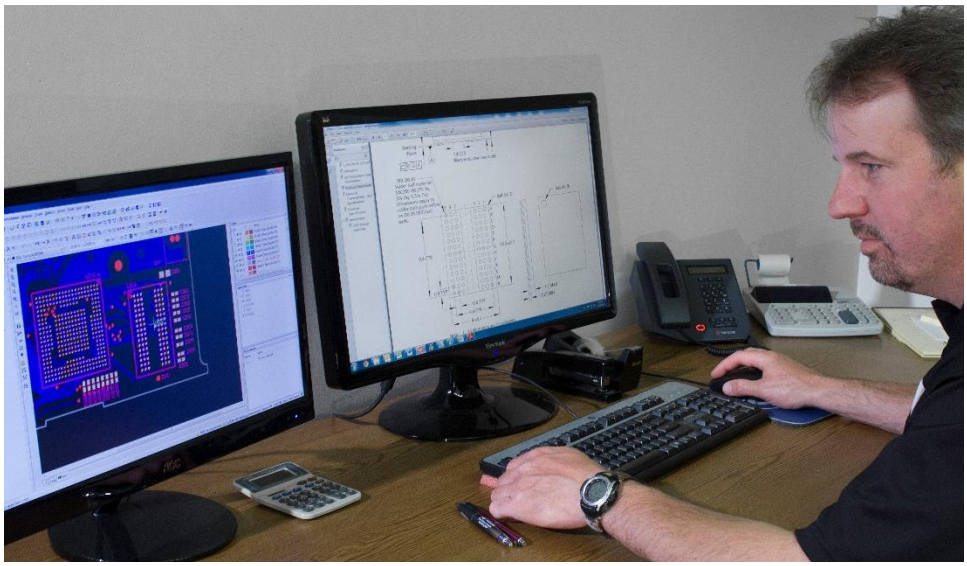
Burton Industries
Manufacturer of Quality Electronic Assemblies



Keeping Deliveries On Time: Burton Industries' Multi-Faceted Approach

Helping Your Bottom Line Series

Keeping Deliveries On Time: Burton Industries' Multi-Faceted Approach

Supply chain disruption has become far too a common event in the electronics industry. Unanticipated spikes in high volume industry demand, merger & acquisition activity among component suppliers, COVID-19 shutdowns and logistics challenges have all created material constraints at one time or another. Even when the industry is running on an even keel, long-lifecycle products can see obsolescence-related issues create availability problems.

Burton Industries' team utilizes a range of stocking programs plus purchasing and engineering expertise to address these challenges. This whitepaper looks at Burton Industries' multi-faceted approach to addressing these challenges.

Stocking Programs

Stocking programs ensure that either raw material inventory and/or finished goods (FG) inventory is placed in an appropriately-sized Kanban for each customer.

Raw Materials Bonds

A number of Burton Industries' supply chain partners carry bonded inventory on behalf of its customers. Bonded inventory gives customers maximum flexibility with minimum liability, because the majority of parts are in high demand and easy to restock should a forecast change. The model typically sets demand based on a 12-month forecast. Bonded inventory can normally be set with minimum and maximum (min/max) quantity availability assumptions within a specific timeframe to accommodate changes in demand. Normally this type of program has no additional cost.

For example, Burton Industries has bonded 75 percent of one customer's components in distribution. This has eliminated stock outs and allows for quick reaction to increased demand during constrained markets. The project has 150,000-200,000 assemblies annually.

Finished Goods (FG) Kanban

With FG Kanban Burton Industries stocks an agreed upon amount of finished product inventory and replenishes that from production. FG inventory can be shipped to the customer, to the end market or to distribution locations. In this scenario, mutually agreed upon pricing normally includes coverage for the added costs of carrying FG inventory.

Combination of FG Kanban and Raw Materials Inventory

In situations with highly variable demand, some customers want the added security of inhouse raw materials inventory and FG inventory. In this model, Burton Industries typically carries a three-month raw materials inventory and eight weeks of FG inventory. Pricing reflects the added cost of inventory and the customer may have higher non-cancellable, non-returnable (NCNR) inventory liability. This does provide the greatest level of material and product availability security.

Blanket Purchase Orders (POs) with Monthly Releases

In this scenario, a customer provides a 12-month blanket PO and Burton Industries reserves material in the pipeline based on that annual quantity. Customers are typically only responsible for 8-12 weeks of inventory and a few NCNR parts. This scenario carries no added cost. However, it can be vulnerable if a supplier allocates material and subsequently cancels material in the pipeline.

Regardless of whether a stocking program is used, Burton Industries' purchasing team strives to get all volume production customers to give 26+ weeks of commitments based on component lead-times. That expectation is modified for customers with legacy products that are built on an as needed or a few times a year basis.

The COVID-19 Challenge

In 2020, most material constraints continued to ease compared with significant issues in prior years, shutdowns related to COVID-19 restrictions created spot shortages. These sporadic supply chain disruptions help illustrate how Burton Industries' purchasing and engineering expertise is applied with unexpected challenges arise.

Identifying Alternate Part Solutions or Non-Franchised Sources

In the case of one industrial customer, the engineering team was able to identify that a 9-pin connector could be replaced with a 4- and 5- pin connector when shortages developed. The customer approved this temporary replacement while options were explored. The purchasing team was later able to find the 9-pin connector at a broker at a higher price. The customer provided a waiver for the purchase through a broker. Burton Industries' policy is to get written authorization from the customer any time broker parts must be used. These parts are inspected for visible issues and tested after assembly. The purchasing team works with a select group of brokers and avoids one-off purchases with new brokers.

In another situation, a medical customer was also impacted by a COVID-19 related supplier shutdown. The purchasing team was able to find a programmed memory part via a broker that provided enough inventory to last through the original supplier's period of internal constraints. The customer approval and initial incoming inspection process for programmed parts obtained through brokers is the same as for passives. However, when programmed parts are purchased through a broker, they are inspected during the production process.

Identifying Alternate Suppliers

In another case related to COVID-19 shutdowns, an industrial customer utilized a printed circuit board (PCB) manufacturer in India. India's COVID-19 shutdowns impacted its entire PCB industry. The purchasing team was able to identify an alternate PCB supplier in the U.S. that could begin production rapidly.

Unanticipated Spike in Demand

A maker of hospital beds had a significant spike due to COVID-19, with orders for the parts Burton Industries supplies nearly tripling. The purchasing team pulled in orders for semiconductors and kept deliveries on time, thanks to its strong supply chain relationships and its previously set up bonding stocking program.

The Engineering Equation and Evolving Product Needs

Many products have changing needs over time. Burton Industries' engineering team helps address those needs over the full product lifecycle. Product lifecycle management (PLM) starts at the quoting stage. The engineering team will do a bill of materials (BOM) scrub and suggest alternate parts wherever the is a risk of obsolescence or the approved material list (AML) only lists a single source. The team can also do risk analysis for microprocessor lifecycle.

Legacy Product

The engineering team does a risk analysis every six months on a legacy product for a mining equipment supplier. When parts near end of life, the purchasing does a lifetime buy and holds it in inventory.

Redesign for Obsolescence

A manufacturer of public safety equipment had a power supply go obsolete. The purchasing team identified an alternate power supply that met the customer's requirements. However, it was not a drop-in replacement. The engineering team was able to redesign the PCB layout to accommodate the new power supply.

Redesign for Improved Availability or Cost Reduction

In some cases, market trends may make the cost of a PCB redesign preferable to the challenges of constrained parts. In one case on a building control product, the engineering team eliminated supply chain constraints by changing the PCB layout to accommodate smaller package styles, reducing from 0603 to 0402. They also found an alternate crystal to replace a part that was constrained.

In a different project with this customer, an initial review of a new product identified that switching to an alternate connector supplier would reduce cost. The engineering team was also able to find multiple alternates for a constrained fuse whose cost had gone up. The purchasing team was able to get these at lower cost. The purchasing team found an alternate for a constrained capacitor that was higher cost and also constrained. They continued to review options and found a comparable part that was available in normal lead-times at lower cost.

As these examples show, the team at Burton Industries has both a standardized process that helps minimize the risk of supply chain disruption arising from changing market demand, plus the ability to identify solutions should an unanticipated disruption arise. Additionally, support is in place to address the evolving needs of products with long lifecycles. This combination helps ensure that regardless of the challenge, deliveries ship on time.

Contact a member of our team at (906) 932-5970 to learn more about ways Burton Industries can support your needs.

About Burton Industries

For more than 40 years, Burton Industries, Inc. has provided customized manufacturing solutions to OEMs in the medical, industrial, motor control, specialized consumer, security, building controls, defense and professional tool markets. We support the full product lifecycle from product development through end market support services.

We've built our business by listening to customer needs and efficiently supporting high mix, variable demand projects at both PCBA and higher level assembly (HLA) stages. Our manufacturing strategy includes:

- *Extraordinary communication with customers*
- *Teaming with suppliers*
- *Optimizing test*
- *Eliminating hidden cost drivers.*

Our primary manufacturing location is in Ironwood, MI and additional HLA manufacturing capability is located in Hazelhurst, Wisconsin.