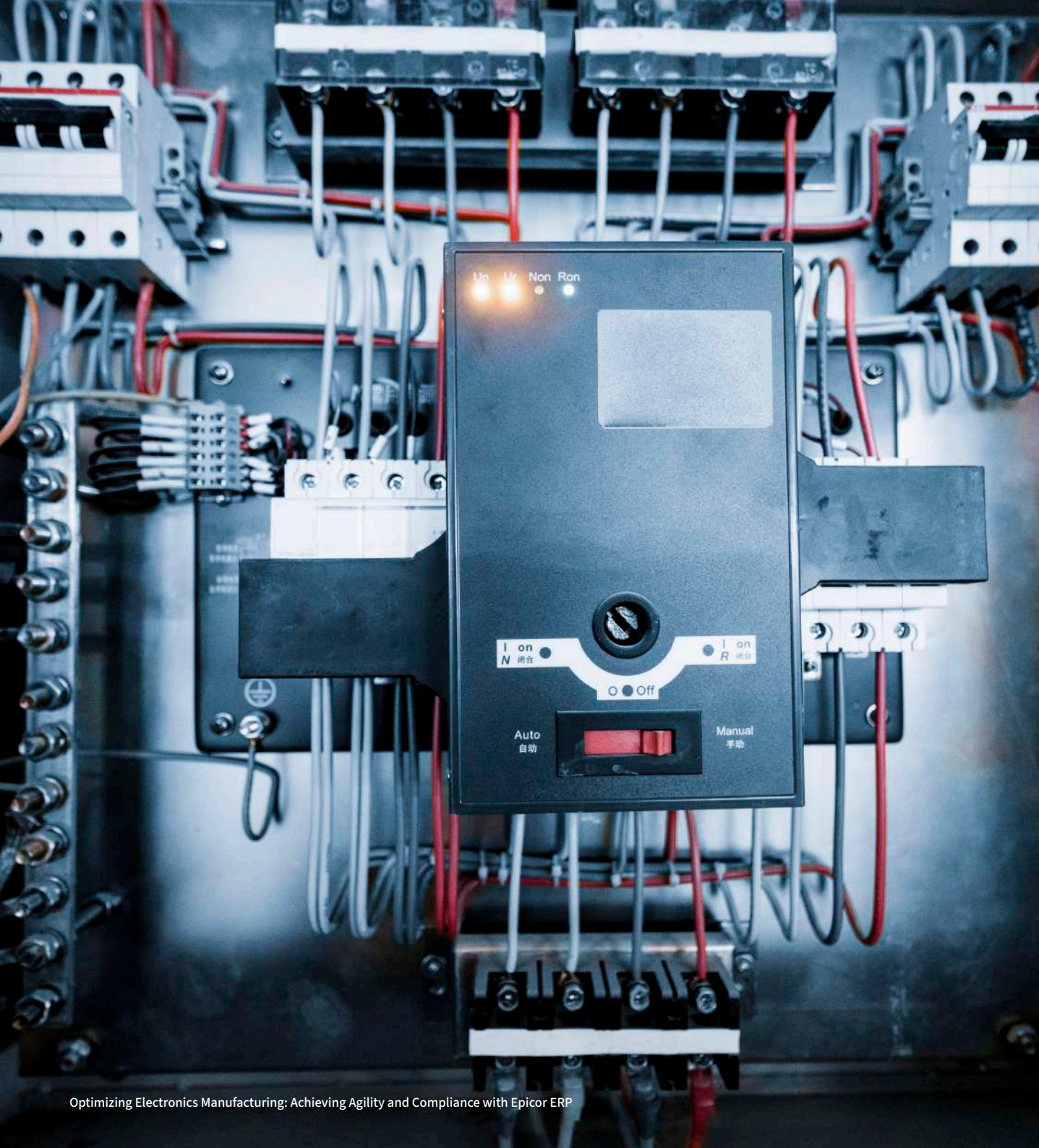


EPICOR

Optimizing Electronics Manufacturing: Achieving Agility and Compliance with Epicor ERP



MANUFACTURING



Where We Are and Where We're Headed

Electronics manufacturers today operate in a high-pressure environment shaped by constant innovation, shifting regulations, and increased demand for customization. Success depends on speed, precision, and the ability to scale—without losing control over quality or compliance. This eBook explores the trends reshaping discrete electronics manufacturing and outlines how Epicor Kinetic, an AI-powered cloud-based ERP solution, supports manufacturers in adapting to complexity, optimizing operations, and maintaining a competitive edge.

Trends in Electronics Manufacturing

1. Increasing Complexity and Customization

Manufacturers face heightened demands for specialized, configurable products requiring flexible production methods. Rapid innovation, shorter product lifecycles, and intricate customer specifications necessitate robust engineering change management, accurate forecasting, and precise production planning.

2. Global Supply Chain Volatility

Global supply chains for electronics are increasingly complex, vulnerable to geopolitical tensions, natural disasters, and supply disruptions. Intricate material and component requirements amplify these challenges, emphasizing the importance of comprehensive real-time supply chain visibility and advanced planning capabilities.

3. Regulatory Compliance and Traceability

Electronics manufacturers must navigate stringent international compliance standards including ITAR, RoHS, WEEE, REACH, and FDA regulations. Ensuring cradle-to-grave traceability and maintaining auditable records is vital to avoid penalties, delays, and reputational risks.

4. Industry 4.0 and IoT Integration

Industry 4.0 and IoT integration enable electronics manufacturers to leverage real-time data for predictive maintenance, enhanced productivity, and significant improvements in overall equipment effectiveness (OEE). Manufacturers adopting these technologies can proactively manage equipment performance and reduce downtime.

5. Sustainability and ESG Initiatives

Environmental, social, and governance (ESG) factors increasingly drive procurement and production strategies. Manufacturers must ensure transparency, responsible sourcing, waste reduction, and energy efficiency, aligning with both regulatory and consumer demands.



Challenges Unique to Discrete Electronics Manufacturing

- Short, varied production runs requiring rapid production changes
- Complex global supply chains with intricate material and component specifications
- Extensive compliance requirements and rigorous documentation
- Rapid obsolescence, demanding continuous innovation and fast time-to-market
- High customization, necessitating flexible and efficient production processes
- Integration of rapidly emerging technologies into products
- Intellectual property protection across diverse international jurisdictions

Trends in Electronics Manufacturing Visibility and Agility

Epicor Kinetic centralizes global operations, providing comprehensive real-time visibility, allowing rapid adjustments to demand and operational changes. This improves decision-making agility and operational responsiveness, crucial for dynamic electronics markets.

Advanced Supply Chain Management

Epicor Demand Management, Supplier Portals, and integrated EDI streamline supply chains, ensuring proactive inventory management and minimizing obsolescence. Constraint-based planning optimizes material acquisition and assembly processes.

Comprehensive Compliance and Traceability

Epicor Kinetic offers end-to-end traceability and advanced quality management features, supporting regulatory adherence to RoHS, WEEE, ITAR, and more. Embedded compliance tools simplify audits and quality control processes.

Industry 4.0 Capabilities

Epicor Advanced MES integrates IoT and IIoT solutions, automating production monitoring, significantly reducing downtime, and enhancing predictive maintenance. These capabilities boost overall productivity and equipment effectiveness.

Scalability, Flexibility, and Global Operations

Epicor ERP supports multi-company, multi-country operations, alternate BOMs, and routing per plant. The flexible deployment options (cloud, hybrid, on-premises) enable scalability and adaptability, catering to diverse operational requirements and geographic challenges.

Enhanced Sustainability Management

Epicor solutions facilitate sustainability tracking and ESG compliance, providing manufacturers with the capability to monitor and optimize energy and environmental metrics across global operations.

Leveraging AI, ML, and Generative AI

Epicor Kinetic integrates advanced AI, machine learning, and generative AI capabilities. Epicor Prism enables business users to intuitively interact with complex business data using natural language, offering powerful, actionable insights. Additionally, Epicor Knowledgebase leverages generative AI trained on Epicor-specific content, delivering highly contextual, accurate, natural language responses directly within the application, enhancing user productivity and support efficiency.





Epicor Kinetic: Industry-Specific Strategic Capabilities

Epicor Kinetic provides electronics manufacturers with a robust set of specialized functionalities:

- Product Lifecycle Management (PLM) and Engineering Change Management (ECM): Enables meticulous planning and revision-based tracking across the product lifecycle. Supports part creation on the fly and streamlines engineering changes with full visibility across departments.
- Embedded CRM and Quote Management: Facilitates rapid, accurate quotations, improving customer responsiveness and satisfaction.
- Advanced Planning and Scheduling (APS): Offers sophisticated forecasting and constraint-based scheduling capabilities, optimizing resource allocation while managing inventory to prevent overstocks or stockouts.
- Lean Manufacturing and Kanban Support: Enhances operational efficiency, reduces waste, and accelerates production flow.
- Human Capital Management (HCM): Automates HR processes including training, certifications, and compliance requirements efficiently.
- Global Multisite and Multi-Company Management: Simplifies management across multiple geographic locations, facilitating optimized global operations.

Real-World Applications and Case Studies



PCB Manufacturer

As Aimtron expanded its global printed circuit board assembly (PCBA) operations, disconnected systems and limited visibility created planning and compliance roadblocks across its U.S. and India sites. Epicor Kinetic gave the manufacturer a unified platform to manage inventory, monitor operations in real time, and integrate new acquisitions with ease. Since deployment, Aimtron reduced inventory costs by over 7% and cut production staffing expenses by 23%. With built-in compliance support and improved supply chain transparency, the business now runs more efficiently, scales faster, and makes smarter decisions—regardless of time zone or location.



LED Lighting Manufacturer

Faced with rapid growth, rising demand, and the complexity of launching two new brands, CRS Electronics turned to Epicor Kinetic to replace their outdated, finance-focused system. With support from Epicor channel partner Six S Partners, the team went live in just 60 days: streamlining operations, improving inventory accuracy, and laying the groundwork for scalable, multi-brand expansion. Epicor enabled better supply chain planning, real-time visibility, and stronger operational control across departments. As a publicly traded company managing international demands, CRS now runs with tighter integration, faster insights, and a system built for where they're headed next.



Aerospace and Defense Manufacturer

EFLA, a specialist in airfield lighting components used at airports worldwide, needed tighter control over production and better data visibility. Their legacy ERP system couldn't support modern manufacturing demands or ensure compliance with global aviation standards. With Epicor Kinetic deployed in the cloud, EFLA gained real-time insight across operations, improved equipment utilization, and boosted efficiency—without adding headcount. Production volume increased, lead times dropped, and the business now runs with more accuracy and control. Epicor also enables customers to configure custom orders while helping EFLA bring innovations like surge protection devices to market faster.



Scientific Instruments Manufacturer

Techcomp Group, a global manufacturer of precision scientific instruments, turned to Epicor Kinetic to unify operations and drive smarter decisions across 15 countries. Facing rapid growth, complex supply chains, and rising demand for visibility, Techcomp replaced spreadsheets with standardized processes for pricing, production, and procurement. Epicor's flexible deployment model and cost-effective licensing helped streamline operations, improve traceability, and inform strategic investments. With deeper insight into margins, product performance, and planning, Techcomp gained the tools to optimize decision-making and scale globally, all while maintaining the precision its customers rely on.

The Kinetic Difference

Electronics manufacturers face a unique convergence of pressures: accelerating innovation cycles, complex regulatory landscapes, and the increasing need for speed, flexibility, and precision. Meeting these demands requires incremental improvements, along with a system built to handle complexity at scale.

Epicor Kinetic delivers the capabilities electronics manufacturers need to stay competitive today. From real-time visibility and agile supply chain planning to embedded compliance, AI-driven insights, and global scalability, it offers a purpose-built foundation for continuing to grow while reducing risk and improving responsiveness.

The case studies referenced show how manufacturers in electronics, lighting, aerospace, and scientific instrumentation are using Epicor to streamline operations, accelerate delivery, and make smarter decisions. Whether preparing for expansion, improving traceability, or reducing production inefficiencies, these organizations demonstrate the practical value of a modern, industry-focused ERP system.

Epicor Kinetic goes beyond supporting electronics manufacturing. Our solutions make every day easier, helping you lead the industry forward.



EPICOR

We're here for the hard-working businesses that keep the world turning. You're the companies that make, move, and sell the things we all need. Trust Epicor to help you do business better. Your industry is our industry, and we understand you better than anyone. By working hand-in-hand, we get to know your business almost as well as you do. Our innovative industry solution sets are carefully built to fit your needs and respond flexibly to your fast-changing reality. We accelerate ambitions, whether you want to grow and transform, or simply become more productive and effective.

That's what makes us the essential partner to the world's most essential businesses.

Contact Us Today: info@epicor.com | www.epicor.com

This document is informational only. Epicor Software Corporation makes no guarantees, representations, or warranties to the information and disclaims, any implied warranties, such as fitness for a particular purpose, merchantability, satisfactory quality, or reasonable skill and care. Testimonials are unique to the particular user and may vary. Epicor and the Epicor logo are trademarks of Epicor Software Corporation. Other trademarks are the property of their respective owners. Copyright © 2025 Epicor Software Corporation. All rights reserved. Rev. Date July 22, 2025.

