





A true embedded architecture, on the other hand, is built specifically for those types of needs.

An embedded controller can offer deeper control over how the machine behaves, how the electronics are integrated, and how the operator interface works. It can support mass production and allows the control system to be tightly tied to the machine itself, rather than acting as a collection of separate components that were simply assembled to get things moving.

Still, regardless of the benefits, migrating from a legacy PLC to a modern embedded system is not an easy answer.

First, it's not a simple swap. It introduces an entirely new level of complexity, requires highly specialized engineering knowledge, and carries a significant cost.

Second, internal engineering teams already carry the responsibility of the current product development, production line support, customer issues, regulatory requirements, and every urgent thing that comes with building heavy equipment. Even when it is known that the legacy architecture needs to be reworked, carving out the dedicated time and specialized expertise to safely do that work can be a challenge.

That difficult middle place is where Guild Automation can offer support.

We augment the internal teams of industrial vehicle and heavy equipment OEMs to support the integration, design and/or migration/updating of the electronics and software that run their machines. That can include embedded software, electrical system design, displays and HMI, harnessing, testing, prototype support, and production release work.

And, since we've done it before, we know what a successful PLC to embedded migration takes.

It begins with identifying exactly what the current system does well so that behaviour can be preserved. From there, the parts of the architecture that are genuinely limiting the product are isolated, and the pieces that no longer serve the machine's roadmap are cleaned up, restructured, or retired.

This involves reviewing the existing logic alongside the current electrical architecture to see where wiring, I/O, and communication paths need to change, and building a test bench so the team can validate hardware, software, and machine logic. It also involves making sure the new system is set up to properly support the operator, service team, and production line.

You don't have to choose between living forever with a system that no longer fits or starting from zero with a risky rewrite. We can support your team to preserve the value inside your existing platform, identify what is limiting the next version of the equipment, and migrate in a way that reduces risk instead of creating more of it.

If your PLC-based system is getting harder to support, scale, integrate, or build around, please reach out. We'd love to have a deeper discussion.

