Printed Circuit Board (PCB) Design
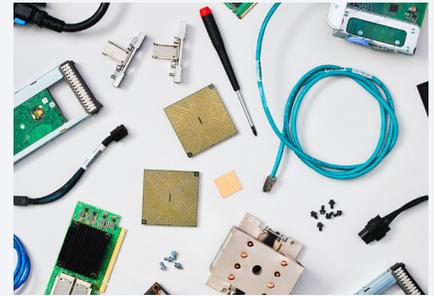
IBM Card Engineering

Working to support designs from development to physical creation

The IBM card engineering team provides support for the different operations related to developing a PCB design from start to finish. Our card engineers manage gathering the information necessary for schematic entry and continuously update as new design changes are encountered. In addition, they conduct thorough schematic reviews, both manually and with supporting automation, to ensure the design has been implemented correctly and all stakeholders have verified the design. Depending on the card design, more extensive reviews are performed such as detailed connector reviews, end-to-end bus reviews, property validations, and BoM comparisons between data sets. These engineers can help your team by playing an essential role in documenting and organizing all information for seamless execution of the card development process from concept definition, through manufacturing, to end-of-life.
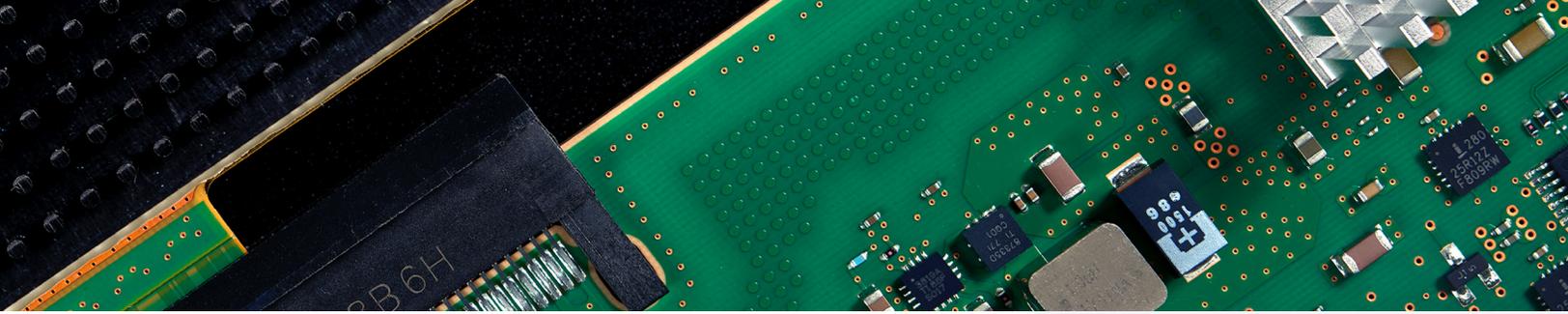
Card Engineering Processes and Tools:

— Cadence Allegro Design Entry HDL

— Schematic reviews

— Connector reviews including bus end-to-end reviews

— BOMs comparisons

— EC releases

Contact us >

For more information about card design, or email us at:
prodeng@us.ibm.com

IBM®

IBM Physical Design

Working to provide a complete solution for card layout

These experts provide complete placement of all components per manufacturing and design requirements. They work closely with card planners in sizing efforts for placement and wiring along with determining the card cross-section for the design. They also work closely with the power team to ensure power integrity is met for all power plane and shape implementation. Their designs are in adherence to industry wiring standards for major buses along with IBM proprietary constraints. In addition, they perform Design for Test by working with manufacturing experts to verify they have a testable design. This includes using system provided checking tools for any Design for Manufacturing issues, using the Mentor Graphics Valor toolset for a post design check before the creation of Gerber or artwork files for release to manufacturing along with locally generated utilities to go beyond the standard checks. IBM's physical design team's process is unique as it involves heavy utilization of locally generated utilities to automate much of the design process beyond what the tools offer. The PD or PCB Layout team has significant experience with very challenging designs that include large motherboards with more than 10,000 parts and 40 layers. Their skills can aid your team in the efficient creation of your PCB design.

Methods and Tools:

- — Cadence Allegro PCB Editor
- — Cadence Allegro Symbol Editor
- — Mentor Graphics Valor
- — IBM's own host of tools
- — PCB symbols designed in house

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