

## SolarTech Power Solutions

# Host assembly portable power supply



## Overview

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What is the best portable power supply for college electrical engineering students?

The No Inductor power supply. This project utilizes PicoPD's previous work to prototype a bench power supply. Beside portable soldering iron, this should be one of the best portable tools for college electrical engineering students. This bench power supply is powered by USB-C PD 3.0/3.1 using their PPS capability.

Does the bench power supply have a buck or boost converter?

This bench power supply is powered by USB-C PD 3.0/3.1 using their PPS capability. There is no buck or boost converter on the board as these component is already in your USB-C charger. We will explore how to implement constant voltage (CV) and constant current (CC), two modes that are featured in all of the standard bench power supplies.

How do I charge my portable power supply?

Insert the 18650 battery and the portable power supply is ready to go! How to charge it: Plug micro-USB into the device and the red led will light up. When it is fully charged - the green led will light up. Hope you like the project!.

What is a PD adjustable DC power supply?

This project was created on 06/01/2025 and last updated 3 months ago. The PD Adjustable DC Power Supply is a compact, USB-C-powered device designed to provide adjustable voltage output like a traditional lab bench power supply, but using the USB Power Delivery (PD) 60W as power input.

How many volts a PPS spec can a project handle?

I think this would extend the usefulness and longevity of the project. The PPS spec currently only go up to 20V max. I think that you are talking about AVS mode which allow voltage negotiation up to 48V at 100mV increment.

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