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There are now generations of people moving through life with little or no concept of repair. Instead, when something breaks it is replaced. However, if people’s desire for sustainability in genuine, then surely the idea of repairing a product once, twice or more must return.

In the electronics arena there are many barriers to repair. For example, manufacturers often don’t design products to be repaired, refuse to publish official repair manuals and won’t make spares available. Yet, as more manufacturers sign up to new environmental and greenhouse gas certifications, it’s difficult to see how they can avoid addressing the issue for long.

Which brings me to the reason for writing this leader. Over the past few weeks, I’ve encountered a number of events relating to product repair. Firstly, bubbling away in the background, is right-to-repair legislation. Secondly, (quite by coincidence) John Denslinger’s article in the North American issue of Electronic Sourcing is on sustainability. Thirdly, an article in a recent issue by an authorised aftermarket component manufacturer stated its expectation of repair related demand. Fourthly, I was surprised by an article about an electronic sub assembly who’s USP was its repairability. Finally, I’ve started seeing adverts for domestic appliance repair services.

It’s almost as if the idea of extending the useful life of an electronic product is limping back into fashion.

What does that mean of this industry? Well, if repair gains pace, at some point in the future high volume, low value component sales to offshore manufacturing centers will start to cede some ground to high value, low volume sales to local repair facilities.

Maybe, maybe not. Time will tell.

Jon Barrett
Marl International has named Anglia Components as UK and Ireland master distributor for panel lamps, PCB mount indicators and other standard LED components. Anglia will carry extensive stock of standard devices for customers and resellers, while also offering support for customised products.

Anglia’s CEO, Steve Rawlins, said: “Marl International has an outstanding pedigree with LED technology, and we are delighted to extend our relationship with them. The new partnership is a win-win-win. Customers benefit further from the improved logistical support that Anglia can offer and the enhanced stock profile with which we are supporting the line, as well as our FAEs who have been trained by Marl in their technologies. Anglia adds a more comprehensive range of opto solutions to its portfolio and we increase Marl’s presence with our key customers.”

Marl’s MD, Adrian Rawlinson, added: “We are delighted to sign a new partnership with Anglia Components. They share our focus on quality and exceptional customer service and their strong team of field applications engineers and field sales engineers will greatly enhance our presence in the market. They will offer our customers the benefit of exceptional logistical support as well as access to a wide range of complementary devices.”

Anglia will support Marl’s full range for markets including rail, aerospace and defence. The range includes: panel mount indicator LEDs; 3mm and 5mm PCB mounting LED indicators in flame retardant plastic housings; and filament replacement LEDs.

Lane Motorsport has been appointed as a motorsport specialist distributor for Lemo’s M and F series connectors. Distribution is a key strategic move for connector manufacturers as lead times and availability from stock are important in this fast-moving industry sector.

Lane Motorsport will hold stock of the most popular Lemo connectors, which will grow and be fine-tuned as customer demands and market trends are observed. The M series complements Lane’s Eaton BSTA franchise with high density contacts up to 114-ways or 66-way mixed power contacts in the largest shell size S. The M series is FIA approved, being used on ECUs and more due to their reliability. The F series is the push/pull series and is used in small sizes in motorsport for weight saving and the high density contact system.

Lane Electronics’ sales director, Nick Wheeler, said: “We are looking forward to driving Lemo connectors forward in the motorsport industry in a number of applications in cars, motorcycles and boats.”

Mouser Electronics is now stocking Sensirion’s LPG10-1000 digital planar liquid flow sensor. The device measures liquid flow in a planar microfluidic glass substrate with down-mount fluidic ports for compact integration into any fluidic manifold system.

Measuring 10 by 10 by 2.35mm, it suits high-volume applications with strict space limitations. Microfluidics chips and digital microsensor chips are combined to measure liquid flow inside a planar glass substrate. The digital microsensor chip provides signal processing functionality for a fully calibrated, temperature compensated, linearized digital output.

Applications include biomedical devices, point-of-care diagnostics and surgical instruments.

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Aligning supply with surging demand in various sectors is an ongoing challenge for many manufacturers due to persistent supply chain issues. From ongoing COVID-19 outbreaks to extreme weather, workforce shortages and geopolitical conflicts, supply chain disruptions keep mounting.

The consequence: surging prices across various commodities and lead times that extend from months to years. The result: manufacturers becoming more resourceful in their supply chain strategies.

Adjusting as the World Seems to be Running Out of Everything

The raw material shortages that have been haunting the electronic component manufacturing supply chain show little signs of subsiding. DigiTimes reports “the supply of ABF substrates will continue to be at least 20% short of demand in 2022.” Worse, new capacities are unlikely to alleviate the strain until 2023. The shortage of ABF substrate is a concern that manufacturers like Intel, Nvidia and Advanced Micro Devices Inc. (AMD) have voiced as a primary setback to their GPU, CPU and IC component production. As the competitors battle for allocation, a 20% price increase is anticipated. To alleviate some of the stress on its production, Intel is diversifying its ABF substrate sources from various suppliers in Vietnam, Japan, Taiwan and southwestern China.

Similarly, silicon price and availability are impacting silicon wafer production, which has been tight since Q3 2019. Siltronic AG, Shin-Etsu Chemical Co. Ltd and SUMCO Corporation are among the top silicon wafer manufacturers that supply wafers to chipmakers. With their output limited due to silicon shortages, the trickledown effect is exacerbating current silicon wafer bottlenecks. For example, lead time of Diodes Incorporated parts is up to 80 plus weeks as the limited wafer availability stifles capacity.

As a result of industry-wide difficulties to allocate raw material supply for component builds, prices are expected to increase in the coming months.

Planning to Face Workforce Shortages Head-On

In 2021, many manufacturers turned to long-term planning, leading to factory expansion as a solution to align supply with demand. This included Intel Corporation, Samsung Electronics, Micron Technologies and others investing billions of dollars to build new chipmaking facilities. However, once the factories are built, the concern is a growing scarcity of talent to fill them. As a result, some governments and regional manufacturers are investing in feeder institutions.

For example, the local Taiwanese government and chipmakers like TSMC are investing up to $300 million in connected universities; the US passed a bill providing billions of dollars to scholarships, workforce programs and technology institutions to invest in the future semiconductor workforce; and the EU is moving to implement a Chips Act in the interest of growing its stake in semiconductor manufacturing. These investments will take time to make an impact, which means manufacturers will have to adapt to the current workforce shortages that have been plaguing production lines since 2021.

Bracing for the Long-term

Although manufacturers are re-assessing supply chain strategies to build more resilient processes, the results will take time to manifest. This means operational setbacks will likely be felt from manufacturers to consumers throughout 2022 until a balance between supply and demand can be reached.
Embedded systems and display solutions provider, Review Display Systems has announced accreditation to ISO13485:2016 medical device quality management system standard, letting the company partner with med-tech businesses for design, development and product manufacturing.

RDS is seeking partnerships with established med-tech companies, medical device design and consultancy businesses and start-ups. The company boasts technical and commercial experience in the design, development and manufacture of systems featuring embedded computing platforms and display solutions.

Review Display Systems’ managing director, Russell Gilbert, said: “We have made a significant investment and worked tirelessly to obtain ISO13485 accreditation at RDS. As a result, we are immensely proud of our achievement and the accreditation provides a compelling business case to strengthen our ability to engage with designers, developers and manufacturers in the med-tech sector.”

review-displays.co.uk

Real-time enclosure stock information

Live stock information regarding nVent/Schroff enclosures and accessories available from Foremost is now on Schroff’s new website. nVent/Schroff has partnered with B2B parts search specialist Mectronic and now hosts distribution partner stock data including the top 250 most popular products in stock at Foremost.

Foremost has integrated its stock via the Mectronic software and will be using the platform to add more products as they grow further as an nVent/Schroff channel partner.

Foremost Electronics key account manager, Emma Kempster, said: “Design Engineers, buyers and manufacturers need fast access to up to date information on product availability. By integrating our stock on the nVent/Schroff reseller list customers can buy directly from our stock for fast delivery.”

www.4most.co.uk

Quick access to faster WiFi

Rutronik is stocking the Silex SX-PCEAX Tri-Band Wi-Fi 6E 2x2 PCIe module (2.4, 5 and 6GHz) which is designed to provide faster, more reliable WLAN for demanding, mission-critical applications. The module, based on Qualcomm’s SoC QCA2066, is one of the first Wi-Fi 6E modules.

The module also supports Bluetooth 5.2 BR/EDR/LE. Applications include: diagnostic imaging; industrial trucks and intelligent production lines; plus industrial automation.

To meet space requirements, Silex realized the module in several sizes and form factors. For example, the PCI Express card form factor suits migration of 802.11ax into existing legacy PCIe solutions. The SMD option (M.2 LGA type 1418) requires minimal space requirement. An M.2 plug-in card in M.2 2230 is also available.

The module is certified for Europe, North America, Japan and Canada. Silex also offers additional certification services for previously non-certified regions.

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— Libby Meyrick, Chief Executive at Institution of Engineering Designers

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Understanding home healthcare medical connectors

PEI-Genesis’ country sales manager, Angelo Meriggi, introduces buyers to the requirements behind home healthcare medical connectors.

The pressure caused by the Coronavirus pandemic has created a space where remote treatment can thrive, meaning patients with disorders like diabetes and abnormal blood pressure can now receive reliable healthcare at home. Remote patient monitoring often frees time for healthcare providers and their patients, while protecting vulnerable people from exposure to Covid-19.

A recent McKinsey report estimated that uptake in remote patient monitoring using telecommunications could be up to 38 times higher than before March 2020. This growth has been made possible by advancements in medical device technology—in particular, the innovations in electrical connector designs.

Traditionally, healthcare connectors needed to be robust to withstand heavy handling, IP67-sealed to protect from water ingress, and EMI-shielded to ensure data transmission is successful. While these criteria are added bonuses for connectors used in home...
Protecting interconnects and contacts is important when designing connectors for medical devices. This is because connectors need to be higher speed and density to support greater data acquisition and transfer. If demand for remote patient monitoring continues to increase, ensuring the connector computing elements are safe and efficient will be vital.

Lemo Redel plastic push-pull connectors are simple to operate and can be colour coded to prevent accidental mismatching. The housing material can be sterilised without risk of water ingress, minimising risks of harbouring bacteria.

Just like patients need to trust their doctor, medical device original equipment manufacturers must trust that suppliers are equipping them with the right connectors. PEI-Genesis is meeting increased demand for healthcare at home by cultivating relationships with manufacturers to combine flexibility, performance and safety into simple ergonomic designs.

www.peigenesis.com

Remote patient monitoring often frees time for healthcare providers and their patients, while protecting vulnerable people from exposure to Covid-19.
Mouser Electronics’ customer service director EMEA, Isabel Hanson, offers buyers’ five tips when selecting a distribution partner

**Tip 1: Relationships**
Many buyers are non-technical so it’s important for distributors to provide the tools and guidance they need to become confident when purchasing complex components. Mouser helps make customers—regardless of their technical expertise—comfortable in their buying journey via purchasing tools and human initiatives. For example, Mouser’s bill-of-materials tool helps buyers make sense of incomplete product codes and/or part numbers. It provides buyers with obsolescence status and last-time-buy management by providing information about products manufacturers are planning to retire and then helping them identify suitable and timely replacements.

**Tip 2: Trust**
Buyers must trust their distributor, who in turn must establish a basis for and build on that trust. Mouser has a long, proven track record as a supplier to hundreds of thousands of customers. The company provides in-person support for customers who don’t wish to use self-service features. Mouser only sells traceable, genuine and authentic components that meet strict quality control standards, with accreditation to standards such as AS6496, AS9100D, ISO 9001:2015 and ANSI/ESD S20.20-2014.

**Tip 3: Digital advancements**
Mouser considers digital processes and digital tools as key enablers that make buying as seamless as possible. The company has designed its EDI and API platforms so they can be easily integrated with a buyer’s ERP or ordering system, helping them reduce the paperwork and processing time associated with placing orders. Mouser’s buyer’s guide is structured to allow the selection of visually identifiable products and not just alphanumeric part codes, which can be confused. Customers can also tailor the search filter to meet their bespoke requirements. For example, by using a Punch Out/OCI, buyers can search by specific suppliers.

**Tip 4: Quality and data integrity**
Buyers understand the importance of accuracy when the difference of a single letter can mean a completely different product. That’s why it’s important for a distributor to provide information with unquestionable integrity. Mouser assures buyers that it always uses accurate and reliable part numbers and product codes. To help eliminate any doubts, Mouser also provides the option to search products using part images. Information includes a full portfolio of datasheets, 3D CAD models, part footprints and other product data.

**Tip 5: Communication**
If the buyer/distributor relationship breaks down, it can usually be traced to a lack of communication. Mouser understands the need to keep channels of communication permanently open. Buyers are sent immediate updates when products come back into stock and requests for quotation are responded to promptly. The company provides real-time information on order handling to keep buyers aware of the progress of shipments. Mouser also offers basket-sharing that lets buyers collaborate with colleagues that wish to provide input to their ordering process. In addition to these direct communication options, Mouser sends timely, relevant and accurate newsletters about new products, offering buyers the chance to keep up-to-date without having to contact the company directly.

www.mouser.co.uk

Buyers understand the importance of accuracy when the difference of a single letter can mean a completely different product
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How to successfully outsource manufacturing

Corintech offers buyers a detailed assessment of the questions to ask when starting the process of finding and engaging a subcontract manufacturing partner

From reduced production costs to procurement of hard-to-source components, outsourcing manufacture offers OEMs a range of benefits. However, selecting the right CEM is not straightforward and, if the subcontracting process goes wrong, it can lead towards significant damage to an OEM’s operations and reputation.

It’s important to not underestimate the upfront work required to select a CEM and provide it with the detailed information necessary to enable the successful build of quality products. While outsourcing pays dividends long term, it requires significant early involvement from the OEM to ensure the final product meets specification and is delivered in-full and on-time. A good CEM will not simply build-to-file but will carefully peer review customers’ data, ask questions and make cost-saving and design-for-manufacture recommendations.

Before searching for a new manufacturing partner, OEMs should clearly define their requirements. Not all CEMs are alike and different CEMs offer different capabilities, service levels and capacity. Spending time refining requirements will narrow down the search and help select the right CEM. Detail the processes being subcontracted, the order volumes, the internal procedures a new supplier needs in place and the quality accreditations it needs to have.

The OEM should also undertake a careful assessment of all potential risks associated with a new supplier before beginning the search. Are there specific difficulties with component sourcing, an assembly process...
Derby based Tioga Limited, founded in 1996, has developed into one of the UK’s leading Contract Electronic Manufacturers.

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Alongside the international accreditation for ISO 9001, ISO 13485, ISO 14001, Tioga are now working towards ISO 27001 compliance.

ISO 27001 provides the framework for an effective Information Security Management System to protect corporate information and data being accessed, corrupted or stolen. Managing threats to our business will in turn give our customers complete confidence that robust security controls are in place and give us more scope to grow in other areas such as key government contracts.

We will finalise the process by the end of March 2022.

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www.tioga.co.uk
or a quality issue which could re-occur? Is there a possibility of gaps in supply that will affect the business or its customers? Spend time on this phase and develop robust plans to mitigate perceived risks.

With requirements and risks understood, begin the search. Whilst online search tools provide a good starting place, be sure not to neglect other sources. Review publications, attend industry events and speak to others whose opinions you trust.

Narrow the selection by contacting prospects and asking the right questions. This is the time to find out: what quality accreditations they hold; what manufacturing, inspection and test equipment are in operation; whether they manufacture locally or offshore; what KPIs do they monitor and how are they performing against them; and what other services they offer outside the immediate needs. Make sure there is sufficient confidence in the prospective CEM’s ability to meet the requirements.

Problems in process and quality are better discovered and solved before proceeding to full-scale manufacture. Having established a robust supply contract with the chosen manufacturer, start by manufacturing small quantities and only increase these by a factor of ten once there is confidence in the CEM’s capabilities. A good CEM will want to ensure that procedures are in place to guarantee its customer’s ongoing supply and will therefore look to carefully ramp supply. If the prospective CEM is considering full-scale production from the outset, this may be cause for concern: proceed with caution.

An experienced CEM, such as Corintech, will look to make the outsourcing process as easy and transparent as possible. By encouraging regular site visits and face-to-face meetings to discuss prospective customers’ requirements, and providing feedback and manufacturing recommendations, Corintech is a good place to start when searching for a new manufacturing partner.

www.corintech.com

“An experienced CEM, such as Corintech, will look to make the outsourcing process as easy and transparent as possible.”

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In this article, Alpha 3 Manufacturing emphasises the importance of researching and verifying a CEM’s accreditations before forming a long-term partnership.

Selecting a new contract electronics manufacturer can be daunting. Get it right and you’ve got a long-term partnership which can facilitate growth. Get it wrong and the financial consequences can be difficult to return from.

One essential check is verifying the manufacturers’ quality accreditations and certifications. These are critical to ensuring products will be safe, high quality, consistent and traceable, thus mitigating future issues and associated costs. A CEM not holding any accreditations could be seen as a red flag. Therefore, speak to them about this early in the selection process and do your own research into those essential for your industry and application, if not already aware.

Some standards are generally expected as a minimum no matter the industry. ISO9000 for example focuses on quality, repeatability and consistency in supply. It ensures products match the required standard, are built using genuine components with full traceability and can be consistently manufactured to the same standard for future demand.

IPC620 is another internationally recognised manufacturing standard, covering the actual assembly and ensuring high quality manufacturing processes are used and adhered to. Companies offering this standard have been audited and their staff trained to follow these methods.

For those looking for an industrial control panel manufacturer, the UL508A standard provides guidelines to panel builders on various issues including component selection, short circuit current rating (SCCR) and wiring methods. Regular assessments verify consistent design procedures, effective maintenance of suitable tooling and best build practices which in turn, guarantees high quality electrical control systems for the customer.

Then come industry specific accreditations. These provide assurances that the manufacturer complies with and meets the necessary directives for a sector. For example, AS9100 is a global standard which manages the stringent requirements of the aviation, space and defence sectors. Quality and safety are understandably the core focus areas and the standard is updated every few years which compels manufacturers to adjust their processes accordingly. The current revision is AS9100D which places emphasis on integration with individual business strategies as well as product safety, counterfeit products, human factors, risk-based thinking and performance monitoring.

Alpha 3 Manufacturing can supply into the medical industry by holding ISO13485 for medical devices. This focuses on quality management system practices, risk management and product safety, plus product testing, inspection and traceability.

It is revised regularly to reflect updates in technology, research and legislation. The current revision is ISO3485:2016 which places emphasis on risk management and risk-based decision making.

Buyers can be assured that companies holding these certifications, such as Alpha 3 Manufacturing, have been rigorously assessed by various standards agencies. Annual audits assessing procedures and working practices are routine, and manufacturers are expected to demonstrate ongoing improvement year-on-year regardless of outcome. Once a company has passed, it is awarded a certificate which buyers can ask to view to ensure validity by checking the standards agency’s mark, signature and expiry date.

www.alpha3manufacturing.com
Choosing a CEM

In this article, Pektron’s group supply chain director, Jayson Hatton, steps buyers through the process of choosing a contract electronics manufacturer.

There are a variety of reasons why OEMs look to engage a contract electronics manufacturer: it could be that developing electronics expertise and manufacturing capability might not fit their long-term strategy; they might be facing a particular technical challenge and need specific expertise; or perhaps they are looking to reduce costs and timescales. Whatever the reason, choosing the right partner is critical.

The current economic environment encouraged many companies to take another look at CEMs with a view to second sourcing and/or locating UK-based production to minimise risks (beyond today’s supply chain issues).

For OEMs looking to outsource their electronics, whether a straightforward build to print assembly partner or company that can undertake design and development, there are key attributes to add to the checklist.

- Quality: does the company have the necessary quality standards and industry accreditations to meet the demands of the market the OEM is operating in?
- Technical Support: is the CEM proactive in offering design suggestions? For example, improvements based on engineering input or faster time-to-market due to component lifecycle and availability analysis, all of which may increase yield, reliability and cost efficiencies.
- Quantities: will the company support sample quantities as well as production volume, with the necessary documentation?
- Flexibility: are there options offered for re-scheduling? Are there different ways to order?
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Contact: is there a named, single point of contact?

Experience: CEMs tend to have expertise within particular market sectors and it makes sense to look at companies that supply the same sector. However, that shouldn’t preclude an OEM looking further afield. There is often value from drawing in experience and learning from other sectors.

It’s more than just a tick-list exercise. Strong relationships build success and meeting people and understanding the business is vital, so a site visit and face-to-face contact with the teams the OEM will be working with is equally important. It is just such relationships that have been critical to surviving the current global component shortage.

Jayson said: “Working closely with customers and suppliers is key and the long-term relationships we have with both has paid dividends. We’ve been able to source parts which we don’t normally supply for customers where they themselves have struggled, and we’ve worked tirelessly to source parts wherever we can, without compromising quality. Inevitably though we are having to wait for particular components, and it is at these times that clear communication and honest relationships with customers and suppliers has been vital. It’s important to remember that no one person is going out of their way to make life difficult—it’s just the current market conditions—and it will get better, hopefully before I’ve gone completely grey.”

www.pektron.com

Working closely with customers and suppliers is key and the long-term relationships
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Tioga's MD, Warwick Adams explains that honesty, communication and support are key to navigating a manufacturing environment never before seen by CEMs

Tioga's activities encompass design, engineering, procurement, supply chain management, manufacturing, test, configuration, warehousing and distribution. In short, the company has positioned itself to manage customers’ products from initial design-for-manufacture requirements, through ongoing manufacturing, to delivery of configured product to the end user.

Tioga works hard building relationships with its suppliers and has developed and maintains a well-established, local and global supplier network of small, medium and large distributors and subcontractor facilities. Materials control solutions allows the use of e-commerce when dealing with purchase orders, expediting and rescheduling orders and requirements. Efficient progress chasing, especially with component availability, reduces lead times and shortages to controlled and acceptable levels.

In a normal environment with stable designs all the above is easy to maintain. Efficiencies, bulk buying, holding stock and call-offs are part and parcel of a relationship which saves time, saves money and creates stability.

However, it is safe to say the current environment is far from the normal one we previously loved and cherished. Offering long term vision, component availability and pricing—helping provide security, continuity and save money—is a thing of the past. This situation got progressively worse through 2021 and will remain for 2022 and beyond.

Stock rose rapidly to record levels, never seen before for a healthy CEM. Scheduled run rate orders have been reduced to part availability, assembling small batches, taking key parts off old/returned stock and various other avenues to keep production flowing. This, along with price increases across the board, is making life frustrating.

Everyday involves firefighting, progress chasing, finding alternatives and redesigning boards. Most time is spent liaising with customers, working together to make it happen.

It will be a while before this industry returns to normal. With numerous customers relying on supply to keep their businesses running, plus long lead times and increasing costs, business will remain challenging in 2022/23.

Once the market settles down there will no doubt be a flood of parts and, with stock holding at its highest, there will be other challenges to deal with.

Tioga’s MD, Warwick Adams said: “Here at Tioga we just find that honesty is the best policy, communication is the key and we will support our customers the best way we can whatever the challenges may be.”

www.tioga.co.uk
Going for aerospace gold

Buyers looking for a CEM offering aerospace level operations will be interested to know Jaltek has joined the UK aerospace transformation programme.

Jaltek has joined Sharing in Growth (SiG), the UK aerospace transformation programme designed to help companies win a share of the global aerospace market. Jaltek will work alongside SiG’s team to share industry expertise in areas including leadership, culture, strategy, development, operations and productivity.

SiG business transformation manager, Darren Cheetham, said: “We are delighted to welcome Jaltek on the programme and are looking forward to working together on a multiyear basis. The scheme will provide Jaltek with a comprehensive programme of training, coaching and development, tailored to their specific needs.

“With over 2,000 years’ of cross sector industry experience, our team applies global best practice intervention, enabling UK companies to create sustainable growth. We are motivated by the transfer of knowledge and capability to teams and individuals to enable ambitious supply chain companies to grow and compete globally. Our aim is to support the Jaltek vision towards world class competitiveness and productivity.”

Jaltek’s managing director, Steve Pittom, commented: “We are truly honoured to have been selected by SiG and to have their support and guidance. The scheme is the epitome of government and industry working together to drive improvements in operational competitiveness, leadership behaviours and business strategy for UK companies such as ours.”

Jaltek’s Steve Blythe added: “SiG has already started to change how we do things. Jaltek has grown in recent years but SiG will enable us to develop even further, along with the confidence and ambition of our people, this will continue to improve how we support our customers and in turn create more jobs in the future.”

www.jaltek.com
CEM boosts surface mount capacity

Dorset-based ETL has embarked on an investment programme including new assembly equipment and accessories to expand surface mount production capacity and capability.

With James Arnold and Stuart Crook (sons of the original founders Pip Arnold and Ken Crook) now running ETL, the decision was taken to invest in equipment and upgrades to enhance the company’s production capacity with infrastructure that would capitalise on the speed of the twin-turret iineo pick and place machine which sits at the heart of the company’s surface-mount line.

As part of a funding programme across the ETL business, including improvements to the company’s factory and office premises, the equipment investment focused on: a new reflow oven; a strategic upgrade to its Europlacer feeders; new board conveying/handling solutions; and an optical comparator. To expedite the investment’s impact, the ETL directors opted for a range of specialist technical support from the Europlacer Applications Team and upgrade paths for its legacy accessories and operating systems, plus feeder setup hardware and stock management software tools to get to full productivity fast.

James Arnold said: “This investment gives us the tools to greatly increase throughput. By minimising downtime in conjunction with new offline setup functions, we calculate a capacity uplift of at least 40 per cent, without needing additional systems. In fact, this investment allows us to make the most of the speed and throughput that our trusty iineo machine already delivers.”

Much of the productivity improvement relates to offline facilities that allow preparation activities that do not impact the pick and place machine’s operation or from contemporary software solutions such as ‘drag and drop’ programming for the iineo included in the latest Europlacer RCS.16 operating system.

James added: “The OS upgrade augments a satisfyingly cost-effective trade-in solution for our older feeder trolleys. These have been replaced by new state-of-the-art intelligent ii-feed carts.”

Despite a challenging time for all businesses, ETL has secured new customers in a variety of markets including energy, defence and domestic electrical appliances.

James pins the success on ETL’s continuing ability to quote and deliver on short lead times, including the company’s fast-turn service for medium to large batch sizes alongside its cable harness and cabinet build services.

James concluded: “We can still offer JIT manufacturing services for our customers despite the squeeze of global component shortages. But we did come to the decision that we needed to upgrade our surface mount lines to meet the capacity demands of our increasing customer base. The great rapport we have with Europlacer and the fact that we’ve always valued the service that Europlacer delivers and trusted the advice of its technical and applications teams made that decision straightforward.”

www.etluk.co.uk

Despite a challenging time for all businesses, ETL has secured new customers in a variety of markets including energy, defence and domestic electrical appliances.
Keeping products in production

FermionX’ commercial director, Will Patrick, discusses current component shortages and keeping customers’ products in production

There is plenty of news explaining how chip shortages are impacting the profits of big manufacturers. Jaguar Land Rover states it has lost £9m in the last three months alone. The shortage is, in part, driven by demand for electric cars, PCs and other chip-hungry products. As a contract electronics manufacturer, FermionX is aware of the problem and managing it through its supply chain team and customers thanks to the company’s ability to act quickly and flexibly.

Thanks to strong relationships with suppliers and customers, smaller specialist CEMs can be flexible when customers need to redesign products and parts, reacting quickly to changes in parts supply.

FermionX’ customers operate in niche markets, so are looking for bespoke build and component solutions. As they use a contract electronics manufacturer rather than manufacturing in-house, they can be flexible with when they choose to order. Big in-house manufacturers must continue to pay overheads, even if no components mean they can’t manufacture. It seems a common view that the current shortages will continue over the next one to two years.

Supply will eventually catch up with demand through the opening of channels cut off by Covid, Brexit and other uncertainties.

So how can OEMs keep products in production? Start early—keep on top of yearly requirements and review often. Talk to the CEM regularly (they should be keeping customers in the picture) to assess and proactively avoid supply delays. Pick a CEM that can be flexible. Look for one who demonstrates flexibility with ideas and solutions that support customers and keep products in production.

www.fermionx.com

FermionX’ customers operate in niche markets, so are looking for bespoke build and component solutions

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Selecting the right CEM

Ultra CEMS Engineering Manager, Tom Troughton, explains the benefits of selecting a trusted partner who can fully support all a customer’s manufacturing requirements

When selecting a CEM, an open and honest relationship is essential. Communication throughout the process is key to ensure the CEM fully understands the customer requirements, time frames and budgets.

Working with the CEM from an early design stage is imperative as the CEM will, in most cases, be responsible for sourcing components and taking the product from concept to tangible product. CEMs with design-for-manufacture and rapid prototyping processes will provide greater rewards over the project’s life.

Ultra’s engineering team can recommend design optimisations to aid manufacturability and reduce cost. Thus, any potential design changes take place before first production, reducing the number of design cycles. This reduces time-to-market and ensures greater production efficiency and yields, resulting in reduced cost throughout the product’s lifecycle.

Faced with long component lead times, it is essential the CEM understands the BoM and can advise on purchasing strategies and inventory management to support the product lifecycle and short-term demand. Ultra’s procurement team can provide support on BoM health including last-time-buys, end-of-life items and alternatives.

Having robust processes and experienced engineering/supply chain teams is no longer all that is required in today’s ever-changing world. OEMs must ensure the CEM they select can be flexible and react effectively to changing requirements and market conditions.

www.ultra.group/cems

Working with the CEM from an early design stage is imperative as the CEM will, in most cases, be responsible for sourcing components
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Balance key to surviving and thriving

Texcel Technology’s commercial director, Peter Shawyer, highlights what is needed to survive and grow in the UK contract electronics manufacturing industry

The last couple of years have been tough for the UK electronics manufacturing market and the challenges OEMs are experiencing are rippling down to CEMs. So, what does it take to survive and thrive as a CEM in the current climate? The one-word answer is ‘balance’.

It would have been hard to miss the automotive industry’s catastrophic slump, with last year’s UK car sales the lowest for 65-years. Any CEMs focusing on this industry will have struggled too, with no silver bullet to offset the drop in demand. Texcel has always worked with OEMs across a wide spread of market sectors, helping smooth fluctuations in demand.

It is always beneficial to have a financially balanced business and CEMs are no exception. Financially stable CEMs can reinvest profits in capital equipment, automation, productivity, efficiency and capacity. Additionally, investing in recruiting and training people, helps a business expand its capabilities.

Healthy finances also help CEMs navigate market peaks and troughs, evident during the global pandemic. CEMs financially stable pre-pandemic were best positioned to survive the last couple of years.

It has been necessary to increase component and sub-assembly stockholdings to smooth supply chain shortages and lead times. Texcel has invested an additional £2M in stock to help remain on track. The company shared some of this load with its customers—in terms of orders and contracts—but has been committed to supporting them.

Texcel has seen competitors without a sound financial foundation struggle during the crisis, either going into administration or losing business to competitors offering better service.

No-one could have predicted the Covid-19 outbreak in late 2019 or the global implications for the following two years and beyond. Chip shortages are predicted until 2023, so the industry faces at least another year of supply chain disruption, plus any other knock-on effects of the current economic landscape.

CEMs that are well balanced in terms of customer base, financial stability and ability to flex their manufacturing output are best positioned to face these challenges, survive them and thrive.

Just as CEMs’ fortunes are inextricably linked to those of their OEM customers, the same can apply in reverse. OEMs are dependent on the stability of their chosen CEM to ensure continuity of supply. OEMs need to research and select their CEM carefully to minimise their risk and allow for future growth.

www.texeltechnology.com

“...t had been necessary to increase component and sub-assembly stockholdings to smooth supply chain shortages and lead times.”

Texcel Technology’s commercial director, Peter Shawyer
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SiTime has introduced the XCalibur active resonator. The company classes this as a new product category designed to solve supply chain constraints using programmable semiconductors as drop-in replacements for quartz crystal resonators. SiTime also claims the technology offers higher performance and reliability, while reducing development time by up to two months in automotive, enterprise and industrial applications.

SiTime’s executive vice president of marketing, Piyush Sevalia, said: “SiTime’s portfolio consists of many unique solutions that deliver value to customers. We are continuing that tradition by creating a new category of Mems-based active resonators that opens up a $200 million SAM within the $4 billion resonator market.

“Our new XCalibur active resonators solve quartz availability problems through programmability and by using the semiconductor supply chain that is independent of quartz. Additionally, quartz resonators are notorious for posing design challenges requiring additional testing and development, delaying customers’ projects. XCalibur solves these challenges by providing a more reliable, flexible drop-in replacement that’s much easier to implement.”

Quartz resonators have well-known weaknesses such as being susceptible to strong EMI fields and requiring negative resistance testing in every design and layout cycle, as well as requiring qualification for each frequency. With XCalibur active resonators, customers no longer experience EMI or start-up issues. They no longer need to send their board to quartz vendors for negative resistance testing. Furthermore, customers can implement a new frequency in the same design without re-qualifying the part. All these benefits enable the customer to get to market faster.

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What's New - Frequency

New OCXO suits satellite, radar and GHz systems

RFX's new OS936M-10 high stability OCXO offers frequencies up to 500MHz. Designed around an in-house manufactured precision SC cut crystal, frequency stability is ±5ppb over a -40 to 65°C operating temperature range.

The device limits harmonics to -35dBc and the sub-harmonics to -40dBc. Short term ageing is ±0.1ppb maximum per day, while long term ageing is ±80ppb maximum per year, both measures after 30-days continuous operation. The model is said to offer excellent phase noise performance for a multiplied frequency design at -150dBc/Hz @ 100kHz. The device has a one second Allan Deviation of approximately 1.5x10-10 for a 400MHz output.

Standard and custom frequencies can be manufactured from 150MHz to 500MHz. Housed in a 36 by 26.5mm hermetically sealed package with a height of 10mm, the OS936M-10 is RoHS compliant and meets vibration, mechanical and thermal shock to MIL standard 202F. Design-in samples are ex-stock; lead time for production quantities is 12-weeks.

Typical applications include satellite links, radar and high frequency local oscillators for GHz systems.

www.rfx.co.uk

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Leveraging digital solutions for strategic procurement

Margaret Cunha is senior director, supply chain solutions, for Digi-Key Electronics. Digi-Key is both the leader and continuous innovator in the high service distribution of electronic components and automation products worldwide, providing more than 10.7 million components from over 2,200 quality name-brand manufacturers.

These days, procurement professionals have a more difficult job than ever. Products and materials across all industries are often difficult to obtain, subject to supply chain delays and challenges. The ability to match purchasing needs with available supply may fluctuate by the minute. With so many issues at hand, it can be difficult to think strategically beyond the tactical needs of today.

Strategic procurement is critical to the sustained success of an organization. It goes beyond the day-to-day tasks and looks several years ahead to help determine what is needed to help your organization be successful.

To be sure, tactical, daily procurement tasks like filling purchase orders must still be completed to keep business moving, but finding time to be strategic and plan for the future is just as important to ensure you are poised for success down the road.

Digital Transformation

Over the past several years, purchasing has become increasingly more digital and increasingly more automated. Digital solutions like Digi-Key’s APIs, EDI, and Punchout Catalog bring data in faster, helping purchasers make better supply chain and procurement decisions.

Some purchasers may be intimidated by the idea of automation, but what it ultimately comes down to is bringing in a digital machine-to-machine connection and letting computers do what they do best – make simple, tactical decisions – thus freeing up valuable time for humans to take on more critical and creative thinking, connecting with business partners and ideation.

Getting Started

Strategic procurement can help you start developing the building blocks today that you’ll need to reach your goals in the future. Some questions to consider when it comes to strategic procurement include:

- What does the market look like 1-2 years out?
- What does your purchasing department look like 5-10 years from now?
- Which suppliers do you want to align with?
- What tools do you need to be the best at what you do?

From there, you can begin reviewing which digital solutions might be best to implement for your business. Here’s how to get started with Digi-Key’s digital solutions:

- Identify the processes you want to improve and automate.
- Consider your current technology infrastructure and resources.
- Evaluate the return on investment with tools such as the API Solutions Calculator.
- Get in touch with any questions.

Digi-Key Solutions

The supply chain is brimming with data, and strategic, digital procurement processes can leverage that data to optimize outcomes. Digi-Key offers a variety of digital solutions designed to reduce costs and errors and increase efficiency, accuracy, and time to market. If your business could benefit from APIs, EDI, or Punchout Catalog, Digi-Key is ready to help take your eProcurement requirements to the next level.

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Digi-Key offers a variety of digital solutions designed to reduce costs and errors and increase efficiency, accuracy, and time to market.
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Using standards to increase quality

Quality and reliability are essential to compete in today’s electronics industry. Using IPC standards throughout the entire process, companies can demonstrate better performance and enhanced product life, as well as compliance with industry requirements.

IPC standards are accepted worldwide as the pinnacle manufacturing standards for the electronics industry and can be adopted for every process stage including design, assembly, handling, and shipping. IPC standards help manufacturing companies demonstrate the products and services offered have high quality and reliability.

Investing in IPC training and certification programmes can help manufacturers: demonstrate how important they consider rigorous quality control practices; meet the requirements of companies that expect suppliers to have credentials; gain valuable industry recognition; and facilitate quality assurance initiatives for international trading.

Training alone may help with quality initiatives, but when staff have an industry-recognised certification, companies have the additional credibility to help source new customers and contracts.

Individuals can become certified to six key IPC standards:

- IPC 6012, Qualification and Performance Specification for Rigid Printed Boards
- IPC-A-600, Acceptability of (Bare) Printed Boards
- IPC-A-610, Acceptability of Electronic Assemblies
- IPC/WHMA-A-620, Requirements and Acceptance for Cable and Wire Harness Assemblies
- J-STD-001, Requirements for Soldered Electrical and Electronic Assemblies
- IPC-7711/7721, Rework, Modification and Repair of Printed Boards and Electronic Assemblies

Regarding aerospace products, Advanced Rework Technology is the only UK IPC Accredited Training Partner (IPC Training Centre) authorised to teach both of the IPC Space Addendum training courses for J-STD-001 and IPC-A-620.

MD, Debbie Wade, said: “ART training staff are highly experienced with every part of the industry from design, fabrication, through to assembly and quality/inspection so this will assist the trainer with every step of their teaching which makes our courses second to none.

“The staff here at ART also dedicate their time to sitting on numerous IPC Standards Development and Training Committees. This gives us the added advantage and skills required to not just teach the latest requirements but fully understand the changes to the technical standards and associated training courses.”

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- Requirements for Soldering Electrical and Electronic Assemblies
- Repair Rework and Modification of Electronic Assemblies
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- Qualification and Performance Specification for Rigid PCB’s
- Acceptability of Printed Boards

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Farnell is now stocking the full range of ams Osram’s Oslon UV 3636 UV-C LEDs. Buyers can access a greater range of UV-C LEDs solutions for purification and disinfection applications including: point-of-use water treatment; automotive interior disinfection; air purification; general disinfection of high touch surfaces; medical environments; home goods and other consumer applications. The range is available in three power ratings of 4.7, 13.5 and 42mW.

All products feature a ceramic package with integrated glass cover and are based on AlGaN flip chip technology. The Lambertian emitter offers radiation of 120°deg and UV-C colour of 275nm.

Farnell’s global head of semiconductors and SBC, Lee Turner, said: “Ams Osram has a long-established reputation for manufacturing innovative optical solutions, offering the highest standards in quality and reliability. Our customers rely on having access to high-quality UV-C components to keep pace with this fast-growing market. The range of optical solutions enables our customers to improve quality of life in terms of health, safety and convenience, while reducing impact on the environment.”

www.element14.com

OKW’s new Enclosures & Tuning Knobs for Medical Equipment brochure covers an offering spanning over 3,000 products. Applications include wireless/wired remote controls; emergency systems, monitoring and signalling devices; portable solutions for personal protection and ambient assisted living (AAL); analysis, diagnostics and therapy equipment; monitoring systems and IoT; peripheral devices; and data acquisition for laboratories and research.

The company states all the products are characterised by ergonomic design, user-oriented functionality, high-quality moulding and finishes and customisation options.

OKW’s enclosure design offers solutions for power supply and displays; high ingress protection ratings; high-performance, easy-to-clean materials; recessed surfaces to protect keypads, displays and interfaces.

New models include elegant and ergonomic Slim-Case phone-style enclosures for handheld devices; Smart-Panel wall-mount cases for building control and monitoring; Easycube sensor enclosures that can be cable-tied to rails; and a new range of illuminated tuning knobs for menu-driven interfaces.

www.okw.co.uk
Benefits of British made cable

Aerco encourages buyers to explore the cost, logistical and customer support benefits offered by UK-based cable manufacturers

British cable manufacturing has a long history. However, over the past two to three decades overseas manufacturers have been favoured by many UK buyers due to price advantages. Despite this pressure, the UK industry has retained skills, albeit supporting lower volumes. Today, Britain's independent cable manufacturers remain in business because they are good at what they do.

As a small independent cable manufacturer ATAG works alongside UK electronic systems designers, manufacturers and specifiers, offering the latest polymer, wire and materials—plus innovative manufacturing processes—to deliver products designed to meet customers’ needs regarding temperature, size, insulation, conductivity, flexibility and dynamic flexing characteristics.

Now, as overseas suppliers seem increasingly remote, UK manufacturers and service companies see the advantages of immediate communication with a local manufacturer which offers local stock, fast response and small MOQs.

This contrasts with the logistics that now apply to those previously sourcing from overseas.

As overseas suppliers seem increasingly remote, UK manufacturers and service companies see the advantages of immediate communication

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AceOn Group’s MD, Mark Thompson, explains how buying British encourages a collaborative approach to the supply chain and drives innovation

AceOn Group has been in the battery business for over 30 years and it’s fair to say things have changed a lot over that time. From its Telford base, the business has evolved from carving a niche designing and assembling bespoke power packs to supplying off-the-shelf universal battery types.

In many ways, increased competition from Europe and the Far East has encouraged component suppliers like AceOn to push the boundaries of what it can deliver to UK customers. The new focus is collaboration with other British organisations to create innovative power pack solutions using different chemistries and configurations that meet the exact specification of an application—from power packs that withstand extreme temperature, dust and water, to those requiring high or low voltages over a short or long period.

Without made-to-measure solutions, many companies would find their own ambitions curtailed by the lack of suitable power options. Could they buy bespoke solutions from the Far East? Maybe. However, the innovation process would take significantly longer and there’s no guarantee of quality or effectiveness. With homegrown products, the quality stamp is more assured.

Over the years, AceOn has created custom-built battery packs for everything from seal and elephant trackers to arctic drones and wave boards. Likewise, the skills and knowledge of the inhouse design team is shared with other British companies to develop new technologies, such as second life applications for old EV batteries.

AceOn is at the forefront of a million-pound project to deliver a commercial application for sustainable sodium-ion batteries (a solar-powered portable energy storage solution for rural communities in Africa) and is working with local colleges to champion the safe installation of solar storage batteries. When companies collaborate, they are so much more than the sum of the parts.

Great things happen when British companies work together: innovation thrives and it becomes the catalyst powering positive change for us all.

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Over the years, AceOn has created custom-built battery packs for everything from seal and elephant trackers to arctic drones and wave boards

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Quest for sustainable electronics

As consumers escalate environmental, social and governance expectations for publicly traded companies, John Denslinger argues there is only one downside: failure to act.

By John Denslinger

ESG, carbon neutral, zero emissions, e-waste, sustainability and similar environmental stewardship labels are more than just talking points in company boardrooms and investment communities. Maybe it was the pandemic that elevated consciousness and the social value of safeguarding the health/safety of employees, workplace, consumer and environment. To be that socially responsible is not a small undertaking. It requires unconditional resource allocation and perhaps a total revamp of business. One only needs to look at the epic investment by our industry in more eco-friendly products, processes, material procurements and end-of-life considerations as evidence that being sustainable matters. It’s truly a seismic shift in management priority.

While the pandemic may have opened eyes, it wasn’t the only contributor to a social awakening. In 2013, CEA reported the average household made use of 28 electronic products in everyday life. Since then, advances in digitalisation, connectivity, fitness, robotics, drones, VR, AI, EV and smart home added to that household list: and that just typifies the point. Manufacturers constantly promote and condition consumers to continually buy the latest technology. Unfortunately, what's good for the economy tends to be an undesirable pathway to early obsolescence. A 2018 BCC Research paper identified global electrical/electronic waste at 6.5 per cent CAGR but noted recycling was not keeping pace. EPA’s most recent data reports domestic recycling at 30 per cent. Europe is doing better per EEA reports at 40 per cent. Assuming global electronics consumption doubles by 2050 as forecasted, pre-emptive measures are needed now. Introducing more sustainable electronics could be that game changer.

So, what is sustainable electronics? A description search offers a few key words: absent toxic chemicals, reduced carbon footprint, recyclable. Sustainability starts with raw materials, product design, manufacturing techniques, recovery methods and ends with environmental impact considerations. Most companies utilise ISO14000/14001 for structure and planning. This guidance has been available for some time providing the necessary environmental management system with standards to measure and drive improvement.

Launching a sustainability initiative but question where to start? One might do well talking with companies that already:

• Designed and implemented comprehensive programs
• Measured all elements in detail
• Published results against goals
• Showed total transparency throughout

These are the real environmental leaders and each offers valuable insight into sustainable electronics. My former employer, Murata Manufacturing Co has one of the most developed initiatives I've researched, a worthy standard for the industry. Check it out by clicking at the top of their global website: corporate.murata.com/en-global on Corporate Social Responsibility for a complete mapping of ESG initiatives. Remarkable work.

There is plenty of upside to sustainable electronics. The spawning of renewable technologies will be amazing: bio-based materials; biodegradable components; additive manufacturing; recyclable substrates; textile and graphene integrated electronics; cellulose sensors; sustainable batteries; bio-batteries based on printed enzymes; and much more.

If there is one downside, it would be failure to act. Consumers have escalated ESG expectations for publicly traded companies and there is no going back. That pressure is rippling across the industry and down supply chains. Before long, corporate policy will dictate procurement selection based on supplier demonstrated ESG achievement. So, it's not too early to begin the quest for sustainability.
ECS is a one-day tabletop event that has been launched for those who design, and source components & associated services.

ONE DAY EXHIBITION
Register FREE online today!
www.electronic-component-show.co.uk/register/

WHY VISIT ECS?
- Component manufacturers showcasing their latest products
- Opportunities to create new business relationships
- Opportunities to connect with current and potential suppliers

SEMINAR PROGRAM
- A seminar program for design engineers and purchasing professionals tackling the industry's latest challenges, hot topics and what the future holds

SCAN HERE TO REGISTER FOR THE SHOW.
ECS RAFFLE

Over £1,000 worth of prizes for ECS visitors to win!
On Thursday the 19th of May at the Electronic Component Show, each pre-registered visitor will be handed their visitor badge and on the reverse side of the badge is a unique number. At 2:30 PM at ECS the lucky 25 visitor numbers will be announced and those lucky winners can collect their free gift from the platinum concourse area.
Prizes include:
- JVC 50” UHD Smart 4K ready TV
- Fitbit smart fitness watch
- Dolce Gusto Coffee Maker starter kit
- Navitel Dual Full HD Car Dash Cam
- Samsung wireless TV Sound Bar
- 15 X Electronics Sourcing Goody Boxes

These prizes will be given to ECS attendees who are still at the show at 2:30 PM. If visitors leave the show prior to 3PM these visitors will be excluded from the free prize draw.

DON'T JUST TAKE OUR WORD FOR IT

ECS is a one-day table top event that has been launched for those who design, components & associated services. Organised by MMG Publishing, publisher of Electronics Sourcing and eBOM.com, the event aims to bring together the industry’s leading manufacturers and distributors with design engineers and purchasing professionals.

Offering an informative dual seminar program, this one-day event is the place, where ideas will be shared, meaningful conversations will be had and business relationships can start or be strengthened.

OK I'M IN! HOW DO I REGISTER?

1. REGISTER ONLINE
   www.electronic-component-show.co.uk/register/

2. RECIEVE YOUR FREE PASS

3. ARRIVE AT THE SHOW
   Thursday 19th May 2022 at the Kassam Stadium - Oxford
Micross offers a single-source solution for the design and manufacture of specialty microelectronic components

With authorised access to die and wafer suppliers, plus advanced packaging, assembly, modification and test capabilities, Micross can provide solutions including bare die, fully packaged devices and complete program lifecycle sustainment. Applications include aerospace, defense, space, medical and industrial.

Regarding bare die, Micross has access to over 70,000 part types and offers the knowledge, capabilities and flexibility to adapt suppliers’ standard products to the unique requirements of customers’ devices or systems. From simple diodes to advanced analog ICs and digital components, Micross can support initial design and manufacture, to post-production end-of-life (EOL) lifecycle sustainment.

As a QML supplier certified to AS9100, ISO9001 and ISO14001 operating to MIL-STD-750, Micross operates in aerospace, defense, space, industrial-embedded and medical diagnostic markets. The company is certified to MIL-PRF-38535 Class Q & V, MIL-PRF-38534 Class H and has over 1,100 part numbers listed with DSCC, on various SMDs.

Micross offers a range of capabilities from design to test. For example, its DMFA Trusted Source facilities provide advanced packaging and electrical/environmental testing, while its counterfeit mitigation facility ensures authenticity to specification.

When military or space grade products are unavailable, Micross offers an array of solutions to provide these hard-to-get components.

An obsolete, long-lead time or high-priced device mounted on an otherwise defective or obsolete circuit assembly can be removed, refinished and verified for re-use by the original source, saving the costs of redesign or replacement. Micross salvages expensive and rare components, specialising in BGAs (removal and/or reballing) and provides these as either discrete components or installed on new boards.

Micross offers robotic hot solder dip (RHSD) technology, the only process approved by the TMTI report to eliminate tin whisker risk without damaging the component.

Micross supports application specific requirements where either leaded or non-leaded components are required and can convert to any device footprint with processes that are NADCAP certified and compliant to the IEC TS62647-4 international standard. The process has undergone extensive qualification at independent labs, validating the process as safe and reliable.

www.micross.com
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Micro connectors start at 1.25mm pitch delivering 2A per contact, up to 8.5mm and 60A - we cover a wide range of applications for when SWaP matters most.

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And you’ve got the world that we deliver an innovative interface and embedded solution for:

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Engineer to Engineer – Harwin won’t let you down.

Harwin.com
Semiconductor lifecycle solutions

Rochester Electronics will be using its ECS stand to showcase its authorised distribution, licensed manufacturing and product replication solutions

Rochester Electronics claims the position as the world’s largest continuous source of semiconductors, 100 per cent authorised by over 70 semiconductor manufacturers including NXP Semiconductors, Infineon Technologies, Texas Instruments, Analog Devices, Onsemi, Ampleon and more.

As an original manufacturer stocking distributor, Rochester has over 15 billion devices in stock encompassing more than 200,000 part numbers, providing an extensive range of end-of-life (EoL) semiconductors and active semiconductors.

As a licensed semiconductor manufacturer, Rochester has made over 20,000 device types.

With over 12 billion die in stock, Rochester can manufacture over 70,000 device types.

The company offers a full range of manufacturing services including design, wafer processing, assembly, test, reliability and IP archiving, providing single solutions through to full turnkey manufacturing for faster time-to-market.

With direct sales and support staff in all major markets, complemented by a network of regional and global authorised channel partners, Rochester aims to meet customers’ needs over the phone or via its e-commerce platforms anytime, anywhere.

Rochester’s growing product and service portfolio continues to provide an authorised source of supply to customers around the world directly, in partnership with its authorised distribution network and through e-commerce platforms.

Visitors to Rochester’s stand can learn more about: obsolescence management; continuous sourcing of EoL and active semiconductor devices; combating counterfeit products; licensed manufacturing of after-market devices; product replication solutions; and supply-chain disruption.

www.rocelec.com

Rochester’s growing product and service portfolio continues to provide an authorised source of supply to customers around the world
Focus on switch innovations

RJS Electronics’ ECS stand will highlight the company’s range of electromechanical components, with a focus on anti-vandal and programmable switches.

RJS Electronics draws visitors’ attention to the RJS1N1LP series low profile range, which offers a total maximum height of 14mm, much shorter than standard types. Key features include: micro travel; single, bi-colour and RGB LED illumination options; 12 to 30mm size; and IP67/68 rating.

The company’s high current switches (RJSX07 series) are available in sizes 16 to 25mm in 1NO or 2NO configuration (22mm and 25mm). They are IP67 rated (front) and available with LED illumination (ring or power symbol or non-illuminated). The products are designed to offer a long mechanical life, high resistive load and compact, cost efficient solution.

RJS-SDE is a multi-purpose component three-in-one combining full colour TFT LCD display, rotary encoder and pushbutton switch. The display is programmed via its SPI interface. Libraries are offered for HVAC, home control, automotive, media player and more. The switch is IP65 rated (front) and caps can be customised.

The company’s latest edition to its programmable switches, the RJS-SLC, lets customers fit two rows on a 1U rack. This programmable switch uses an I2C interface 0.42in high-resolution mono OLED display (72 by 40px OLED module). Applications include home automation, medical equipment and audio/broadcast equipment.

RJS has over 19 years’ experience distributing quality electromechanical components and supports industries including automotive, military, emergency services, lighting, video/audio broadcasting and security.

www.rjselectronics.com
A specialist manufacturer within the electronics sector, Phoenix Dynamics provides performance cable assemblies to support high-reliability and harsh environment applications in markets including aerospace, defence, rail, energy, marine, automotive and motorsport.

Products include wiring harnesses, fibre optics, RF cable assemblies and power cables, plus a range of electro-mechanical assemblies. Complementing these products, a bespoke overmoulding service addresses enhanced environmental protection and customer specific cabling requirements.

In addition to Phoenix Dynamics’ manufacturing capabilities, customers are turning to the company for design and development support too. Building on its cable assembly design service, Phoenix has assisted customers with the design of enclosures, sensor assemblies and custom connectors.

With the effects of the pandemic causing global component shortages and lengthy lead-times, Phoenix is working closely with its customers to minimise disruption to their production lines. Being an independent, privately owned business allows it to source materials from a range of manufacturers and distributors and propose suitable alternatives for any problem parts. Phoenix holds buffer stock of regularly used components so customers can get their manufactured items delivered sooner.

www.phoenixdynamics.com

“Phoenix Dynamics provides performance cable assemblies to support high-reliability and harsh environment applications.”

**Rapid PCB Assembly in just a few easy steps**

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3. Choose your PCB specifications
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FANS AND BLOWERS FOR PRESSURISED AIR AND SUCTION APPLICATIONS

We provide worldwide, perfectly engineered miniature high-performance fan and blower solutions for demanding air pressure, vacuum and flow applications.
Powerful design support

Visitors to Luso Electronics’ stand can explore product offerings including switch mode power supplies, DC/DC converters and associated products.

From a globe spanning array of manufacturers, Luso’s factory trained product specialists will be available to assist and recommend solutions for power applications.

Technologies range from 0.25W DC/DC converters to 3kW stackable programmable switch mode power supplies, with application-specific products for rail, medical and specialist industrial requirements. The company also offers modular configurable supplies with its UK-based configuration centre offering quick-turn response for small quantities.

With years of experience, Luso’s factory trained specialists are on hand to assist when selecting a power supply for a new design. They also offer support throughout the design cycle and provide a local link to the factory.

At ECS, Luso will showcase the Enedo modular power range to illustrate its flexible and innovative design. Alongside its range of medical power supplies and adaptors, Luso will also show its rail approved DC/DC converters, plus the innovative Din rail-based battery backed UPS system from Delta. Specialists will be on hand to discuss applications and recommend solutions, guiding customers through the design cycle.

www.lusoelectronics.com

At ECS, Luso will showcase the Enedo modular power range to illustrate its flexible and innovative design.
END OF LIFE IS NOT THE END OF THE LINE.

As an authorised distributor, Rochester Electronics provides the world’s most extensive range of end-of-life (EOL) and broadest range of active semiconductors to keep the medical, defense and infrastructure industries moving worldwide.

Visit us at stand 33-34 at the Electronic Component Show 2022

www.rocelec.com
Revealing signal details

Benefits of Rohde & Schwarz’ new RTO 6GHz class oscilloscope range from rapid everyday measurements to revealing signal details in high definition mode.

Test and measurement specialist, Rohde & Schwarz, will present the new R&S RTO6 series oscilloscope at ECS 2022. Featuring a new streamlined user interface on a larger 15.6in full HD touchscreen, the oscilloscope is designed to speed up everyday measurement tasks and help quickly solve simple or complex circuit issues.

The touch functionality and redesigned front panel help test engineers quickly set up measurements. The significantly larger screen can display a maximised waveform viewing area and signals can be dragged and dropped to different parts of the screen with R&S SmartGrid. The app cockpit provides access to the oscilloscope’s applications with a single tap. Specifications include 9.4 ENOB, an update rate of one million waveforms per second, plus a comprehensive toolset of analysis functions.

The oscilloscopes are offered in six bandwidth models from 600MHz to 6GHz with a sample rate up to 20G sample/s. The integrated test solution for the time and frequency domain, as well as protocol and logic analysis, support design engineers across all industries.

Rohde & Schwarz states the instrument features a high waveform update rate, excellent signal fidelity, a powerful digital trigger and responsive deep memory. More signal details can be revealed using high definition mode which increases the vertical resolution up to 16-bit with digital filtering, resulting in sharper waveforms and less noise.

www.rohde-schwarz.co.uk
Charcroft dives deeper to cut leadtimes

Specialist support on leadtime management

From automatically checking for alternatives to allocated parts, to investing in UK-based inventory, Charcroft takes responsibility for helping customers to find solutions to extended leadtimes on passive components.

For buyers
- Identifying alternative parts with faster availability
- Cross-referring parts from non-franchised manufacturers
- Getting fast answers from franchised manufacturers
- Investing in inventory to minimise back-to-back ordering
- Actively planning inventory based on potential demand
- Minimising inventory liability and procurement risk for customers
- Strong linecard of global and specialist franchises

For engineers
- Auditing availability during parts selection
- Identifying upgraded alternatives to legacy devices
- Suggesting ways to design-in flexible procurement
- Liaising between customer engineers and buyers
- Thinking outside the box to find different approaches
- Taking responsibility for delivering a total solution
- Specialist though-life support on designs

UK-based manufacturing facility
- Custom passive assemblies
- Manufacture of legacy passives
- Vishay Approved Precision Centre

Call 01591 610408
Click debbie.rowland@charcroft.com

Debbie Rowland
Director
debbie.rowland@charcroft.com

Roger Tall
Director
roger.tall@charcroft.com

Charcroft: Challenge Accepted

Web: www.charcroft.com Email: sales@charcroft.com Tel: 01591 610408
Passives, Power, Sensors, Emech and more
Foremost Electronics has announced availability of Icotek cable entry plates. The KEL-FA range is a compact system designed to route and seal combinations of pre-terminated cables, conduits or pneumatic hoses using Icotek KT series grommets.

Foremost Electronics key account manager, Emma Kempster, said: “The new Icotek KEL-FA offers panel and machine builders a very flexible way of routing pre-terminated cables, conduits or pneumatic hoses without requiring any tools, it’s simply click-clack-closed. Offering high cable density, great strain relief and IP54 environmental protection the KEL-FA offers many advantages over conventional cable glands.”

Once the frame is populated with grommets and cables, the cover is applied and the two clamping levers are locked. IP54 sealing is offered for cable from 1 to 35mm dia. The frames match cut-out dimensions for 10, 16 and 24-pin standard industrial connectors and can be screw mounted or snapped into a frame.

Key specifications include: flame resistance class UL94-V0, self-extinguishing, polyamide material, -40 to 140°C operating temperature range, UV-resistant, silicone free, halogen free and screw mounting.

www.4most.co.uk

Intelliconnect has launched a new website offering visitors easier navigation, improved search facilities, a Quote Basket and a chat facility to assist with sales and technical questions.

Intelliconnect supplies European and North American defence, medical and marine OEMs and has been awarded the SC21 Silver Performance Standard Award for a third year. The company also manufactures standard connectors and adapters including the Pisces range of IP67/IP68 waterproof RF connectors, plus Covert, Triaxial and Multipin ranges.

MD Roy Phillips said: “We believe Intelliconnect are a different kind of interconnect solutions provider. We use our long experience and innovative thinking to tailor our services to each individual customer. Our experience tells us that every product is unique, and every project requires its own strategy and outlook.”

Intelliconnect’s recently launched cryogenic cable assembly business, CryoCoax, supplies the growing market for quantum computing, medical, research, test and measurement and the emerging low temperature computing markets.

www.intelliconnect.co.uk

It’s precise performance, delivered.

Our CoreHC product family, Card Edge Contact systems, and Gen-Z solutions offer high-density interconnects with lower insertion and return losses at densities as high as 2.5 mm. CarlisleIT leads the way with high-performance interconnect solutions by offering unmatched signal integrity for today’s faster and more complex communication systems operating up to 70 GHz.

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Genuine electronic components from only authorized sources.

Enter a component part number

54B+ parts in stock
25M+ unique part numbers
4K+ leading manufacturers
2.3M users per year
120M searches per year

ALWAYS REAL-TIME PRICING AND AVAILABILITY

Search authorized distributors at TrustedParts.com
# Buyers' Guide

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Distributor</th>
<th>Telephone</th>
<th>Website</th>
<th>Franchised Distributor</th>
<th>No of Lines for Principal</th>
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**Services Sourcing**

**CEM**

- **Wilson Process Systems**
  - In-house processes including:
    - Oversized PCB Capability
    - Automated SMT/Through-Hole Assembly
    - Hand Assembly/Box Build
    - Design For Manufacture
    - Environmental Testing
    - Wide Range of Coatings/Encapsulation
    - Full Test Services
    - IPC Certified Staff
  - Company: www.wps.co.uk 01424 722222 enquire@wps.co.uk
  - ISO 9001: FM 14458

**DEVICE PROGRAMMING**

- **Action Circuits**
  - Services: device programming & reeling specialist
  - Contact: Emma at emma.evernden@electronics-sourcing.com
  - Or call us on 01892 613400

**TAPE REELING**

- **Action Circuits**
  - Services: tape reeling & benchtop solutions
  - Contact: Emma at emma.evernden@electronics-sourcing.com
  - Or call us on 01892 613400

**INTERCONNECTION**

- **Hiros Electric Europe BV**
  - More than 50,000 connectors
  - Contact: Emma at emma.evernden@electronics-sourcing.com
  - Or call us on 01892 613400
  - Website: www.hirose.com/eu eu.info.3d@hirose-gl.com

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54 March 2022  •  www.electronics-sourcing.co.uk
**ICs & SEMICONDUCTORS**

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<th>Minimum Order Value</th>
<th>% Lead Free for Principal Range</th>
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**HEATSINKS**

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**INTERCONNECTION**

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<td>N/A</td>
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## Buyers’ Guide

**Manufacturer Guide**

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Best Windings Ltd, Viking Works, Bucklesham Road, Ipswich, IP10 1NX, UK

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<table>
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<th>Turnover</th>
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