution

Cadence's automotive design and verification solutions can help you deliver applications that can make cars safer and more reliable. We also provide an automated requirements management flow that helps you deliver silicon that complies with ISO 26262.

SEE THE WEBSITE FOR MORE INFORMATION
CENSIS is a not-for-profit Innovation Centre established to support private businesses and public sector organisations to accelerate the pace of innovation by exploiting sensing, imaging and Internet of Things (IoT) technologies.

In taking advantage of these enabling technologies, you will gather real-time information to help you make better informed business decisions to:

- Develop new products and services
- Improve operational effectiveness
- Improve competitiveness, cost reductions and profitability

We work with all types of organisations, from large multinationals and public sector bodies, to SMEs, including high tech, pre-revenue start-ups.

We also support collaborative R&D projects and industrial PhDs to both develop the skills base and generate new technologies.
## Charntec Electronics Ltd

**Telephone**: +44 (0) 2380 642 571  
**Email**: info@charntec.co.uk  
**Website**: www.charntecelectronics.com  

Wafers and packaged device handling, test and measurement systems with full service support throughout Europe to manufacturers in the semiconductor, optoelectronics, display, MEMS, optical coating industries and the R&D community.

### Mass Water Transfer Systems
- **One Button Operation**
- **High Reliability**

### Water Handling Systems
- Cassette mapping & pre-aligning.
- Precision XYZ stages and motion

### Automated Handling Systems
- **Hot-Cold** - temperature, vision and laser marking equipment.
- Device Sockets:
- Tape & Reel Systems.

### Innovative Semiconductor Equipment
- Four Point Probe & Mercury Probe
- C-V / I-V / Q-V systems.

All equipment is fully supported from the UK by our team of sales and service support personnel from first contact with customers through the sale, installation, warranty and after sales support.

### Analytical Tools & Services
- Equipment Sales and Refurbishment
- Equipment Spares, Instrumentation & Consumables
- Equipment Support Services
- Reliability Test
- Software & Automation
- Testing
CST Global is an independent, volume-producer of III-V compound semiconductors for the fabrication of photonics products.

CST Global provides both a custom foundry service, as well as a range of high-volume, standard laser products for the optical communications markets. We are an active partner in the UK and European, Technology Consortium Programme.

We work with leading companies around the world in the Telecommunications, PON, Industrial, Defence and Healthcare markets.

Custom Solutions
CST Global has developed a unique, pre-qualified process library, associated with each platform. This allows us to produce products to market requirements (such as Telecordia), reducing risk and lead-times for our customers.

Foundry Solutions
CST Global is an ISO-certified and fully compliant foundry. We currently employ 68 staff in chip fabrication at our facility in Hamilton, Glasgow. We have an ongoing, active research and development programmes in various technology areas.

Phone: +44 (0) 1698 722072
Email: salesinfo@cstglobal.uk
Website: www.cstglobal.uk

ANALYTICAL TOOLS & SERVICES - EQUIPMENT SALES AND REFURBISHMENT - EQUIPMENT SUPPORT SERVICES - RELIABILITY TEST - SOFTWARE & AUTOMATION TESTING
For over 50 years, Compugraphics has provided innovative photomask solutions and expert technical support to a global customer base. We work in close partnership with both established and start up customers to devise cost-effective solutions for a variety of industries from Semiconductor through to MEMS, Photonics and Life Sciences.

**Global Manufacturing Network**
We have 3 strategically located manufacturing sites located in Scotland, Germany and USA in addition to a dedicated repel and recertification site in Austin, TX.

**Customer Centric**
We offer 24/7 technical support to help keep our customer operations running and provide fast turn manufacturing, recertification and repel services.

**Quality**
By building quality into all our processes, we enable our customers to achieve the best possible manufacturing yield. All our sites are certified to ISO9001:2015 and both our European sites are ISO14001:2015 compliant.

**Products & Services**

- 1X Masters (3”-7”) & Reticles (1X, 2X, 2.5X, 4X, 5X, 10X)
- Large Area Masks – up to 18” x 18”
- Direct Write Wafers
- MPT™ Coating (Mask Protection Technology)
- Mask Cleaning
- Mask & Reticle Recertification

**CONSULTANCY SERVICES - PHOTOMASKS**
Concept Part Solutions, Inc. (CPS) was founded in 2007 as an OEM support company dedicated to maturing product portfolios. CPS is Lam Research’s only authorized and licensed partner for the Novellus Concept One, GaSonics and Speedfam/IPEC CMP equipment lines and is empowered to provide OEM Spare Parts, Upgrades, Service, and Engineering support for these toolsets. This unique, non-competitive partnership perpetuates streamlined and focused attention on these maturing products. We are committed to this relationship and have made it our mission to represent this partnership as a business unit of the OEM.

We continually strive at every level of our operation for perfection.

CPS has grown to become a global organization of dedicated, experienced individuals. Each area of expertise is staffed with former OEM employees of the same field that have a wealth of knowledge to share with our customers.

CPS is a global company founded on the principles of quality, integrity and respect. We continually strive at every level of our operation for perfection. We are dedicated to providing a service that exceed our customer’s expectations. This is achieved by working with our customers as partners and a continuous review of deliverables. All aspects of our operation and business systems are subject to review and continuous improvement to maintain efficiency, satisfy compliance requirements, and uphold our standard of excellence.

**EQUIPMENT SALES & REFURBISHMENT**

**EQUIPMENT SPARES, INSTRUMENTATION & CONSUMABLES**

**EQUIPMENT SUPPORT SERVICES**
EXHAUST GAS TREATMENT

At CS Clean Systems (UK) Ltd., we are the UK and ROI Distributors for CS CLEAN SOLUTIONS® and have over 20 years of experience in the semiconductor industry as your reliable partner for exhaust gas treatment, with a primary focus on dry bed absorption. In addition to the silicon and compound semiconductor industries, we also serve the photovoltaic, MEMS and other high-tech industries.

Key Advantages;

- Safe, dry chemical conversion of toxic gases to stable solids
- Proprietary CLEANSORB® media
- No handling of toxic waste for customer
- Practically maintenance free
- Local refill service

GAS DETECTION

At CS Clean Systems (UK) Ltd., we are also the UK Distributors for New Cosmos – BIE Gas Detection Equipment, offering expertise for the most demanding applications in the silicon and semiconductor, photovoltaic, MEMS, automotive and other industries.

Key Advantages;

- Proprietary sensor technology with unique cross-sensitivity capabilities
- Detection of toxic, pyrophoric, oxygen and combustible gases
- Sensor recovery after large exposure to toxic gas
- Installation, commissioning and calibration services

Please visit www.newcosmos-europe.com
DfT Solutions Limited provides Design-for-Test (DfT) Training and Consultancy across IC, Board and System test to the Electronics Design communities world wide.

Eric has over 30 years of experience in the field of design-for-test. He has implemented a wide range of DfT solutions in IC, board, Soc and MCM level test. Eric started his career working with military applications for the UK MoD, implementing customised board level design-for-test solutions.

He moved on from there to establish a test services company, Testech, in the USA for his UK based company providing a wide range of services from DfT consultancy in customer designs to full turn-key packages, delivering tester hardware and test program suites in ICT and Functional Test for a variety of ATE platforms.

Eric has implemented custom scan and BIST based solutions at IC level, boundary scan at IC, SoC and board level, and has developed customised test and diagnostic solutions for MCM applications in satellite systems. Eric has over 12 years experience in the semiconductor industry working for Hitachi and Philips/NXP.

Consultancy - DfT Solutions Limited offer a range of test technology and test strategy development consultancy services tailored to solve your Design-For-Test (DFT) and production test challenges.

Contact our experts for an evaluation of your needs and honest view of how DfT Solutions Limited can assist. Experts will work within your organisation to identify and resolve root cause issues preventing you achieving your engineering, quality or test cost goals.
Diodes Incorporated is a leading global manufacturer and supplier of high-quality application specific standard products within the broad discrete, logic, analog, and mixed-signal semiconductor markets. Diodes serve the consumer electronics, computing, communications, industrial, and automotive markets.

Diodes’ products include diodes, rectifiers, transistors, MOSFETs, protection devices, function-specific arrays, single gate logic, amplifiers and comparators, Hall-effect and temperature sensors, power management devices, including LED drivers, AC-DC converters and controllers, DC-DC switching and linear voltage regulators, and voltage references along with special function devices, such as USB power switches, load switches, voltage supervisors, and motor controllers.

Our product focus is on high-growth end-user equipment markets such as TV/Satellite set-top boxes, portable DVD players, datacom devices, ADSL modems, power supplies, medical devices (non-life support devices/systems), PCs and notebooks, flat panel displays, digital cameras, mobile handsets, AC-to-DC and DC-to-DC conversion, Wireless 802.11 LAN access points, brushless DC motor fans, serial connectivity, and automotive applications.

**Telephone**  +1 972-987-3900  
**Email**  Visit the website  
**Website**  www.diodes.com
For 30 years Doulos has set the industry standard for the highest quality training and KnowHow™ in the languages, methodologies and technologies that have defined state-of-the-art electronic system design, covering both hardware and embedded software design domains.

The essential choice for over 3800 companies spanning more than 70 countries, Doulos provides training programs on a global basis at customer locations to address project team requirements, and through a scheduled program of classes in training centers across North America and Europe.

In addition to face-to-face training, a scheduled program of live online training is available offering timely access across all time-zones deployed using unique cloud-based technology.

The business ethos is 'Service through Excellence' which, when combined with our industry-leading independent KnowHow™, makes Doulos the ideal training partner.
dSPACE is the world’s leading provider of technology for the development and test of electronic control systems. Used by every OEM and Tier One supplier worldwide, we have a significant range of products.

We have new technologies for the development of ADAS and Autonomous vehicles, with solutions for managing scenario based testing and data, including unique solutions for the gathering, categorisation and anonymization of sensor data.

We cover the areas of:

- Hardware in the Loop Testing
- System Architecture
- Controller Design
- Rapid Control Prototyping
- Automatic Production Code Generation
- Virtual Validation
- Data Management
- Engineering
- Test Benches
Dynex designs and manufactures high power semiconductors for customers around the world including the European, US and the rapidly growing Far Eastern markets.

The Power Semiconductor operation is located in Lincoln, England, manufacturing a range of high power Module and Bipolar discrete products that include insulated gate bipolar transistor (IGBT) and diode modules, IGBT/FRD die, fast diodes, fast thyristors, gate turn-off thyristors, rectifier diodes, phase control thyristors and transistors.

**Semiconductors**

Offering high power IGBT modules and bipolar products Dynex manufacture highly robust and reliable modules that are in service in over 60 different countries around the world.

**Power Assemblies**

Providing support for customers requiring more than the basic semiconductor by utilising the skills of our power electronics, mechanical and electronic engineers. The Dynex team have direct access to the company’s application, test and product design personnel to produce the optimum solution for your requirements.

**Electric Vehicle IGBT**

Our IGBT module range are designed and developed in an environment to comply fully to automotive EV industry standards AQG -324 and IATF16949 to ensure our highest reliability assurance. Typical applications for these modules include; electric and hybrid vehicles including cars, LGV and Electric PSV, motor drives and power charging equipment.

**SEE THE WEBSITE FOR MORE INFORMATION**
Embecosm was founded in April 2008.

Embecosm’s mission, was and continues to be, to deliver the best compiler technology in the world. We believe that cooperating with our customer’s and the open source community we will achieve this.

In 2018, Embecosm branched out in to providing embedded operating system services.

**Embecosm offers services in four core areas.**

**Compiler tool chain development and porting.** We develop open source tool chains (principally GCC and LLVM). This may be creation of a new tool chain from scratch or upgrading and development of an existing tool chain. A particular speciality is development of tool chains for new processors pre-silicon using models of the processor. Embecosm develops tool chains for processors of all types, but has acquired a reputation for expertise with smaller embedded processors and digital signal processors (DSP), where minimizing code size and energy consumption can be as important as maximizing code speed.

**Hardware modeling.** We focus on processor modeling, although where appropriate we develop models of peripheral IP. This includes development of instruction set simulators using tools such as CGEN and TableGen and creation of cycle accurate models using Verilator. These models are very often used as test targets when porting compiler tool chains.

**Open source tool support.** Beyond development of open source tool chains, we are able to provide support for other open source EDA tools. This involves keeping the tool up to date, fixing bugs and extending the tool. We have strong relationships with many tool development teams, and most of our maintenance work is contributed upstream to official distributions. This ensures any new functionality continues to be maintained long term.

**Embedded operating systems.** We develop open source embedded operating systems, including embedded Linux, FreeBSD, and Free RTOS, spanning from resource-limited 8-bit devices to fully featured 64-bit systems.
EMS Particle Solutions is an industry leader in Cleanroom Technology, providing our clients with a full range of solutions in Cleanroom Monitoring / Particle Detectors; Calibration Laboratory to include repairs to manufacturer's specification. Our Company provides an end to end service in the provision of designing systems, project managing systems, full maintenance and complete validation package.

The EMS calibration laboratories are regularly audited by NSAI and PMS Inc. the proven global leader in micro-contamination monitoring ensuring that best practice and quality standards are met.

As the only company in the UK & Ireland that is backed and supported by PMS, we can uniquely provide the best cleanroom monitoring advice supported by the newest instrumentation and software to meet and satisfy the constant changes and regulations in your industry.

Our Company has sole access to the latest calibration techniques, procedures, software updates, and genuine particle detector parts supplied direct from PMS. Continuous training and support from PMS centre's worldwide, enable us to ensure our customers meet all industry requirements with minimal effect on their core business operations.

All EMS engineers regularly attend EU training courses/seminars organized by NEBB, IES, CETA and Cranfield University guaranteeing the most current up to date practices are implemented.
IC Design and Supply Services

EnSilica is a leading ASIC design house with 19 years of ASIC design experience and a proven track record of delivering custom silicon solutions to OEMs and system houses.

The company has world-class expertise in analogue, mixed signal, RF and digital IC design and work with a wide range of international customers in the automotive, industrial, healthcare and consumer markets. The company also provides a complete IC supply management service, including for automotive grade production silicon.

EnSilica delivers high quality solutions to demanding industry standards and is an ARM approved Design Partner and Functional Safety Partner.

- Core Design Capabilities
- Automotive grade design
- Functional Safety compliance
- Integrated low power sensing
- Wireless IoT connectivity such as medical devices
- High voltage motor and actuator control
- RF, mmWave, satellite and Radar
- Security technologies

Request a Design Consultation

With the right volumes, ASICs reduce cost, power and size. They can also be a great way to bring your technology to market embedded inside a chip. Our ASIC design consultants can provide a technical and commercial assessment, including a budgetary estimate of the economic benefits, considering the NRE and licensing costs vs the potential BOM savings.
The vision of EpiValence is to be the leader in select niche chemicals by supplying sustainably superior value products to customers based on unique technology, backed by analysis and knowledgeable service.

EpiValence invest in research and development for key materials of interest to the electronics and the emerging flexible electronics market. Our innovative products, solutions and services deliver the needs of our customers today and in the future. Working in collaboration to develop niche chemicals and innovative materials.

The formation of strategic alliances with our customers has enabled EpiValence to proactively investigate new technologies to meet future product needs.

THE FUTURE

EpiValence continues to be recognized by our customers as the leading supplier of niche chemicals. This means executing all processes flawlessly, effectively and efficiently while bringing more value to our customers. EpiValence strives to bring more resources closer to our customers to help make companies such as yours more successful.

The continuing success of EpiValence is founded on three principles: uncompromising commitment to the highest standards of product quality, purity, and consistency; the establishment and maintenance of genuinely interactive relationships with customers; and a leading-edge, proactive approach to the rapidly evolving electronics market worldwide. As an ISO9001 and ISO14001 certified company our quality and environmental policies are guaranteed.

<table>
<thead>
<tr>
<th>Telephone</th>
<th>+44 (0)1642 924 904</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td><a href="mailto:info@epivalence.com">info@epivalence.com</a></td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.epivalence.com">www.epivalence.com</a></td>
</tr>
</tbody>
</table>
Evince Technology is developing breakthrough electron devices using synthetic-diamond – considered by many to be the ultimate material for electronics. But despite its huge undoubted potential, technologists have struggled to find a commercially viable way of making practical diamond devices.

We have found the solution to this problem. We have torn up the semiconductor rulebook and gone back to fundamentals, starting with the device that actually kick-started the electronics revolution at the turn of the 20th century – the thermionic valve (or tube).

Using modern semiconductor manufacturing techniques, coupled with our proprietary Embedded Electron Emission technology, we make solid-state electron devices and sources at the microelectronic scale. These unite the best characteristics of valves with the efficiencies of modern semiconductors. By fully exploiting diamond’s unique properties, our devices promise performance levels that far outstrip anything available today.

Our first generation of products will focus high performance zero-wear cold cathodes. How our technology will be applied is down to the device developers and manufacturers who want to work with us to gain first mover advantage using our unique practical approach. We’re open to talk business.
Exception is a European time critical and technology driven printed circuit board manufacturer.

Specialists in quick-turn, low to medium volume, standard multilayer, flex, flex-rigid and high density interconnection (HDI) solutions for a wide range of industries including aerospace, medical, telecommunications, defence and automotive.

<table>
<thead>
<tr>
<th>Telephone</th>
<th>+44(0)1684 292448</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td><a href="mailto:info@exceptionpcb.com">info@exceptionpcb.com</a></td>
</tr>
<tr>
<td>Website</td>
<td>epcbonline.com</td>
</tr>
</tbody>
</table>

Our technical and production skills and experience combined with fast turnaround capability, has made Exception the ideal partner of choice for customers requiring prototype, new product Introduction (NPI) and low to medium volumes.

**Technical Capabilities / DFM Guidelines**

- Exception PCB has an extensive range of capabilities to support our Global Customer base.
- £250K of raw materials stocked on site.
- Access to “exotic” laminates within 3 working days – Rogers/Arlon/Taconic/PTFE – if not stocked.
- DFM guidelines linked to capabilities and CAM Engineering “Traffic Light System” to indicate Standard/Technical or R&D Capabilities.
- 4 dedicated Engineers for Technical Support
- 8 CAM Engineers
- 5 Process Managers

**Services**

- Prototype
- Manufacturing
- One Stop Shop
- Offshore
Founded in 1999 by several of the world’s top reliability and safety experts, exida is the world’s leading product certification and knowledge company specializing in automation system safety, alarm management, cybersecurity, and high systems availability.

With over 20 locations worldwide, exida’s global presence ensures there is always someone close by ready to help your team be successful.

Companies around the world turn to exida for help and guidance related to functional safety, alarm management, and control system cybersecurity standards implementation.

Our team of industry leading engineers have over 500 years of combined knowledge, with extensive experience in Chemical, Petro-Chemical, Oil & Gas, Subsea, Metals and Mining, Pharmaceutical, Pulp & Paper, Power Utilities, Automotive, Robotics, and Machinery applications. This unique combination of technical depth and hands on experience enables exida to provide practical solutions to address your most difficult challenges.

exida is the choice of leading companies when it comes to implementing and achieving compliance to the global standards relating to the IEC 61508 and IEC 61511 standards for functional safety for the process industry; IEC 62443 for industrial control system cybersecurity; ISA-18.2 for alarm management; ISO 26262 for functional safety of automotive, IEC 62061 and ISO 13849 for safety of machinery, and ANSI/RIA 1506 for robot safety.
Dedicated to delivering world class electronic manufacturing services including high complexity pcba through to full product assembly utilising our advanced UK capabilities, with a focus on high quality, high reliability sectors and NPI / fast-turn / small-med volumes requirements.

**Aerospace & Defence**
Fabrinet UK is at the forefront of providing electronic solutions for land and flight based communications, detection, battlefield and sensor programmes

**Oil & Gas Electronics**: The oil and gas industry has developed to such a point that it now has a business critical need for electronics that can work reliably in harsh conditions, at much higher temperatures for longer!

**Communication Architecture**: With many technologies being shared across a variety of high reliability markets and applications, Fabrinet UK's contract manufacturing services are able to support the on-going technology demands within this sector

**Automotive and Transportation Services**: Supporting safety critical and information electronic solutions in the automotive and rail industry. Fabrinet UK has the experience and knowledge you can trust.

**Green Energy**: As global OEM’s continue to develop complex and depending on the application lower technology products, it is clear that the services offered by Fabrinet UK are key to the launch and successful share of market sales.

**Semiconductor & IC Development**: As both fab and fab-less companies vie for supremacy in their chosen niche markets, be it GPS, wireless, mobile gaming or power management and processing, the need for smaller component packages (silicon) with greater I/O becomes a critical business need and technology driver

**LED Lighting Solutions**: The LED Lighting industry is fast growing and Fabrinet UK are playing a key part of, supporting UK and offshore manufacture of commercial and hazardous LED lighting solutions

**Medical Technology**: Fabrinet UK and its offshore partner are leading the way in Europe with design and electronics manufacturing services, offering an effective end-to-end capability for the design and manufacture of complex electronic systems to the healthcare market

---

**Fabrinet UK**

**Telephone**: 01249 814081

**Email**: salesenquiries@fabrinet.co.uk

**Website**: www.fabrinet.co.uk
We can help you improve your embedded software development skills.

Feabhas already improves the embedded software development skills within the world’s leading electronic companies, such as Samsung, Arm, HP and Intel.

They rely on Feabhas competency assessments, face-to-face training, and consultancy, to help their embedded software developers and engineers to:

- increase product quality and speed to market
- reduce product failures caused by bugs
- stay at the forefront of best practice for embedded systems development and testing.

As a result, these organisations are better placed to:

- recruit talented software developers and identify skills gaps
- provide practical ongoing learning and development from industry experts
- measure the impact of the training received.

Choosing Feabhas as your partner for embedded software development improvement gives you access to:

- On-site team training, around the globe
- Public training for individual engineers in the UK
- Pre and post course assessments
- Graduate training programs
- Re-skilling from other software development and engineering disciplines

The range of embedded software training includes courses for:

- Programming languages (C, C++, and Python)
- Operating systems
- Infrastructure technologies

Additional services from Feabhas

But it's not just about training teams or individuals. Feabhas also provides services to support organisations looking to develop or improve their own embedded software competence strategies. See our website for more details.

Address

Feabhas Ltd
PO Box 4259
Marlborough
SN8 9FJ
UK
Established in 2002, FirstEDA is a highly responsive value-added distributor of EDA tools and training in Europe.

The company comprises a team of highly skilled engineers and is the trusted partner-of-choice for a number of EDA companies; each of which has a range of innovative and versatile products. As experienced engineers, FirstEDA ensures the solutions we promote and support are fit-for-purpose and able to tackle today’s most demanding challenges. Moreover, we work extremely closely with each of our suppliers and their product specialists so, on the rare occasion when additional support is required, we provide a fast turnaround.

FirstEDA ensures that the solutions it supplies and supports integrate seamlessly into the end-users’ design flows, and that quantifiable benefits result.

**As seasoned EDA engineers we have a wealth of expertise, making FirstEDA an extremely capable company.**

We are engineers. We live and breathe EDA, and we understand what our customers are trying to achieve. Our considerable capabilities enable us to provide support and guidance throughout the entire development lifecycle. From top-level system design and verification down to software machine code and hardware description languages, we have hands-on experience. We support customers developing applications in a variety of sectors, including aerospace, automotive and medical. We have an impressive working knowledge of HDL languages, as well as systems languages. We are also familiar with the EDA industry’s latest verification methodologies plus the methods contained therein. In addition, we are well-versed in design and verification for safety- and mission-critical applications and have a working knowledge of the industry standards. We also have considerable experience in the use of platforms for in-hardware, at-speed design verification – a requirement of DO-254.
Fourteen Technology was created in 2005 to supply and support British and Irish manufacturers with the best second source spare parts available.

We work closely with customers and suppliers to provide a route for buying good quality parts at a reduced cost.

**WHY FOURTEEN TECHNOLOGY?**

We're all trying to save money, but sometimes finding out how and where to save money is hard to do, especially when you've got to get product out of the factory. The solution providers we work with are experts in their field and have a wide range of parts and services to help you save money on your spare parts spend.

Fourteen Technology is the exclusive sales representative for Applied Ceramics and SPM AG in the UK and Ireland. Since starting out solely in the Semiconductor industry, we now support customers from the Photonics, Research and Development and Industrial coatings industries.

**HOW WE WORK**

We work directly with engineers and buyers to understand their needs and help them identify where to reduce cost. We provide our customers with ongoing support and technical assistance, and we are always happy to talk about potential new cost saving opportunities.
Founded in 1987, Huawei is a leading global provider of information and communications technology (ICT) infrastructure and smart devices.

We have more than 194,000 employees, and we operate in more than 170 countries and regions, serving more than three billion people around the world. We are committed to bringing digital to every person, home and organization for a fully connected, intelligent world.

To this end, we will: Drive ubiquitous connectivity and promote equal access to networks; Provide the ultimate computing power to deliver ubiquitous cloud and pervasive intelligence; Build digital platforms to help all industries and organizations become more agile, efficient, and dynamic; Redefine user experience with AI, making it more personalized for people across all scenarios, whether they’re at home, in the office, or on the go.

Huawei is a private company wholly owned by its employees. Through the Union of Huawei Investment & Holding Co., Ltd., we implement an Employee Shareholding Scheme involving 104,572 employees. Only Huawei employees are eligible to participate. No government agency or outside organization holds shares in Huawei.

Research & Innovation

Looking to the future, Huawei’s innovation will transition as we move from an Innovation 1.0 era to an Innovation 2.0 era. In Innovation 1.0, we have focused on innovations in technology, engineering, products, and solutions to address customer needs. In Innovation 2.0, driven by our vision, we will expand our efforts to seek breakthroughs in basic theories and develop new basic technologies.
For thirty years, IBS has assembled the expertise, tools and skills required to meet the diverse implantation needs of global clients.

Every year, the company continues to develop this technology to keep pace with the growing needs of the industry: implantation expertise.

Additionally, the development of services dedicated to equipment maintenance and spare parts has naturally led IBS to be able to respond to almost any implant related challenge. Knowledge and mastery of a wide variety of equipment types and vintages also gives IBS the capability to propose innovative and cost saving upgrades and retrofit services.

IBS's positioning as a manufacturer of new-generation equipment, such as PULSION® and IMC™ validates its leadership in ion implantation technology, and offers its clients unique expertise to accompany them effectively in facing today's and tomorrow's challenges.

**Pioneering spirit to serve our customers**

Thanks boundless curiosity and passion, IBS has earned a position among ion implantation leaders. We are the only company to date offering both outsourced and manufacturing services and state-of-the-art equipment.

Thanks to a visionary outlook, IBS maintains its lead, whether with the PULSION® machine through its success during tests at CEA-LETI and at the premises of a world leader in microelectronics, or with the IMC™ system, whose sales growth give it a key role in advanced technologies such as sensors or silicon carbide power electronics.

IBS's international presence supports the agile deployment of expertise and local support, necessary to make it a valuable ally for its customers.

**CONSULTANCY SERVICES - EQUIPMENT SALES & REFURBISHMENT - EQUIPMENT SPARES, INSTRUMENTATION & CONSUMABLES - EQUIPMENT SUPPORT SERVICES - R&D SERVICES**
In the endless search for talent, your company needs a business ally who understands the technology recruitment landscape.

For 20 years, IC Resources has built a reputation for delivering insightful and relevant recruitment solutions to the technology community. This stems from our business evolving hand-in-hand with the industry itself, therefore we are uniquely placed to understand the challenges companies face, offering the expertise and insight necessary to overcome them.

Our specialist consultants work in dedicated teams across Hardware, Software, Creative, Sales and Marketing, IT and Supply Chain recruitment.

If you’d like to discuss the employment marketplace, salary levels, your recruitment strategy or indeed your career, please contact us.
Founded in 1964, iCAM Engineering are a second generation family run business.

The company specialises in the manufacture of high quality Stainless Steel fabrications, to a wide range of industries. Supplying a diverse product line which includes: Sampling Cylinders, Sensor Housings, Probes, Sampling Systems, Gas and Fluid Handling Systems, Manifolds, Pigtails, VCR Welded Assemblies, Thermowells, Coolers, and Cyclones.

The company also has extensive experience in the manufacturing of high integrity chemical cylinders. Producing its first cylinder back in 1986, using a combination of manual and orbital welding techniques. Today we rely on the same proven procedure and skills to produce thousands of full penetration sealing welds, essential for the containment of highly unstable compounds.

iCAM Engineering Ltd are an ISO 9001 registered company and a U.S. Department of Transport approved manufacturer and RIN testing facility (I337).

The safe containment of inherently dangerous compounds is of critical importance. Our production and quality control systems are key to the integrity of our vessels. Production and inspection procedures are closely monitored and audited. Our skilled production team are diligent and motivated, they understand the importance of their roles, within the process. All testing on cylinders is independently witnessed, in accordance with specification 4B. Pressure calculations and witnessing are provided by Steigerwalt Associates of Allentown P.A. Raw materials are sourced from N. American or European mills only, via approved stockholders. All materials are physically and chemically tested to ensure that properties are verified against material certification. Each cylinder is subjected to an extensive inspection routine, both internally and externally.
Established in 2004, IceMOS Technology is focused on establishing itself as a best-in-class provider of cost effective/high performance Super Junction MOSFETs, MEMS solutions and Advanced Engineering Substrates.

IceMOS has developed an innovative deep trench MEMS Super Junction High Voltage MOSFET that outperforms competing solutions with a much simpler, lower cost process.

IceMOS is a global leader in the development and manufacture of high quality MEMS product substrates as well as advanced engineering substrates based on our wafer bonding technology. Our core expertise is in Wafer Bonding, Deep Reactive Ion Etch (DRIE) and wafer shaping.

We utilise our expertise in DRIE to offer trench etch and refill services to customers on bulk Si substrates or on SOI. Combining both our SOI and trench etch and refill technology, we offer customers a unique dielectrically isolated substrate preparation service.

IceMOS will work directly with the customer to develop a unique specialized product if this is not already on offer. It is with this, that IceMOS’s product portfolio remains unrivaled.

Encompassing over ten years of expertise, unsurpassed manufacturing skill and the latest developments in technology, IceMOS ensures that each customer receives outstanding service from the point of initial enquiry through to product delivery.
Ichor Systems Ltd. is a preferred supplier to Lam Research and the holder of their Global License to sell selected refurbished Etch Equipment models for Metal, Conductor and Dielectric applications.

Ichor’s technical expertise and rigorous processes provide the Ichor Advantage for highest quality & lowest risk to meet customer’s expectations when purchasing refurbished Lam Research Etch Equipment. All our systems go through the same testing and quality process expected from an OEM certified manufacturing environment.

In addition to supplying equipment Ichor are Proactively Managing Obsolescence on Legacy Platforms as this is a high priority for many manufacturers in the IoT/MtM space looking to manage their equipment lifecycle.

With a team of highly qualified Lam Research Trained Engineers, and locations around the world, we are ideally placed to meet customer requirements in the ≤200mm Equipment Market.

**Product Range**

| Alliance     | 4420XL, 4520XLe, 4720XL, 9400, 9600 |
| TCP          | 4420, 4520, 4520i, 4520XLe, 4720    |
| Rainbow      | 490, 590, 690, 790                   |
| AutoEtch     | Edwards 40/80 & Lam 2080            |
| TCU          |                                      |

**Services**

- Fully Refurbished System Packages
- Hardware & Process Support
- Contracts
- Turnkey System Installations
- System Training
- Customer Technical Support
- Process Development
- Legacy System Spare Parts Supply
- Obsolescence Management

**CONTACT US**

https://www.ichorsystems.com/refurb

**Telephone:** +44 1355 222 166  |  **Email:** otangney@ichorsystems.com

**CLEANROOM SERVICES & FACILITIES**
- EQUIPMENT SALES & REFURBISHMENT
- EQUIPMENT SPARES, INSTRUMENTATION & CONSUMABLES
- EQUIPMENT SUPPORT SERVICES
- TRAINING
- VACUUM RELATED EQUIPMENT & SERVICES
ICsense is Europe's premier IC design company. ICsense's core business is ASIC development and supply and custom IC design services.

ICsense has the largest fab-independent European design group with world-class expertise in analog, digital, mixed-signal and high-voltage IC design.

The company develops and supplies customer exclusive ASIC solutions for the automotive, medical, industrial and consumer market compliant with ISO9001, ISO13485, IEC61508-ISO26262.

HOW WE DIFFERENTIATE

Innovative and high-complex designs at low risk through our unique expertise in analog, mixed-signal and high-voltage IC design.

ICsense has Europe's largest fab-independent mixed-signal design group. Analog and digital teams under one roof.

Exclusive ASIC supply to secure your competitive advantage. Every ASIC is made for and sold to 1 single customer only.

COMPANY VALUES

- **Innovation:** Build first-of-a-kind ASICs right first time
- **Excellence:** Pursue the highest technical quality and reliability
- **Trust:** “We do what we say and we say what we do”
II-VI Incorporated, a global leader in engineered materials and optoelectronic components, is a vertically integrated manufacturing company that develops innovative products for diversified applications in the industrial, optical communications, aerospace & defence, life sciences, semiconductor capital equipment, and consumer markets.

Headquartered in Saxonburg, Pennsylvania, the Company has research and development, manufacturing, sales, service, and distribution facilities worldwide. The Company produces a wide variety of application-specific photonic and electronic materials and components, and deploys them in various forms, including integrated with advanced software to support our customers.

**MARKETS**
- Consumer Electronics
- Communications
- Life Science
- Materials Processing
- Semiconductor Capital Equipment
- Aerospace & Defence
- Automotive
- Rare Metals

**PRODUCTS**
- Optical Communications
- Optoelectronic Devices
- Optics
- Laser Systems
- Laser Processing Tools
- Laser Components
- Electronic Devices
- Epitaxial Wafers
- Silicon Carbide Substrates
- Thermoelectrics
- Ceramics & Composites
- Rare Metals

**Contact Information**
- **Telephone**: +44 1572 771 778
- **Email**: info.uk@ii-vi.com
- **Website**: www.ii-vi.com

SEE THE WEBSITE FOR MORE INFORMATION
Imec is a world-leading R&D and innovation hub in nanoelectronics and digital technologies.

The combination of our widely acclaimed leadership in microchip technology and profound software and ICT expertise is what makes us unique.

By leveraging our world-class infrastructure and local and global ecosystem of partners across a multitude of industries, we create groundbreaking innovation in application domains such as healthcare, smart cities and mobility, logistics and manufacturing, energy and education. As a trusted partner for companies, start-ups and universities we bring together more than 4,500 brilliant minds from over 85 nationalities. Imec is headquartered in Leuven, Belgium and has distributed R&D groups at a number of Flemish universities, in the Netherlands, Taiwan, USA, China, and offices in India and Japan.

Further information on imec can be found at www.imec-int.com.

Imec.IC-link helps innovators, entrepreneurs and universities realize their ideas in silicon by providing low-cost prototyping, volume production and system integration of electronic assemblies.

Our world class industrial service experts in nanotechnology offer tailored support across the entire IC value chain, from imagination to mass production, and collaborate with leading partners in the semiconductor ecosystem.

Imec.IC-link is based in Leuven, Belgium and is a TSMC value chain aggregator for Europe, North America, Russia, Brazil and India.

Further information can be found at www.imec-int.com/en/iclink.
Infineon Technologies AG is a world leader in semiconductor solutions that make life easier, safer and greener.

Microelectronics from Infineon is the key to a better future.

**AUTOMOTIVE**

Semiconductors are essential to realizing key trends like electro-mobility, automated driving and secure, connected cars.

We are the leading semiconductor partner in the fast-changing automotive world, based on our system knowledge coupled with our passion for innovation and quality.

We are a key driver in the ever-advancing pace of digitalization in the automotive industry.

We shape the future of mobility with microelectronics enabling clean, safe and smart cars.

SEE THE WEBSITE FOR MORE INFORMATION
Inseto is a leading technical distributor of equipment and related materials to the semiconductor, microelectronic & advanced technology sectors, as well as adhesives for electronics, automotive & industrial manufacturing.

Our advanced equipment and materials are available from specialist technology divisions, which offer carefully selected, technically innovative, high performance products, comprising:

**EQUIPMENT DIVISION:** Provides fabrication, assembly, test & inspection equipment, including: manual and automated lithography equipment for exposure, resist coating and development, plus semiconductor furnaces, wafer bonders, probing systems, dicing saws and diamond scribing machines, die bonders and sorters, inspection and metrology equipment, ultrasonic wire bonding machines, plasma cleaners and etching systems, vacuum solder reflow ovens, material testers for wire pull and shear testing etc.

With several hundred equipment installations throughout Europe, our dedicated team of specialist engineers provides each of our customers with a full technical and after sales support programme.

**CONSUMABLE DIVISION:** Provides fabrication and packaging materials and services, plus machine assembly consumables. Our products include: semiconductor & silica wafers, sub-contract wafer bumping grinding & dicing, wires & ribbons for bonding and soldering, precision stampings & preforms, hermetic metal & ceramic packages, thick film materials, thin film substrates, thermal dissipation materials, welding electrodes, plus bonding wedges, capillaries, die collets & dicing blades etc.

**ADHESIVE DIVISION:** Provides technically advanced adhesives for bonding, sealing & encapsulation throughout the UK & Ireland. Exclusively representing DELO Industrial Adhesives, our adhesive division has the technical expertise to advise on all your project requirements. Products include an extensive range of UV cured or light activated Epoxies, light cured Acrylates, light / heat cured Epoxies, dual curing materials, light / Anaerobic curing Adhesives, 2 part Polyurethanes, 1 & 2 part Epoxies, Cyanoacrylates and single part Silicones.

<table>
<thead>
<tr>
<th>Telephone</th>
<th>+44 (0)1264 334505</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td><a href="mailto:enquiries@inseto.co.uk">enquiries@inseto.co.uk</a></td>
</tr>
<tr>
<td>Website</td>
<td>inseto.co.uk</td>
</tr>
</tbody>
</table>
 Based in Sheffield UK, Ioetec specialise in IoT cybersecurity, ensuring data is trusted, authenticated and secure.

A complete, fully scalable SaaS platform offering true end to end data security for IoT.

It’s easy to install, OS and comms systems agnostic and designed particularly for resource constrained devices. We make the process of implementing IoT security simple, requiring no specialist expertise, assisting device manufacturers in compliance with regulation such as GDPR, and providing their customers with data they can trust and rely upon.

IoT devices are difficult to secure, because they are often confined by computational, memory and battery power. It builds in cost and requires combined specialist expertise in cybersecurity and communications. Because of this, manufacturers of IoT devices often ignore the security provision because it is difficult to do, thus creating vulnerabilities in networks. Ioetec solves this problem by providing a simple to implement, computationally efficient security solution.

We have developed an innovative use (patent in application) of standard protocols to encrypt and authenticate data generated by IoT devices. The technological development has been influenced and guided by UK Government Cyber intelligence agencies.
Benefits of being a member of the NMI Supplier Group include -

- Invitations to participate in exhibitions at manufacturing sites and NMI technical conferences.

- Preferential rates to attend and exhibit at international trade shows.

- Opportunities to attend business networking events where knowledge is shared and business opportunities can be explored.

- Trade body representation within the Electronics industry at local and national Government levels.

- Inclusion in this “NMI Manufacturing Suppliers Directory” which is circulated to our Equipment Engineering, Purchasing and Facilities Engineering contacts.

If you are a supplier and would like to join us then please contact :

info@techworks.org.uk
The IQE Group is the leading global supplier of advanced wafer products and wafer services to the semiconductor industry. IQE’s market leadership and competitive advantages enable the group to provide a unique service that is second to none.

**Our vision**

It is IQE’s vision to maintain and grow our established position as the leading global provider of advanced semiconductor materials – the global “go to” compound semiconductor materials specialist.

**Our strategy**

To realise this vision requires the ability to deliver “enabling technology”, which meets performance and price points, and which can be delivered reliably, on-time, every-time with the ability to scale rapidly.

**Our delivery**

IQE is extremely well positioned to rise to this challenge, having built the broadest portfolio of materials IP in the industry with a unique platform for secure low-cost supply. Moreover, IQE has developed a reputation to match – for excellence and reliability. We have been unwavering in our vision and have developed a robust strategy which gives us confidence in our ability to execute our technology roadmap.

---

**Contact Information**

**Telephone** 02920 839 400  
**Email** sales@iqep.com  
**Website** www.iqep.com
ITDev delivers engineering excellence through fully managed software and electronic design services. We thrive on building relationships, developing insight and delivering value to our clients.

Specialists in embedded software, electronic engineering and systems engineering, our engineers are experienced in both hardware and software. We have a wealth of experience in a range of commercial and open source technologies, including C, C++, Python, PHP, Java, VHDL and SystemVerilog for FPGAs.

From our UK based offices, we develop:

- embedded systems (including DSP)
- device drivers for Linux and Android operating systems
- mobile applications (e.g. for Android)
- PC and web-based applications
- FPGA and PCB solutions

We are defined by a set of shared values: Empathy, Trust, Considered, Passionate and Smart. These drive our decision making, the way we work and our relationships.

What does this mean for you? We will ..

- work to find the best fit for you and your project
- be open, dependable and ethical at all times: you’ll have access to our Client Portal so you can track progress, set priorities and monitor time spent
- architect our designs with care and make use of continuous integration and test automation to deliver high quality work as efficiently as possible
- impress at every opportunity, build our knowledge and experience so we can solve your problems as efficiently and quickly as possible
- take a smart approach to projects, reducing risk, delivering value sooner and providing more flexibility

Our clients have this to say about us:

‘One of the most professionally competent engineering services I have worked with. From first engagement through to project completion, on time and within budget, fully meeting our expectations and technological challenges.’ Dolby

‘We have used ITDev for many years and given the opportunity will use them again. They are always very professional and equally as important they are friendly and helpful. Other outsource companies I have used could learn lessons from them.’ MediaKind
Jaltek is a leading electronics technology solutions provider, based in the UK, offering a comprehensive range of vertically integrated design and manufacturing services tailored to meet our customer’s highly diversified business requirements.

We offer a tool box of solutions which can either be utilised as a fully integrated solution or a single service. From conceptual design, PCB Layout and NPI, through manufacturing and test of PCBA’s, to final product realisation, Jaltek supports products through-out their complete lifecycle.

- 3 SMT lines with 1 dedicated to NPI & Prototyping
- PCB Layout
- Selective Solder
- Manual Assembly workmanship
  - Standards up to IPC-A-610 C Class 3 (+)
- Conformal Coating
- Cable Assembly
- Pressfit
- Extensive test suite
- X-ray
- Environmental Temperature and Humidity Test Chamber
- State-of-the-art 3D inspection
- Box-build & High Level Assembly
- System Integration
KMG produces and distributes specialty chemicals and performance materials for the Semiconductor, Pipeline and Energy Services and Industrial Wood Preservation markets.

Our proven acquisition growth strategy has consistently enhanced shareholder value by optimizing the profitability of acquired businesses and driving free cash flow growth. We specifically seek to acquire proven, niche specialty chemicals with significant market share, long product life, high barriers to entry and low capital expenditure requirements. We currently have two reporting segments: Electronic Chemicals and Performance Materials.

**Electronic Chemicals**

KMG is a leading global supplier of high purity process chemicals, serving major semiconductor manufacturers in the U.S., Europe and Asia. Our key products include high purity acids, solvents and other wet chemicals used to etch and clean silicon wafers in the production of semiconductors.

**Performance Materials**

KMG’s Flowchem subsidiary is a leading manufacturer of pipeline performance products, serving many of the world’s leading pipeline operators. Flowchem specializes in manufacturing and supplying drag-reducing agents (DRAs), which are highly effective in optimizing pipeline flow and lowering pipeline operating costs. Flowchem’s broad family of DRAs enable the company to provide the most appropriate and effective solution for its customers’ needs. As the second largest DRA provider globally, Flowchem serves more than 50 pipeline operators worldwide, as well as midstream service providers and distributors.

Through our Val-Tex and Sealweld subsidiaries, KMG is a leading global provider of high-performance products and services for industrial valve and actuator maintenance. We also offer routine and emergency valve maintenance services and technician training for many of the world’s leading pipeline operators. We are dedicated to enabling safe and optimal valve operation while preventing costly, unscheduled downtime at customer facilities and pipelines.
IXYS is now part of Littelfuse.

Together, IXYS and Littelfuse will leverage their combined technology portfolios and expertise to enhance customer value.

Headquartered in Milpitas, CA, and Leiden, Netherlands, IXYS has gained a worldwide reputation as a premier power semiconductor manufacturer. Its diversified product base of specialized power semiconductors, integrated circuits and RF power is utilized by more than 2500 customers worldwide, ranging across industrial, transportation, telecommunications, computer, medical, consumer and clean tech markets.

Learn more about IXYS’ 30-year history, its founder Dr. Nathan Zommer, its divisions and current growth.

PRODUCTS

- Power Semiconductors
- Integrated Circuits
- Microcontrollers
- RF Power & Systems
- Stacks, Subsystems and Assemblies
- Display Drivers
- Green Energy & Solar
We are committed to providing global, solution-focused logistics services.

We are a trusted partner for complex move management projects, proving ourselves to be a world-class resource time and time again. From one-off machine moves to complete facility relocations, we understand the challenges of delivering your project smoothly and on time.

Our customer-centred approach provides you with peace of mind when it comes to moves, freight, packing and storage. We work across a range of sectors, including, but not limited to, life sciences, construction, facilities management, power generation, and manufacturing.

Established in 2003, Logos Logistics has grown to become a leader in move management solutions.

For more information, or to arrange for a quotation, please contact us below.

ISO 9001, ISO45001, NMI, Safe Contractor, Constructionline, UKWA

We are a Living Wage employer.
Lumentum delivers innovative photonics to accelerate the speed and scale of cloud, networking, advanced manufacturing, and 3D sensing applications.

The Lumentum portfolio of innovative photonic products enables agility, flexibility, and speed throughout communications networks.

Lumentum products address the staggering and growing amount of data traversing networks and being processed and stored in large data centers. Much of this data traffic is driven by cloud-based applications including streaming video to mobile devices, PCs, and smart TVs.

Leveraging its photonics expertise, Lumentum produces high-performance commercial lasers, including kilowatt fiber lasers and ultrafast solid-state lasers used in the manufacture of products with exacting standards including automobiles, consumer appliances, semiconductor chips, mobile phones, tablets, and PCs.

Lumentum is a leader in providing diode lasers for high-volume 3D sensing applications in the gaming and PC markets and is now driving the technology to enable adoption in mobile devices and other next-generation applications.
LYNBOND 2000 was formed in 1988, as agents for a number of companies providing equipment for the electronics industry.

We felt that with the benefit of our experience we could source and supply consumable products targeted at specific work functions. To highlight this, we subsequently reformed as LYNBOND 2000, the company now in operation today. Operating in the UK and Europe supplying to many industries.

Lynbond 2000 is committed to providing a professional and personal service offering the most comprehensive range of Cleanroom consumables, disposable apparels and reusable products for controlled environments and safety products. Equipment range consists of anti-contamination photoresist extractors, refurbished parts for SVG track equipment, external level sensor systems, stainless steel pressure vessels, microscope incubators and temperature control units.

Our web-based platform provides a quick reference to our core stock of products, however, Lynbond 2000 can source a vast array of products not shown on our website through our network of global suppliers and partners. If there are any products that you require within your cleanroom or controlled manufacturing areas please contact us directly at solutions@lynbond2000.com

- Non-woven wipers from class 1 (compatible) to class 1000
- Facemasks
- Tacky mats
- Gloves from class 10 to class 1000
- Conductive and anti-static assembly gloves
- Writing paper and notebooks
- Cut resistant gloves
- Cleaning/mopping systems
- Finger cots
- Coveralls and lab coats (polyolefin and polypropylene )
- Launderable cleanroom garments (from class 1)
- Mob caps
- Safety glasses
- Over shoes and over-boots
- Swabs
- Clean room pens
Magna-Power designs and manufactures robust programmable power products in the USA that set industry standards for quality, size, and control.

The company's experience in power electronics is reflected in its 1.25 kW to 2000 kW+ product line, quality service, and reputation for excellence. Today, you will find Magna-Power's standard products at its thousands of customers worldwide, aiding in the manufacture of electric vehicles, simulating solar arrays for development of inverters, steering magnets for particle accelerators, powering radar systems, driving traction controllers for locomotive development, or at a wide range of Universities for cutting-edge energy research.

Magna-Power Electronics products are proudly made in the USA at the company's vertically integrated, company designed and owned 73,500 sq. ft headquarters in Flemington, New Jersey. All engineering, manufacturing and North America product servicing is performed at the company's headquarters.

Magna-Power Electronics utilises vertical integration in its manufacturing process for complete control over quality, cost, and lead-time of its made-to-order products. As the company has grown, more operations have been internalised. Vertical integration enables Magna-Power to manufacture a very broad line of sophisticated electronic products, while still maintaining industry leading lead-times. Housing engineering and manufacturing teams in the same facility forces strong collaboration between the two teams for continual process and product improvements.
MASER Engineering is an independent engineering service company. Since 1993 we have offered Reliability Test and Failure Analysis Services to the semiconductor and electronic systems industry.

Whether your company is active as Fabless Semiconductor Manufacturer, IC Design House, Electronic Manufacturing Service (EMS) Provider or Original Equipment Manufacturer (OEM) we can support you with your daily Reliability Test or Failure Analysis challenges.

Maintaining and improving our quality level is one of our strengths. Since June 2000 we are ISO9001:2015 certified. In September 2005 we proudly became the first company in the Netherlands with an ISO/IEC 17025:2005 accreditation for reliability tests and analysis of electronic components and electronic (sub)systems.

We have the equipment and know-how available to perform timely & efficient reliability tests and failure analysis on your semiconductors, electronic components, (sub) systems or complete products.
Part of the McLaren Group, McLaren Applied’s vision is to pioneer a better future by uniquely applying data science, design and engineering; drawing on its 30-year heritage in electronics and data systems expertise into sectors including Automotive, Public Transport, Aviation and beyond. We support automotive manufacturers by providing the latest technology that drives product innovation and differentiation putting them ahead of the curve.

Technology is the bedrock of all McLaren Applied’s automotive products. We understand that each market has specific needs, and our products are holistic, scalable world-class solutions that harness our expertise in Electrification, Telemetry, Control and Analytics, and Virtual Product Development.

We have developed highly optimised safety critical systems in electrification energy storage and power delivery for automotive applications.

We provide a holistic telemetry, control and analytics solution that is optimised for every stage of the end-to-end data journey.

This journey begins with precision data capture via sensors, followed by accurate and reliable data processing through high-integrity controllers, and concludes with using telematics modules to offboard data that can be processed in real time by our analytics toolsets.

These analytics toolsets lie at the very heart of our ability to provide detailed condition and decision insight when a product is in service. By combining advanced simulation techniques with the data platform, we provide clear and robust insights, so you can understand complex environments, optimise decision making and reduce vehicle development time.

We work to the highest safety standards such as ISO26262 and have an established supply chain producing 15,000+ automotive components a year. Contact us to see how we can help you innovate.

SEE THE WEBSITE FOR MORE INFORMATION
Megatech Limited is the largest independent supplier of equipment and services to the semiconductor and thin film industries in the UK. Established in 1973, the company has built a well-founded reputation for the supply of quality products, in-depth technical expertise, and excellent customer service.

As an exclusive UK outlet for a number of US and European companies, Megatech sells to end users, researchers, and OEMs as well as supporting all products with both field and in-house service.

Megatech have a modern headquarters in the Midlands with engineers located strategically around the UK.

Megatech Europe Limited has offices and stock facilities in the ROI for Mainland Europe Customers and MegaCold LLC has Cryopump Sales and Service facilities in the USA for US, Canada and South America. We also have MegaCold Sales agents in SE Asia.

- Brooks Instrument
- Entegris
- Comdel
- Ferrotec - Ferrofluidic Seals
- Verity Instruments
- BeamTec
- Polycold Systems
- MegaCold Cryopumps
- InstruTech Vacuum Gauges
- Quartz Monitor Crystals

- Thermal Evaporation
- UVOCS Ozone Cleaning
- Angstrom Sciences
- inTaq
- Mactronix
- Lytron Chillers
- CO2 Snow Jet Cleaning
- ONDA Corporation
- FloTron
- Used & Refurbished Equipment
Since 2003, memsstar has served as Europe’s premier process and equipment supplier of etch and deposition solutions for semiconductor, MEMS and related technology manufacturing processes. The company innovates best-in-class solutions based on Applied Materials, Lam and Novellus platforms combined with its proprietary memsstar® systems for MEMS applications.

memsstar offers full manufacturing, design, process engineering and demo capabilities. ISO 9001 certified, the company is recognized for its remanufacturing excellence, technology development, process guarantees, as well as extensive service capabilities to support its full range of remanufactured semiconductor and proprietary MEMS equipment.

memsstar fosters a collaborative spirit with our customers, research partners and industry organizations, sharing our knowledge, experience and expertise to support the development of the semiconductor and MEMS industries.

We create value for our customers and stakeholders by delivering innovative, proven and cost-effective products and services used in the development and manufacture of microelectronic devices.

We are the wafer fab equipment technology partner of choice for semiconductor and global MEMS organizations by supplying high-quality proprietary and remanufactured etch and deposition equipment and services.

memsstar innovates and delivers etch and deposition equipment, as well as process solutions for semiconductor and MEMS manufacturing and R&D. We support our customers from lab to fab – with equipment and processes based on proven platforms.

**How memsstar serves the global MEMS markets:**

- Developed MEMS-dedicated processes for manufacturing using semiconductor equipment
- OEM for memsstar® tools optimized for MEMS-specific manufacturing
We enable companies to develop better electronic products faster and more cost-effectively. Our innovative products and solutions help engineers conquer design challenges in the increasingly complex worlds of board and chip design.

Technology Solutions

Mentor has the broadest industry portfolio of best-in-class products and is the only EDA company with an embedded software solution.

Valor MSS

One platform supports your entire manufacturing process

Valor seamlessly integrates the entire PCB manufacturing process with one easy-to-manage platform. Available as an end-to-end suite, each module may be also installed separately.

Valor IoT Manufacturing

Valor® IoT Manufacturing is a robust, secure plug & play IoT device and data acquisition solution for electronics manufacturing, featuring:

- Built-in interfaces to the majority of automated and manual stations on the shop floor
- Advanced machine and process control capabilities
- Highly scalable infrastructure
  Industrial-grade hardware, high performance, security, and data integrity
Moortec was founded to accelerate our customer’s ability to dream big and innovate compelling technological solutions within a range of competitive marketplaces.

At an early stage we had a vision to succeed by simply keeping our customers ahead of the pack through the delivery of relevant, well-considered and robust embedded monitoring technologies. Over the last decade it has become clear to us that within the semiconductor industry there is a huge opportunity for solutions to deliver deep insights and understanding the way chips are made and also the dynamic conditions within. For us the motto of, ‘See, Control, Optimize’ for the lifetime of chips and products has never been more relevant.

Over the years we have nurtured and proudly supported a global customer base and are now setting the standard of in-chip sensor, in-field analytics and product-level optimization solutions.

Thanks to our team’s imagination, world class engineering expertise and determination, Moortec has become the go to leader for in-chip monitoring technology. We have brought about a new way of thinking toward maximizing device performance, power utilization and reliability across many platforms, including Data Center, AI, HPC, Automotive and Consumer. We understand that you don’t succeed by chance but instead by refusing to be complacent.

We're on a mission to continually innovate high performance, highly featured and well supported products that are relevant to many fast-moving technology industries. We have created a solid foundation upon which we are building great solutions for the future that will significantly benefit our customers, society at large and the earth’s global environment.

**Telephone** | +44 1752 875130  
**Email** | info@moortec.com  
**Website** | www.moortec.com
The Newport Wafer Fab facility has unparalleled experience with analog/advanced power and compound semiconductor technologies.

Current capacity is 32,000 wafer starts per month of 0.18µm to 0.70µm wafers with an expansion capability within the existing envelope to 44,000 wafers starts per month.

The site has developed and deployed a wide range of semiconductor technologies ranging from MOSFETs / TIGBTs using wafer thinning methods to CMOS, analog and compound semiconductors.

NWF offers fast time to production due to Newport’s experience in ramping technologies and developing derivatives.

Semiconductor processing on silicon has been used for 50+ years. Combinations of new materials from the periodic table have now been developed which have the following benefits:

- Improve silicon performance by 50x for higher speeds, lower losses and lower battery consumption.
- Can be used for different applications such as light sensing and emitting across a large spectrum (photonics), RF applications, sensors and medical applications where battery life is critical

**ADAPTABLE LOADING** : The facility has a strong capability in managing complex loading requirements. Products range from high-volume automotive applications to low-volume specialized end-user applications.

**PROCESS INTEGRATION** : Newport Wafer Fab transfers MOSFET / TIGBT / Silicon Photonics processes and can develop derivatives processes and devices from initial concept/design stage through production. Initially acting as a wafer foundry (1992-2002), the site has well developed effective systems for technology transfers.

**AWARD WINNING FAB** : Newport has received multiple industry awards including the United Kingdom’s NMI factory of the year and the EEF Environmental Achievement Award, EFF Energy UK Award and numerous ESTNET Awards for Engineering talent.

**CS CONNECTED COMPANY** : Newport Wafer Fab are a critical component in the SE Wales Compound semiconductor cluster.
Nexperia is a leading expert in the high-volume production of essential semiconductors, components that are required by every electronic design in the world.

The company’s extensive portfolio includes diodes, bipolar transistors, ESD protection devices, MOSFETs, GaN FETs and analog & logic ICs. We became independent at the beginning of 2017. Focused on efficiency,

Nexperia produces consistently reliable semiconductor components at high volume: more than 90 billion annually. Our extensive portfolio meets the stringent standards set by the automotive industry. And industry-leading small packages, produced in our own manufacturing facilities, combine power and thermal efficiency with best-in-class quality levels. Built on over half a century of expertise, Nexperia has over 12,000 employees across Asia, Europe and the U.S. supporting customers globally.
Total Lithography Solutions

NtekLitho was established in 2003 by CEO Gordon Macintyre. With over 80 years combined experience in the semiconductor industry we are committed to providing a full line of services which include but are not limited to; refurbished equipment sales, refurbishment services, service contracts, replacement parts and bespoke training.

We pride ourselves on being one of the leading aftermarket supplier of these services and we believe that no other aftermarket supplier in the world has the unique focus or experience in working specifically with Nikon steppers. Whether you are looking for a specific or a specially engineered part NtekLitho can meet and exceed your needs and expectations.
Leading the transformation towards safe and securely connected mobility

NXP’s domain-based architecture intelligently groups together the functions that let cars sense, think, and act-to manage complexity and separate concerns related to security, upgradability, and functional safety.

**ADAS and highly automated driving:** Enabling the capabilities of sensing and thinking, while ensuring the safe and secure operation of the vehicle.

**Infotainment & In-Vehicle Experience:** Delivering high-performance next-generation infotainment systems for a safer, more convenient, and enjoyable user experience.

**Connectivity:** Enabling vehicles to interact with each other and with the infrastructure for safer, greener, and more efficient roads.

**Body and comfort:** Versatile and adaptive vehicle features that ensure the safety and comfort of everyone on board.

**Powertrain and vehicle dynamics:** Improving fuel economy and enhancing performance with robust and safe automotive qualified solutions.

**Vehicle networking:** Securely connecting and upgrading everything in the vehicle for an improved user experience.

**Functional safety and automotive security:** At the heart of automotive innovation, our functional safety and security programs are essential to make self-driving cars a reality.

SEE THE WEBSITE FOR MORE INFORMATION
SOLUTIONS MADE TOGETHER

We collaborate with engineers to bring their world-changing ideas to life.

AUTOMOTIVE As a market leader in energy efficient solutions for powertrain and traction control and the #1 supplier of CMOS image sensors for Autonomous Driving, our team of Vehicle Electrification experts are eager to help engineers turn dreams of safer, carbon-free transportation into reality.

IoT We’re passionate about helping smart-network innovators build a more connected world. Equipped with a cutting-edge lineup of low power, compact sensing and wireless products for Smart Home & Building and Industrial Automation, we partner with engineers to create IoT solutions that lead the way to a smarter future.

INDUSTRIAL & CLOUD POWER We are one of the world’s leading innovators in Solar & Energy Storage, Datacenter Power and Robotics. We work with engineers to power their ideas and advance the manufacturing technology industries of the 21st century, creating safer, more energy efficient, and more productive infrastructures together.

ON Semiconductor®

<table>
<thead>
<tr>
<th>Telephone</th>
<th>+44 (0)1344 371988</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>Visit the website</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.onsemi.com">www.onsemi.com</a></td>
</tr>
</tbody>
</table>

ELECTRONIC COMPONENT MANUFACTURING
Pegasus Chemicals manufacture and purify high purity chemicals for delivery in bespoke designed packaging for semiconductor, materials science and innovation technology applications.

Our extensive knowledge and investment in research and development provide the basis for innovation, to provide products with consistent purity and unique capabilities for niche applications. Our product portfolio is wide and varied with a specific focus on intrinsic purity, which is underpinned by our in house analysis.

We can measure ppb level metals and oxygen impurities and ensure the delivered product is suitable for the application as required.

We provide technical support to develop sustainable, consistent precursors with custom made packaging for specific applications.

Our technical and product application knowledge in ALD and (MO)CVD applications has been honed through the manufacture and supply of specialist chemistry with many years experience. Our technical service team is available to discuss your deposition requirements to tailor the product with the application:

- High purity precursor manufacture
- Precursor design
- In house analysis
- Refill of customer owned containers
- Technical application knowledge
- Global supply

The global requirements for technology innovation are more demanding with greater emphasis on smaller, faster and smarter ways of supporting our day to day living. To enable technology to support these developments, the supply of small scale innovative chemistry in specialist packaging is vital.

Primary research and development within the material science and semiconductor markets in the UK and EU has specific emphasis on emerging technologies. Pegasus Chemicals is a critical part of the core European supply chain to enable EU innovation and long-term growth in emerging technologies. Our mission at Pegasus is to achieve excellence in service, quality, technical expertise and value for our customers.
As the Internet of Things begins to explode, it is clear that system security is becoming a priority. As the UK’s leading specialist in supporting engineers at all stages of embedded safety critical and high-integrity projects, Phaedrus Systems is uniquely positioned to work with companies to create the development process best matched to their needs.

Consultants have experience working on automotive, rail and aerospace applications, meeting standards such as IEC 61508 SIL4, and D0178B.

When it is appropriate Phaedrus will recommend other tools than those it represents. The website also holds an expanding library of documents covering the issues in developing secure systems.

**Backing this are tools for all stages of a project**

- Requirement definition
- Capture
- Modelling and tracking
- Estimation software
- SIL3 RTOS and run-time RTOS analysis tools
- Hi-rel embedded database
- Software and compiler analysis
- Middleware including SSL stack
- Test, verification and debugging tools

When it is appropriate Phaedrus will recommend other tools than those it represents. The website also holds an expanding library of documents covering the issues in developing secure systems.
Phasix is an established semiconductor device ESD test centre located in Hampshire, Southern England.

We have been involved in ESD test for more than 30 years with extensive experience of developing and maintaining ESD test equipment.

We also have experience of how the various Standards Committees work.

Our business philosophy is based on adding value to our customers businesses by taking care of aspects of their work which are not necessarily part of their core competence.

Phasix focuses on Semiconductor Quality and Reliability, helping our customers to ensure that their products are sufficiently robust to guarantee reliability in their intended end-use.

We understand our customers need for ESD testing in a timescale which fits into their, often very tight, design schedule. For this reason we offer a highly responsive and flexible service with an emphasis on getting the maximum useable information about ESD sensitivity in the shortest practicable time.
A Global technology solutions leader established in 1969, for over 50 years we have pioneered and delivered the best in photomask manufacturing and technology. Our specialized products deliver world-class performance, and we continue evolving to support leading-edge technologies for both integrated circuits (IC) and flat panel displays (FPD). Our global presence, product breadth and technological prowess are unmatched. We invest in state-of-the-art tools and work in partnership with you to ensure we meet all your photomask requirements.

Photronics local support centre based in Manchester UK, manufacturing operations in Bridgend UK and Dresden Germany offer local, friendly service and support to our European customers. With 11 global manufacturing facilities across Europe, North America and Asia, customers have access to our global network via local support.

From Copy masks and routine wafer production at 250nm and above, to advanced sub-wavelength reticle development at 5nm and below including EUV. Special anti-stick coatings, cleaning/re-pellicle/recertification services, in addition to our quartz recycle program, enhance our green commitment to protecting our environment. Innovative service initiatives such as our proprietary design software CyberMask™ and global manufacturing control system MaskTrac™, customers can easily place orders, review SPC data, and track delivery status. Front-end data handling experts prepare mask data and rapidly begin the manufacturing process helping Photronics define the standard for customer service in the photomask industry.

Investments in new technology and partnerships have propelled Photronics to the forefront of both IC and FPD photomask manufacturing. We’re continuously adding tools to support growing requirements – expanding both capacity and capability in our local and global network. Our robust technology solutions are recognized worldwide and are allowing customers to build state-of-the-art technologies in a cost effective manner.
Plessey is working with a world leader in consumer technology who is paving the way with innovative next-generation Augmented Reality and wearable applications, based on advance microLED display solutions.

Challenging existing display technologies, microLEDs are propelling forward a vast and emerging market, changing and stimulating the way we interact with our devices, both for information and entertainment.

Drawing on over a decade of semiconductor and optoelectronics expertise, Plessey has developed an award-winning, unique and proprietary GaN-on-Silicon platform and monolithic process at its state-of-the-art manufacturing facility where it continues to expand the bounds of possibility in this exciting market segment.
Pulse Power and Measurement Ltd (PPM) was founded in 1994 as a distributor of pulse power systems, power electronics components and EMC test equipment. Since 1995 and the acquisition of Electro Optic Developments Ltd, PPM has manufactured RF over fibre equipment.

Today, PPM designs and manufactures a wide range of RF over fibre systems, which allow RF electrical signals to be transmitted over fibre optic cables. PPM now has over 24 years of experience in the development, manufacture and distribution in a wide range of world-class products.

The company has developed into the four current-day divisions. ViaLite Communications, PPM Test and PPM Systems are specialists in the RF over fibre industry. PPM Power is the fourth division and is a distributor for pulse power and power electronic components.

PPM has been an accredited “Investors in People” organisation since 2004 and sees the training and development of its people as a key element to the success of its business model. In November 2016, PPM was very proud to receive the Gold accreditation of Investors in People.

Guaranteeing its quality processes, products and workmanship, PPM is certified to the latest ISO quality standard: ISO 9001:2015. The company has been certified to ISO 9001 since 2005.

Telephone 01793 784 389
Email sales@ppm.co.uk
Website www.ppm.co.uk
Presto Engineering provides ASIC design and outsourced operations for semiconductor, industrial and IoT device companies, helping its customers minimize overhead, reduce risk and accelerate time-to-market.

The company is a recognized expert in the development of industrial solutions for RF, analog, mixed-signal, optics, sensor network, payment systems and secured applications - from design to tape-out to delivery of finished goods. Presto’s proprietary development environment, OCEAN platform, coupled with extensive back-end expertise, gives its customers a competitive advantage.

The company offers a global, flexible, dedicated framework, with operations across Europe, North America and Asia.
Billions, maybe trillions of times a day...

That’s how often people around the world touch something made better by Qualcomm. It could be the smartphone in your pocket, the tablet on your coffee table, that wireless modem in your briefcase... it could even be that navigation system in your car or that action camera strapped to your chest.

Who is Qualcomm, and what do we do? We are engineers, scientists and business strategists. We are from many different countries and speak many different languages. We come from diverse cultures and have unique perspectives. Together, we focus on a single goal—we invent breakthrough technologies that transform how the world connects, computes, and communicates.

While many of our breakthroughs reside “under the hood” of technology familiar to us today, our inventions have transformed the world in a big way. They have helped propel mobile to the forefront of the technology world and brought wireless innovations into new industries. They have created new opportunities for ecosystem players—the wireless device makers, the operators, the developers and the content creators of the world. And more recently, our inventions and breakthroughs have inspired fresh, new ideas from those companies—large and small.

We've been called dreamers, inventors, rebels, risk takers, pioneers and geeks. We embrace those labels because in many ways, they're true. We dream big. We invent bigger. And most importantly, we often do what many thought was impossible.

VISIT THE WEBSITE FOR MORE INFORMATION
Our site in East Kilbride, Scotland has been manufacturing and supplying Quartz into the Semiconductor Industry for over 25 years, with Thermocouples being added as a core product for over 15 years.

Quartztec took over the site in 2016 and has retained the experience and knowledge of the workforce and has invested heavily since this time, to add to the business in terms of personnel and assets. Key investment into the site allows us to offer Mechanical, Thermal, Laser and Surface processes and recently enabled us to secure qualification for ASM and Kokusai products.

We are proud to be in a position to offer the following products and services into the industry:

- Quartzware for 6", 8" and 12"
- Profile & Spike Thermocouples
- Epitaxy Quartz & Thermocouples
- Repairs and Refurbishments
- Laser Processing
- Development and Consulting

The team here at Quartztec look forward to continuing to support the industry with our knowledge, experience and high quality products and services.
RDM Group, formed in 1993, supplies world class products and engineering services to the automotive, rail and aerospace industries.

We have developed an excellent reputation and track record as a tier 1 supplier for high quality, innovative engineering solutions. RDM supplies some of the world’s largest OEM’s, is IATF 16949 accredited and operates to ISO 26262 automotive safety standards.

RDM Group is a wholly owned business with over 80 employees throughout our UK, USA, Australian and Canadian offices where we can offer clients ground up vehicle design, development and manufacturing services. Our Advanced Engineering Centre based in the UK, which was officially opened in 2014, supports our autonomous vehicle projects and cutting edge development work on a host of advanced components and systems.

We work with customers from the earliest possible development stage right through to volume production. The RDM approach is extremely customer focussed and based on design, innovation and world class performance.

<table>
<thead>
<tr>
<th>Telephone</th>
<th>02476 635818</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td><a href="mailto:ask@rdmgroup.co.uk">ask@rdmgroup.co.uk</a></td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://rdmgroup.co.uk">http://rdmgroup.co.uk</a></td>
</tr>
</tbody>
</table>
Reltech Limited founded in 1976 is an Independent Test Laboratory, Burn-In and HTOL system manufacturer serving the Semiconductor and Microelectronics industries.

Reliability and Qualification test services are provided to industry leading Fabless Semiconductor companies and Integrated Device Manufacturers.

Reltech’s vast experience in qualification testing and HTOL system design and manufacture enables it to offer its customers full turn-key solutions covering all aspects of semiconductor reliability, including qualification planning, die and package level testing such as High Temperature Operating Life (HTOL), Highly Accelerated Stress Test (HAST), Low temperature Operating Life (LTOL) and Temperature Humidity Bias (THB).

Reltech develops, designs and manufactures all of the required test hardware and software used for the complete qualification testing of its customer’s products prior to volume manufacture. For Board Level Reliability, Reltech provides a full HALT turn-key solution including consultancy, training, product analysis, strategy, HALT and Qualification testing.
At Renesas, we make things - it's part of our DNA to be inventive, innovative & creative. We're providing solutions for our customers, who are all part of the connected world.

OUR VISION

We create relationships of trust with customers and partners through our commitment, professionalism & high quality which ultimately creates the Renesas brand that we take so much pride in.

OUR MISSION

Our mission statements were created in synch with our business strategies and they act as a bridge between concrete, specific business strategies and our high-level Vision.

All mission statements place Customer Value at the core of our activities.

AUTOMOTIVE SOLUTIONS

As the number one supplier of vehicle control microcontrollers and SoC products for the automotive industry, we are focused on helping our customers realize their vision for the future of the automobile. With billions of SoCs and MCUs supplied to our global customers, Renesas is also a proven partner, true to our policy of “Quality First.” Our technologies address the latest trends in fuel economy, engine efficiency, driver assist systems, body control, infotainment, connectivity, security and reliability.

SEE THE WEBSITE FOR MORE INFORMATION
Renishaw is one of the world’s leading engineering and scientific technology companies, with expertise in precision measurement and healthcare.

We supply products and services used in applications as diverse as jet engine and wind turbine manufacture, through to dentistry and brain surgery.

Our metrology products help manufacturers to maximise production output, to significantly reduce the time taken to produce and inspect components, and to keep their machines running reliably.

In the fields of industrial automation and motion systems, our position measurement and calibration systems allow machine builders to manufacture highly accurate and reliable products. For example, our position encoders ensure accurate linear and rotary motion control in a wide range of applications from electronics, flat panel displays, robotics and semiconductors to medical, precision machining and print production. These include magnetic encoders, incremental optical encoders, absolute optical encoders and laser interferometer encoders.

We are also a world leader in the field of metal additive manufacturing (3D printing) with machines that produce parts from metal powder.

Our healthcare technologies are helping within applications such as craniomaxillofacial surgery, dentistry, neurosurgery, tissue and biofluid analysis. These include engineering solutions for stereotactic neurosurgery and the supply of specially configured metal additive manufacturing systems for medical and dental applications.

We have 80 offices in 36 countries, with over 4,500 employees. Around 94% of sales are derived from exports and our major markets are the USA, China, Germany and Japan. The majority of our R&D and manufacturing is carried out in the UK.
Retronix Semiconductor is an experienced global engineering services and general contractor company serving the semiconductor and high-tech manufacturing industries. We offer flexible labour, equipment installation, tool decontamination, harvesting, and relocation, as well as facility support for the world's leading OEMs and IDMs.

Since 1992, we've achieved recognition and respect for our turnkey equipment relocation and facility management services. Our innovative and cost-effective approach means we dedicate our time to developing and implementing the most efficient solutions to the challenges faced by your business. Whether it's a full fab de-installation, single-tool relocation, short or long-term project, we pride ourselves in getting your job done right and on time. Our primary service groups include:

### Parts & tools
We can help you harvest inventory, pack and store surplus parts and stock, or provide the essentials for your projects.
- Tool harvests and surplus stock
- Parts refurbishment
- Photographed inventory
- Secure delivery

### Resourcing & staffing
Offering a flexible, motivated, and highly qualified workforce – we work quickly to match your business needs.
- Targeted recruitment
- Streamlined on-boarding
- Staff training and development
- Payroll and benefits

### Equipment relocation
We provide a fully-integrated tool and equipment extraction, relocation, and installation services.
- Decommission and decontamination
- Crating and rigging
- Rebuild and testing
- Turnkey Service

We’re also experts in: PM kitting management | Cable testing | OEM module assembly and testing | RF refurbishment and repair | And many other areas!

Retronix Semiconductor is headquartered in Arizona with additional locations in Texas, Colorado, Ireland, Scotland, and Israel. We are located right where our customers are – all over the world. If you’re looking for quality, reliable, value-added services performed by dedicated industry experts – choose Retronix Semiconductor.
RF Global Solutions was established in 2004 to supply low cost RF Generator and RF Match repairs for the semiconductor industry. We are now an active member of TechWorks and have won the prestigious Top 10 Supplier of the year award in 2011, 2012, 2014 & 2015.

The company has achieved this by providing low cost, high quality RF repairs and the sale of refurbished RF equipment into the Semiconductor and Medical industry. We are now an internationally renowned brand, with customers utilising our services from across the globe.

Each customer receives an excellent level of service from our friendly and personable customer service team, who repair, install, service and train to the highest possible standards. Quality service is a key component of our organisation, who are well regarded and an international leader in RF technology.

Key industries presently supported by RF Global Solutions include Semiconductor, Photovoltaic, Medical, Food Packaging and Food Sterilisation. RF Global Solutions are continuing to reach into new foreign markets while looking after our existing clients meeting their requirements and exceeding their expectations.

The company is highly focused on the following areas:

- Customer responsiveness
- Quality of repair work and sales units
- Bespoke industry leading warranties
- Fast lead times as standard (2-3 Days)
- 24 / 7 online customer portal
- Continuous improvement activities

RF Generators – RF Matching Networks – RF Sealing Equipment – RF Cables – RF Accessories - RF Test Kits – DC Power Supplies
RF Support provides an excellent cross platform service on all RF generators and matching networks used in the plasma processing industries.

We are able to offer a one stop solution to all your RF needs. Repairing several different OEM’s equipment, including Applied Materials, LAM, Mattson, Matrix, Tegal, Advanced Energy, ENI, Comdel and Trazar to name a few. Helping to reduce the numbers of individual vendors the engineer or even purchasing have to deal with.

Processes are all designed around ISO9001 ensuring you have complete confidence in each repair. Our excellent reliability record is constantly being monitored to maintain standards.

We offer full traceability of your equipment from delivery to us through the repair process and back to your stores. All this provided 24hrs via your Customer Zone web portal.

Repairs are all fully backed with a RTB warranty which is one of the best in the industry and can be configured to suit individual fab requirements.

RF Support was established in 2003 to be the leading RF Repair centre for semiconductor plants worldwide. We recognised that the fabs were being forced to examine costs in order to survive. This led us to establish a total quality approach.

It is acknowledged that the major cost involved in unplanned RF equipment failure is not the actual repair cost it is firmly with lost wafer processing time. To that end we set in motion a quality system to significantly improve the reliability of this equipment.

It is much more cost effective to have highly reliable high quality repairs. We set out to achieve this while continuing to trim all margins to ensure our customers can maintain their cost effectiveness.

A number of different strategies have been implemented.

- Targeting ISO9001:2000 designed processes
- Quality Improvement Program
- and arguably the most fundamental - Fine attention to detail
We are a global strategic engineering and environmental consultancy. Our mission is to create a world fit for the future, meeting the challenges within the markets of transport, security, energy, scarce natural resources & waste.

Our work extends across a range of market sectors – including automotive (passenger cars, commercial and off-highway vehicles), rail, defence, motorsport, energy and environment. We are proud to possess a client list that includes transport operators, manufacturers, energy companies, financial institutions and government agencies.

Through our multi-industry knowledge and deep technical expertise, we are uniquely positioned to handle our clients’ toughest strategic and operational challenges, with assignments that have included strategy development, cost reduction, safety management, regulatory compliance and environmental impact assessments.

In addition to our technical consultancy services, we have in-house engineering capabilities that enable us to design and deliver high-quality prototypes and niche, low-volume manufacturing of complex products and assemblies, including engines, transmissions, e-machines, generators, battery packs and fuel cell systems. And, across everything we do, in every assignment we undertake, we remain committed to the ethos of our founder, Sir Harry Ricardo, one of the most innovative engineers of his time, who in 1915 set out on a mission to ‘maximise efficiency and eliminate waste’.

SEE THE WEBSITE FOR MORE INFORMATION
Roke believes in improving the world through innovation.

We do it by bringing the physical and digital together in ways that revolutionise industries.

Established in 1956 and based in Romsey, Hampshire, Roke is a British firm that has been at the forefront of complex electronic systems development since its inception. Today our 500+ team of experts use their deep knowledge of sensors, communications, cyber and AI to invent and engineer digitally resilient systems for global companies.

Our people are curious and unashamedly technical, combining some of the finest engineering, scientific and mathematical minds with robust links into industry and academia.

We also have a strong pedigree of working with Government organisations responsible for keeping the UK safe and secure. For our customers, we’re a trusted partner, combining and applying technologies in ways that keep people safe whilst unlocking value.

Using our extensive internal expertise, we help customers protect their embedded and IOT technologies and improve and streamline their processes through the application of smart processing and automation. We can also exploit machine learning and AI to enhance customer data, generating insight and improving decision making. And all our work is underpinned by our deep expertise in cyber security so that our solutions always protect what matters most.

We’re confident that our consulting, research, innovation and product development skills will help organisations maximise their investments in science and technology.

Since 2010, we are proud to be part of the Chemring Group, providing us with complimentary expertise, corporate strength and access to international markets for our world-leading intellectual property.
RoodMicrotec has over 50 years’ experience as an independent value-added microelectronics and optoelectronics service provider. We offer a one-stop shop proposition to fabless companies, OEMs and other business partners. We have built up a strong position in Europe. Our services comply with the highest industrial and quality requirements as demanded by the high reliability aerospace & military, automotive, telecommunications, medical, IT, and electronics sectors.

**Value-added services include:**

- Supply Chain Management, including ASIC design services (working with specialist partners), silicon manufacture, wafer probe, package, final test, and qualification
- Failure & Technology Analysis
- Qualification & Monitoring Burn-In
- Test & Product Engineering
- Production Test (including device programming and end-of-line service)
- ESD / ESDFOS Assessment & Training
- Quality & Reliability
- Consulting

The company has accredited laboratories for qualification & reliability investigation as well as failure & technology analysis in accordance with the DIN ISO/IEC 17025 standard (PL-12120-01-01 and PL-12120-01-02). The company is also certified according to DIN EN ISO 9001 and VDA6.2.

RoodMicrotec has locations in Germany (Noerdlingen and Stuttgart), the Netherlands (Deventer) and the UK (Bath).
Savantech offers world-class software solutions to the semiconductor manufacturing industry. Our innovative, industry-leading equipment integration platform, CoreTegral, underpins automation solutions that:

- Increase equipment throughput
- Decrease unplanned down-time
- Eliminate scrap caused by mis-process
- Utilise data collection and analysis to improve manufacturing efficiency
- Facilitate Advanced Process Control

Tool integration is pivotal in achieving cost efficiencies and the company can offer a complete package of tailored solutions and services designed to increase ROI on present tools and staffing. Our commitment to long-term relationships with our customer base means that as you grow, we grow, and we invest the skills and knowledge learned from such close working collaborative partnerships into our team and into our products, continually improving the features offered and system integrations supported.

We are constantly being challenged by our customers to deliver non-automation systems, too, and as a result have experience of delivering a wide range of solutions in asset tracking, lot identification and plant health sensing, to name but a few. By bringing our work in other industries to the table, we can help identify fresh opportunities for leveraging efficiency and optimising productivity. All of our software development services are backed up with comprehensive support and maintenance packages. Look no further than Savantech for any of your software development needs.
Scotech – the UK’s premier distributor of thin film coating equipment and consumables.

Scotech supply Capital Equipment and Consumables from market leading companies in the Vacuum Deposition and Etch field.

Our product range covers diverse markets ranging from blue chip Silicon, MEMS & III-V Semiconductor manufacturers through leading edge research companies and universities.

Through our experienced team of engineers we aim to supply high quality service with efficient technical back up. All our technical staff have over 30 years industry experience in thin film processing.

- Ion Beam Sources
- Ion Beam Systems
- E Beam Evaporation Systems
- E Beam Evaporation Components
- Sputtering Sources
- Substrate Heaters
- Throttle Valves
- Sputtering Targets & Coating Materials
- Quartz Monitor Crystals
- Vacuum Fluids & Greases
- Plasma Etch Electrodes
- Stepper Lamps
- Molecular Vapour Deposition

EQUIPMENT SALES & REFURBISHMENT - EQUIPMENT SPARES, INSTRUMENTATION & CONSUMABLES - EQUIPMENT SUPPORT SERVICE - MATERIALS/CHEMICALS - VACUUM RELATED EQUIPMENT & SERVICES
We Craft the Datasphere

We help maximise humanity’s potential by delivering world-class, precision-engineered data solutions developed through sustainable and profitable partnerships.

Experience and Knowledge

We are thoughtful, trailblazing guardians who are equally committed to people, planet and profit.

Trustworthy for the Long Haul

Our long-standing partnerships with Fortune 500 businesses and leading organisations help us deliver data solutions that perform well under pressure.

Excellence and Innovation

Our people, partners, and customers are advancing the datasphere in brilliant ways.

Global Citizenship

Seagate’s Global Citizenship program establishes corporate social responsibility strategies, ensures adherence to laws, ethical standards and international norms, and embraces responsibility for how our activities affect stakeholders.

Responsive. Transparent. Accountable

We honour our people’s craftsmanship, take great pride in successfully collaborating with our partners, and care deeply about our customers and their data. Our solutions help protect memories, business intelligence, communication records, and so much more.

VISIT THE WEBSITE FOR MORE INFORMATION
Search for the next is a fabless semiconductor company. Its mission is to find mass consumer markets in which to use its designs, research and development of advanced semiconductor processes, CPU architectures and products. To then use these semiconductors to create with its chosen OEM partners’ disruptive products.

The company R & D team has experience from a proven track record of semiconductor innovation and design. This experience includes achieving cross-industry awards such as DI manufacturer of the year, most innovative product, best low-cost product and the Light Association Innovation Award sponsored by Osram. It has experience with supplying some of the most respected companies in the world such as Martin Professional, High End, GE, and Sylvania.

The company’s specialities includes fabless, transformative and disruptive technology innovation with both UK and overseas manufacturers and OEMs with a focus on green technology mass consumer products to maximise its impact in reducing the effects of global warming.
Semefab have an impressive track record of process development, process set-up and high-volume foundry supporting silicon-based MEMS, CMOS, ASIC, Bipolar-Linear & Discrete semiconductor device technologies.

From our unique capability within the UK we are able to export over 80% of product to Europe, North America and the Far East.

Now with 3 wafer fabs on a single site – Fabs1 and 3 produce a diverse process portfolio of CMOS, ASIC, Bipolar-Linear & Discrete semiconductor technologies including precision analog integrated circuits, JFET transistors, Bipolar transistors, Photo Diodes, Mixed Signal ASICs and supports the ‘front end’ processing for Fab2.

During the past 10 years, Semefab has invested £15.2M in creating the ability to develop and manufacture advanced MEMS Sensor technologies in Fab2.

Separating the three Fab's ensures the integrity of Fabs1&3 for producing ultra-low leakage junctions with high carrier lifetimes and high reliability stable MOS transistors. MEMS processes often feature heavy metal processing e.g. gold and platinum and alkali ionic solutions e.g. KOH. The ability to segregate processes ensures that Semefab is able to routinely produce MEMS devices with ultra clean semiconductor characteristics where necessary.
SemiTechnology has been set up to help you fulfill your requirements for parts and services for the Semitool SAT's SST's, SRD's, Magnum and storm product lines. We also support the single wafer Semitool equipment, namely LT210, Millennium, Equinox and even the Raider platforms.

SemiTechnology use only Semitool trained and experienced service personnel, we are able to provide Semitool parts and services at very competitive rates. We achieve this by simply providing a service at a rate, which is applicable to these times of austerity, to support those directly engaged in making your business a success.

We are an independent leading supplier in the international semiconductor market. Founded 9 years ago, we started as a company small in scale, but great in ambition. Based in the UK, Netherlands, and France.

**We are able to offer**

a wide variety of value-added services that have proven to meet our client's needs. From routine maintenance to service contracts, from piece parts to refurbished equipment sales. However small or large we take care to ensure that we are offering the right service at the right price.

Our staff is dedicated to providing clients with superior customer service, care, and knowledge. Providing cost-effective solutions to the challenges you face today. We achieve this by using our experience to better provide a quality service to our customers. By being willing to provide a quality of care that endeavors to exceed even the most demanding of our customer's needs, we have been able to build an ever-expanding and satisfied client base.

VISIT THE WEBSITE FOR MORE INFORMATION
Semtech Corporation is a leading supplier of high performance analog and mixed-signal semiconductors and advanced algorithms for high-end consumer, enterprise computing, communications, and industrial end-markets.

We have nearly 60 years of experience designing and manufacturing proprietary platforms differentiated by innovation, size, efficiency, performance, and reach. Our balanced portfolio of semiconductor products is used by original equipment manufacturers and their suppliers for automotive, broadcast equipment, data centers, passive optical networks (PONs), industrial, Internet of Things (IoT), LCD TVs, smartphones, tablets, wearables, and wireless infrastructure applications.

Since our founding in 1960 as a manufacturer of high reliability products, Semtech has grown to become a multinational technology innovator, enabling solutions that fuel a safer, more productive, more sustainable, and socially focused planet. We leverage our highly skilled teams to develop new products that solve some of the world’s most complex design challenges, making a positive and significant impact in our lives and environment.

**Semtech product platforms include:**

Circuit Protection • Wireless Charging • Smart Sensing • Power Management • Signal Integrity • Wireless RF • Broadcast Video • Professional
Shin-Etsu Handotai Europe Ltd. (SEH-Europe) have been based in Livingston, West Lothian for over 35 years, have over 450 employees and manufacture semiconductor grade silicon wafers.

Semiconductors are one of the fundamental enablers of the technology and electronics value chain. The Shin-Etsu Handotai group are the largest manufacturer of silicon wafers in the world.

It is the mission of SEH Europe Ltd to be recognised by our present and potential Customers as the supplier most able to ensure that their requirements (stated or implied) are consistently met and, where possible, exceeded.

SEH-E aims to develop and maintain a position of being the undisputed leader in the European market place using a process approach in key areas of unrivalled technology, quality, delivery, cost, safety, environment and ethics results while maintaining a stable relationship with all our customers and other interested parties.

It is the policy of SEH Europe Limited to:

Manufacture and supply Silicon wafers (Polished and Epitaxial 150mm ~ 200mm Diameter) to meet customer, legal, regulatory and other interested parties’ applicable requirements with our goal being ZERO defects.

Ensure that customer and applicable statutory and regulatory requirements are determined, understood and consistently met whilst enhancing customer satisfaction.
On the threshold to the next mobility revolution, which is truly starting to gather momentum now with the rapid progress in the area of self-driving cars, old approaches are coming up against their limits. This is not the only reason, however, why the field of road transport keeps generating new questions that require new answers: smart answers that will help master increasingly complex tasks and simplify ever more complicated issues and open up new opportunities for municipal and regional authorities to actively shape the mobility world for the next generation instead of simply responding to changing conditions.

**Re-thinking mobility**

The comprehensive consulting expertise of Siemens ITS remains unmatched in the industry. No other company specializing in mobility can rely on such a wealth of experience and in-depth knowledge in all areas related to transport. In addition to a complete range of cutting-edge products for road infrastructure, including intelligent traffic control, management and information systems, the ITS experts working at Siemens bring a multi-modal approach into play. This ability to think out side the box arises from the continuous exchange of ideas with their colleagues from the Siemens Rail Systems units and makes it much easier for them to develop holistic mobility concepts.

To find out more, visit the website: [www.siemens.co.uk/traffic/en/](http://www.siemens.co.uk/traffic/en/)
SiSTEM Technology is a full-service company founded in June 2004. We offer a wide range of leading edge process tools and ancillaries, automation and consumables to the microelectronics and other high technology industries throughout Europe and ROW.

Our company goals are to supply to our customer’s advanced technology products which meet their needs of quality build and reliability, on-time delivery, and competitive cost. Only in this way will we maintain our justifiable reputation as a key supplier in what is an increasingly demanding and ever-changing advanced technology market place.

A key part of our success to date may be attributed to the impressive list of manufacturing suppliers that we are privileged to represent in the UK and Ireland, Europe and, in some cases, globally. Many of these companies are worldwide leaders in their fields and they continue to contribute to the outstanding developments and ranges of products offered by the Micro and Nano-electronics, Photovoltaic, Thin Film display, and other High Technology industries.

From our offices in the Caswell Science & Technology Park, we support our customers across the UK and Ireland and in Mainland Europe. We offer installation, commissioning, warranty support, service contracts and upgrades from our factory-trained engineers who share our commitment to quality of supply.

SiSTEM Technology has attended at many of the UK and Ireland exhibitions and conferences in recent years and our customer base continues to grow as a result of our ever-increasing exposure through these events. Our affiliations with the UK’s leading trade associations for our industry, NMI (National Microelectronics Institute) and JEMI (Joint Equipment and Materials Initiative) also play a major role in helping to promote the goods and services our company provides.
At Sofintsys, we aim to make a difference for our clients. We aim to bring practical solutions that solve our clients' concerns.

We can partner with our clients to address the business and technical challenges inherent in developing complex software-intensive systems. Providing engineering and consulting services aligned to real business needs, borne of practical experience, and for application in various parts of the product lifecycle, its processes and organisation.

**Leveraging Multi-Domain Experience**

Sofintsys leverages over 35 years of experience working in leading industries such as Industrial Controls, Defence, Communications, Automotive, Aerospace and Nuclear. Sofintsys enables companies to accelerate their product development efforts, and drive more predictability and productivity into their businesses.

Sofintsys helps clients recognise how to develop products differently, develop products with a difference, and even develop different products to ensure they deliver the products their customers need and value, and maximise the market opportunity.

At Sofintsys, we're committed to helping our clients take control of the engineering and development of their systems and products, with insights into techniques and practical systems of management, competency and professional development as well as advice on organisational and leadership structure and behaviour.
Reactive’s Solid State Disk (SSD) Division, UK – The Industrial Division of the Reactive Group, deliver innovative system solutions to defence, commercial and industrial customers worldwide. We specialise in the design, development and integration of advanced flash data storage systems.

We are also a focused UK flash memory distributors of SanDisk (recently acquired by Western Digital), Innodisk, APRO, Transcend and Smart Modular. These flash vendors are the market leaders of flash disk drive technology and other flash products to the defence and industrial markets.

Solid State Disks Ltd are ISO 9001:2015 and NATO NCage certification (No: U1AL9) guaranteeing the highest levels of expertise, professionalism and care. Product Conflict Minerals reports available upon request.

Reactive Group’s SSD Division applies leading edge technologies and design methodologies to meet the stringent requirements of customised Disk and Tape storage and solutions We offer an extensive range of products for OEM customers including Solid State Drives, Mobile Connectivity and Data Collection.

In October 2000 Tiger Technology Ltd was acquired. Tiger was a specialist company in advance data storage in the military storage products. Through this acquisition Reactive Group gained the ability to design and build bespoke solid state disk storage and tape emulators for legacy computer installations many of which are installed in NATO, Telecom, Audio and Military environments.

The SCSIFLASH drive offers OEM’s Legacy SCSI support for ageing SCSI drives which are still needing support out in the field. The SCSIFLASH drive is designed, manufactured & supported through our Head office in Reading, UK.
Sondrel is Europe's largest independent IC design consultancy serving technology companies and OEMs worldwide with System On Chip and ASIC design services.

Sondrel offers a complete semiconductor design solution from feasibility study, through architectural design to fully packaged silicon and can also provide architecture and physical design services through to tape out. Sondrel's ASIL ready design team is skilled in supporting ISO26262 conformant projects for the automotive industry.

Operating from design centres in the UK, France, Morocco, India and China, Sondrel also provides outsourced design services to some of the world's leading technology companies working at the most advanced process nodes. Founded in 2002, Sondrel is renowned for its specialist verification, design for test and physical design practices.

Strong partnerships with IP vendors, EDA manufacturers and foundries enable Sondrel to provide competitive proposals with a fast time to market and attractive NRE. Sondrel creates strong and trusting working relationships so that every customer receives a professional and personable service for a smooth path to silicon.

**Sondrel is highly regarded for its work in the following areas:** Automotive solutions including safety critical design - Secure, power efficient IoT edge node devices - High resolution video processing and machine vision - High definition video camera input and video display including wireless streaming - AI with HPC architecture and complex fabrics.

**Contact Sondrel to learn more about how these services can solve your design challenges:** Concept to validated silicon design services - COT and turnkey ASIC options - High quality outsourced design services - Workshop and feasibility studies ideal for OEMs - Cost effective, right-first-time FPGA to Silicon design service - Accelerated design service based on proven reference platform architecture.

Contact Sondrel for an informal discussion about making a success of your next silicon project.
SPS is a full-service distributor of small equipment, tools and consumables used in semiconductor fabrication, MEMS, & Biotechnology, including wafer handling, photolithography, wet processing, CMP & Etch / PVD / diffusion areas. We supply a range of Equipment and Consumables including:

**WAFER HANDLING**

**WET PROCESSING**
DI Water & Chemical Heating systems, Flow Control & Measurement for all chemicals including CMP slurries. An extensive range of Process Tanks (PTFE, PP, PVDF, Quartz), chemical Pumps, Valves & Fittings. Spin Processing systems from small tabletop Spin Coaters to fully integrated Spin-Processing Stations with automated tracking dispense, and custom systems for large format FPD and specialist applications. We also supply "In-Deck" versions for OEM’s and for integration into existing wet benches.

**PHOTOLITHOGRAPHY**
Mask Aligners & UV Light Sources, bench-top small R&D systems, cassette-to-cassette Automated systems, and large format FPD aligners. We also supply Nano-Imprint modules, as well as a range of UV Meters & Analyzers including meter Calibration services. We also have a range of high quality Stepper compatible Reticle Cases.

**ETCH, CVD & DIFFUSION**
For Diffusion Furnaces we supply Heating elements, Vestibule Blocks, Soft Collar insulation materials & a full range of Gas Filters. For Etch, PVD/CVD, & RTP robots, we supply End-Effector wrist upgrades – eliminating end-effector "droop", and long-lifetime Ceramic Bearing Upgrades for reducing downtime & improving cleanliness.

**CMP**
CMP Retaining Rings and Conditioning Disks, Head Motor Refurbishment, as well as OEM-approved upgrades for slurry Flow Control, and other quality upgrades including VME & Pneumatics boards.

**BACK-END**
Dicing Film Applicators, UV Curing Systems and Die-Matrix Expanders, as well as consumable Dicing/Grinding Films (standard/UV), Grip Rings, Film-Frames, & their respective Shipping Containers. Wafer Probe Cleaning Sheets
SPTS Technologies, a KLA company, designs, manufactures, sells, and supports etch, PVD, CVD and MVD capital equipment, providing advanced wafer processing technologies and solutions for the semiconductor and microelectronics industry. End-market applications include micro-electromechanical systems (MEMS), advanced packaging, LED, high speed RF device IC’s and power semiconductors.

Formed in 2009, SPTS brings together over 40 years wafer processing experience from companies including Trikon Technologies, STS, and Aviza Technology. The solutions offered by SPTS include industry leading silicon etch, dielectric etch, dry-release etch, PVD, PECVD, MOCVD and MVD. SPTS supplies wafer processing equipment and technologies to the world’s leading semiconductor and microelectronic device manufacturers and research institutions, offering dedicated local sales and customer support through a network of international offices and agents. Under agreement with SPP Technologies, Ltd., SPTS also offers APCVD solutions and a range of large batch vertical furnaces.

SPTS Technologies has been recognized by leading industry experts, government agencies, and Her Majesty the Queen, having received the Queen’s Award for Enterprise in International Trade in 2013 and 2017 and for Innovation in 2018. SPTS has also been given the prestigious Anchor Company status by the Welsh Government. SPTS has also been given the prestigious Anchor Company status by the Welsh Government.

<table>
<thead>
<tr>
<th>ETCH</th>
<th>DEPOSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inductively Coupled Plasma (ICP) etch of silicon, dielectrics and polymers</td>
<td>Plasma Enhanced Chemical Vapor Deposition (PECVD)</td>
</tr>
<tr>
<td>Deep Reactive Ion Etching (DRIE)</td>
<td>Physical Vapor Deposition (PVD)</td>
</tr>
<tr>
<td>Dry Release Etch using HF vapor</td>
<td>Metal-organic Chemical Vapor Deposition</td>
</tr>
<tr>
<td>Isotropic etching of silicon using xenon</td>
<td>Molecular Vapor Deposition (MVD®)</td>
</tr>
</tbody>
</table>

EQUIPMENT SALES & REFURBISHMENT - EQUIPMENT SPARES, INSTRUMENTATION & CONSUMABLES - EQUIPMENT SUPPORT SERVICES
Strem Chemicals UK distributes a wide range ALD precursors, nanomaterials and quantum dots for the solar and electronic industries together with catalysts and ligands for other markets including drug discovery.

We have around 5000 products which come with licensed technologies, royalty free for R&D purposes. We offer next day delivery on a growing range of stock in the UK.

We are Iso 9001 & 14001 certified, with a growing range of stock available next day.

Other stock locations USA and France giving a 3-5 working day delivery for most materials.
Simple Technical Solutions Ltd (STS) was created in Scotland in 2003 by a management team with over 20 years’ experience in providing PVD equipment and support to the Semiconductor industry.

The company started by refurbishing and supporting Varian/Novellus PVD tools and after being granted license status by Novellus we officially began assembling new tools, spare parts and providing support in Europe and in the USA through STS Inc. Austin Texas.

In 2006 STS acquired the UK parts cleaning business of Saint Gobain and created a stand-alone company called STS Precision Cleaning Services.

STS Precision Cleaning Services were transferred from their original facility into a new cleaning factory in Glenrothes in 2008. In 2014 Simple Technical Solutions moved into a new factory for equipment building and support built on the land occupied by STS Precision Cleaning Services.

In 2016 STS Precision Cleaning Services acquired another factory next to the existing factory in Glenrothes. STS now have 25,000 sqft of space to conduct parts cleaning and 8000 sqft for equipment support.

New to STS in 2020 is our 16,000 sqft site in Willstätt Germany. The site will give our mainland European customers a better, closer, service for all their cleaning and refurbishing requirements.

**Telephone** 01592 593300  
**Email** sales@sts.gb.net  
**Website** www.sts.gb.net
Supply Design deliver custom power supply and motor drive technology to OEM’s and system developers within challenging environment sectors.

We support customers with tailored, high-performance power solutions to enhance system operation: utilising a combination of technology building blocks, IP and innovative clean-sheet design.

- Increase power density & efficiency
- Liquid cooling expertise to remove heat
- Integrate power, control and intelligent sensor technology

For large companies, we shorten design-cycle times and increase supply-chain flexibility. Under your guidance, we support your exact product needs to keep you ahead of the competition. For SME’s, Supply Design will reduce the uncertainty and use our experience to guide your product developments as you grow.

Supply Design operates as your experienced power team and brings a network of suppliers to your company. Supply Design has strong links with academic research institutions and the Catapult network to inspire next-generation ideas, and explore low TRL solutions.

Contact us to discuss your design and manufacturing needs.
We are the preferred partner of large and small semiconductor industry players since 1986.

With over 30 years of experience, our high-performance solutions maximize yield improvements while ensuring the most competitive cost of test over our product lifetime.

Our world class engineering expertise and support teams serve the most demanding clients as they bring new technologies to market.

We offer full turn-key solutions with global support as a manufacturer of reliability testing equipment and services for your project journey from R&D into production and beyond.

With exceptional multi-disciplinary team talent, we offer innovative and reliable solutions for your most demanding next generation technology challenges.

We employ the latest industry simulation tools to achieve optimized solutions that meet the needs of the fast-moving semiconductor industry with excellence.
Teledyne e2v is a global leader in specialised components and subsystems for innovative solutions in medical, science, aerospace, defence and industrial applications.

Our people

- Always work to deliver excellence and value to our customers through long-term partnerships
- Are recognised and respected as experienced and talented people
- Demonstrate a strong competency in design, manufacture, service and support across our core technologies and market areas
- Understand our responsibilities to managing and minimising the environmental impact of our activities

Our values

- Customer Focus – our customers are at the heart of everything that we do
- Innovation – our innovation underpins everything that we do from our processes to our customer-focused technologies
- Excellence Throughout – we continually improve what we do and how we do it

We offer:

- RF Power solutions for: defence electronic countermeasures, radiotherapy cancer treatment machines, radar systems, satellite communications amplifiers, industrial heating, cargo screening, ProWave® industrial processing systems, missile control safety and arming devices, and digital television transmitters.
- Imaging solutions including CCD and CMOS sensors and cameras, for space and earth observation imaging, science and life science imaging, machine vision, ophthalmology and dental x-ray systems.
- Semiconductor solutions for aerospace and defence programmes requiring: lifecycle management, hi-rel microprocessors, high speed data converters, high reliability ICs with lifetime continuity of supply, assembly and test services and MRAMs.

VISIT THE WEBSITE FOR MORE INFORMATION
DIFFUSION & LPCVD FURNACES

- Fully automated solutions with cassette-to-cassette transfer & back-to-back loading
- State-of-the-art computer control system with data collection and SPC
- Multiple applications including Semiconductor, MEMS, PV, and LED
- Largest installed base worldwide with lowest CoO and high MTBF
- System design based on 45 years experience
- Comprehensive product range from R&D laboratory systems to large production tools
- Extensive global support network

CHEMICAL WET BENCHES

- Fully automated, semi-auto and manual wet stations
- For semiconductor, industrial and medical applications
- Electroless metal deposition – Au, Ni, Pd, Cu, Ag
- Porous Si Etching systems
- Single wafer cleaning and metal lift off tool
- Custom wet chemical solutions for demanding applications
- Chemical delivery and distribution system design and manufacture
- Reduced Surface Tension dryer

EPITAXY REACTORS

- High Process Flexibility
- Substrate diameters from 100 to 200mm
- Wide EPI Layer thickness from < 5 μm to >100 μm
- EPI Layer Resistivity from 0.02 Ωcm to > 50 Ωcm
- Dual process chamber system with high throughput
- Low Cost of Ownership
- Sharp dopant transitions due to unique dopant injection system
- Wafers x dia: 35 x 100mm, 24 x 125mm, 18 x 150mm, 8 x 200mm
Thermco Systems designs and manufactures furnace systems, custom wet benches and chemical handling equipment and epitaxy reactors for the semiconductor, MEMS, LED, photovoltaic and nanotechnology industries.

Established in 1962 in Orange County, California, Thermco Systems is the original pioneer of diffusion furnaces. With over 55 years of Thermco has the largest installed base of horizontal diffusion furnaces in the world. Expanding rapidly, our growth is now supported by manufacturing facilities in our UK headquarters, US and China.

In 2018 Thermco acquired CSD Epitaxy Inc. offering a range of leading epitaxy solutions to the semiconductor sector.

Our deep experience and extensive process know-how enables us to design efficient thermal processing systems offering maximum uptime, fast throughput and lowest cost of ownership.

Thermco continue to innovate, offering new solutions for horizontal & vertical furnaces including full cassette-to-cassette automation, newly redesigned control boards, gas diffusion cabinets, chemical wet benches and advanced, next generation backward compatible control systems.

With decades of experience in providing customer solutions, Thermco Systems work with customers to understand their requirements and tailor solutions to meet their needs whether it be for new systems, upgrades, retrofits, spares & repairs, custom-made solutions or support services.
TKS Partnerships (TKSP) provides comprehensive marketing services and technology strategy advice.

We can help you position your product, service or organisation, or help you integrate your product roadmap, marketing and sales strategies in one cohesive and pragmatic plan.

We can bring together your product roadmap, marketing and sales strategies in one cohesive and pragmatic plan, or work with your existing management team in any of marketing, business strategy or product roadmaps to help you compete effectively in global markets.

We are all about complementing your core management team with many years experience in marketing, strategic business development and product planning as well as R&D for semiconductors, consumer and automotive product development & manufacture and embedded software.

With 10 years as CMO of one of the world’s leading semiconductor IP companies, we can help you promote, differentiate, manage & exploit all of your hardware and software assets. And with 25 years R&D management experience running five different product design teams across SoCs, mixed signal ASICS, consumer products and automotive subsystems, we have plenty of technology depth to understand any of your deepest technologies quickly. We work with engineering leads through to CxOs, and are particularly strong in relating advanced technology concepts to investors and non-technical audiences.
We work as an extension to your own business, providing timely solutions that meet your budget needs.

From specification, procurement to supply of technology products. Offering new, used and refurbished tools and support we are an approved vendor to many of the major global semiconductor manufacturers.

We offer a unique blend of technology and commercial expertise that can be applied to most businesses and industries.

Operating from the University of Southampton Science Park we are one hour from central London and Heathrow airport, an ideal location for a global business.
Ultra, Energy is a global engineering and design manufacture leader with just over six decades of experience designing for heavily regulated markets, such as nuclear, aerospace, oil and gas, and more.

We develop sensors, instrumentation and control, and PCB electronics for harsh environments and mission critical applications when safety and reliability matter.

We focus on our customers’ success in every step of our process from sales engagement, quality, delivery, and customer service. Our customers trust us and know our commitment to safety is our top priority.

**EXPERTISE**

We are a company of engineers and specialist teams – now more than 600 strong across the globe – who work every day to design and deliver ideal solutions that comply with safety and harsh environment standards and regulations.

We do this across many industries including nuclear, aerospace, oil & gas, rail, automotive and defense.

We have decades of experience in component design, system integration, installation and testing. This combined with our agile project management tools and culture ensures better solutions, faster turnaround and accurate project estimates for our customers. We take single source responsibility for design, development, supply chain, manufacturing and delivery.

**AREAS WE EXCEL**

- Harsh environment engineering
- Ruggedized sensor development
- System integrations and project execution
- Operational assurance planning and support
- Emergency monitoring and incident support
- Electronic manufacturing
- Supply chain management
- Quality systems maturity

---

**NMI Directory**

**Telephone**

See the website

**Email**

Via the website

**Website**

www.ultraelectronicsenergy.com
Verax was established to support manufacturing and equipment engineers operating within the semiconductor industry. We pride ourselves on understanding the challenges and requirements of customers and delivering solutions that fully satisfy their requirements. Our services include:

PREVENTATIVE MAINTENANCE LABOUR SOLUTIONS: We understand the skills and behaviours that must be adopted by PM operatives every day to ensure optimal performance. We offer the ideal solution for IC manufacturers seeking third party support in this area to include resourcing, technical over-sight and reporting.

PROJECT LABOUR SOLUTIONS: We offer an integrated solution to find, secure, manage and report on the people that our customers require to fill project roles. Our resourcing capabilities extend from entry level personnel to field service engineers.

TURNKEY EQUIPMENT INSTALLATION AND DECOMMISSIONING: Our personnel have extensive experience of managing this activity in support of equipment manufacturers, or on behalf of the fab owners. We pride ourselves on being safe, responsive and productive, engaging specialist capability with verified prior experience to ensure that our contribution fully satisfies our customer’s requirements.

USED EQUIPMENT AND PARTS SOURCING AND SALES BROKERING: We have an extensive network of contacts operating within fab, equipment manufacturing and brokering environments. We are well placed to aid customers to procure used equipment and parts from around the world.

EUROPEAN REGION SALES REPRESENTATION: We offer regional sales representation in the EU that provides immediate access to a wide array of customers. Our experienced personnel are well placed to stimulate demand and enable equipment manufacturers to support new and existing customers throughout the EU.

Contact Details:

- **Telephone**: +44 7711 264830
- **Email**: info@verax-semiconductor.com
- **Website**: verax-semiconductor.com
Wafer Technology Ltd. is a U.K. based producer of III-V materials and epitaxy-ready substrates.

The company has a long and well established history in the manufacture of compound semiconductors and offers the widest product range in the business. Wafer Technology's unrivalled choice of material types and forms enables it to support almost any customer application.

The origins of the company can be traced back to 1957 when it was a pioneer in the growth of single crystal gallium arsenide. Recognising the potential importance of III-V compound semiconductors, the company focussed its efforts on establishing manufacturing technologies for such materials and thereafter lead the way in being the first to offer production sources of gallium arsenide in various forms. Today sees Wafer Technology benefit from a rich history of materials development which has positioned the company as an industry leading authority on a diverse range of compound semiconductor types.

Wafer Technology is a wholly owned subsidiary of IQE plc, the world's leading MOCVD and MBE epitaxial wafer foundry. Group membership provides customers with the credence and confidence that is required to support the purchase and qualification of III-V materials and substrates. Close relationships with all Group member companies supports Wafer Technology's thorough understanding of the latest material and device market trends which in turn are utilised by the company to develop new product types.
Wistron NeWeb Corporation (WNC), established in 1996, is a product design and manufacturing company that provides high-quality services for communications products. WNC offers comprehensive technical support in RF antenna design, software design, hardware design, mechanical design, system integration, user interface development, and product testing & certification. Headquartered in Taiwan's Hsinchu Science Park, WNC has also established an overseas presence in the USA, the UK, Japan, China, and Vietnam. Together these sites offer complete solutions and local support for customers worldwide.

To satisfy customers' demands for integrating products using different technologies, WNC offers services for short-/mid-/long-distance consumer, enterprise, industrial, and automotive communications products. For years, WNC has been developing technologies in the fields of network communications, the digital home, satellite broadcasting, and intelligent driver assistance, and has maintained close relationships with many of the world's largest companies.

Under the strong leadership of WNC’s management team, WNC has set a number of impressive industrial benchmarks: ranking #1 with 35% of the world’s market share for built-in antennas for laptops, shipping over 300 million units of satellite communications products and digital home products, and topping the list of Taiwan’s satellite communications product-exporting manufacturers. WNC has also maintained a leading position for enterprise-class wireless communications products and serves as the Alpha site of the world's major chip suppliers. WNC is capable of independently developing automotive-grade wireless modules and 24 GHz/77 GHz/79 GHz high-frequency radar products and is one of the world's major automotive electronics suppliers.

In the IoT era, WNC will continue to expand its technological expertise and service scope in areas including broadband, broadcast, multimedia, the IoT, wireline, and wireless to build application platforms for different technologies. WNC also aims to develop stable and safe high-speed communications systems from WAN to LAN and from the cellular to fiber networks to realize smart living that is safer, more convenient, and more efficient.
yieldHUB is a leading semiconductor yield management provider. Founded in 2005, our expert software solutions provide actionable data for customers worldwide.

We provide top class support to our customers from our worldwide network of experts.

Why should you contact us?

- **Yield Improvement**: If you want to improve your semiconductor yield, look no further.

- **Global support**: Our global team provides expert support, 24/5.

- **Software development**: We continuously invest in R&D to provide the best possible insights for our customers for new product introduction (NPI) and subsequent volume manufacturing.

- **Expert team**: Most of our team come from the semiconductor industry and have a deep understanding of the industry and its associated challenges.

- **Scalability**: yieldHUB’s database design is scalable from a few gigabytes to multiple terabytes of data. As your production ramps in volume, you won’t have to worry about the analysis scaling.

- **Automation**: You can set up scheduled reports and alerts which simplify monitoring your manufacturing.

- **Cloud-hosting**: We host many customers in the cloud on AWS (Amazon Web Services). This ensures high availability, world class security and is a cost-effective solution for you.

Contact us today to unleash the power of your data -  **www.yieldhub.com**
The 6th Annual Internet of Things Security Foundation Conference is a four-day virtual event that takes place between Tuesday 1st and Friday 4th December 2020. The Annual IoTSF Conference has built a loyal global following from the IoT stakeholder communities and is renowned for delivering high quality conference programmes.

The era of IoT describes the world as it transforms to be ever-digital and increasingly connected. Along with the power of digital comes the reciprocal cyber threat, and we continue to witness an increasing number of attacks enabled by products that lack protection against well-known exploits, have been badly configured or suffer from poor maintenance. This causes businesses to be hesitant, concerns governments, increases the likelihood of regulation and ultimately frustrates markets.

Visit the conference website to find out more and register

WWW.IOTSFCONERENCE.COM
Three Fabs
One Vision
The UK’s Premier MEMS & Sensor Fab Facility

www.semefab.com

Semefab Limited
Newark Road South
Eastfield Industrial Estate
Glenrothes
Scotland, UK
KY7 4NS
+44 (0)1592 630630
info@semefab.com
Integrated global supply of the most advanced metalorganic chemistry for deposition

www.pegasuschemicals.com