




# OBSOLESCENCE SOLUTIONS

Manufacturers	Products	Applications
	<p>Counterfeit Mitigation Services: IC Counterfeit Detection Testing                      Component Modification: Robotic Hot Solder Dip - Compliance with RoHS directive                      lead-free Solder Alloy, grid failure &lt;1%                      Elimination of Tin-Whiskers through tin-lead-alloy                      Component Obsolescence Challenges, Non-availability of tin-lead components                      Life-time buy opportunity (Long Term Packaging)                      BGA Reballing for the Conversion of tin-lead, Component Harvesting                      Lead Reconditioning, Lead Attach Coplanarity and Compression Bond                      Forming and Cutting of Pins                      Gold Mitigation, column grid array (CGA) interconnect technology                      Packaging &amp; Assembly, Electrical &amp; Environment Testing</p>	<p>Aerospace &amp; Defense,                      Space,                      Industrial Applications,                      Implantable Medical                      Industry,                      Transportation</p>
	<p>Design &amp; manufacture for the electronic system lifecycle                      Custom solutions for mitigating Device Obsolescence and Board Re-Design                      Adapter Products, Interconnect Pitch Adapters, Programming Adapters,  <b>Allocation &amp; Obsolescence</b>                      ASIC / FPGA Adapters to include code reconstruction and re-targeting; Package/                      1:1 Footprint Conversion, Device Re-targeting, Connectors; Reverse Engineering of                      Small Plastic &amp; Metal Parts; Atmel AVR Adapters for Micro Controllers  <b>Test &amp; Development</b>                      Production &amp; Test Sockets, Prototyping Adapters/Interposers,                      Emulation &amp; Test Interface, Programming Adapters, Voltage Regulation,                      Test Clips &amp; Modules, Custom Development  <b>Interconnect</b>                      Screw Machine/ Turn Pin Sockets, Dual Row Component Header, PCB Connectors,                      Single Row High Profile IC Sockets, Stamped Pin IC Sockets , Wire Wrap  <b>Jermyn Semiconductor Hardware</b>                      Mounting Pads, Transistor &amp; Circular IC Sockets, Opto/Diode Display Sockets,                      Insulators, Panel Washers, Bushes and Covers, Component Carriers, Heatsinks,  <b>Precision Engineering</b>                      Reverse Engineering Solutions; Injection Moulding , CNC Machining, Toolmaking</p>	<p>Adapter Solutions,                      Aviation, Defense, Space,                      Automotive,                      Medical Industry,                      Industrial Applications,                      Railway,                      Package Conversions</p>

	<p>High Reliability Hybrid Microcircuit Crystal Oscillators &amp; Crystal Units                      Crystal Oscillators: Standard, Military, MIL-PRF-55310, MIL-PRF-38534, MIL-883B                      Technology; TTL-LVTTL-CMOS-HC/ACMOS-ECL; Lowest voltage is 1.8V, SMD-Packag-                      es 5x7mm; Crystal Units: QPL Crystal Units, Custom Crystal Units; Obsolete Through                      Hole packages, Custom Solutions; High Temperatures up to +230°C                      High Shock &amp; Vibration Designs, Up-Screening Program</p>	<p>Defense, Space, Aircraft,                      Hi-Rel Applications,                      Industrial Products,                      Telecommunications,                      High Temp. Products</p>
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# DISPLAYS & CONTROL ELEMENTS

Manufacturers	Products	Applications
	<p>Touch Metal Piezo Switches &amp; Keypads, Non-Touch Infrared Metal Switches                      Piezo Electric Pushbutton Switches: Ring-, Point- and Non-illuminated from 16mm                      to 28mm diameters. Piezo Electric Keypads, Access Control Stand Alone, Access                      Control Keypads with communication protocol, Access Control Keypad Readers,                      Industrial Solutions and Custom Designs, all products are in Aluminum or Stainless                      Steel with an operation temperature from -40 to +125°C and IP68/69K protection                      Tested for 50,000,000 cycles including vibration and impact tests,                      Non-Touch Infrared Metal Switches with detection range 5 to 80cm                      Piezo Technology Pushbuttons work reliably under a glass thickness of 3 mm</p>	<p>Access Control Panels,                      Fuel dispensing e-Car                      Charging,                      Underwater, Submarines,                      Oil and Gas,                      Parking Systems,                      Rail Traffic &amp; Public                      Transport,                      Emergency Switches</p>
	<p>Character Displays of 8x1, 10x4, 16x1, 16x4, 20x2, 20x4, 24x2, 40x2, 40x4, 68x4                      Graphic LCDs (TN/ STN/ FSTN/ DFSTN) Displays with or w/o backlight, COG Displays,                      TFT-, LCD-Modules, HMI Modules, UART TFT Displays, Touch Panels,                      OLED Character &amp; Graphic Displays, OLED Modules, OLED Switches</p>	<p>Industrial Measuring                      Instruments,                      Control Devices</p>

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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.