ESTEEM PCB

Mixed Signal Personal Training Course Content

Day-1 Task Introduction in detail.

Details:

- Project requirement details.
- Detailed Schematic Introduction.
- Pin mapping using datasheets.
- Hardware Components selection based on requirement.

Day-2 Schematic decisions, differential pairs, Ethernet, USBs, CAN and Net Classes.

Details:

- Schematic Block diagram design
- Schematic design for MCU and other peripherals.
- Differential Pair and its classes in detail
- Characteristic impedance calculation using Saturn PCB toolkit
- Net Classes in details for Different communication protocols

Day-3 EMI AND EMC decisions for schematic design

Details:

- How to make EMC proof PCB Board.
- Selection of ESDs, Ferrite beads and other components
- Where to add EMI and EMC components on schematic design

Day-4 Mixed Signal decisions.

Details:

- ADC selection and other mathematic calculations
- Schematic decisions for analog signals
- Design rules decisions for Analog and digital signal (Mixed Signal)

Day-5 Layer Stack selection, Reverse current, Looping, Slow Speed and high speed stakes in details.

Details:

- How to select no of layer on any PCB
- How reverse current and looping effects the Design
- Slow speed and high speed layer stack-ups

Day-6 Rigid Flex PCB and Components Placement decisions in detail.

- Create a Rigid Flex PCB in detail.
- Components Placement of Board

Day-7 Components Placement optimization for the board and Documentations

- Components Placement optimization of Board
- Create all required Documentation from scratch using Output Job File.

Day-8,9 Some High Speed Simulation on Hyperlynx VX2.5

- Field Solver introduction and How to use it.
- Via Planning and Simulation for Better SI of High Speed Signal.
- Cross talk Simulation
- DDR Simulation Demo and How to understand data, and generate report.

Thanking You

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