

OUR SERVICES AT A GLANCE

Hi-Rel Business

New Space, Aerospace, Avionics, Defense, Hybrid Capacitors, Time-To-Digital Converters, Rad Hard Space Products, Rad Hard and Rad Tolerant MOSFETs, Rad Hard DC/DC Converters, Mil & Space Chip Resistors, MRAMS MIL & Space Diodes, MIL-STD-1533 Data Bus Couplers

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, MEMs, Equalizers

IoT Solutions

High-quality LCD Modules, TFT-LCD-, OLED- Displays, Access Control Keypads, Piezo Switches, Non-touch Metal IR Switches, IoT Products & Sensors

Power Management


Backup Ultracapacitors, AC/DC- & DC/DC-Converters, Ultra Low Power Energy Harvesting Products, POL-Converters, Power Controllers, LDOs, Smart Power Stage Products

Obsolescence Solutions

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



HI-REL BUSINESS

Manufacturers	Products	Applications
	<p>ESA Space Qualified ESCC 5000 and 5010 Hi-Rel components, Hi-Rel Radiation Hardened Power MOS Transistors from 60V up to 650V, N-CH, Based on the unique CoolMOS™ superjunction technology, Hi-Rel Silicon Bipolar RF Microwave Transistors, Hi-Rel Silicon, PIN- and Schottky-Diodes for RF Microwave Applications, Bare Dies (Chips), ECoLEO Rad Tolerant N-CH MOSFETS 60, 150V in a Plastic SMD & THT Package No export license required!</p>	<p>Space Heritage, Satellite Programs, Microwave Applications, RF-Foundry Services, New Space, LEO Applications</p>
	<p>Power Discrete: MIL-PRF-19500, Rad hard MOSFETS, Space Schottky Diodes, Rad Hard GaN HEMTs, Space ultrafast Rectifiers Power ICs: MIL-PRF-38535, Gate Drivers, PWM Controllers, POL Regulators, Linear & LDO Regulators Multi-Chip Modules: MIL-PRF-38534, Solid State Relays, Power Stages</p>	<p>Deep Space Heritage, Aerospace, Defense, Aviation, Aircraft, New Space</p>

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Manufacturers	Products	Applications
	<p>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, Manufacturing, Screening & Testing of Hi-Rel optoelectronic components,</p>	<p>Space Heritage, Defense, Aerospace, Avionics, New Space</p>
	<p>European Rad-Hard Fabless Semiconductor Supplier, 100KRad, 62,5MeV Products Rad-Hard Motion-Series: Chips for Resolver/LVDT, Thermocouple Pressure Sensors, Limit Switches, Relay Drivers and BiSS Communication. Rad-Hard Power-Series: DC/DC PDL-Converter, Input 5 to 11V, Output 0.9 to 5V. Rad-Hard Time-Series: Time-to-Digital Converters, Phase Locked Loop (PLL) product. Rad-Hard AI-Series: Low Power Neural-Network Interface SOC for real time video/ image processing. Customized Rad-Hard Chip Design, ESCC-Q-ST-60-02C compliant, ITAR free products</p>	<p>Nuclear, Space, Medical, Autonomous Operation, Rovers/Landers, Drones Robotic, Satellite, Space Launchers</p>
	<p>Micross Space: DC/DC-Converters including custom Hybrids, EMI Filters, 30-300KRad 80MeV Radiation Hard logic (AND, NAND, OR, XOR), Zener Diodes, Unipolar TVS, Bipolar TVS (Axial and SMD), 64Mb (4Mx16) Class S 100K Rad-Hard & Rad Rolerant, MIL-STD-1533 Data Bus Couplers 38534-Norm 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 esting</p>	<p>Aerospace, Defense, Aviation, Space, Marine, Industrial-Embedded Products, FPGA-Boards, Launch Vehicles</p>
	<p>FastCap® Ultracapacitors for energy storage applications of operating up to 150°C, high shock 500G peak & vibration 20G rms. Lithium free - no risk of explosions, 20+ year shelf life, Hermetic Ultra-Capacitor Technology D & AA size cells, 35 to 340F capacitance Voltage 1 to 2V, very low ESR 15 to 32 mohm, Low Temperature Ultracapacitors from -55 to +85°C, 35F, 40mohm</p>	<p>Hi-Rel Avionics, Space Missions, High Temperature Products, Harsh Environments</p>
	<p>Highest Energy and Power Density Capacitors with MTBF>5.000.000 hours, product range 22 to 1.000.000 uF (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</p>	<p>Power Hold-up Avionics, Oil & Gas Exploration, New Space, Radar Lidar, Directed Energy</p>
	<p>ESCC Qualified Rad-Hard PDL Converters 2A, 24V & 8A, 40V, Voltage Clamp 10A, 40V, DC/DC Converter PWM Controllers, Quad LVDS Line Receivers with Extended Common Mode, Quad LVDS Line Drivers, 1:4 LVDS Fanout Buffers with Extended Common Mode, Screening & testing of SPACE IC products to the ESCC 9000 requirements, Rad-Tolerant PDL Converters in a plastic package</p>	<p>Space Missions, Satellite Business, Harsh Environments, New Space</p>
	<p>MIL-PRF-55342, MIL-PRF-914, MIL-PRF-32159 Thin & Thick Film Chip Resistors, Mission critical Precision Chip Resistors, Chip Resistor Networks, High Frequency Products, Silicon Chip Resistors, Chip Attenuators, Current Sense Resistors, High Power Chip Resistors, High Voltage Chip Resistors, Power Moisture Compliant Chip Resistors, Zero Ohm Chip Resistors (Jumpers)</p>	<p>Space, Defense, Aviation Hybrid Modules, Medical, Biomedical, New Space</p>
	<p>Hi-Rel & High Temperature Hybrid Microcircuit Crystal Oscillators & Crystal Units, 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, High operating temperatures up to +230°C</p>	<p>Space Heritage, Aircraft, Hi-Rel Defense, Aerospace, High Temperature Products, New Space *</p>

Notice: A link is provided behind the manufacturer logos. If you follow this link, you will get to the respective manufacturer information on our KAMAKA Company homepage.