



Zapario Electronics Contract Manufacturing Technical Capabilities

Metal Fabrication	<p>Our metal fabrication offering is built on the experience with a vast range of raw material such as carbon steel, stainless steel, copper, brass, aluminum, kovar, invar, silver, gold, molybdenum, tungsten, and titanium. We can custom design your parts, revise your current designs to optimize, or build parts to your design and specifications.</p> <p><i>Areas of competency in metal fabrication:</i></p> <ul style="list-style-type: none">• Processes including CNC laser cutting, CNC punching, CNC bending, CNC milling, CNC turning.• Complete fabrication assembly with welding, riveting, and grinding.• Enclosure panels from sheet metal panels, with riveted, and welded assemblies and power coated per specifications.• Machined parts and assemblies with stringent dimensions on CNC machines.• Press parts are individual parts manufactured by pressing operation on hydraulic/mechanical press using suitable tooling. Our press parts are high precision with close dimensional tolerances.• Spot welding for carbon steel, stainless steel, and aluminum.• Powder coating, painting, electroplating, chrome plating, and other finishes.
Molded Plastics	<p>As a part of electronics contract manufacturing, Zapario delivers cost-effective, reliable, and quality plastic manufacturing.</p> <p><i>Areas of competency in plastic injection molding:</i></p> <ul style="list-style-type: none">• Product design and development.• Material selection: With over 72,000 plastic materials to choose from, this is a critical decision.• Materials we work with include PPS, PPO, POM, Nylon 6, PC, PET, PEI, PES, ABS, PC-ABS Blend, PEEK, PS, HIPS, PMMA, SAN, PP, LDPE, HDPE, TPE.• Process selection.• Process capabilities include injection molding, ultrasonic welding, pad printing, screen printing, laser marking, hot stamping, solvent bonding, heat sealing, gamma sterilization, and blister packaging.• Prototyping and production quantities.• Tooling design, development, and management.• Quality control involving specific testing, evaluation, and calibration of all parts, equipment, and procedures.• Certifications and QMS: ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018. <p><i>Our Metal -> Plastic Conversion offering.</i></p> <p>In applications where it is appropriate and advantageous, Zapario's offering allows for a metal to plastic conversion.</p> <p>The primary reasons that you may consider changing from fabricated metal to plastic:</p> <ul style="list-style-type: none">• Reduction in weight.• Possible reduction in number of components of an assembly.

	<ul style="list-style-type: none"> • Reduction in secondary operations like painting, machining, assembly, leading to possible improvement in productivity and cost reduction. <p>Before analyzing the potential value of converting metal components to plastic, the team will consider various aspects including:</p> <ul style="list-style-type: none"> • Requirement of mechanical strength. • Temperature at point of use. • Requirement for conduction of heat, electricity, or radio frequency shielding. • Exposure to the chemicals. • Cost drivers for the metal part. • Tolerances required for form, fit, and function. • Tooling costs for converting to plastic componentscomponent.
3D Printing	<p>The Zapario additive manufacturing (3D printing) offering enables a rapid prototyping of the OEM box build product or specific parts therein.</p> <p>We feature a broad range of materials (ABS, resins, nylon, hard polymer) in clear, black, white, and color.</p>
Cable Assembly and Wire Harness	<p>Wire harnesses and cable assemblies are critical to electronics contract manufacturing your full (box build) product. Our OEMs benefit from a breadth of wire, cable, insulation material, and wire management product availability that are a part of our Cable Assembly and Wire Harness offering.</p>

