

# CIRCUIT BOARD DESIGN PROCESS

1

## DESIGN

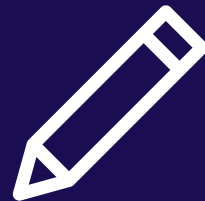
- Create your design one circuit or subsystem at a time.
- Define components and their connections.
- Consider bench testing or SPICE simulation to validate your ideas.



2

## TRANSFER

- Use electronic design automation (EDA) software to lay out your board.
- Consider *signal integrity* and *thermal management* when placing your components.



3

## RULE CHECK

- Run automated electrical rule checks (ERC) and design rule checks (DRC) to spot *common mistakes*.
- Your board fabricator may have their own set of recommended rules.



4

## OUTPUT FILES

- **Gerber files** contain standardized descriptions of your board's geometry.
- **Pick-and-place** files describe which components to place, and their position/rotation.



5

## PROCURE

- Choose a manufacturing service and upload your fabrication output files.
- Specify final details, like the *board material*, *surface finish*, and *quantity*.
- Review carefully and ask questions before submitting your design for production.

