# 2023 STATE OF POWER

### A Survey of Design Engineers and Their Managers

The need for more capable, efficient and connected electronic systems spans every market and application. But no matter their shape or function, they're all dependent on one critical factor: power.

How are design engineers and engineering managers preparing for the AI, automation and connectivity needs of tomorrow while tackling the power limitations of today? We surveyed over 800 members of the global engineering community to find out.



## **KEY TAKEAWAYS & INSIGHTS**

Design engineers and managers shared their experiences, challenges and opinions about designing new power solutions. Responses were captured in April 2023.

# **Powerful Priorities**



Agree power is a critical requirement for design engineers

**3/4** Agree increasing energy efficiency is the top priority in power system design





# 97%

Face at least one significant challenge in the balance of thermal management, EMI, reliability, safety and cost effectiveness

#### **Innovation Drivers**

Top three innovations likely to have the greatest impact on power system performance:

Battery technologies

Material advancements

Thermal efficiencies

**60%** Agree that higher efficiency demands will drive board-level power design



**OVER 50%** Agree that multiple macro trends are forcing power design innovation including a shift to renewables, tighter energy regulations and higher functionality demands



To Specialize or Not, That is the Question

More than **4 out of 5** (82%) expect demand for power expertise

for power expertise

#### to increase over the next 5 years





Just **20%** say their companies are currently hiring power specialists over engineering generalists





Already have training or expertise in at least one power specialization such as power quality, regulatory requirements or EMI mitigation

**97%** Agree that even more expertise would be beneficial



Read the full report to learn more of what the engineers had to say about power-related priorities, challenges, trends and career requirements.

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