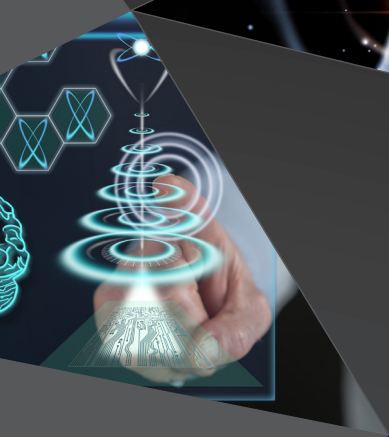

KAMAKA Electronic
Bauelemente Vertriebs GmbH

SHAPING THE FUTURE WITH ELECTRONICS

Hi-Rel Business | New Space | Power Management
E-Mobility | Obsolescence Solutions

ABOUT US

SINCE 1992, KAMAKA ELECTRONIC BAUELEMENTE VERTRIEBS GMBH HAS SERVED AS A TRUSTED, AUTHORIZED DISTRIBUTOR OF HIGH-QUALITY ELECTRONIC COMPONENTS. SPECIALIZING IN INDUSTRIES SUCH AS AEROSPACE, DEFENSE, AUTOMOTIVE, AND INDUSTRIAL APPLICATIONS, WE PROVIDE TAILORED SOLUTIONS THAT MEET THE PRECISE DEMANDS OF EACH SECTOR. OUR EXPERTISE IN OBSOLESCENCE MANAGEMENT AND PRODUCT MODIFICATIONS ENSURES SEAMLESS PRODUCTION PROCESSES, MINIMIZING DISRUPTIONS. WITH A STEADFAST COMMITMENT TO QUALITY AND TECHNICAL EXCELLENCE, KAMAKA DELIVERS RELIABLE, INNOVATIVE SUPPORT AND SOLUTIONS YOU CAN ALWAYS DEPEND ON.

OUR DIVISIONS AT A GLANCE

Hi-Rel Business

Aerospace, Avionics, Defense, New Space, Rad Hard Space Products, Rad Hard GaN-on-Silicon Transistors, Rad Hard & Rad Tolerant DC/DC Converters, Mil & Space Chip Resistors, MRAMS Mil & Space Diodes, MIL-STD-1533 Data Bus Couplers, JANS MIL-PRF-19500 Rad Hard GaN HEMTs, Hybrid Capacitors

Power Management

AC/DC- & DC/DC-Converters,AC/DC-Open Frame Power Supplies, Railway DC/DC-Converters, Isolated Gate Drive Power Modules, Foil Resistors, POL-Converters, Power Controllers, LDOs, Smart Power Stage Products

E-Mobility

EV On-Board Chargers, AC/DC- & DC/DC- Battery Chargers, Bi-Directional DC/DC-Converters, 2-in-1 On-Board Chargers & DC/DC-Converters, EV On-Board DC/DC Converters

Obsolescence Solutions

Adapter Solutions, Anti-Counterfeiting Program, BGA Reballing, Long Lifetime Program, Requirement Engineering, Re-Tinning, Component Harvesting, Replacement of obsolete FPGAs

OUR PARTNERS

ANNREN
CALEX
CoolCAD ELECTRONICS
Electronic Concepts
EPC·SPACE
ISOCOM LIMITED
micross one source. one solution.
muRata INNOVATOR IN ELECTRONICS
NetPower
Evans GROUP
SPACE IC
State of the Art, Inc.
TOPPOWER
unicore a BDStar company
VISHAY The DNA of tech.
VPG Foil Resistors VFR · ALPHA ELEC. · POWERTRON · APR
WINSLOW ADAPTICS
XSIS

HI-REL BUSINESS I NEW SPACE

Manufacturers	Products	Applications
State of the Art, Inc.	Space & military MIL-PRF-55342 thin & thick film SMT chip resistors, MIL-PRF-914 SMT chip resistor networks, MIL-PRF-32159 zero Ohm chip resistors (jumpers), Mission critical precision chip resistors, high frequency chip resistors, silicon chip resistors, SMT fixed chip attenuators, 4-terminal current sense chip resistors, High power chip resistors, high voltage chip resistors, wire & epoxy bondable chip resistors for hybrids, power moisture compliant chip resistors, Hi-Rel screening	Space, New Space, Defense, Aviation Hybrid Modules, Biomedical
EPC·SPACE	EPC Space is focused on designing and manufacturing radiation hardened (Rad Hard) GaN-on-silicon transistors and ICs packaged, tested, and qualified for satellite and high-reliability applications. Built for mission-critical environments, EPC Space's GaN technology guarantees high power density, fast switching, and superior radiation tolerance, making it the ideal choice for spaceborne and high-reliability electronics. Products: JANS MIL-PRF-19500 Certification for Rad-Hard GaN-on-Silicon transistors and ICs, Rad-Hard GaN Packaged HEMTs, Rad-Hard GaN Die on Ceramic Adapter, Rad-Hard GaN Drivers & Power Stage Modules, Rad-Hard GaN Drivers & Power Stage ICs Available engineering tools: Demonstration Boards, Point-of-Load Evaluation Boards, Motor Drive Evaluation Boards	Space High-Efficiency DC/DC Converters, Space Systems Lidar, Space Motor Drives, Space Systems - Ion Thrusters, Low Earth Orbit (LEO), Geostationary Earth Orbit (GEO)
VISHAY The DNA of tech.	Avionics, Military, Space (AMS) Products, Active, Passive, Discrete Components Qualified to relevant CECC, EN, ESCC and MIL specifications Hi-Rel, MIL, Space Grade Power Inductors, Coils, Transformers MIL Ceramic Capacitors, X/Y Fuses (safety capacitors) MIL-, ESA-Precision Resistors, Special Resistors, Shunt Resistors, Transducers MIL-, COTS-Tantal Capacitors, Wet-, Stacked-, SMD-, Polymer Types MOSFETS, AEC-Q COTS Products, TVS-, ESD-Diodes Optical & Thermal Sensors RF-Resistors, Substrates	Aerospace, LEO, Defense, Missiles, Airborne Systems, Guided Defense Systems, Navigation & Communication, Optronics, Radar Systems, UAV, Drones
micross one source. one solution.	Military hermetic hybrid DC/DC-converters 5W to 120W, single, dual, triple versions Space rad-hard hermetic hybrid DC/DC-converters 5W to 120W, single, dual, triple versions, TID 100krad, SEE 82MeV MIL-PRF-38534 DLA qualified, SMD part number available New space rad tolerant hermetic hybrid DC/DC-converters 25W, 40W, single, dual versions, TID up to 30krad, SEE up to 60MeV EMI filters complementary to their hermetic hybrid DC/DC-converters offering a range of input voltages and packages Rad-hard and Rad-tolerant PCB based DC/DC-converters with key features and tailored to customer´s requirements, single, dual, triple, quad, octo versions, Output power 5W to 400W, TID 100krad, SEE 60MeV Space Components Rad-hard & rad tolerant MRAMs 64Mb (4Mx16) class S 100K Radiation hard logic ICs (AND, NAND, OR, XOR), Hi-Rel diodes, rectifier & Schottky diodes, unipolar & bipolar TVS diodes, Zener diodes, COTS diodes, Diode assemblies - ISOPAC®, center taps and doublers, Hi-Rel ICs & components DLA/DSCC certified products, QML/SMD 5962, memories, logic devices, analog ICs Nuclear Event Detector (NED) screened to class H military flow or class K space flow MIL-STD-1553 data bus couplers & accessories	Space, New Space, Defense, Aerospace, Aviation, Marine, Launch Vehicles, Industrial-Embedded Products, FPGA-Boards
VPG Foil Resistors VFR · ALPHA ELEC. · POWERTRON · APR	Ultra-precision Bulk Metal Foil resistors. Extremely low temperature coefficient of resistance (TCR as low as 0,2 ppm) and exceptional longterm stability through temperature extremes. High Precision Foil Resistors, Standard & Custom Resistors, Power-, SMD-, THT-, Thermosensitive Resistors, Hybrid Chips (PRND), Trimmers, Voltage Divider Networks. Wide selection of highly precise and reliable precision resistors from customized made-to-order to standardized made-to-stock that meet any required specifications. Comprised of four brands: VFR, Alpha Electronics, Powertron and APR.	Space Qualified Resistors, Aviation, Aerospace, Defence, Downhole Oil & Gas

HI-REL BUSINESS I NEW SPACE

Manufacturers	Products	Applications
XSIS	Hi-Rel & High Temperature Hybrid Microcircuit Crystal Oscillators & Crystal Units, LVDS Output Oscillators for Space Applications, MIL-PRF-55310, MIL-PRF-38534, MIL-883B, TTL-LVDT-CMOS-HC/ACMOS-ECL, Lowest voltage is 1.8V, SMD-Packages 5x7mm, High Shock & Vibration Designs, Extreme High temperatures products operating up to +230°C New Commercial Space Oscillators for LEO Applications, SMD-Packages 3x5mm	Space Heritage, New Space, Aerospace, Aircraft, Defense, High Temperature Products
SPACE IC	ESCC FM, QM, EM qualified rad-hard POL converter 2A, 24V flatpack, buck-boost operation, rad-hard POL converter 8A, 40V (prototype), Voltage clamp 10A, 40V, DC/DC-converter controller, PWM controller with start-up, quad LVDS line receiver with extended common mode, quad LVDS line driver, 1:4 LVDS fanout buffer with extended common mode, Screening & testing of SPACE IC products to the ESCC 9000 requirements, Rad-tolerant POL converter in a plastic package	Space, New Space, Satellite Business, Harsh Environments
Evans GROUP EVANS	Highest energy and power density capacitors with MTBF>5,000,000 hours, product range 22 to 1,000,000 µF (5.5 to 150V) -55°C to +200°C very low ESR, very high current handling capability, highest levels of quality, Qualified to NASA INST-002, ISO 9001 and AS9100 registered, MIL-STD-704 space grade capacitors for critical missions	Space, New Space, Power Hold-up Avionics, Satellite Thrusters, Radar Lidar, EMP and Laser, Oil & Gas
Evans GROUP PAKTRON	Multi-layer Polymer (MLP) Film Stacked Capacitors: Capstick® Capacitor (lead-frame capacitor), Surfilm® Capacitor (surface mount chip capacitor), Quencharc® Capacitor (RC network snubber capac-itor), and the Angstor® Capacitor line. New Angstor series: 1200 VDC high-voltage polyester capacitors, withstand high current ripples, self-repairing, ultra-low ESR/RSL	Military, Space, Commercial, Automotive, Telecom, Mission-critical
Evans GROUP UTC	Multilayer ceramic capacitors (MLCCs) and leaded devices. Surface mount (SMT) multi-layer ceramic chips capacitors in both custom and EIA stand-ard sizes; switch mode power supply (SMPS) capacitors in accordance with MIL-PRF-49470 and DSCC/DLA 87106, 88011 drawings and customer source controlled drawings (SCDs); SMT high voltage MLCC; radial leaded high voltage capacitors; SMD large body size MLCC; discoidal capacitors; discoidal arrays; and custom molded case radial parts. SMPS family for input and output filters in switch-mode power supplies DH Series: negative dielectric energy pulse capacitors, +250°C, 10 KV	Defence, Aerospace, Hi-Rel applications, Industrial, Telecommunications, Missiles, Downhole
Evans GROUP EULEX	Innovative ceramic components for the most demanding high-frequency microwave, millimeter-wave, and 5G applications. Temperature range from -55° to 125°C. Design advantages through small-footprint, low-profiling packaging, and a wide voltage range. Fully tested up to 67Ghz. Patented High-Frequency Ceramic Capacitors single-layer ceramic capacitors Broadband Capacitor, Eulex Gap Capacitor, Single Layer Binary Capacitor, Vertical Layer, Ultra High-Q MLCC, Substrates and Stand-Offs	Hi-Rel applications, high-fre-quency microwave, millimeter-wave, 5G applications
Electronic Concepts	High reliable film capacitors meeting high demands for temperature and vibration. Operating temperature range from -65 to 125°C. Capacitance range from 0.001µF to 17100µF. Voltage range from 50VDC to 3300VDC, 230VAC to 920VAC. Lifetime up to over 100,000 hours. High RMS current capability, low ESL & ESR. Qualified MIL standards (PRF-39022, PRF-55514, PRF-83421, STD-790), hermetically sealed ceramic case for hostile environments, 100% burn-in screening.	Military, Avionics, Radar, Oil & Gas
ISOCOM LIMITED	Rad-hard space qualified optocouplers & optoelectronic components, high gain-, high speed-, high voltage optocouplers, VCSEL high power laser diodes, rad-hard & military solid-state relays, voltage regulators, ITAR free products, Rad-Hard Power MOSFETs, N-Channel, P-Channel, Combination N-+ P-Channel	Space Heritage, New Space, Aerospace, Avionics
CoolCAD ELECTRONICS	High Power Wide Bandgap (WBG) silicon carbide (SiC) Transistors Integrated Circuits (ICs) for applications in Power Electronics Silicon Carbide (SiC) High Voltage Power MOSFET´s & Schottky Diodes Breakdown Voltage 650, 1200, 1700, 3300V, Current 1-300Amps Low on-resistance and low leakage in the blocking state, SMD and THT packages	Aerospace, New Space, Aviation, Defense, High-Temperature, Deep Ultraviolet Optical

POWER MANAGEMENT

Manufacturers	Products	Applications
CALEX	Isolated single, dual & triple output DC/DC-converters up to 3000W High performance DC/DC-bricks Railway conform with the input battery voltage transient ranges of EN50155 up to 10:1 ratio input voltage range High power DC/DC-converters 500W, 1000W Mid-range power DC/DC-converters 100 to 500W Low power DC/DC-converters 1 to 75W Chassis mount converters, SMT&THT modules, brick assembly modules Encapsulated PCB mount from 2 to 60W AC/DC-power supplies 250W, 300W and 600W with 90-264VAC input Switch mode AC/DC supplies, 15 to 150W chassis Industry standard footprints SIP, DIP, SMT, 1x1 and 1x2 thru hole patterns Operating temperature range -40 to +105°C baseplate High efficiency up to 97%	Transportation, Railway, Industrial Applications, Commercial Applications, Medical Industry, Avionics
muRata INNOVATOR IN ELECTRONICS	Power management products ideal for applications where performance and quality are critical. DC/DC-converters: isolated from 0.25 to 1500W, non-isolated from 3 to 60V, POL converters, Isolated Gate Drive Power modules, SMD and Through Hole AC/DC-converters: open frame from 250 to 1000W, isolated board mount from 1 to 10W	Industrial, Robotics, Automotive, Medical, Power over Ethernet PoE, Railway
NetPower	Isolated and non-isolated DC/DC-converters 1W to 1000W Input voltage range 2.5V to 520V with 10:1, 8:1, 4:1, 2:1 ratios Railway DC/DC-converters: 10 to 160VDC input, 5 to 56VDC output voltage, 50 to 800W High voltage DC/DC-converters: 180 to 400VDC, 300 to 520W Over-voltage, over-current, short-circuit and over-temperature protection High efficiency up to 96%	Railway, Industrial Applications, Server Applications, Telecommunication
VPG Foil Resistors VFR · ALPHA ELEC. · POWERTRON · APR	Ultra-precision Bulk Metal Foil resistor providing an extremely low temperature coefficient of resistance (TCR) and exceptional long-term stability through temperature extremes. High Precision Foil Resistors, Standard & Custom Resistors, Currents Sense-, Power-, SMD-, THT-, Thermosensitive Resistors, Hybrid Chips (PRND), Trimmers, Voltage Divider Networks	Power the innovations, Medical, Industrial, Automation Telecommunications
TOPPOWER	Single and dual output DC/DC-converters from 0.1 to 50W, Switch mode AC/DC supplies Encapsulated PCB mount from 1 to 30W AC/DC power supplies 25 to 1200W enclosed/open frame type Industry standard footprints SIP, DIP, SMT, 1x1 and 1x2 thru hole patterns	Railway, Industrial Applications, Commercial Applications, Medical Industry

E-MOBILITY

Manufacturers	Products	Applications
ANNREN	High voltage power distribution units (PDU), high voltage battery disconnect units (BDU), high voltage on board chargers (OBC) and DC/DC-converters, combo OBC and DC/DC-converter, electric vehicle communication controller (EVCC) OBC: 6.6kW to 40kW, 94% efficiency DC/DC-converter: 300W to 12kW Combo OBC and DC/DC-converter: 3.3, 6.6 or 11kW OBC + 1 to 3kW DC/DC EV chargers, high voltage power connectors (plastic or metal), manual service disconnectors, signal connectors, charging connectors, high voltage wire harness	Battery Management Systems, Automotive, Electric Vehicles, Charger Systems, Agriculture, Automatic Guided Vehicles, UGVs, UAVs
CALEX	Powering the Future of Transportation DC/DC-converters from 300 to 3000W for 12, 24, 28, 48, 400VDC battery voltages 3000W BCA series bi-directional DC/DC-converters Ruggedized enclosed 3000W BCE series bi-directional DC/DC-converters 1500 & 3000W bi-directional non-isolated DC/DC-converters 12V/48V battery with a CAN 2.0b interface including remote ON/OFF HVC series 400S12.4K0HVC-L-CM: 4kW auxiliary power module, 220VDC to 420VDC input, 9 to 16V output and provides a single isolated 12VDC output for powering auxiliary equipment, liquid cooled, rugged and fully IP rated, vibration resistant, thermally optimized enclosure HVC 800S24.4K0HBC 16-32V output 4kW High efficiency up to 97% 1000W full-bricks with wide input range at 9 to 36VDC AC/DC on-board charger module with 6.6kW, 240 to 450 VDC output, operate from international nominal mains voltages of 100-120 / 200-240VAC nominal. OBC series are liquid cooled and feature a rugged, fully IP rated, vibration resistant, thermally optimized enclosure with slotted through holes for easy installation 300W AC/DC Li-Ion battery chargers for e-mobility and battery applications High efficiency up to 95% Battery Management Systems Standard brick size DC/DC-converters 50 to 1000W Single modules with 9 to 160VDC input & 5 to 57VDC output voltage Option: chassis mount and DIN-rail version, good shock and vibration dampening, temperature range -40 to +105°C high efficiency >95%	Battery Management Systems, Automotive, Mild Hybrid Vehicles, Autonomous Vehicles, Recreation Vehicles, Electric Industrial Vehicles, Agriculture Vehicles, Last Mile Transit, Automatic Guided Vehicles, Fork Lifts
Electronic Concepts	Robust film capacitors meeting high demands for temperature, vibration and high reliability. Operating temperature range from -65 to 125°C. Capacitance range from 0.001µF to 17100µF. Voltage range from 50VDC to 3300VDC, 230VAC to 920VAC. Lifetime up to over 100,000 hours. High RMS current capability, low ESL & ESR.	Automotive, Marine, Inverters, DC/DC-Converters, Battery Systems, AC Filtering, Medical
unicore a BDStar company	GNSS receivers with accuracies from meter level down to millimeter level Multi-constellation, multi-frequency, high-performance Compatible with GPS, BDS, GLONASS, Galileo, QZSS Processing of multiple GNSS signals on a single chip Ultra low latency processing technology: more than 100Hz RTK processing ability, less than 10ms output delay, up to 200Hz attitude and positioning data Dual-RTK solution: single-board dual-antenna positioning and dual-RTK calculation High precision even if satellite signals are blocked: centimeter-level accuracy maintained for more than 10 minutes after interrupted base station or blocked communication	Precision Agriculture, Surveying, UAV, Drones, Robotics, CORS Autonomous Driving, Vehicle Navigation, IoT, Trackers, Wearables, Precision Timing
VPG Foil Resistors VFR · ALPHA ELEC. · POWERTRON · APR	Ultra-precision Bulk Metal Foil resistor providing an extremely low temperature coefficient of resistance (TCR) and exceptional long-term stability through temperature extremes. High Precision Foil Resistors, Standard & Custom Resistors, Currents Sense-, Power-, SMD-, THT-, Thermosensitive Resistors, Hybrid Chips (PRND), Trimmers, Voltage Divider Networks	Automotive, Electric vehicle, EV Battery Management Solutions, Motor control

OBSOLESCENCE SOLUTIONS

Manufacturers	Products	Applications
micross one source. one solution.™	Component Modification Services Robotic hot solder dip – compliance with RoHS directive Elimination of tin-whiskers through tin-lead-alloy, lead attach coplanarity and compression bond, lead-free solder alloy, gold mitigation, forming and cutting of pins, BGA reballing for the conversion of tin-lead, column grid array (CGA) Interconnect technology; packaging & assembly, electrical & environment testing	Space, Aerospace, Aviation, Defense, Implantable Medical Industry, Industrial Applications, Transportation
WINSLOW ADAPTICS	Solving Obsolescence and Supply Chain Shortages Remanufacturing of legacy components, custom solutions for mitigating device obsolescence and board re-design, adapter products, interconnect pitch adapters, programming adapters Allocation & Obsolescence ASIC / FPGA adapters to include code reconstruction and re-targeting; package/ 1:1 footprint conversion, device re-targeting, connectors; reverse engineering of small plastic & metal parts; atmel AVR adapters for micro controllers Test & Development Prototyping adapters/interposers, emulation & test interface, programming adapters, voltage regulation, test clips & modules, Custom development Interconnect Screw machine/turn pin sockets, PCB connectors, stamped pin IC sockets, wire wrap, PLCC sockets & plugs, SIMM sockets, transistor and circular IC sockets, shorting link/jumpers, opto/diode display sockets, dual row component header, single row high profile IC sockets Custom interconnects Jermyn Semiconductor Hardware Mounting pads, transistor & circular IC sockets, opto/diode display sockets, insulators, panel washers, bushes and covers, component carriers, heatsinks Precision Engineering Reverse engineering solutions: re-manufacturing of legacy components, including material study to meet current regulations, even if only the physical part exists without a drawing Injection moulding, CNC machining, toolmaking	Space, Aerospace, Aviation, Defense, Automotive, Railway, Transportation, Medical, Industrial Applications, Adapter Solutions
KAMAKA Electronic Bauelemente Vertriebs GmbH	Bare die components: every industry standard is supported, customized setups are available Bare die cross referencing, die re-engineering, obsolete die stocks, wafer dicing, dummy bare dies Wafer and die level testing: bipolar transistor, comparator, digital + logic, diode, MOSFET / JFET, operational amplifier, transistor, voltage regulator, class H testing, class K testing Access to procure obsolete or allocated components with anti-counterfeiting program Life cycle management with last time buy, end of life and product change notification service	Defense, Military, Industrial, Medical, Obsolescence Solutions, Industrial Applications

MEMBERSHIPS

erai MEMBER CLICK TO VERIFY · VDE · COGD · BEST OF SPACE Die Kraft aus der Mitte. · era MEMBER

OUR SERVICES

KAMAKA - ESTABLISHED IN 1992
AUTHORIZED DISTRIBUTOR & SOLUTION PROVIDER

- Anti-Counterfeiting Porgram
- Requirement Engineering
- Total Quality Management:
  DIN EN 9120:2018 (technically equivalent to AS 9120B and SJAC 9120A); DIN EN ISO 9001:2015; DIN EN 61340-5-1: ESD compliant storage & handling process
- Qualified Visual & Electrical Test Reports
- AQL Spot Checks according to DIN/ISO 2859-1
- Hi-Rel: Screening & Procedure Service
- Long Lifetime Program up to 25 years
- Monitoring of Critical Components
- Traceability is guaranteed
- Supplier Risk Management
- ITAR free products available

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