Chip Design Flow

**DESIGN STEPS**

1. Architecture, IP block selection, Package Selection, Technology Selection

2. Design Entry
   - IO Planning
   - RTL Design and Verification
   - Schematic Capture
   - Component Placement

3. Chip Layout / Routing / Package Layout

4. Verification
   - Functional
   - Electrical
   - Thermal

5. Send to Manufacturing

**MANUFACTURING STEPS**

1. Chip Fab, Wafer Probe Test

2. Package Fabrication

3. Assembly

4. System Level Test
**PCB Design Flow**

### DESIGN STEPS

1. Architecture, Component selection, Package Selection
2. Design Entry
   - IO Planning, Initial Placement
   - Schematic Capture
     (HDL/Orcad/Altium/Pads/Allegro)
   - Placement Optimization
3. PCB Routing and Layout
4. Verification
   - Functional
   - Electrical (PI/SI)
   - Thermal
5. Send to Manufacturing

### MANUFACTURING STEPS

1. Substrate Fab, eTest
2. Tooling
3. Assembly
4. System Level Test
SIP Design Flow

DESIGN STEPS

1- Architecture, Component selection, Package Selection

2- Design Entry
   IO Planning, Initial Placement
   RTL Design and Verification
   Schematic Capture
   Placement Optimization

3- Package Routing and Layout (SiP, APD)

4- Verification
   Functional
   Electrical (PI/SI)
   Thermal

5- Send to Manufacturing

MANUFACTURING STEPS

1- Substrate Fab, eTest

2- Tooling

3- Assembly

4- System Level Test
### DESIGN STEPS

1. Architecture, Component selection, Package Selection
2. Design Entry
   - RTL Design and Verification
   - Schematic Capture, Netlist gen
   - IO Planning, Placement Optimization
3. Package Routing and Layout
4. Verification (can skip if PCB SDV built)
   - Functional
   - Electrical (PI/SI)
   - Thermal
5. Send to Manufacturing

### MANUFACTURING STEPS

1. Substrate Fab, eTest
2. Tooling
3. Assembly
4. System Level Test
PoC SW Dev Vehicle PCB Design Flow

**DESIGN STEPS**

1. Architecture, Component selection, Package Selection
2. Design Entry
   - IO Planning, Initial Placement
   - Schematic Capture (Orcad)
   - Placement Optimization
3. PCB Routing and Layout
4. Verification *(skip)*
   - Functional
   - Electrical (PI/SI)
   - Thermal
5. Send to Manufacturing

**MANUFACTURING STEPS**

1. Substrate Fab, eTest
2. Tooling
3. Assembly
4. System Level Test