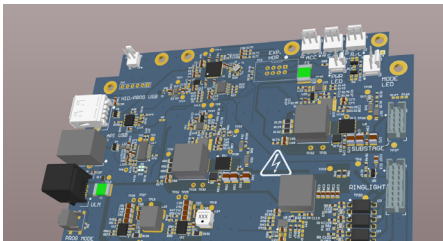


Case Study: **Microscope control system redesign, improving precision and integration**

Project Summary

Our team at Partner Electronics was brought in to redesign a microscope lighting control system to improve usability, flexibility, and integration with existing product platforms.

The work focused on enhancing control capability and configurability without requiring redesign of the wider system.



Key Capabilities & Tools

Embedded firmware development (RP2040)

Analog LED driver design

Multi-interface system integration

Configurable control architecture

Project Outcome & Impact

Improved inspection precision and enabled flexible integration across existing systems.

A single control platform supports multiple interfaces and configurations, allowing use across different microscope setups without hardware changes.

User-defined lighting profiles improve repeatability and consistency in inspection processes.

The redesign enabled continued use of existing systems while extending functionality and reducing the need for product-specific variants.

**Accelerating your path to market -
Speak with our engineering team today.**