Power Supply Design using WEBENCH

What will you learn?

Learn how to use TI WEBENCH to filter down your designs and select the most appropriate part based on your efficiency/footprint/cost requirements and optimize your design and carry out electrical and thermal simulations. Also learn how to create customized power supplies or DC-DC converters for your circuits, or solve switching-power-supply design problems before you build your prototype.

Duration: 2 day

Course Objective:

Power management plays a major role in virtually every piece of electronic equipment. An effective power-management subsystem can affect the reliability, performance, and time to market of associated electronic equipment.

WEBENCH is a free, automatic tool provided by Texas Instruments that allows engineers to create reliable power supply circuits over the internet in minutes.

Topics to be covered:

Day 1

1. Introduction to Power supply design
2. Role of power management in electrical and electronic circuits
3. Introduction to regulator, features and types

LAB1: WEBENCH Overview

4. Power Supply Design using WEBENCH

LAB2: Module, integrated and controller type power solutions

5. Introduction to Visualiser,

LAB3: Visualiser Hands-on Exercise

Day 2

6. Introduction to Editing the Schematic

LAB4: Design Schematic edit. Hands-on Exercises and Assignment

7. Introduction to Electrical Simulation

LAB5: Electrical Simulation of Power systems Hands-on Exercise

8. Introduction to Thermal Simulation

LAB6: Thermal simulation of Power systems Hands-on Exercise

9. Introduction to TI E2E Forum

LAB7: Design optimization

Reports, Design sharing, Contest

Pre-requisite:

Participants are required to bring their own laptops with Wi-Fi connectivity and chargers.