



Solid State Group

GROUP CAPABILITIES BROCHURE



SYSTEMS



POWER



COMPONENTS

TECHNOLOGY FOR DEMANDING APPLICATIONS

SOLID STATE GROUP

Solid State plc is a value added electronics group supplying commercial, industrial and military markets with durable components, assemblies and manufactured systems for use in critical applications, with a particular emphasis on specialist and harsh operational environments.

The company has particular expertise in industrial and ruggedised computing, battery power solutions, antennas, secure radio systems, imaging technologies, electronic components and displays.

Serving industries with demands for complex, performance-critical products, the Solid State trading brands have become recognised industry leaders through consistently delivering product quality, high service standards and comprehensive technical support.

With a focus on the development and supply of performance technologies for extreme environments, the Solid State name, and that of its trading companies, has become synonymous with high quality and reliability.

The company operates through two trading divisions, Steatite Ltd, which focuses on system design and manufacturing, and Solsta Ltd, a technical component distributor serving the needs of the electronics community.



**“WE SOLVE OUR CUSTOMERS' TECHNOLOGY CHALLENGES, TURNING IDEAS
INTO PLANS AND PLANS INTO PRODUCTS AND SYSTEMS”**



SOLID STATE GROUP

Solid State plc was founded in 1971 and is listed on AIM (AIM:SOLI), part of the London Stock Exchange. The company has been profitable every year since being admitted to AIM in 1996 and has consistently grown through a mix of strategic acquisition and organic growth to become a leader of performance technologies.

Today, the company employs over 400 people across 16 sites in the United Kingdom, European Union and United States of America. Solid State is a truly international company, with customers in over 50 countries and in excess of 200,000sq ft of office and scalable production floor space around the world.

Solid State has a diverse range of strategically targeted markets which are aligned to our core strengths. We have particular strengths in the defence and security sector, in addition to robotics, autonomous systems, energy, transportation, medical and life sciences. All of these sectors have commonality in that they require highly reliable products that will operate flawlessly in some of the harshest environment imaginable.



**“BRITISH RESEARCH, DESIGN AND ENGINEERING
AT ITS VERY FINEST”**

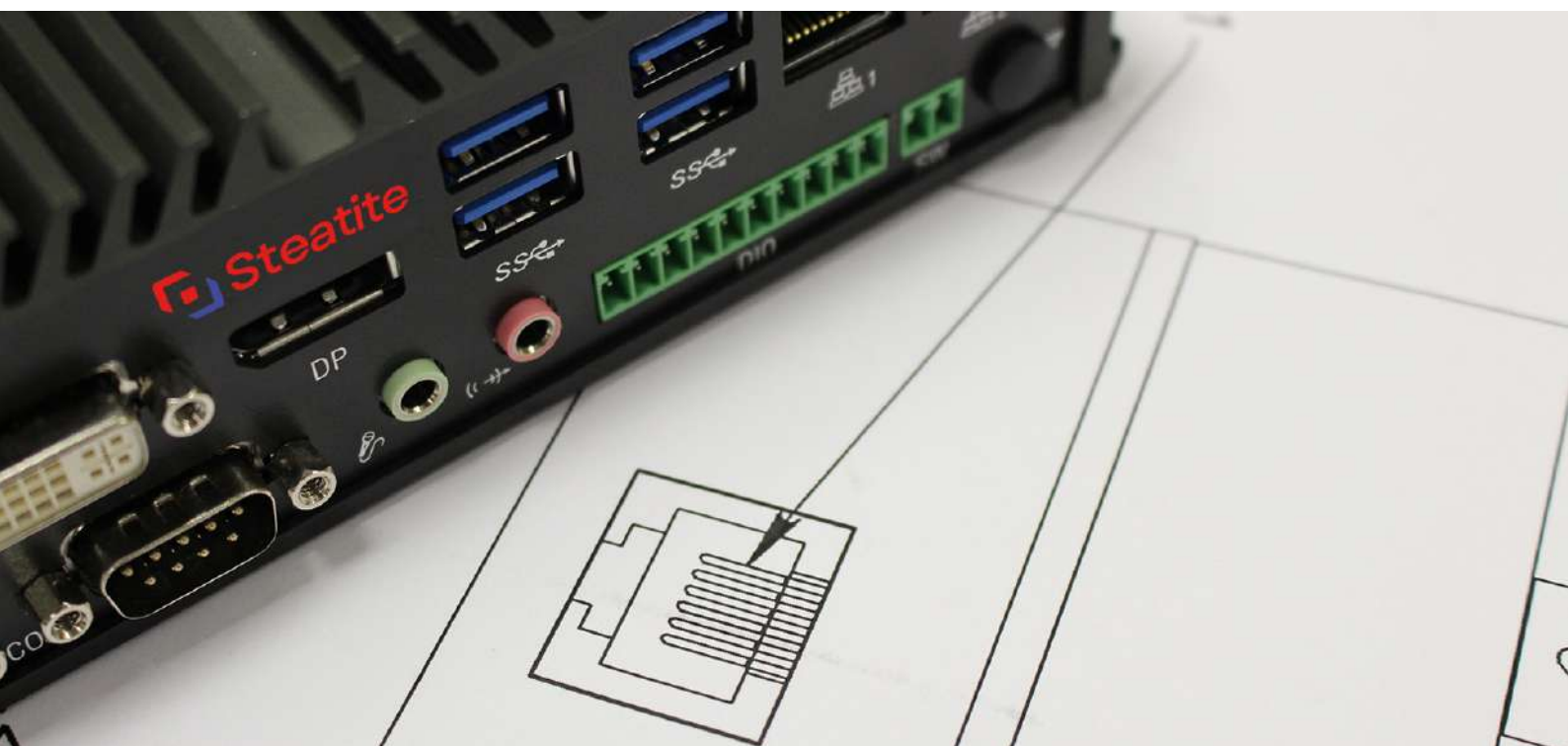


Steatite is the systems manufacturing division of the Solid State group. Established in 1938, the company is a market leader in the design, development and supply of rugged and industrial computers, imaging and embedded vision systems, custom battery solutions, secure communication systems, antennas & subsystems.

Headquartered in Redditch, Worcestershire, Steatite operates a secure, modern facility dedicated to design, engineering, manufacturing, testing and service support.

In addition to our main Redditch site, Steatite has a world-class development facility in Leominster, Herefordshire, dedicated to antenna design, production and testing. We also have a site in Ashchurch, Gloucestershire, where Steatite Integrated Systems works on design and manufacture of military-grade consoles, rack cabinets and other complex products, providing integrated solutions that span the entire lifecycle of projects.

Langley, Berkshire, is home to the company's imaging technologies business unit, Active Silicon. Here the focus is on camera technology, frame grabbers and embedded systems for image acquisition, processing and transmission. Active Silicon also has a sales office for the North America market in Severna Park, Maryland, around 30 miles north east of Washington DC.



**“A MARKET LEADER IN THE PROVISION OF COMPUTING,
POWER AND COMMUNICATIONS TECHNOLOGY”**





TEST CAPABILITIES

Steatite has extensive in-house testing capabilities including a large anechoic RF test chamber and a smaller semi-anechoic EMC chamber, in addition to environmental test equipment.

The Redditch based compact EMC chamber provides agility and efficiency for the engineering function by speeding up product development as a result of being able to quickly test different engineering configurations without the reliance on an external test facility.

The Leominster facility houses the company's state-of-the-art spherical near-field RF test chamber (pictured below). This 7m x 5m chamber is able to accommodate antennas from hand-held horns to 3m diameter dishes and enables full far-field measurements to be derived without the difficulties of a large scale external test range facility.

Also in Leominster is an extensive environmental testing laboratory incorporating a climatic chamber, vibration table and altitude test chamber. This enables testing products to exacting standards for shock, vibration, temperature and humidity

Our battery facility in Crewkerne has over 100 test channels for analysing battery packs. These are used both to characterise new cells to aid in our cell selection when designing new custom battery packs and also for validating correct operation of new packs for our customers.



**“PRODUCTS THAT PUSH THE BOUNDARIES TO THE LIMITS
OF TECHNICAL CAPABILITY”**





RUGGED ENGINEERING SOLUTIONS

Steatite excels in rugged engineering solutions for harsh environments. This includes the hostile surroundings of tactical operations, extreme temperature differentiations of offshore energy operations, the 24/7 requirements of industrial settings, and more.

Expert engineers custom-design solutions for challenging applications, conduct rigorous testing and manufacture products to meet the toughest industry standards.

Beyond extensive capabilities in designing and manufacturing, Steatite's wider skillset enables collaboration across various elements of engineering projects. Using the knowledge of the whole Steatite group, we are able to offer designing, prototyping, testing and volume production of customised rugged technology.

Steatite's CRiB perfectly demonstrates our commitment to innovative, rugged and reliable custom engineering, leveraging the skills and extensive capabilities of all our Business Units. It is a mobile operations hub, providing a powerful multiscreen workstation platform for rapid deployment in the field.



 **Steatite**
 **Custom Power**
 **Active Silicon**



Incorporating the very latest MANET technology, the CRiB natively connects to a Wave Relay network with no requirement for additional hardware, even in the most problematic RF environments.



Three RP-TNC connectors for omni-directional RF antennas and one SMA connector for a GPS antenna provide the CRiB with integrated geo-location services and an instant reach back to headquarters.



2 hot swappable UN-approved 2590 rechargeable battery packs provide uninterruptable 588WH power supply for a full day's use, in operating temps between -40°C to +60°C.



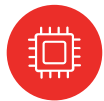
With built-in microphone, stereo speakers, an 8MP camera and integrated HD H.264 video encoding / decoding, the CRiB provides comprehensive video conferencing capabilities.



Packing a powerful i7 processor, 32GB RAM and 512GB of solid state storage the CRiB is capable of running high-end situational awareness software in Windows and Android applications simultaneously.

**"WE ARE DRIVEN BY A NEED TO UNDERSTAND
AND OVERCOME COMPLEX CHALLENGES"**





COMPUTING PRODUCTS



Industrial Computing

Industrial Rack Mount PCs



Fanless PCs



Touch Screen Panel PCs



Rugged Computing

Rugged Laptops



Rugged Handheld



Printers



Time & Positioning

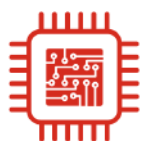
Timing & Frequency



Positioning



GNSS Simulators



Motherboards & Modules

Motherboards & SBCs



Computer Modules



“METICULOUS DESIGN AND ENGINEERING FROM
COMPONENT LEVEL TO FINISHED PRODUCT”





COMMUNICATIONS PRODUCTS



Wave Relay Products

MPU5 Radio



Embedded Module



GVR5



Peripherals

Dual PTT



Rugged Display & Controller



Auto Tracking Antenna



Custom Products

CRiB



MMCU



Training



“DEPENDABLE COMMUNICATIONS SOLUTIONS
THAT SURPASS EXPECTATIONS”





ANTENNA PRODUCTS



**Horn
Antennas**



**EMC & HiRF
Antennas**



**Spiral
Antennas**



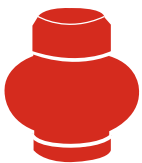
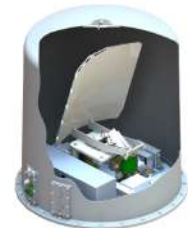
**Reflector
Antennas**



**Sinuous
Antennas**



**ELINT
Antennas**



**Omnidirectional
Antennas**



**Positioner
Antennas**



“AT THE FOREFRONT OF ANTENNA DESIGN,
TEST AND MANUFACTURING”





Camera
Technology

Autofocus-zoom Cameras



Camera Interface Boards



Video Adapters



Frame Grabbers

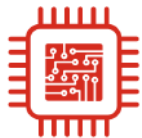
CoaXPress Frame Grabbers



Camera Link Frame Grabbers



Custom Software



Embedded
Systems

Custom Embedded Systems



Machine Vision Computers



Custom Design Services



“HIGH PERFORMANCE TECHNOLOGIES FOR APPLICATIONS
WHERE FAILURE ISN'T AN OPTION”





Custom Power is the power division of the Solid State group. Created by merging our existing battery business with acquisitions in the UK and USA, the company specialises in custom battery pack and battery management circuitry design and production for complex medical, aerospace, defence, and industrial applications.

With facilities in Crewkerne and Newcastle in the UK and Fountain Valley in the US, the product range includes custom built multi chemistry battery packs, COTS battery modules, portable power and energy storage systems. Power solutions are expertly designed for high reliability in the most demanding environments, for sectors as diverse as oil & gas, oceanography and robotics.

Custom Power provides support throughout the life cycle of the battery products, from initial design, through qualification, manufacturing, managing distribution and transportation, and finally environmental disposal. Long-standing partnerships with world-class cell manufacturers provide access to the most advanced and industry-leading technologies available.



“POWERING CRITICAL APPLICATIONS AROUND THE WORLD”





BATTERY PRODUCTS



Primary Battery Packs

Custom Lithium Battery Packs Standard Lithium Battery Packs Other Chemistry Battery Packs



Secondary Battery Packs

Custom Lithium Battery Packs Standard Lithium Battery Packs Other Chemistry Battery Packs



Portable Power

Battery Modules

Energy Storage

Pelican Batteries



“HIGH PERFORMANCE TECHNOLOGIES FOR APPLICATIONS
WHERE FAILURE ISN'T AN OPTION”





The Vital Component

Solsta is a world-leading electronic component distributor and a catalyst for technological innovation.

We help the electronics community solve the problems that can't be solved alone, drawing on unmatched technical knowledge, connections and entrepreneurial spirit. Between us, we have hundreds of years of technical knowledge, yet our focus is firmly on the future - the newest tech, the endless ingenuity of inventors, the world-changing potential of the next big thing.

Innovation with integrity is our passion and our purpose. As such, we operate at the heart of the electronics community, as the trusted partner for our customers and suppliers. We are the vital component.



Linking up the electronic community for over 50 years



Technologies



Suppliers



Products



OEMs



Challenges



Solutions



Applications



Services

“ONE OF THE UK’S LEADING TECHNICAL, FRANCHISED DISTRIBUTORS”





COMPONENTS

Deeper technical knowledge - We know electronic components and their capabilities inside out, meaning we're best placed to help customers shift their vision from specification to application.

Premium product portfolio - We distribute a wide range of best-in-class semiconductors and related components and modules - the components our customers need to unlock vital innovation in their concepts and designs. To complement solutions from our leading edge supplier partners, we offer ownbrand components via our Hermaseal® and Durakool® brands.

Complete supply solutions - We offer our customers end-to-end support, from R&D through to volume production. Beyond the best components for their applications, we provide expert assistance in integrating this technology into world-changing new products.

The trusted partner - We play an essential role in the electronics community. For many years, our customers and suppliers have relied on our unmatched expertise and support. We're proud to have brought together so many inventors and entrepreneurs, helping them realise new possibilities through their plans.





COMPONENTS

Quality you can Trust

A focus on quality has always been important for Solsta. We believe there are huge benefits for companies committed to a quality ethos throughout their business.

Staff in every department are encouraged to consider how to make quality inherent in how they do everything, every day, and we're constantly looking for ways to improve every business interaction. Our aim is to make even the smallest process reliable and robust, and we employ quality management tools to provide a framework for collecting and analysing data to this end.

The quality certifications and accreditations listed here represent recognised industry benchmarks, and provide assurance of our capabilities to maintain robust and reliable processes and procedures.

Accreditations & Memberships



“A WORLD-LEADING ELECTRONIC COMPONENT DISTRIBUTOR”





COMPONENTS

Value Added Services

Key to our success has been the development of our Value Added Services - going above and beyond our core business of component distribution to offer additional services designed to solve problems for customers. As well as providing the best components for particular applications, we assist in integrating these parts into successful new products, working hand-in-hand with customers as projects progress from R&D to volume production.

Our services include:

- Sourcing & Obsolescence Solutions
- Optoelectronics Design & Manufacture
- End-to-End IoT Solutions
- 4G/5G Router Configuration Service & Consultancy
- Device Programming
- Firmware Version Control
- Tape & Reel; Mini Reel; Bake & Seal

Services are carried out in our secure, bespoke, ESD facility in line with our AS9100 certification. UK warehousing and multiple logistics services ensure on time delivery through buffer stocks, consignment stocks and VMI programmes.

Solsta can supply commercial, industrial, military and hi-rel hard-to-source parts from suppliers outside of our franchise base, giving customers in all sectors a more complete service.



“SERVING THE NEEDS OF THE ELECTRONICS OEM COMMUNITY”





Design and Manufacture

Solsta offers a complete end-to-end solution for optoelectronics, sensing and display technologies at our Design and Manufacturing Centre in Weymouth, UK.

Building on our experience of supplying specialist components and displays, we can take your optoelectronic project or custom display assembly from an idea or concept, through specification, design, prototyping and pre-production into full production.

We offer design and manufacturing services covering thermal and optical sensing, illumination and beam manipulation, analogue driver and detection circuitry, optomechanical assemblies, display technologies and embedded control. Our capabilities start at die attach and wire bond for bespoke optoelectronic components, expanding to connectorised circuitry, coding, programming, and testing at the subsystem level, to complex modular assemblies incorporating precise active and passive control of optical chains, right up to turn-key, programmed systems, nitrogen purged and class 5 cleanroom assembled where required.

We offer production, advanced inspection and full product certification, defining and managing the supply chain from our audited and approved global supplier network.





COMPONENTS

Premium Product Portfolio

We distribute a wide range of best-in-class semiconductors and related components and modules from a carefully selected stable of leading edge suppliers. Our portfolio contains the components you need to unlock vital innovation in your concepts and designs.



Comms

2J Antennas
AI Thinker
Antenova
ASUS IoT
Avalue
Digi
Ezurio
GigaDevice
Inseego
Microchip
NexAloT
Pulse Electronics
Quectel
Robustel
ROHM Semiconductors
TechNexion
Winmate



Sensing

Amphenol Advanced Sensors
AI Thinker
Efento
ESPROS Photonics
Excelitas
Ezurio
InnoSenT
Inseego
Kodenshi
Minco
Optek Technology
PNI Sensor Corporation
Polymer Optics
ROHM Semiconductors
Sensolute
Silicon Sensing Systems



Opto & Imaging

AI Thinker
ESPROS Photonics
Excelitas
Fulham
InnoSenT
Kodenshi
Luminus
Mitsubishi Electric
OmniVision
Optotune
Polymer Optics
ROHM Semiconductors
Ushio Opto Semiconductor



Processing

AI Thinker
ASUS IoT
Digi
e-peas
Ezurio
GigaDevice
Microchip
ROHM Semiconductors
Silicon Labs
Skyworks/IsoLink
TechNexion
Winmate

“A CATALYST FOR TECHNOLOGICAL INNOVATION”





Power

Durakool
Fulham
GigaDevice
Microchip
Orion Fans
Pico Electronics
Pulse Electronics
ROHM Semiconductors
VPT Inc.



Storage

Avalue
Digi
GigaDevice
NexAloT
ROHM Semiconductors
Silicon Labs
Transcend
Winmate



Displays

ASUS IoT
Avalue
KYOCERA Display
Leyard Europe
NexAloT
Raystar Optronics
TechNexion
Winmate



Services

Digi
Inseego
Metaverpivot
Robustel
Winmate



E-Mech

Durakool
Elesta Relays
Standex/Meder
Teledyne Relays



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SYSTEMS



POWER



COMPONENTS



