SIERRATHON

Design for INNOVATION

Pushing the Boundaries of PCB Technology

Registrations open
September 4th, 2024

Registration deadline
September 27th, 2024

Competition duration
September 30th to November 22nd, 2024

Submission deadline
November 22nd, 2024

Finalist announcement
November 27th, 2024

Final review and judging panel
December 7th, 2024 (from 9 am to 4 pm on the SJSU campus)

HOST	LOCATION
SIERRA CIRCUITS	Online and San Jose State University Campus

Objective

Participants are invited to design a PCB for any type of electronic device or system, including smart IoT devices, wearable technology, robotics platforms, drone control systems, and more. Winning teams will be chosen based on creativity, innovation, and technical proficiency.

Team structure

- Each team must consist of a maximum of five members.
- Each team can only present one project.

Design support

Teams can benefit from up to 30 minutes of free design consultation with Sierra Circuits' design engineers from September 4th through November 15th, 2024 (office hours only, excluding weekends).

Support tools and resources

- Teams will receive free access to the Sierra Design Portal for the duration of the competition.
- A digital copy of the DFM and DFA Handbooks will be provided.

Submission

- Projects must be submitted through the Sierra Design Portal by November 22nd, 2024.
- Bonus points for teams who submit videos of their design process, showing how they handled key layout aspects.

Judge evaluation

- The judging panel will assess submissions based on creativity, innovation, functionality, the use of the Sierra Design Portal, and manufacturability.
- Teams will be evaluated on a 100-point scale.

Final review and judging panel

- The 10 finalist teams will undergo a final design review with Sierra Circuits' experts where they can ask questions and receive advice for best DFM practices.
- Final presentations will take place at the SJSU campus on December 7th, 2024.

Winners

- The winning team and the four runner-ups will be announced on December 7th, 2024.

Score board

Criteria	Description	Points range
Project originality	Innovativeness and uniqueness of the project idea	0 - 10
Technical complexity	Level of technical challenge involved in the design and implementation	0 - 10
Functionality	How well the project works and meets its intended purpose	0 - 10
DFM compliance	Adherence to Sierra Circuits' design for manufacturing rules and best practices	0 - 10
Design efficiency	Efficient use of space and components on the PCB	0 - 10
Signal integrity	Quality of signal integrity management in the design	0 - 10
EMC/EMI considerations	Effective management of electromagnetic compatibility and interference	0 - 10
Documentation	Completeness and clarity of design documentation and project presentation	0 - 10
Aesthetics	Visual appeal and professional appearance of the PCB layout	0 - 10
Sierra Design Portal use	Level of collaboration and teamwork demonstrated during the project on the Sierra Design Portal	0 - 10
Bonus	Submission of design process videos	0 - 5

Prizes

Top 1

$5,000 off
PCB fab & assembly
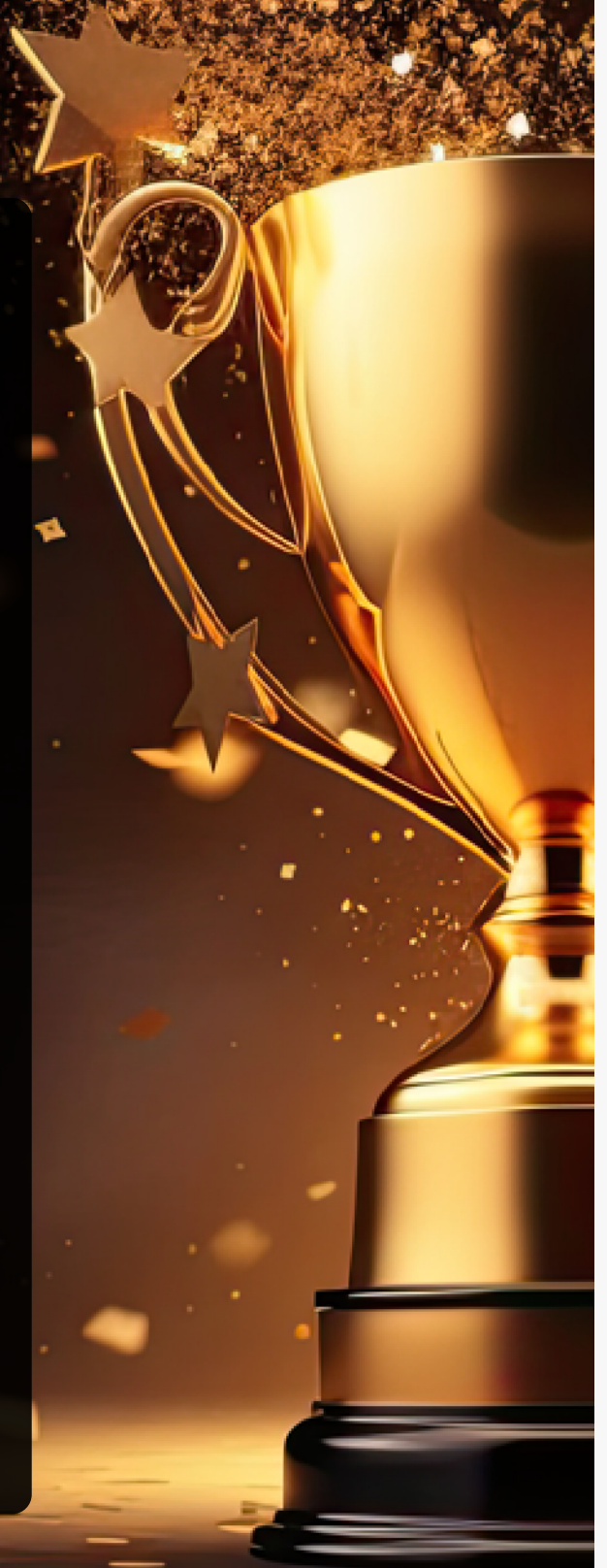
Top 2

$2,500 off
PCB fab & assembly

Top 3

$1,000 off
PCB fab & assembly

Top 4

$500 sponsorship
towards a school project

Top 5

1 free PCB seminar seat
per team member

FAQ

Who can participate?

Sierrathon is open to any students based in the USA. Although anyone can participate, this competition is tailored for electronics and hardware students.

Is there a minimum age requirement?

Participants must be at least 15 years old to sign up for Sierrathon.

Must my team use mandatory tools to develop our project?

Each team must submit their design via the Sierra Design Portal by November 22nd, 2024, with all team members registered on the portal. You can use the portal's PCB tools to develop your project and create the best board possible.

How many projects can a team submit?

Each team must present one project only.

Will Sierra Circuits provide EDA licenses?

Sierra Circuits will not provide any licenses for design software. Each team must have access to an EDA tool such as Cadence Allegro, Altium Design, KiCad, etc. in order to participate.

What type of board can I design?

Participants can design rigid, flex, rigid-flex, micro or HDI boards.

Where and when do I submit my project?

Each team must submit their project through the Sierra Design Portal by November 22nd, 2024.
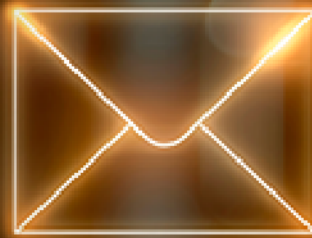
When can I collect and redeem my prize?

Prizes will be announced and distributed on December 7th, 2024. Prizes must be redeemed before June 30th, 2025 when placing an order online on protoexpress.com or through a Sierra Circuits account manager. Each prize is valid for one single order and the discounted amount cannot be used throughout several orders.

Contact

For any additional information or questions, please contact **Lucy** at
lucyi@protoexpress.com

Good luck to all participants!