

AI-Driven efficiency for smarter solar power systems



The opportunity

Maximizing Solar Performance Through Predictive AI

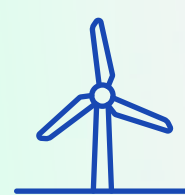
Despite rapid global growth in solar energy adoption, many organizations still hesitate due to inconsistent panel output and inefficient power management.

HTEC and Infineon identified an opportunity to demonstrate how embedded AI can address these challenges by optimizing energy capture, predicting failure points, and minimizing energy loss. Leveraging Infineon's PSOC™ Edge platform, the solution uses real-time voltage, current, and temperature data to tweak power output on the fly.

The solution

- Embed a lightweight AI model into Infineon's next-gen chip to run on minimal power
- Enable the system to instantly adjust for weather and light conditions to maximize solar output
- Deliver 99% prediction accuracy in less than a millisecond
- Use Infineon's software tools to streamline deployment and future updates
- Add a real-time dashboard to track system performance and catch issues on time

The impact



Built-in predictive maintenance

23x

Faster response

42x

Less energy used

HTEC — Saves Cost

You build things that change the world. We build technology that helps you do it better.



Connect with our
AI team today.