



SMP Tech, Inc.

## Ten Steps of Product Development

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>
<b>Product Definition</b>	<b>Concept</b>	<b>Initial Development</b>	<b>Breadboards</b>	<b>Final Development</b>	<b>Detail Drawings</b>	<b>Prototype</b>	<b>Documents</b>	<b>Preproduction</b>	<b>Product Introduction</b>
Marketing analysis	Illustrations, Industrial Design and renderings	Mechanical design layout	Design breadboard	Generate final product specifications	Detail drawings	Release documentation	Final review of prototype and specifications	Start ECO controls	Conduct long-term testing
Preliminary product description	Preliminary layouts	Initial circuit design	Detail and spec components	Define budget milestones, labor loading, etc.	Specification control drawings	Design short-run tooling	Incorporate design changes	Assemble systems	Initiate component test programs
Investigate patent position	Preliminary logic diagrams	Initial software logic	Build breadboard	Complete final layouts	Schematics	Provide manufacturing with engineering liaison	Update software and hardware	Debug assemblies	Submissions to UL, CSA, VDE, CE, etc.
Preliminary manufacturing costs	Estimate software requirements	Theoretical design verification	Define testing required	Complete final circuit design	Complete software	Update design layout and documentation	Update artworks	Test QC components, assemblies and systems	Incorporate changes as required
Preliminary development costs	Initial Selection of OEM, CPU, etc.,	Human factors analysis	Test breadboard	Start software	Assembly drawings	Implement software	Final documentation check	Prepare assembly drawings	
Generate conceptual drawings of models	Conceptual models	FDA requirements	Repeat cycle as required	Incorporate code requirements	Specifications and procedures	Engineering debug of prototype	Formalize assembly procedures	Formal test procedures	
Define hardware and software needs	Preliminary theoretical calculations	Review code requirements (EMI, UL, CE, etc.)	Summarize results and update specifications	Electronics space allocation and packaging	Color schemes and graphics	Test prototype	Meet FDA documentation Requirements		
Program cost justification	Establish design approach	Preliminary selection of OEM parts		Estimate standard costs and manufacturing requirements	Verify standard costs				
Define technology requirements		Define breadboard requirements			Document OEM requirements				
Evaluate competitive hardware		Define milestones and generate budget			Layout PCBs				
					Generate artworks				
					Design and documentation check				

Comments: Project reports and documents are compliant with GMP and ISO requirements.

175 Depot Street, Suite 110, Morgan Hill, CA 95037  
 Phone: 408 776-7776 [www.smptech.com](http://www.smptech.com)