XXX

PCB Design Requirement

**Company Name:** (your company's name)

**Union Tie People:** (Hardware designer or interface person)

**Contact information:** (Contact information of hardware designer or interface person)

**Board Name:** (Name of the board)

**Board type:** (digital board, analog board, mixed analog board, power board, RF board, backplane, tooling board or other)

**Application software and version:** (Please specify the design software used and the exact version)

**Date:** (Date of writing design description)

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### **Submit a list of documents (required)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **PCB Design** | □ | PCB structure dimension drawing (DXF format) | □ | Device package library |
| □ | PCB Design Schematic | □ | Single board signal flow chart |
| □ | Device BOM List | □ | Netlist |
| □ | PCB design instructions (basic design requirements and electrical performance requirements) | | |
| □ | other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | |
| **Simulation Analysis** | □ | IBIS Model | □ | Key netlists that need to be simulated |
| □ | Simulation design specifications (simulation speed, timing requirements, load description, etc.) | | |
| □ | other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | |
| **Package library creation** | □ | Device written information | □ | Device |
| □ | other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | |

### **Board name (required)**

The name that needs to be marked on the PCB board.

### **Application software and version (required)**

### **Board schematic (or netlist) design description (** **required )**

### **Board Overview**

### **Principle structure diagram**

### **Description of key components (including datasheet, etc.)**

### **Board power list (required)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Serial number | Network Name | Voltage value (V) | Current value (A) | Maximum power consumption (W) | Power Supply Description | Remark |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
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### **Simulation design requirements (SI, crosstalk, timing)**

### **Process structure requirements (required)**

### **PCB substrate and surface coating**

Generally it is FR4 with tin-plated surface.

### **Welding process**

Generally it is double-sided reflow soldering (chip mounting) + manual soldering (plug-in).

### **Structural requirements**

### **Other requirements**

### **Layout and wiring requirements (required)**

### **Recommended stacking**

### **Impedance requirements**

### **Signal Line List**

### **Clock, reset line**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Serial number | Signal name | Signal type, impedance requirements and line width design | Signal frequency | Equal length constraint | Other requirements | Remark |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

### **Differential Line**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial number | Signal name | Signal type and impedance requirements | Signal frequency | Other requirements | Remark |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

### **Analog Line**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Serial number | Signal name | Signal type and line width design | Signal Power | Other requirements | Remark |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

### **bus**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Serial number | Signal name | Signal type and impedance requirements | Signal frequency | Equal length constraint | Other requirements | Remark |
|  |  |  |  |  |  |  |
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### **Other important signal lines**

### **Other layout and wiring requirements**

### **EMC design requirements**

### **Thermal design requirements**

### **Testability and debuggability design requirements**

### **DFA Assembling Requirements**

### **Silk screen marking (required)**